SP10 MKII
direct drive turntable

description

The SP10 MKII turntable has been engineered specifically for high-quality audio applications. It offers the highest quality, lowest noise operation available today thus making it ideal for quality music applications. The turntable adds virtually nothing in the way of noise or wow and flutter to the audio recorded on the disc.

The SP10 MKII's electronically controlled brushless direct drive DC motor rotates at precisely the selected speed, eliminating all extraneous mechanical parts normally associated with turntable drive systems.

The absence of belts and idler wheels means there are few parts to wear out, with an attendant reduction of maintenance time and extension of useful life.

Rotational speed of the SP10 MKII is held to the extremely accurate tolerance ±.002% by the use of a quartz crystal oscillator as a frequency reference. This allows the motor speed to be controlled independently of environmental changes, such as temperature variations or fluctuations in power line voltage or frequency. Speed accuracy will be maintained even with wide variations in power line voltage.

Use of this electronic servo-controlled, direct-drive system assures that the wow and flutter will be less than .025%, weighted, RMS and start-up time will be very rapid. Running speed is reached in less than .25 sec, or 25° of turntable rotation, at 33⅓ RPM, allowing accurate and immediate cueing. Speed changes, also, are accomplished very rapidly, taking no more than 0.4 sec. for the turntable speed to stabilize.

The reference signal from the quartz oscillator is also used to power the neon lamp which illuminates the built-in stroboscope. Wave shaping by the strobe logic circuit gives a bright, clear strobe whose accuracy is independent of power line frequency fluctuations.

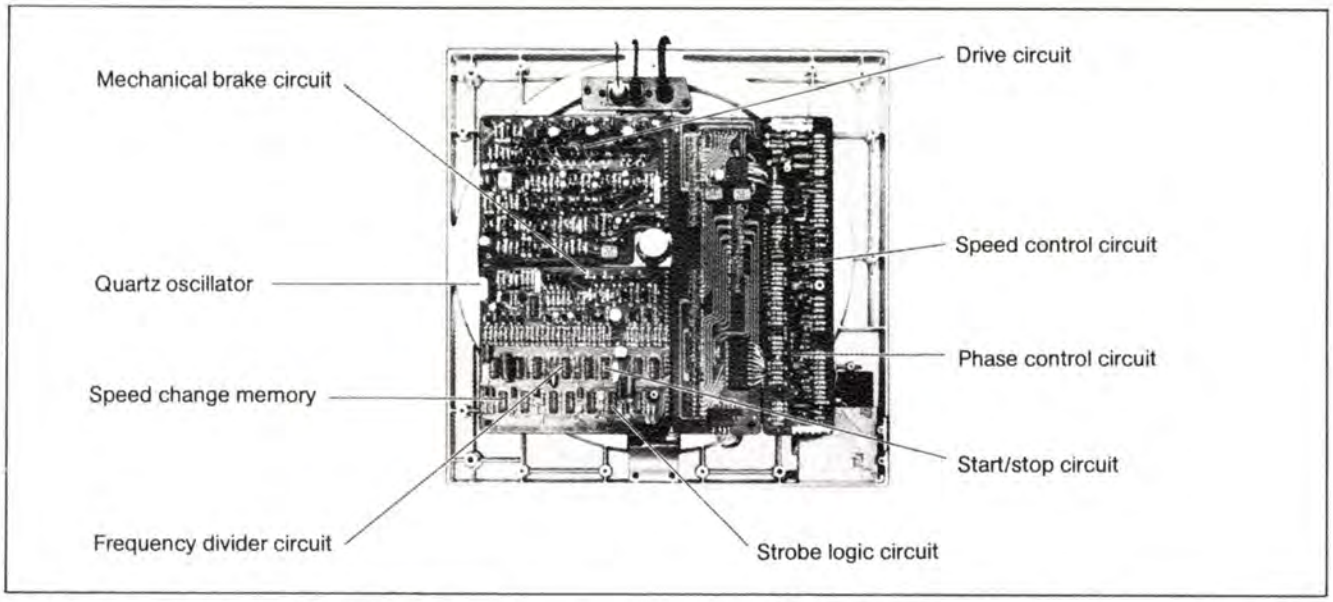
With the increasing demand for high quality standards, it is imperative that vertical as well as horizontal "rumble" be minimized. This "rumble" is generally caused by the motor and drive system vibrations being transmitted to the turntable platter, and thus to the disc and pick-up stylus. The low-speed servo controlled motor of the SP10 MKII has the inherent advantage of very little vibration. Therefore, rumble figures exhibited by the SP10 MKII are better than –50dB (DIN weighting A), –60dB (IEC weighting B) and –70dB (DIN weighting B).

Additionally, the SP10 MKII has a non-magnetic, dynamically balanced, die-cast aluminum turntable platter whose 6.4 lbs of mass provides a strong speed-smoothing flywheel effect.

The SP10 MKII is manufactured to stringent broadcast specifications by Matsushita Electric Industrial Co. Ltd., and is sold under the "Technics" label.

specifications

TYPE: Direct drive.
MOTOR: Ultra low speed brushless electronic commutator DC.
DRIVE SYSTEM: Quartz crystal controlled, phase-locked electronic servo.
SPEEDS: 33⅓, 45 and 78.26 RPM.
SPEED CHANGE METHOD: Electronic.
SPEED ACCURACY: better than ±.002%.
SPEED ACCURACY WITH VARYING LOAD: 0% up to a maximum load of 4.3 lbs in. (5 kg cm).
WOW and FLUTTER: less than .025% RMS, weighted ± .035% peak, weighted.
RUMBLE: Better than −50dB (DIN A) −60dB (IEC B) −70dB (DIN B)
STARTING TORQUE: 5.2 lbs in. (6 kg cm).
START-UP TIME: .25 sec. (25° rotation) to 33⅓ RPM.
BRAKING TIME: .3 sec. (30° rotation) from 33⅓ RPM to stop.
SPEED CHANGE TIME: .4 sec. from 33⅓ to 78.26 RPM.
TURNTABLE PLATTER:
Material: Dynamically balanced, die-cast aluminum.
Weight: 6.4 lbs (2.9 kg).
Diameter: $12^{19}/_{32}$ in. (32 cm).
Moment of inertia: 130 lbs in². (380 kg cm²).
DIMENSIONS: $4^{1}/_{64}$ in. H × $14^{31}/_{64}$ in. W × $14^{31}/_{64}$ in. D. (10.25 cm × 36.85 cm × 36.85 cm)
WEIGHT: 20.9 lbs (9.5 kg).
POWER REQUIREMENTS: 120V AC, 50/60Hz, 20W.

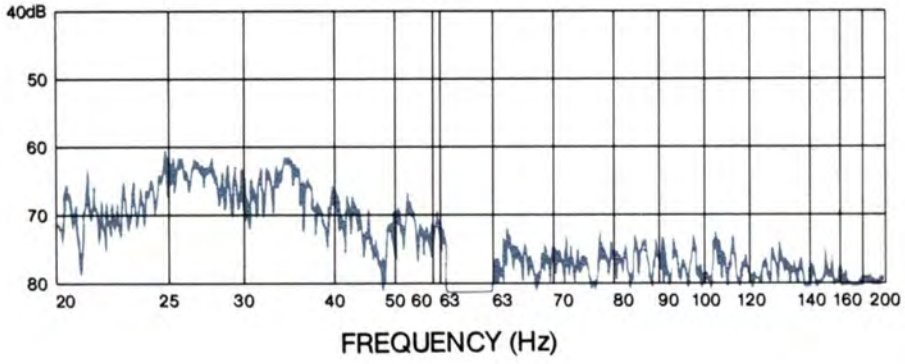


SP10 MKII Drive Electronics. The stable and highly accurate rotation of the SP10 MKII is obtained with analog-digital circuitry using the latest electronic technology.

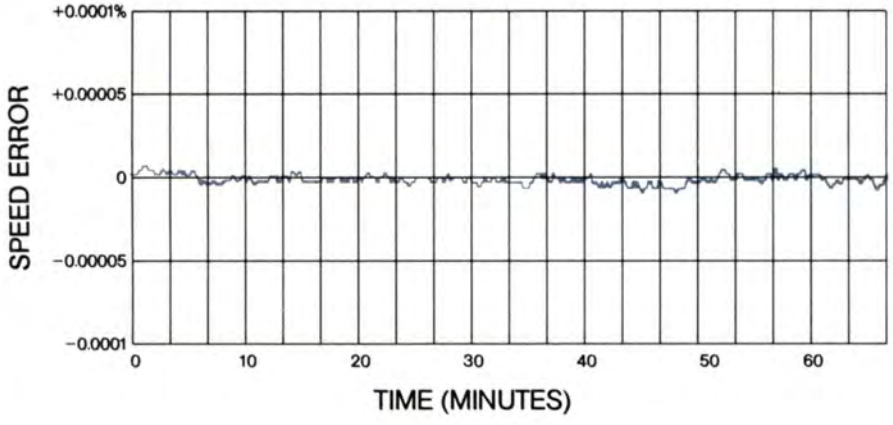
Automatic Electronic Speed Control

SP10 MK II DIRECT DRIVE TURNTABLE

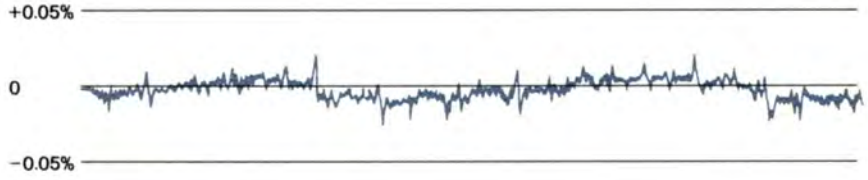
performance characteristics



FREQUENCY SPECTRUM OF RUMBLE



DRIFT CHARACTERISTICS



WOW AND FLUTTER CHARACTERISTICS

McCurdy Radio Industries reserves the right without notice to make such changes in equipment, design, specifications, or components, as progress in engineering or manufacturing techniques may warrant, to improve the performance of the product.

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McCurdy Radio Industries Limited,
108 Carnforth Road, Toronto, Ontario M4A 2L4 (416) 751-6262 Telex: 06-963533

McCurdy Radio Industries Incorporated, TWX: 610-492-3219
1051 Clinton Street, Buffalo, N.Y. 14206 (716) 854-6700 Telex: 06-963533

U.S.A. East Coast Office,
Saddle River, N.J. P.O. Box 86, 07458 (201) 327-0750

SS 3157-A

monaural disc reproducer

McCurdy

description & specifications

The SS3157A Monaural Disc Reproducer provides facilities for professinoal monophonic reproduction of monaural or stereo disc recordings. The SS3157A is completely self-contained with three-speed turntable, tone arm, plug-in pickup cartridge, equalized preamplifier, audio cue switching, and power supply.

The enclosed simplified diagram shows the facilities of the SS3157A. The turntable is the McCurdy CH12A Transcription Turntable with speeds of 33⅓, 45 and 78 rpm. The standard tone arm is a Micro Trak 303 utilizing a Stanton 500AL or Shure M44C professional-quality magnetic stereo cartridge. The cartridge output is equalized and amplified by an AT135 preamplifier which incorporates an input load control (for various types of cartridge) and a roll-off selector. The roll-off selector is located on the control panel and selects either RIAA equalization or variable roll-off from 1 kHz to 16 kHz (see Curve). The roll-off amplitude is variable from zero to a maximum of 10 dB below RIAA between 10 kHz and 16 kHz.

The turntable start system may be set up for local operation by means of the turntable speed selector, or for remote operation by means of a locking or two momentary ON/OFF pushbuttons, lever key, etc. There is also a MOTOR START pushbutton (momentary) for cueing independently of the normal start/stop circuits.

On remote operation, the audio output is delayed slightly on turntable start to prevent speed-up 'wow'. This is accomplished by holding the mute relay (K1) energized until the turntable reaches operating speed, after which this relay deenergizes and completes the audio output circuit. The delay is adjustable from 0.2 to 1.5 seconds, approximately.

For instant cueing, a MOTOR START pushbutton and a CUE pushbutton permit bypassing the delay circuit so that the program output is immediately available, as well as the normal cue output. The cue output is taken from a combining network.

An optional AM275 3 Watt Cue Amplifier may be installed in the SS3157A.

The simplified diagram shows one of the AT135 Phono Preamplifiers in dotted outline as this would be provided only on the stereo model (SS3158A or SS3159).

The output and cue resistive pads, relay K1, and the power supply regulators are contained on one SM25 plug-in printed-circuit card. This card and the amplifiers plug into a prewired frame which also contains the power transformer and connector panel.

The basic cabinet of the SS3157A is finished in textured blue acrylic with wood-grain vinyl overlays applied at points of extra wear such as the control panel and end bells. The top is of laminated formica, ivory in color, with a tinted plexiglas guard at the rear to help prevent accidental displacement of the tone arm. All audio and control connections are accessible at the front of the unit, and are made via connectors which are provided as standard equipment (audio connectors are Cannon XLR types).

SPECIFICATIONS

TURNTABLE

(1) **Type:** McCurdy CH12A; Capstan-Drive.
(2) **Speed Ranges:** 33⅓, 45, and 78 rpm.
(3) **Speed Regulation:** ±0.2% on all ranges.
(4) **Noise and Rumble:** Better than –35 dB ref 1.4 cm/sec peak velocity at 100 Hz.
(5) **Flutter and Wow:** Less than 0.17%.
(6) **Power Requirement:** 117v ac, 60 Hz, single phase, 46va (50 Hz drives can be supplied).

ELECTRONICS ASSEMBLY

(1) **Input Level:** 5 mv nominal.
(2) **Input Loading:** Variable from 10k to 250k.
(3) **Equalization:** RIAA or roll-off at 16 kHz (see Response Curve).
(4) **Frequency Response:**
  (a) Without roll-off; within 0.5 of RIAA curve from 30 Hz to 10 KHz.
  ±1 dB of RIAA curve, 10 KHz to 20 KHz.
  (b) Roll-off; adjustable from 0 to 10dB below RIAA response between 10 kHz and 16 kHz (see Curve).
(5) **Output Levels:**
  (a) Program: adjustable –20 dBm to +8 dBm.
  (b) Cue: adjustable to +8 dBm.
(6) **Output Impedance:** 600 ohms, balanced.
(7) **Distortion:** Less than 0.5% at +8 dBm output, 30 Hz to 20 kHz, using reverse RIAA input network.
(8) **Power Requirement:** 117v ac, 60 Hz, single phase, 50 va approximately.

TONE ARM AND CARTRIDGE

(1) **Arm:** Micro Trak 303.
(2) **Cartridge:** Stanton 500AL or Shure M44C.

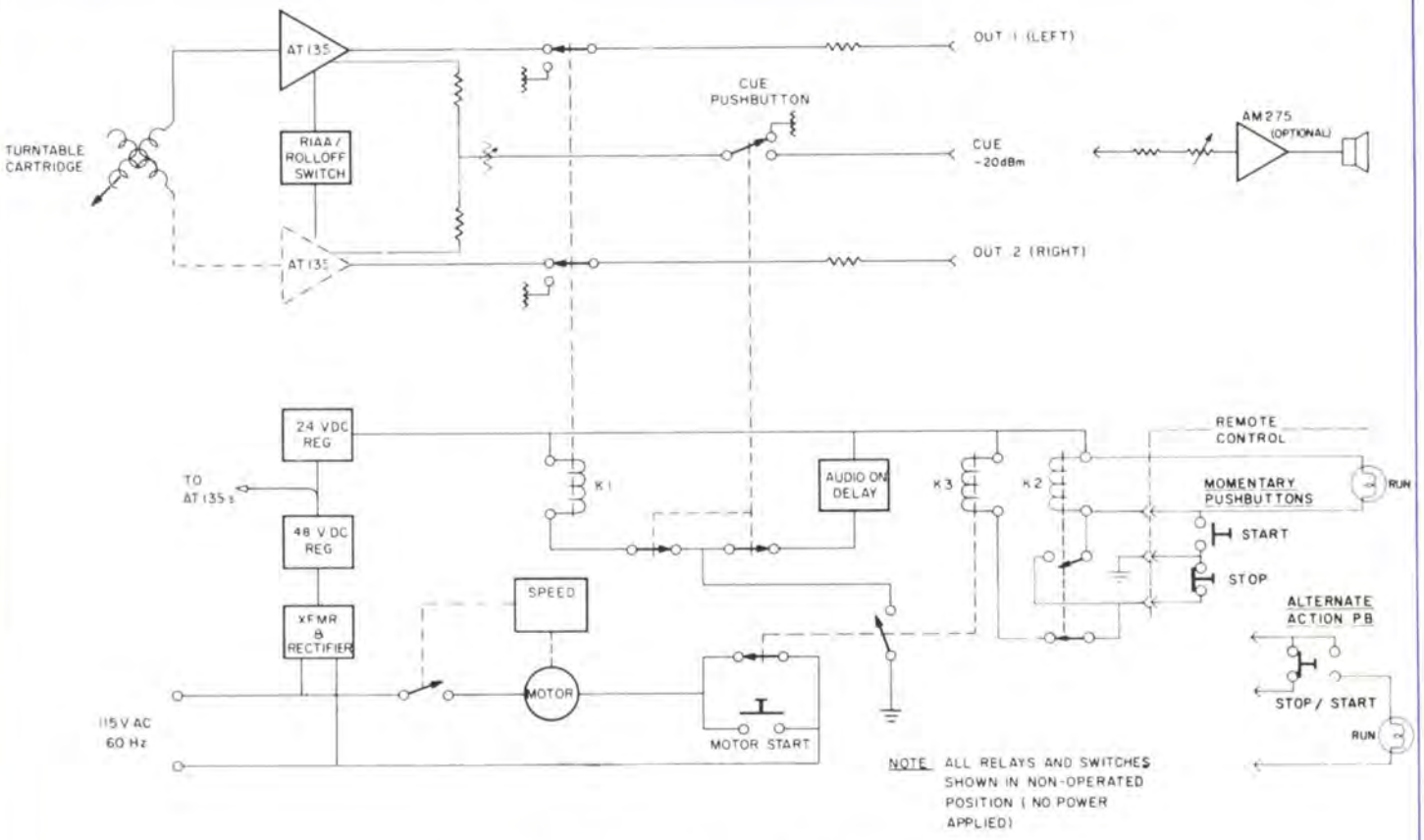
MECHANICAL

(1) **Dimensions:** 33¼ in. high (30 in. to top of Formica), 22 in. wide, 22½ in. deep. Each end bell (optional) adds ¾ in. to width.
(2) **Finish:** Baked textured acrylic blue, complemented by wood-grain vinyl overlay for added protection at points of abnormal wear.
(3) **Weight:** 90 lb., approx.

OPTIONAL EQUIPMENT

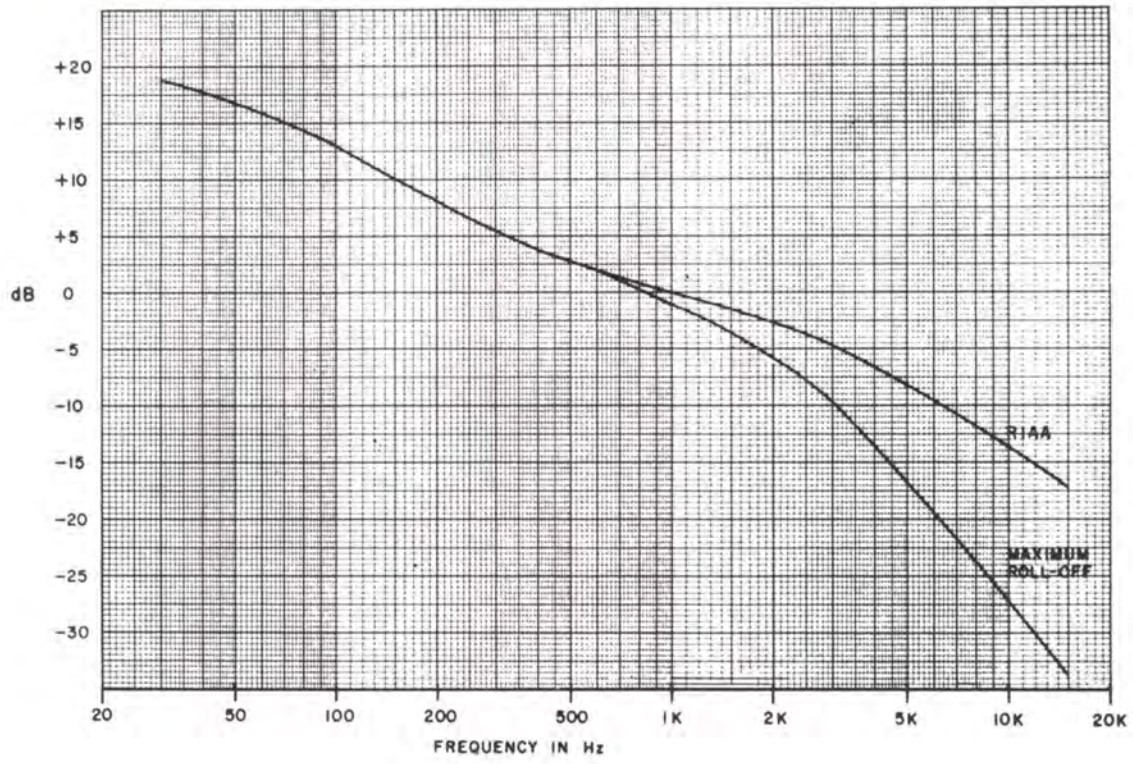
(1) Special Tone Arm, other than the standard (Shure SME 3009 and 3012, for example).
(2) AM275 Cue Amplifier.
(3) SA10048 End Bells with vinyl overlay (2 req'd).

functional



Simplified Schematic of SS3157A

Equalization Characteristic of SS3157A

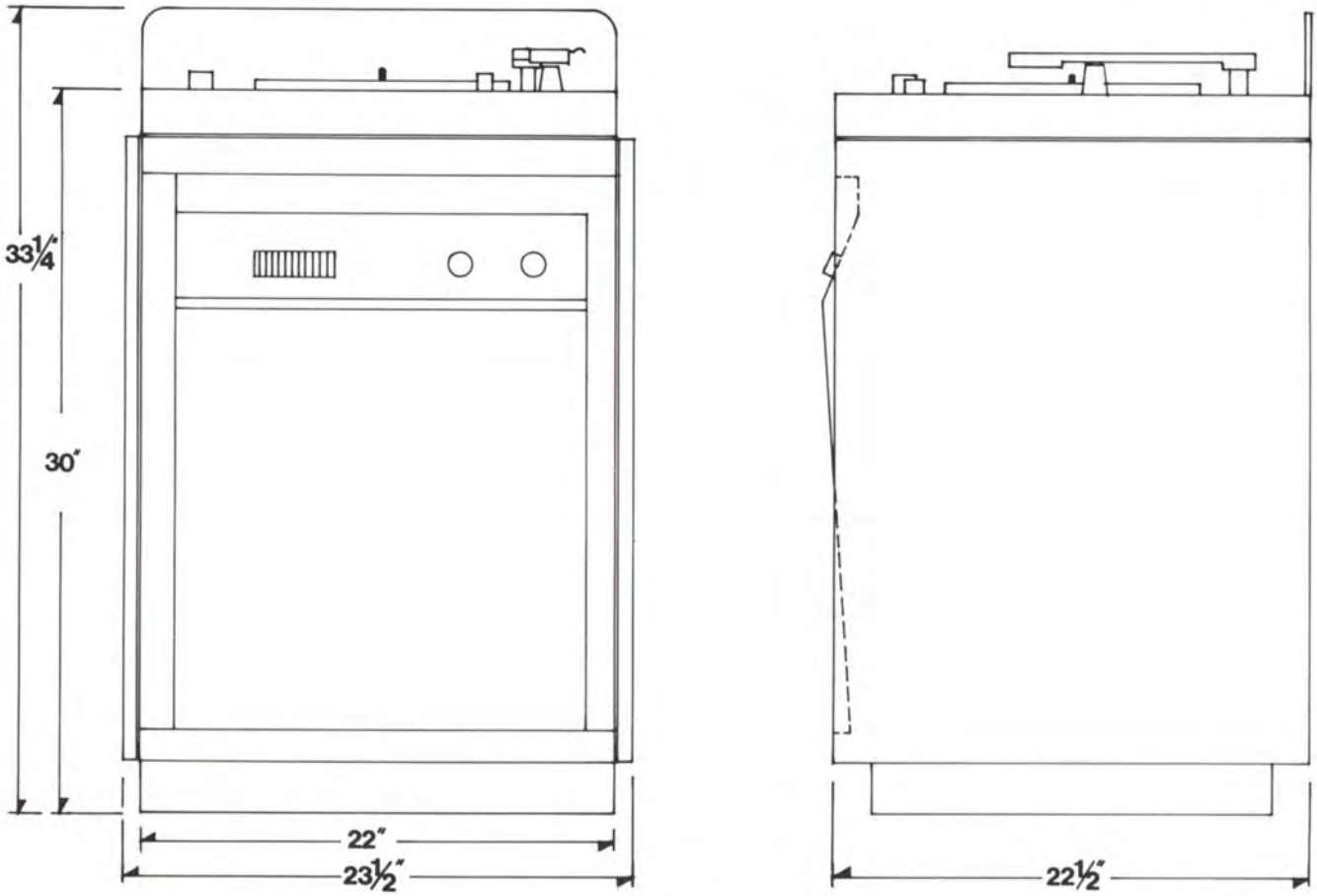


ordering information

SS3157A Monaural Disc Reproducer which comes complete with mating connectors, tone arm, pick-up cartridge, arm guard, felt-backed rubber turntable mat, and front and rear blank panels.

The price for the standard SS3157A does not include optional equipment nor the installation of optional equipment.

installation



Printed in Canada

McCURDY RADIO INDUSTRIES LIMITED
108 CARNFORTH ROAD, TORONTO, ONTARIO M4A 2L4 (416) 751-6262, TELEX: 06-963533

McCURDY RADIO INDUSTRIES INCORPORATED
1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

EAST COAST OFFICE: SADDLE RIVER, N.J. P.O. BOX 86, ZIP 07458, PHONE (201) 327-0750, TWX 610-492-3219

SS 3159

stereo disc reproducer

McCurdy

description & specifications

The SS3159 Stereo Disc Reproducer provides complete facilities for professional stereo reproduction of disc recordings. The SS3159 is completely self-contained with two speed turntable, tone arm, plug-in pickup cartridge, equalized preamplifiers, audio cue switching, and power supply.

The enclosed simplified diagram shows the facilities of the SS3159. The turntable is the Panosonic SP10D Direct Drive Transcription Turntable with speeds of 33⅓ and 45 rpm. The standard tone arm is a Micro Trak 303 utilizing a Stanton 500AL or Shure M44C professional-quality magnetic stereo cartridge. The cartridge output is equalized and amplified by the AT135 preamplifiers which incorporate an input load control (for various types of cartridge) and roll-off selector. The roll-off selector is located on the cue panel and selects either RIAA equalization or variable roll-off from 10 kHz to 16 kHz (see Curve). The roll-off amplitude is variable from zero to 10 dB.

The turntable start system may be set up for local operation by means of the turntable speed selector, or for remote operation by means of a locking or two momentary ON/OFF pushbuttons, lever key, etc. There is also a MOTOR START pushbutton (momentary) for cueing independently of the normal start/stop circuits.

On remote operation, the audio outputs is delayed slightly on turntable start to prevent speed-up 'wow'. This is accomplished by holding the mute relay (K1) energized until the turntable reaches operating speed, after which this relay deenergizes and completes the audio output circuit. The delay is adjustable from 0.2 to 1.5 seconds, approximately.

For instant cueing, a MOTOR START pushbutton and a CUE pushbutton permit bypassing the delay circuit so that the program output is immediately available, as well as the normal cue output. The cue output is taken from a combining network.

An Optional AM275 3 Watt Cue Amplifier may be installed in the SS3159.

The output and cue resistive pads, relay K1, and the power supply regulators are contained on one SM28 plug-in printed-circuit card. This card and the amplifiers plug into a prewired frame which also contains the power transformer and a connector panel.

The basic cabinet of the SS3159 is finished in textured blue acrylic with wood-grain vinyl overlays applied at points of extra wear such as the control panel and end bells. The top is of laminated formica, ivory in color, with a tinted plexiglas guard at the rear to help prevent accidental displacement of the tone arm. All audio and control connections are accessible at the front of the unit, and are made via connectors which are provided as standard equipment (audio connectors are Cannon XLR types).

SPECIFICATIONS

TURNTABLE

(1) **Type:** Panasonic SP-10-D, direct drive.
(2) **Speed Ranges:** 33⅓ and 45 RPM.
(3) **Speed Regulation:** With varying load better than .15%.
(4) **Variable Pitch Control:** ± 3% on all ranges.
(5) **Wow and Flutter:** Less than .03% RMS.
(6) **Rumble:** Better than
–50 db (DIN A)
–55 dB (IEC B)
–70 dB (DIN B)
(7) **Power Requirements:** 120 V AC, 60 Hz.

ELECTRONICS ASSEMBLY

(1) **Input Level:** 5 mv nominal.
(2) **Input Loading:** Variable from 10k to 250k.
(3) **Equalization:** RIAA or roll-off at 16 KHz (see Response Curve).
(4) **Frequency Response:**
(a) Without roll-off; within 0.5 dB of RIAA curve from 30 Hz to 10 KHz.
±1 dB of RIAA curve, 10 KHz to 20 KHz.
(b) Roll-off; adjustable from 0 to 10 dB below RIAA response at 16 KHz (see curve).
(5) **Output Levels:**
(a) Program: adjustable –20 to +8 dBm.
(b) Cue: adjustable to +8 dBm.
(6) **Output Impedance:** 600 ohms, balanced.
(7) **Distortion:** Less than 0.5% at +8 dBm output, 30 Hz to 20 KHz, using reverse RIAA input network.
(8) **Power Requirement:** 117 V AC, 60 Hz, single-phase, 50 va approximately.

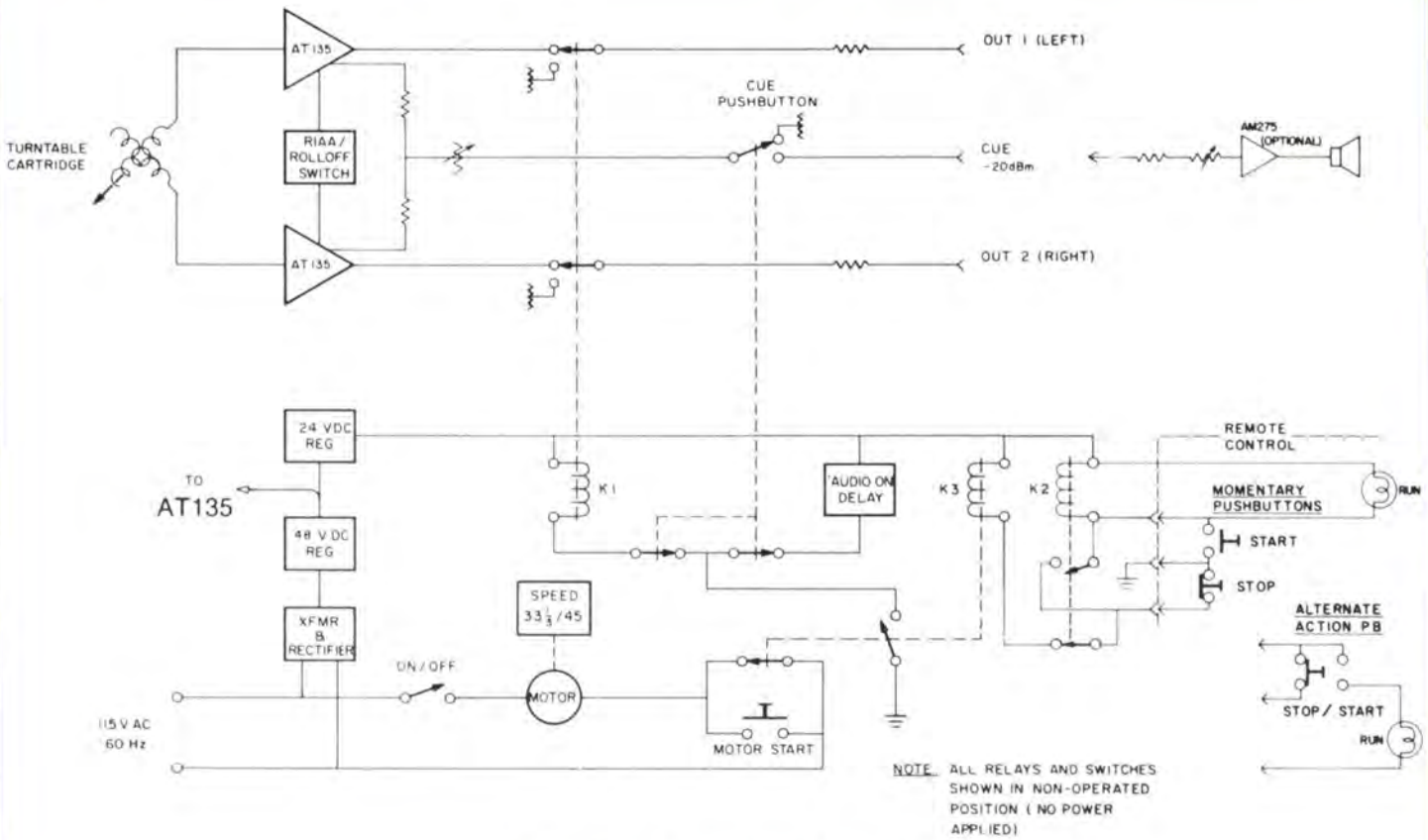
MECHANICAL

(1) **Dimensions:** 33¼ in. High (30 in. to top of Formica), 22 in. Wide, 22½ in. Deep. Each end bell (optional) adds ¾ in. to width.
(2) **Finish:** Baked textured acrylic; dark blue, complemented by wood-grain vinyl overlay for added protection at points of abnormal wear.
(3) **Weight:** 195 lbs., approx.

OPTIONAL EQUIPMENT

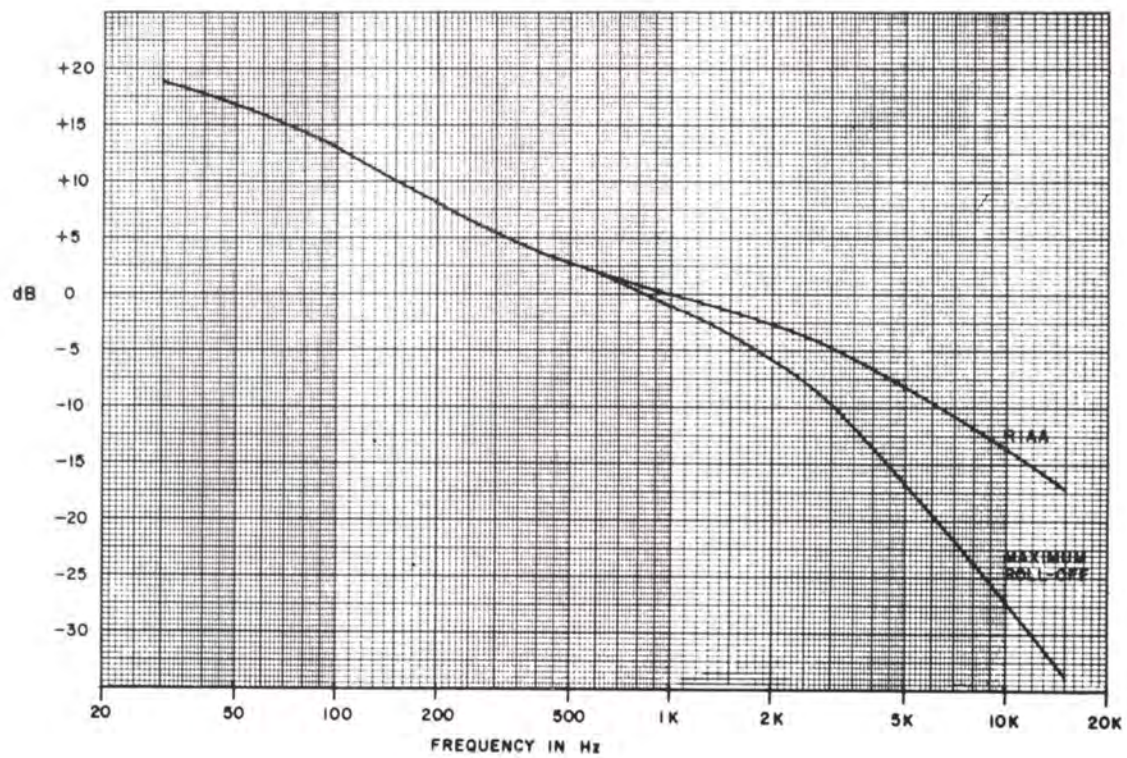
The following units are available as options:
(1) Special Tone Arm if required by customer; for example, Shure SME3009 or SME3012.
(2) SA10048 End Bells with vinyl overlay (2 req'd).
(3) AM275 Cue Amplifier.

functional



Simplified Schematic of SS3159

Equalization Characteristic of SS3159.

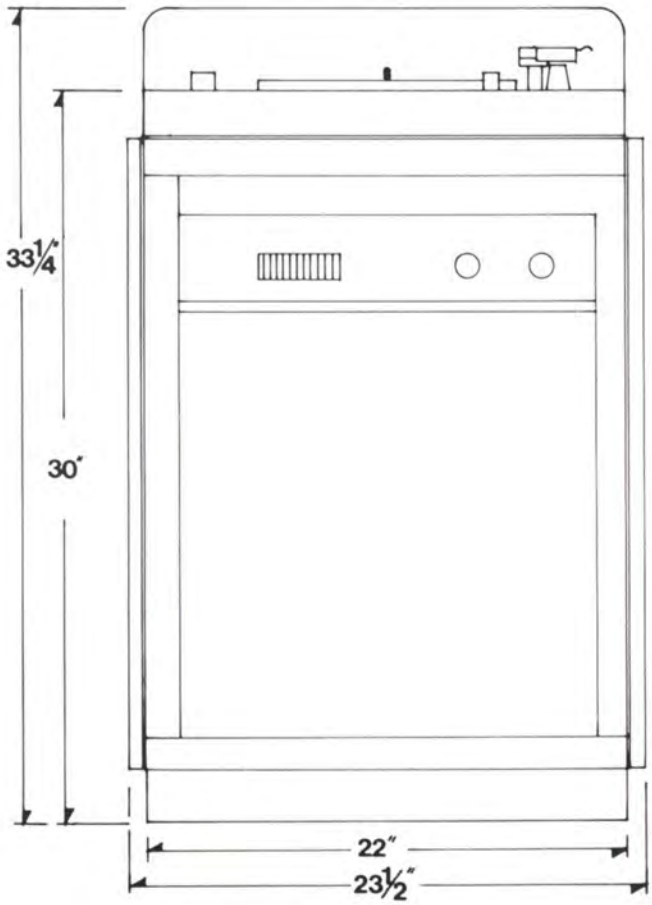


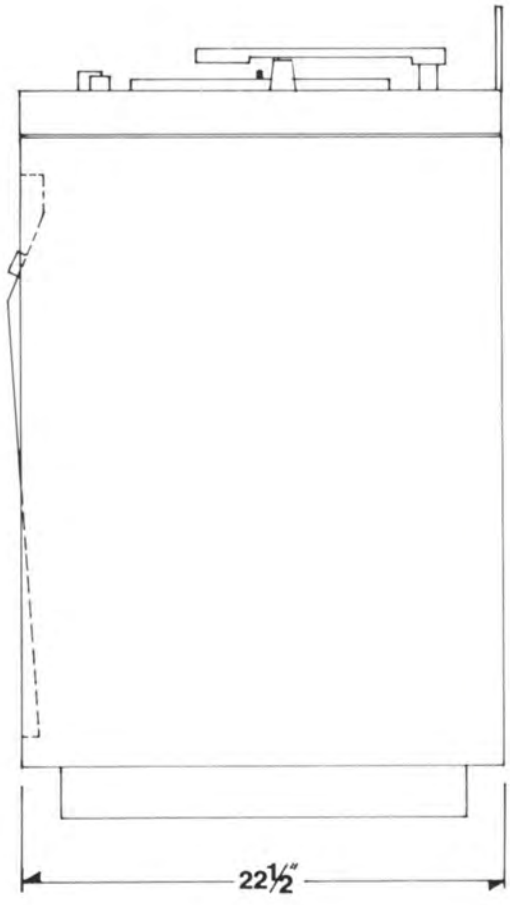
ordering information

The SS3159 Stereo Disc Reproducer is complete with mating connectors, tone arm, pickup cartridge, arm guard, felt-backed rubber turntable mat, and front and rear blank panels.

The price for the standard SS3159 does not include optional equipment nor the installation of optional equipment.

installation





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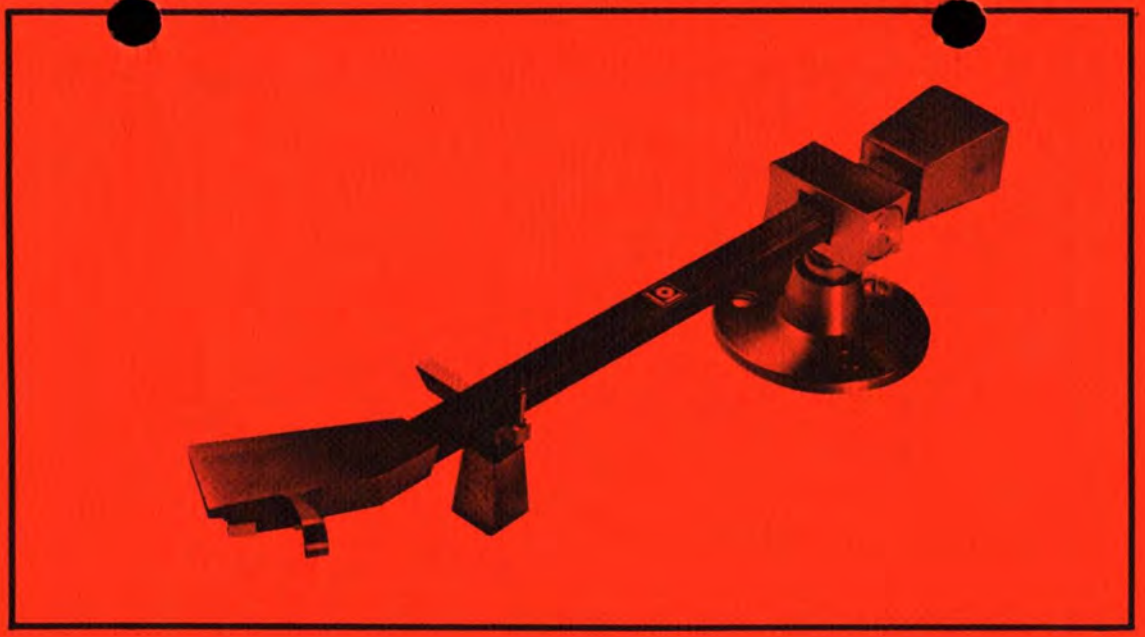
108 CARNFORTH ROAD, TORONTO, ONTARIO M4A 2L4 (416) 751-6262, TELEX: 06-963533

McCURDY RADIO INDUSTRIES INCORPORATED
1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

EAST COAST OFFICE: SADDLE RIVER, N.J. P.O. BOX 86, ZIP 07458, PHONE (201) 327-0750, TWX 610-492-3219



STEREOPHONIC
PROFESSIONAL
TRANSCRIPTION ARM

303-306 PROFESSIONAL TONE ARMS

"Micro-Trak" — A term especially created to properly name the finest professional tone arm series ever Designed.

With tracking capabilities as low as 1/10 of a gram, resonance below 10 Hz., and the greatest possible reliability; what other product could be considered by the professional user?

As you probably know, low mass and high compliance are the criteria for modern tone arm design. The 303 and 306 Micro-Trak format provides the low mass necessary for high compliance performance, and as a bonus, by plan, also provides the strength necessary for 24 hour a day, on line operation.

Features such as the impregnated wood body, laminated for high strength, the plug in memory balancing head, sapphire jewel bearings for virtually frictionless vertical rotation, the fluid anti skate mechanism, and the overall rugged simplicity of design make the models 303 and 306 arms the best buy available today.

Whether you are a station engineer looking for the finest possible performance, or a station manager looking for the lowest possible operating cost per hour, the Micro-Trak series provides it all. If you still wonder after reviewing the specifications, call one of the over six thousand satisfied professional users and find out for yourself.

MICRO-TRAK® SPECIFICATIONS

303 12" PROFESSIONAL TONE ARM

Dimensions: 12-1/2" overall (317.5 MM)
8-5/16" spindle to pivot (211.1 MM)
2-7/8" from pivot to back of arm (73 MM)

Weight: 1 lb. (.454 kg)

Overhang: 0.682" spindle center to stylus

Resonance: Less than 10 HZ 1/2 Gram at $30x10^{-6}$ CM/DYNE Compliance

Tracking Error: 3.0 in radius 0° 0′
3.75 in radius 1° 28′
4.75 in radius 0° 0′
5.5 in radius 2° 0′

MINIMUM TRACKING FORCE: 1/10 GRAM

306 16" PROFESSIONAL TONE ARM

Dimensions: 14-5/8" overall (37.15 CM)
8-5/16" spindle to pivot (21.11 CM)
3" from pivot to back of arm (7.6 CM)

Weight: 1.25 lbs.

Overhang: 0.5333" spindle center to stylus (13.5 MM)

Resonance: Less than 10 HZ 1/2 Gram at $30x10^{-6}$

Tracking Error: 3.0 in radius 0° 0′
3.75 in radius 0° 53′
4.75 in radius 0° 0′
5.5 in radius 1° 15′

MINIMUM TRACKING FORCE: 1/10 GRAM

ACCESSORIES

75932 — HEAD FOR 303 ARM.
75942 — HEAD FOR 306 ARM.

MICRO-TRAK CORPORATION 620 RACE ST., HOLYOKE, MASSACHUSETTS 01040 TEL. 536-3551

SA141

reel tape switcher

McCurdy

description & specifications

SA 141 REEL TAPE SWITCHER

Compact and self contained. Accepts –20 dBm to +8 dBm 10 K Bridging. 3-Watt monitoring with pre-post mode. Standard EIA Rack Panel 3½ in. x 19 in. Amphenol blue ribbon connectors for inputs and outputs.

A. 20 Source input selector (10 K Bridge)
B. Telco feed select
C. Switcher input select
D. Program gain control
E. Two way output select
F. Monitor gain control
G. Monitor head-set jack
H. Monitor speaker

All inputs and outputs are wired to Amphenol blue ribbon connectors at the rear of the unit.

MAX. GAIN

±1 dB.
Pgm: 28 dB max.
Mon: 55 dB max.

FREQUENCY RESPONSE (Ref. 1 kHz)

Pgm: ±0.5 dB, 20 Hz to 20 kHz.
Monitor: ±0.5 dB, 20 Hz to 20 kHz.

NOISE

Pgm: –85 dB below +18 dBm.
Monitor –75 dB below 3-Watts.

HARMONIC DISTORTION

Pgm. 0.5%, 20 Hz to 20 kHz at + 14 dBm.
Monitor: 0.5%, 20 Hz to 20 kHz at 3-W, 8 ohms.

INPUT LEVELS (Nominal)

–20 dBm, Bal/Unbal.

OUTPUT LEVELS (Nominal)

+4 dBm/+8 dBm, 600 ohms Bal.

SOURCE IMPEDANCE

600 ohms.

INPUT IMPEDANCE

10 K ohms.

POWER REQUIREMENTS

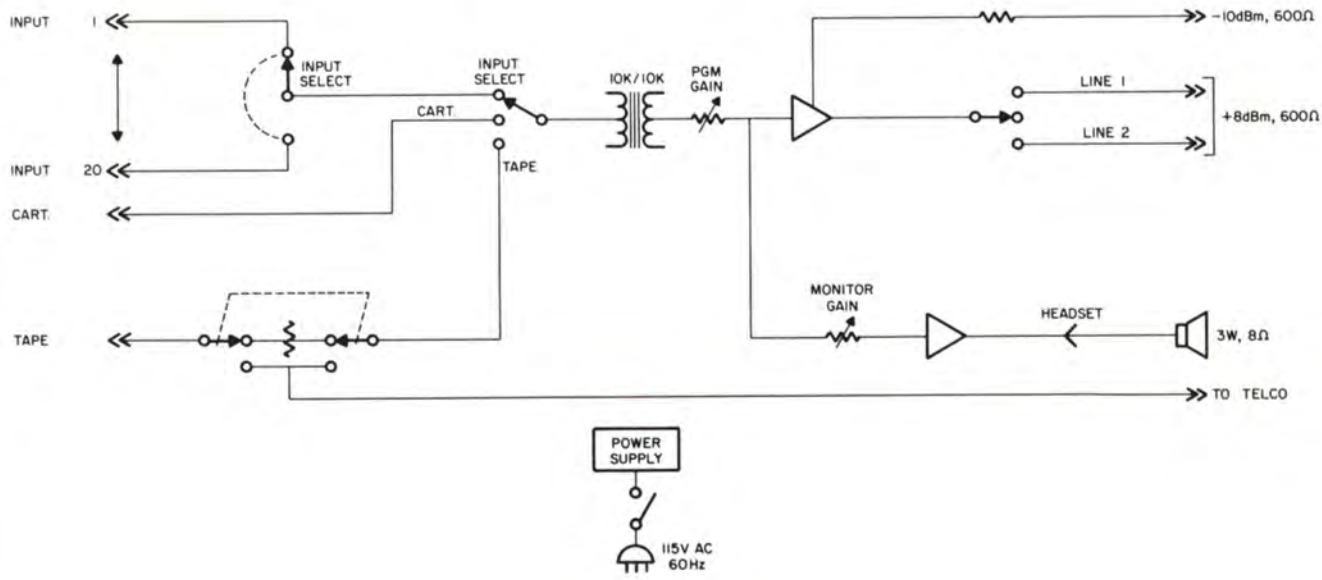
115 V//60 Hz single phase.

OVERALL DIMENSIONS

19 in. Wide, 3½ in. High, 7 in. Deep.

WEIGHT

7 lb. approx. (3.18 kg).



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108 CARNFORTH ROAD, TORONTO, ONTARIO M4A 2L4 (416) 751-6262, TELEX: 06-963533

McCURDY RADIO INDUSTRIES INCORPORATED
1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

EAST COAST OFFICE: SADDLE RIVER, N.J. P.O. BOX 86, ZIP 07458, PHONE (201) 327-0750, TWX 610-492-3219

DA503

audio distribution system

McCurdy

description & specifications

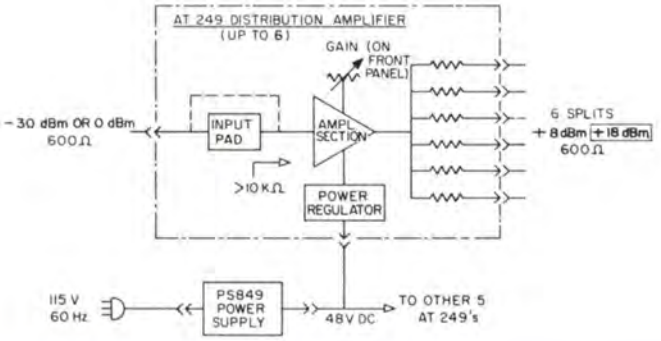
The DA503 Audio Distribution System is designed for audio distribution in broadcasting or other commercial applications where professional quality must be maintained. The DA503 consists of an FR904 19-inch Equipment Frame which holds up to six AT249 Distribution Amplifiers and one PS849 Power Supply.

Each AT249 bridges one input at any specified level from -30 dBm to 0 dBm, and provides six isolated outputs at +8 dBm 600 ohms. Thus, a complete complement of six amplifiers can provide 36 outputs from six inputs.

The wide input dynamic range is made possible by pad selection and preset gain adjustment. A distortion figure of less than 0.5% is maintained over the specified input levels and the frequency band of 30 Hz to 20 kHz.

The FR904 Equipment Frame mounts in a standard 19-inch rack or pedestal and occupies only 3-1/2 inches of vertical space.

Frequency Response: 20 Hz to 20 kHz, ±1 dB (ref 1 kHz).
Input Levels: -30 or 0 dBm depending on strapping on PC Board and Gain adjustment.
Max Gain: 48 dB, ±1 dB. (Gain variable 0 to 48 dB with front panel gain control.)
Outputs: Up to six outputs per amplifier at +8 dBm (+18 dBm).
Source Impedance: 600 ohms terminated.
Input Impedance: Greater than 10,000 ohms.
Load Impedance: 600 ohms or higher; balanced.
Noise: 75 dB to 85 dB below +18 dBm, depending on gain control setting.
Distortion: Less than 0.5% with -20 dBm input and +18 dBm output, 30 Hz to 20 kHz.
Power Requirement: 115v ac, 60 Hz, 40 VA for full complement of six amplifiers.
Dimensions: 3-1/2 in. high, 13-3/8 in. deep, 19 in. wide.
Weight: 22 lb approx.



ordering information

Order DA503 Distribution Amplifier Assembly and specify quantity of AT249 Amplifiers up to a maximum of six.

The standard DA503 includes the PS849 Power Supply and the FR904 Equipment Frame, prewired for the customer to connect inputs and outputs.

Printed in Canada

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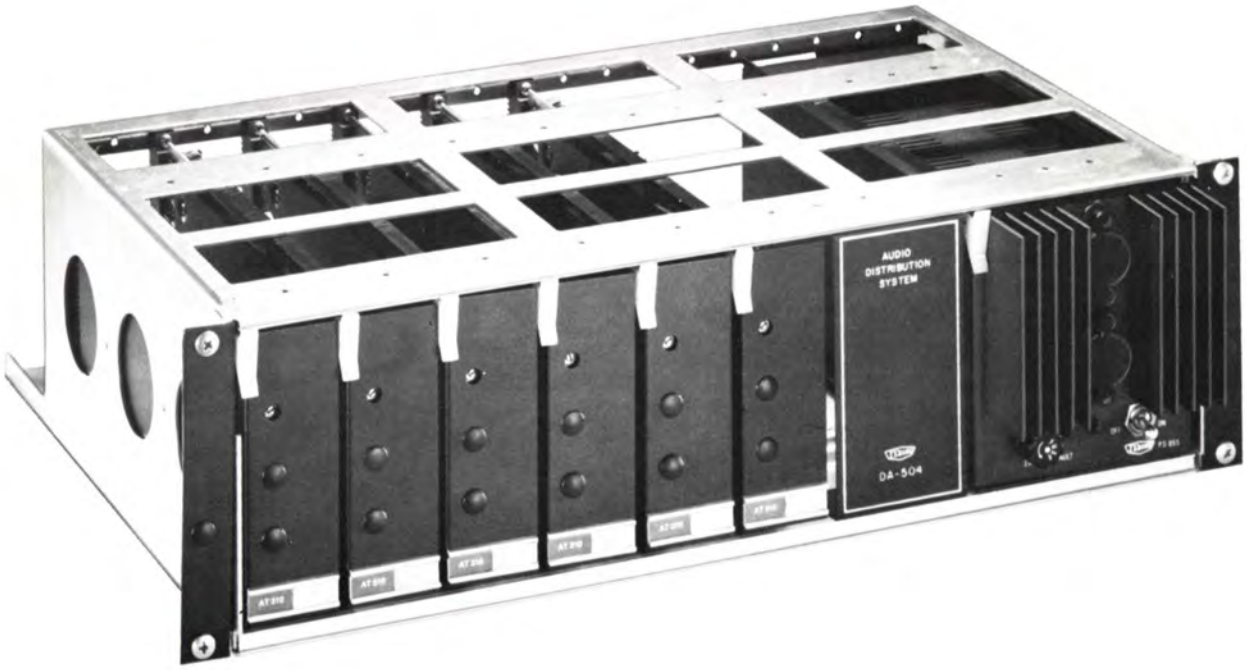
1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

EAST COAST OFFICE: SADDLE RIVER, N.J. P.O. BOX 86, ZIP 07458, PHONE (201) 327-0750, TWX 610-492-3219

DA 504

audio distribution system



McCurdy

description & specifications

The DA 504 Audio Distribution System is designed for audio distribution in Broadcasting or other commercial applications where professional quality must be maintained. The DA 504 consists of an FR 906 5¼ inch rack mounting frame which accommodates up to six AT 310 distribution amplifiers, and one PS 855 power supply.

Each AT 310 bridges one input at any specified program level from –12 VU to +10 VU and provides twelve isolated outputs at +8 VU 600 ohms. Thus, a complete complement of six amplifiers can provide 72 outputs.

The AT 310 Distribution Amplifier has a separate low impedance output which will provide an additional source to an external splitting network, with a maximum of ten splits, FOR A TOTAL OF 22

The FR 906 Frame mounts in a standard 19 inch rack or pedestal, and occupies only 5¼ inches of vertical space.

GAIN
20 dB supplied.
40 dB max. with FBR of 820 ohm.

INPUT LEVEL (Nominal)
–12 dBm. +20 dBm max.

OUTPUT LEVEL (Nominal)
+8 dBm, +25 dBm max. (Typically +26 dBm).

INPUT IMPEDANCE
20 K ohms or summing balanced.

SOURCE IMPEDANCE
600 ohms balanced.

OUTPUT IMPEDANCE
600 ohms balanced.

LOAD IMPEDANCE
600 ohms balanced.

OUTPUT SPLITS
12 on card (max. of 10 externals).

FREQUENCY RESPONSE (Ref. 1 kHz)
±0.25 dB, 20 Hz to 20 kHz.
(Typically 0.1 dB).

DISTORTION
0.2%, 20 Hz to 20 kHz (+18 dBm out).
Typically 0.1%.
0.25%, 20 Hz to 20 kHz (+25 dBm out).
Typically 0.1%.

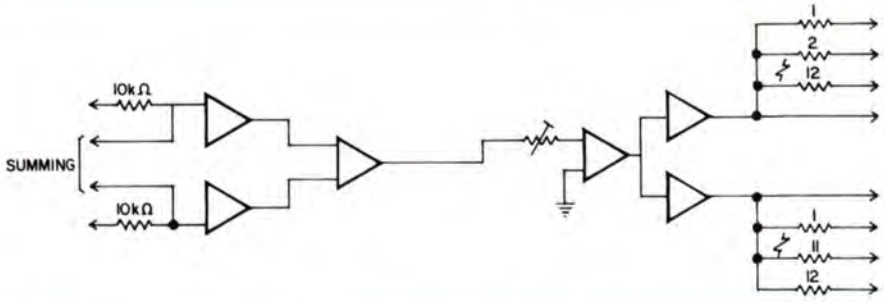
SIGNAL TO NOISE
Unity gain below +18 dBm better than 90 dB from 10 Hz to 100 kHz.

OUTPUT SPLIT ISOLATION
Better than 70 dB (typically 80 dB mid-band) 20 Hz to 20 kHz.

POWER REQUIREMENTS
115 VAC, 60 Hz.

DIMENSIONS
5¼ in. High, 13 in. Deep, 19 in. Wide.

WEIGHT
30 lb. Approx. (13.6 kg.)



ORDERING INFORMATION
Order DA 504 Distribution Amplifier Assembly and specify quantity of AT 310 amplifiers up to a maximum of six.

The standard DA 504 includes the PS 855 Bi-polar power supply and the FR 906 equipment frame, pre-wired for the customer to connect inputs and outputs.

McCURDY RADIO INDUSTRIES LIMITED
108 CARNFORTH ROAD, TORONTO, ONTARIO M4A 2L4 (416) 751-6262, TELEX: 06-963533

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1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

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crown

D-60

The CROWN D-60 single or dual channel amplifier may be used for many different applications. It is ideal for driving efficient speaker systems, as an electrostatic headphone amplifier, or as amplification for the ambience channels in a four channel system. Solid state circuits provide instant start up with minimum thumps and no program delay. Front panel level controls and a stereo headphone jack are provided. A switch on the rear of the unit allows stereo or mono operation with no internal wiring changes.

The D-60 is fully protected against mismatched and shorted loads by a self-resetting limiter which senses overload. It then acts instantly to protect the amplifier, and reverts to normal operation as soon as the overload disappears.

The input stage is protected from excessive input signals by a series limiting resistor. The input voltage amplifiers in the D-60 are integrated circuits powered by two voltage-regulated supplies.

The D-60 output stages require no bias current adjustment since CROWN'S patented output circuitry employing the AB + B configuration uses no quiescent bias current in the output transistors and is completely stable with changing temperature.

After assembly, each amplifier is thoroughly tested and must exceed our guaranteed specifications before it is shipped. A proof of performance sheet accompanies each unit showing actual specifications attained.

The CROWN D-60 amplifier carries a full warranty for three years against failure. Parts, labor, and round trip shipping are provided at no charge should any defects occur.

D-60 Specifications

STEREO

Output Power

32 watts per channel minimum RMS (both channels operating)) into an 8 ohm load over a bandwidth of 20-20KHz at a rated RMS sum total harmonic distortion of 0.05% of the fundamental output voltage.

Frequency Response

±0.1 db 20Hz-20KHz at 1 watt into 8 ohms; ± 1.2 dB 5Hz-100KHz at 1 watt into 8 ohms.

1KHz Power

36 watts RMS into 8 ohms, per channel, both channels operating, 0.1% total harmonic distortion.

Harmonic Distortion

Less than 0.001% from 20Hz-300Hz, and increasing linearly to 0.05% at 20KHz at 32 watts RMS per channel into 8 ohms.

I.M. Distortion (60Hz - 7KHz 4:1)

Less than 0.05% from 0.01 watts to 0.25 watts, and less than 0.01% from 0.25 watts to 32 watts into 8 ohms per channel.

Slewing Rate

6 volts per microsecond (slewing rate is the maximum value of the first derivative of the output signal, or the maximum slope of the output signal).

Damping Factor

Greater than 400, DC-400 Hz into 8 ohms.

Output Impedance

Less than 15 milliohms in series with less than 3 microhenries.

Load Impedance

Rated for 8 ohm usage; safely drives any load including completely reactive loads.

Voltage Gain

20.6 ± 2% or 26.3 ± 0.2 dB at maximum gain.

Input Sensitivity

0.78 volts ±2% for 32 watts into 8 ohms.

Output Signal

Unbalanced, dual channel.

MONAURAL

Output Power

64 watts minimum RMS into a 16 ohm load over a bandwidth of 20-20KHz at a rated RMS sum total harmonic distortion of 0.05% of the fundamental output voltage.

Frequency Response

± 0.2 dB 20 Hz-20KHz, 1 watt, 16 ohms, ± 1dB 6Hz-50KHz, 1 watt, 16 ohms.

1KHz Power

72 watts RMS into 16 ohms, 0.1% total harmonic distortion.

Harmonic Distortion

Less than 0.001% from 20Hz-300Hz and increasing linearly to 0.05% at 20KHz at 64 watts into 16 ohms.

I.M. Distortion

Less than 0.05% from 0.01 watts to 0.25 watts, and less than 0.01% from 0.25 watts to 64 watts into 16 ohms.

Slewing Rate

12 volts per microsecond.

Damping Factor

Greater than 400, DC-400Hz into 16 ohms.

Output Impedance

Less than 30 milliohms in series with less than 6 microhenries.

Load Impedance

Rated for 16 ohm usage, safely drives any load including completely reactive loads.

Voltage Gain

41.2±2% or 32.3 ± 0.2dB at maximum gain.

Input Sensitivity

0.78 volts ±2% for 64 watts into 16 ohms.

Output Signal

Balanced, single channel.

GENERAL

Hum and Noise

(20Hz-20KHz)
106 dB below rated output.

Phase Response

+10, -15° 20Hz-20KHz at 1 watt.

Input Impedance

25K ohms ± 30%

Amplifier Output Protection

Short, mismatch, and open circuit proof. V-I limiting is instantaneous with no annoying thumps, cutout, etc.

Overall Protection

AC line fused. Controlled slewing rate voltage amplifiers protect overall amplifier against RF burnouts. Input overload protection is furnished by internal resistance at inputs of amp.

DC Output Offset

(Shorted Input). 10 millivolts or less.

Turn-on

Instantaneous, with minimum thumps and no program delay.

Circuit

Wideband multiple feedback loop design utilizing one linear IC (dual op-amp). Total equivalent of 40 transistors, 18 signal diodes, 2 zeners, and 4 rectifier diodes.

Power Supply

Special design low profile transformer. Computer grade filter capacitors. Two regulated supplies for complete isolation and stability.

Power Requirements

Requires 50 Hz-400Hz AC on 120 volts or 240 volts ±10% operation. Draws 15 watts or less on idle, 120 watts at 64 watts total output.

Heat Sinking

The entire amplifier is used as a heat sink. Front panel extrusion acts as a heat sink along with the chassis covers.

Chassis

Aluminum chassis construction for maximum heat conduction and minimum weight.

Controls

Two input level controls on front panel with power switch and pilot light. Stereo-mono switch on rear of unit.

Connectors

Input – 1/4 inch phone jack.
Output – Color-coded binding posts with stereo 1/4 inch earphone jack on front panel.
AC Line – Three-wire (grounded) male connector on 5 foot minimum cable.

Dimensions

17 inches long, 8¾ inches deep, and 1¾ inches high (8 inches deep from mounting surface). 19 inch standard rack mounting hardware included.

Weight

10 pounds net weight.

Finish

Santinized aluminum front panel with charcoal gray suede textured lower panel.

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1718 West Mishawaka Road
Elkhart, Indiana 46514
219-294-5571
TWX 810-294-2160

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D-150A

The CROWN D-150A is a single or dual channel power amplifier designed for precision amplification of frequencies from 1Hz to 20 kHz. The design of the D-150A provides extremely low harmonic and intermodulation distortion with very low noise. A switch on the rear of the unit allows stereo or mono operation with no internal wiring changes. In the mono mode, the D-150A is capable of a 50 volt balanced line output. The Unit operates on AC current from 120V to 240V. See complete specifications on reverse side.

The D-150A has two direct coupled amplifier circuits employing a dual integrated op amp and silicon transistors in all amplifier stages. Input voltage amplifiers are powered by two regulated voltage supplies. The output stages utilize CROWN-patented circuitry, including the class AB + B configuration. No quiescent bias current is used in the output transistors for better efficiency and wide band response.

The D-150A contains output protection circuitry pioneered by CROWN. This circuitry protects the unit completely against shorted, mismatched, or open loads and eliminates completely the need for DC fuses and mode switches to protect the amplifier. With this unique protection system, the D-150A can safely drive any speaker load, resistive or reactive, with no fear of harming the amplifier. The speakers can be paralleled with no deterioration of sound quality since changing the load impedance only affects the maximum power available, not the ability of the amplifier to produce clean sound.

All components of the D-150A must meet the highest criteria for long term performance. All resistors in critical areas are 1% tolerance. Integrated circuits and transistors are individually tested before assembly. After assembly, each amplifier is thoroughly tested and must exceed our guaranteed specifications before it is shipped. A proof of performance sheet accompanies each unit showing actual specifications attained.

The CROWN D-150A amplifier carries a full warranty for three years against failure. Parts, labor, and round trip shipping are provided at no charge should any defects occur.

*The D-150A may be rack mounted, or as shown, an optional cabinet is available.

D-150A Specifications

STEREO

Output Power

80 Watts per channel minimum RMS (both channels operating) into an 8 ohm load over a bandwidth of 1Hz-20kHz at a rated RMS sum total harmonic distortion of 0.05% of the fundamental output voltage.

Frequency Response

±0.1 dB DC-20KHz at 1 watt into 8 ohms; ± 1 dB DC-100 kHz at 1 watt into 8 ohms.

1kHz Power

90 watts RMS into 8 ohms, per channel, both channels operating, 0.1% total harmonic distortion.

Harmonic Distortion

Less than 0.001% from 20Hz - 400Hz, and increasing linearly to 0.05% at 20 kHz at 80 watts RMS per channel into 8 ohms.

I.M. Distortion (60Hz-7KHz 4:1)

Less than 0.05% from 0.01 watt to 0.25 watts and less than 0.01% from 0.25 watts to 80 watts into 8 ohms, per channel.

Slewing Rate

6 volts per microsecond (slewing rate is the maximum value of the first derivative of the output signal or the maximum slope of the output signal).

Damping Factor

Greater than 400, DC-400 Hz into 8 ohms.

Output Impedance

Less than 15 milliohms in series with less than 3 microhenries.

Load Impedance

Rated for 8 ohms usage; safely drives any load including completely reactive loads.

Voltage Gain

20.6 ± 2% or 26.3 ± .2 dB at maximum gain.

Input Sensitivity

1.19 volts ± 2% for 80 watts into 8 ohms.

Output Signal

Unbalanced, dual channel.

MONAURAL

Output Power

160 watts minimum RMS into a 16 ohm load over a bandwidth of 1Hz-20kHz at a rated RMS sum total harmonic distortion of 0.05% of the fundamental output voltage.

Frequency Response

±0.15 dB DC-20KHz at 1 watt into 16 ohms; ±1 dB DC-60KHz at 1 watt into 16 ohms.

1kHz Power

180 watts RMS into 16 ohms, 0.1% total harmonic distortion.

Harmonic Distortion

Less than 0.001% from 20-400Hz and increasing linearly to 0.05% at 20 kHz at 160 watts into 16 ohms.

I.M. Distortion

Less than 0.05% from 0.01 watts to 0.25 watts and less than 0.01% from 0.25 watts to 160 watts into 16 ohms, per channel.

Slewing Rate

12 volts per microsecond.

Damping Factor

Greater than 400, DC-400Hz into 16 ohms.

Output Impedance

Less than 30 milliohms in series with less than 6 microhenries.

Load Impedance

Rated for 16 ohm usage; safely drives any load including completely reactive loads.

Voltage Gain

41.2 ± 2% or 32.3 ± 0.2 dB at maximum gain.

Input Sensitivity

1.19 volt ± 2% for 160 watts into 16 ohms.

Output Signal

Balanced, single channel.

GENERAL

Hum and Noise

(20Hz-20KHz) 110 dB below rated output.

Phase Response

+0, -15° DC-20KHz at 1 watt.

Input Impedance

25K ohms, ± 30%.

Amplifier Output Protection

Short, mismatch, and open circuit proof. Limiting is instantaneous with no flyback pulses, thumps, cutout, etc. No premature limiting on transients.

Overall Protection

AC line fused. Thermal switch in AC line protects against over-heating caused by insufficient ventilation. Controlled slewing rate voltage amplifiers protect overall amplifier against RF burnouts. Input overload protection is furnished by internal resistance at inputs of amp.

DC Output Offset

(Shorted Input) 10 millivolts or less, internally adjustable to zero.

Turn-on

Instantaneous with minimum thumps and no program delay.

Circuit

Wideband multiple feedback loop design utilizing one linear IC (dual op-amp). Total equivalent of 47 transistors, 24 signal diodes, 3 zener diodes, and 6 rectifier diodes.

Power Supply

Massive computer grade filter capacitors store over 20 joules of energy. Two regulated supplies for complete isolation and stability.

Power Requirements

Requires 50 - 400 Hz AC on 120 volts or 240 volts ± 10% operation. Draws 30 watts or less on idle, 250 watts on 160 watts total output.

Heat Sinking

The entire amplifier is used as a heat sink. 3/16 inch thick chassis acts as a heat sink along with auxiliary fins.

Chassis

All aluminum construction for maximum heat conduction and minimum weight.

Controls

Two input level controls on front panel with power switch and pilot light. Stereo-mono switch on rear of unit.

Connectors

Input - 1/4 inch phone jacks
Output - Color coded binding posts
AC line - 3-wire (grounded) male connector on 5 foot minimum cable.

Dimensions

17 inches long, 5-1/4 inches high, 8-3/4 inches deep (for mounting surface of front panel), 19 inches long with standard rack mounting brackets installed.

Weight (Net)

25 pounds.

Finish

Satinized aluminum front panel with charcoal gray suede textured lower panel.

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Elkhart, Indiana 46514
219-294-5571
TWX 810-294-2160

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DC-300A

The CROWN DC-300A is a single or dual channel power amplifier designed for precision amplification of frequencies from 1Hz to 20kHz. The design of the DC-300A provides extremely low harmonic and intermodulation distortion with very low noise. A switch on the rear of the unit allows stereo or mono operation with no internal wiring changes. In the mono mode, the DC-300A is capable of a 70V balanced line output. The unit operates on AC current from 120V to 256V. See complete specifications on reverse side.

The DC-300A contains output protection circuitry pioneered by CROWN. This circuitry protects the unit completely against shorted, mismatched, or open loads and completely eliminates the need for DC fuses and mode switches to protect the amplifier. With this unique protection system, the DC-300A can safely drive any speaker load, resistive or reactive, with no fear of harming the amplifier. The speakers can be paralleled with no deterioration of sound quality since changing the load impedance only affects the maximum power available, not the ability of the amplifier to produce clean sound.

The DC-300A has two totally separate direct coupled amplifier circuits employing dual integrated circuit op amp input stages and silicon transistors in succeeding stages. The DC-300A exhibits essentially flat frequency and phase response down to DC and eliminates thumping from non-symmetrical wave forms. Output stages utilize CROWN class AB + B circuitry in which the driver transistors carry the quiescent bias current while the output transistors serve only as boosters which sense and deliver large currents.

As with other CROWN components, the DC-300A is completely protected by a full warranty for three years against defects in parts and workmanship. CROWN pays parts, labor, and round trip shipping, should the DC-300A need service.

*The DC-300A may be rack mounted, or as shown, an optional cabinet is available.

DC-300A Specifications

STEREO

Output Power

155 watts per channel minimum RMS (both channels operating) into an 8 ohm load over a bandwidth of 1Hz-20 KHz at a rated RMS sum total harmonic distortion of 0.05% of the fundamental output voltage.

Frequency Response

±0.1 dB DC-20KHz at 1 watt into 8 ohms; ± 1dB DC-100KHz at 1 watt into 8 ohms.

1KHz Power

180 watts RMS into 8 ohms, per channel, both channels operating, 0.1% total harmonic distortion.

Harmonic Distortion

Less than 0.001% from 20 Hz-400 Hz, and increasing linearly to 0.05% at 20 KHz at 155 watts RMS per channel into 8 ohms.

IM Distortion (60 Hz-7KHz 4:1)

Less than 0.05% from 0.01 watts to 0.25 watts and less than 0.01% from 0.25 watts to 155 watts into 8 ohms per channel.

Slewing Rate

8 volts per micro-second (slewing rate is the maximum value of the first derivative of the output signal, or the maximum slope of the output signal).

Damping Factor

Greater than 750, DC-400 Hz into 8 ohms.

Output Impedance

Less than 7 milliohms in series with less than 3 microhenries.

Load Impedance

Rated for 8 ohm usage; safely drives any load including completely reactive loads.

Voltage Gain

20.6 ± 2% or 26.3 ± 0.2 dB at maximum gain.

Input Sensitivity

1.71 volts ± 2% for 155 watts into 8 ohms.

Output Signal

Unbalanced, dual channel.

MONAURAL

Output Power

310 watts minimum RMS into a 16 ohm load over a bandwidth of 1Hz-20KHz at a rated RMS sum total harmonic distortion of 0.05% of the fundamental output voltage.

Frequency Response

±0.15 dB DC-20 KHz at 1 watt into 16 ohms; ± 1 dB DC-60KHz at 1 watt into 16 ohms.

1KHz Power

360 watts RMS into 16 ohms, 0.1% total harmonic distortion.

Harmonic Distortion

Less than 0.001% from 20 Hz - 400Hz and increasing linearly to 0.05% at 20 KHz at 310 watts into 16 ohms.

I.M. Distortion

Less than 0.05% from 0.01 watts to 0.25 watts and less than 0.01% from 0.25 watts to 310 watts into 16 ohms.

Slewing Rate

16 volts per microsecond.

Damping Factor

Greater than 700, DC-400 Hz into 16 ohms.

Output Impedance

Less than 15 milliohms in series with less than 6 microhenries.

Load Impedance

Rated for 16 ohm usage; safely drives any load including completely reactive loads.

Voltage Gain

41.2 ± 2% or 32.3 ± 0.2 dB at maximum gain.

Input Sensitivity

1.71 volts for 310 watts into 16 ohms.

Output Signal

Balanced, single channel.

GENERAL

Hum and Noise

(20Hz-20KHz) 110 db below rated output.

Phase Response

+0, -15° zero to 20 KHz at 1 watt.

Input Impedance

25 K ohms, ± 30%.

Amplifier Output Protection

Short, mismatch, and open circuit proof. Limiting is instantaneous with no flyback pulses, thumps, cutout, etc. No premature limiting on transients.

Overall Protection

AC line fused, thermal switch in AC line protects against overheating caused by insufficient ventilation. Controlled slewing rate voltage amplifiers protect overall amplifier against RF burnouts. Input overload protection is furnished by internal resistance at inputs of amp.

DC Output Offset

(Shorted input) 10 millivolts or less, internally adjustable to zero.

Turn-on

Instantaneous, with minimum thumps, and no program delay.

Circuit

Wideband multiple feedback loop design utilizing one linear 1C (dual op-amp). Total equivalent of 59 transistors, 32 signal diodes, 3 zeners and 6 rectifier diodes.

Power Supply

1 kilowatt transformer with massive computer-grade filter capacitors storing over 48 joules of energy. Two regulated supplies for complete isolation and stability.

Power Requirements

Requires 50 - 400 Hz AC with adjustable taps for 120, 128, 240, 248 and 256 v. ± 10% operation. Draws 40 watts or less on idle, 510 watts at 310 watts total output.

Heat Sinking

The entire amplifier is used as a heat sink. Front panel extrusion acts as a heat sink along with the chassis covers.

Chassis

All aluminum construction for maximum heat conduction and minimum weight, heavy aluminum front panel is single extrusion.

Controls

Independent input level controls are on front panel. Power switch, with integral pilot light is on front panel. Non-interacting DC balance controls are mounted behind front panel. Stereo-mono switch on rear of unit.

Connectors

Input - 1/4 inch phone jack
Output - Color coded binding posts
AC Line - three-wire (grounded) male connector on 5 ft. min. cable.

Dimensions

19 inch standard rack mount (w.e. hole spacing) 7 inches high, 9-3/4 inches deep (from mounting surface).

Weight (Net)

48 pounds.

Finish

Satinized aluminum front panel with charcoal gray suede textured lower panel.

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1718 West Mishawaka Road
Elkhart, Indiana 46514
219-294-5571
TWX 810-294-2160

LSA609

speaker-amplifier assemblies

McCurdy

description & specifications

The LSA609 Speaker/Amplifier Assembly is designed to provide quality sound from monitor feeds or from audo distribution systems. The 10-watt amplifier used in this assembly supplies an adequate reserve of low-distortion power which, combined with the acoustically-designed speaker enclosure, makes this assembly ideal for Studio, Control Room, or Classroom monitoring.

The LSA609 has a 15-degree reverse slope for wall-mounting and is fitted with a hanger bracket. It has a high-impedance input necessary for bridging a 600-ohm line, and uses the McCurdy AM415 10-watt Power Amplifier to drive a dual-cone speaker.

The dual-cone speaker is used with a special surround damping treatment to lower the free-air resonance and provide optimum damping at low frequencies. This results in an assembly possessing extremely low distortion and wide frequency response characteristics. Additional damping is applied to the interior of the speaker compartment to reduce spurious reflections from the inner surface.

The cabinet material is hand-rubbed walnut, with a frontal finish of open-weave material chosen to reduce high-frequency attenuation.

Input connections are easily made to screw terminals at the rear of the amplifier. A volume control and ac fuse are recessed in the side of the cabinet.

Input Level: 0 dBm, bridging, unbalanced.
Output Level: 10 watts max, 8 ohms.
Source Impedance: 600 ohms, unbalanced, or transformer balanced.
Input Impedance: 10,000 ohms, unbalanced.

System Frequency Response: ± 3 dB, 50 HZ to 18 kHz.
Power Requirements: 117v ac, 60 Hz, 30 va.
Dimensions: LSA609: 11-11/16 in. deep at top, 8 in. deep at bottom, 13-3/8 in. high, 21-19/32 in wide.
Weight: Approximately 32 lb.

ordering information

ORDER
LSA609 Speaker/Amplifier Assembly for wall mounting.

Printed in Canada

McCURDY RADIO INDUSTRIES LIMITED
108 CARNFORTH ROAD, TORONTO, ONTARIO M4A 2L4 (416) 751-6262, TELEX: 06-963533

McCURDY RADIO INDUSTRIES INCORPORATED
1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

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Model 4301 Broadcast Monitor

Model 4301 Broadcast Monitor

Accurate, smooth reproduction 45 to 15,000 Hz, ±3 dB

39 dB SPL at 30 feet with a 1-milliwatt input

88 dB SPL at 1 meter with a 1-watt input

Components: 8-inch low frequency loudspeaker, 1.4-inch high frequency direct radiator

Balance control located behind the removable grille

Oiled walnut enclosure

A compact monitor loudspeaker system designed specifically for broadcast applications, the 4301 delivers the wide band sound reproduction, accuracy and efficiency required by improved broadcast technology. Use of the 4301 is particularly relevant in light of the most recent broadcast developments, including TV/FM stereo simulcasting, AM stereo and multiplex television audio. Just as a video engineer wouldn't think of judging image quality on a household television receiver, an audio engineer shouldn't consider monitoring AM, FM, TV or film sound on anything less than a studio-quality loudspeaker system.

A professional monitor, such as the 4301, is of particular importance for monitoring the quality of the transmitted signal in order to detect and control spurious noise, i.e., turntable rumble, air conditioning and other acoustic interference picked up by open microphones, tape hiss or cue tone leakage. Such noise results in loss of broadcast power as well as signal degradation. Previously, monitoring these sounds would have been inconsequential since they exceeded the bandwidth or definition capabilities typical of audio transmission and reception. However, the competition for quality among broadcasters, enhanced by marked improvements in recorded program material, have resulted in a generation of equipment capable of transmitting high fidelity signals virtually equal to the program material. This, coupled with increased listener awareness of sound quality, has resulted in industry-wide improvement in broadcast technology, making accurate monitoring absolutely essential.

The 4301 shares its basic performance characteristics with all other JBL monitors—exceptional clarity, wide dynamic range, solid bass and open high frequency reproduction. The 4301 is efficient enough to produce a sound pressure level of 98 dB in a typical broadcast booth of 6' x 10' x 8' (1.8 x 3.0 x 2.4 m) with an amplifier delivering only 10 watts rms. The compact enclosure of the 4301 is designed to fit the smaller spaces typical of broadcast control booths, production studios or mobile recording, broadcast and film editing facilities.

Low Frequency Loudspeaker

The 4301 utilizes a low frequency loudspeaker specifically engineered for a compact enclosure without the compromises usually associated with smaller drivers. The 8-inch (20 cm) loudspeaker exhibits unusually smooth frequency response, wide dynamic range, superior transient reproduction and low distortion for a unit of compact size. It features a precision die-cast aluminum frame for structural integrity under the most severe operating conditions. The 2-inch (5 cm) diameter copper voice coil is suspended in a magnetic field having a flux density of 8500 gauss. The magnetic field is generated by a 2½-pound (1.1 kg) low-loss magnetic assembly energized by an Alnico V magnet. Mass and compliance of the integrally stiffened cone have been carefully selected to optimize low frequency bandwidth and definition while reducing distortion. As with all JBL loudspeakers, this unit provides maximum power handling capacity and efficiency consistent with the bandwidth expected of the device.

High Frequency Direct Radiator

The open, crisp treble performance of the 4301 is the product of a 1.4-inch (3.6 cm) direct radiator designed for clarity, smoothness of response and power handling capacity. The ⅝-inch (1.6 cm) copper voice coil is large in relation to cone size for efficiency and transient reproduction with definition and accuracy, yet the diameter of the cone and center dome has been kept small to obtain wide dispersion. The magnetic assembly weighs 1⅜ pounds (0.7 kg) and generates a flux density of 15,000 gauss. The entire direct radiator is surrounded by a ring of dense foam damping material to absorb spurious radiation and reflections.

Frequency Dividing Network

Smooth control of the component loudspeakers is achieved by a frequency dividing network engineered and tested to complement the electrical and acoustical characteristics of the system. The dividing network is fitted with a continuously variable control that permits adjusting the relative level of the high frequency direct radiator to suit listening preferences and room conditions. The control does not affect the crossover frequency, nor does it limit the upper frequency response of the loudspeaker system.

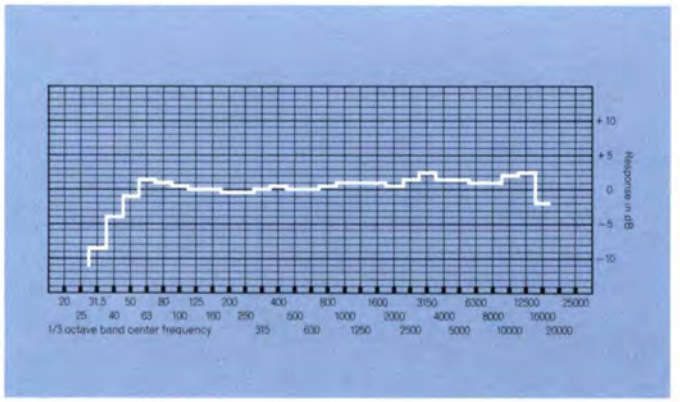
Enclosure

Size and configuration of the 4301 enclosure have been carefully matched to the acoustic characteristics of the component loudspeakers as well as the intended use of the complete system. To achieve maximum strength and resistance to vibration, all enclosure joints interlock, are hand fitted and wood welded; all panels are constructed of ¾-inch (19 mm) dense compressed stock. This material, also known as particle board, is preferred to solid wood for its superior acoustical properties. Acoustic damping material is applied to the interior surfaces of the side and back panels to attenuate standing waves within the enclosure. A ducted port extending through the baffle panel provides proper acoustical loading of the low frequency loudspeaker. All components mount directly to the baffle panel and are removable from the front of the enclosure. The four side panels are veneered with solid American Black Walnut, hand rubbed to a rich, lustrous finish enhancing the natural beauty of individual grain structure and color.

Test Conditions

The accompanying graph and specifications were compiled from measurements made under carefully controlled conditions. The loudspeaker system was mounted flush in the center of a large, flat baffle in a non-reverberant environment. Laboratory-standard condenser microphones were suspended in a spherical pattern around the acoustic center of the system, sufficiently distant to be out of the near field, so that data taken would reflect the total output of the combined transducers. In keeping with accepted laboratory practice, all equipment was checked and calibrated before tests were conducted.

Bandwidth On-Axis



Frequency response of the 4301 taken with 1/3-octave band pink noise. Measured response contour of a typical system averaged through an inclusive arc of 30° in the vertical and horizontal planes does not deviate more than 3 dB from the above curve.

Loudspeaker system components of the 4301 Broadcast Monitor

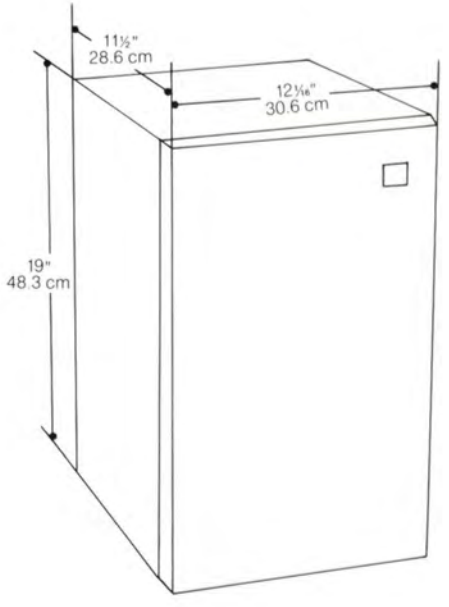
JBL continually engages in research related to product improvement. New materials, production methods and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published description but is always warranted to equal or exceed the original design specifications unless otherwise stated.

Specifications

Maximum Power Input[1]	15 watts rms at 8 ohms	
Nominal Impedance	8 ohms	
Power Output[2]	88 dB SPL measured at 10 ft. (3.0 m) in a room volume of 2000 cu. ft. (56.6 m³) with ½ rated power input (−3 dB)	
Frequency Response		
Sine Wave, On-Axis	45 to 15,000 Hz, ±3 dB	
⅓-Octave Band (400 Hz Reference)	−3 dB at 50 Hz 0 dB at 1200 Hz +2 dB at 12 kHz	
Polar Response	No less than −6 dB at 90° horizontal and vertical to 10 kHz	
Sensitivity	39 dB SPL measured at 30 feet (9.1 m) with a 1-milliwatt input averaged from 500 to 2500 Hz 88 dB SPL measured at 1 meter (3.3 ft.) with a 1-watt input averaged from 500 to 2500 Hz	
Distortion		
½ Power, 87 dB SPL/10 ft. (3.0 m), Single Frequency	0.5% or less third harmonic generation from 100 to 15,000 Hz	
Crossover Frequency	2500 Hz	
Finish	Oiled Walnut	
Grille	Dark Blue fabric	
Enclosure Volume	1 cu. ft.	28 liters
Enclosure Dimensions	19" x 12⅛" x 11¼" deep 48.3 x 30.6 x 29.1 cm deep	
Net Weight	26 lbs	12 kg
Shipping Weight	29 lbs	13 kg

1. The 4301 may be driven by amplifiers rated up to 60 watts rms (per channel) if normal precautions against input device distortion or amplifier clipping are followed.
2. Power output measured with a B&K Impulse Precision Sound Level Meter.

JBL Professional Products are not intended for household use.



Professional Division
James B. Lansing Sound, Inc.,
8500 Balboa Boulevard, Northridge, California 91329

50744 PPB4301 2T Printed in U.S.A.

Professional Series
Model 4311
Control Monitor

Smooth, powerful, wide-range response within a compact enclosure.

Components: 12-inch, long excursion, low frequency loudspeaker; 5-inch midrange transducer; 1.4-inch high frequency direct radiator; matched frequency dividing network with front panel controls providing separate adjustment of midrange and high frequency output.

90° dispersion allows vertical or horizontal placement.

A product of JBL's long experience and intimate involvement with the recording industry, the 4311 is a powerful, yet compact, monitor loudspeaker system. Its wide-band reproduction at loudness levels required in professional work make the 4311 ideally suited for control room installations, small studios, mixdown facilities, broadcast monitors and portable playback systems.

JBL

Model 4311 Control Monitor

Low Frequency Loudspeaker

Bass material is reproduced by a powerful, long excursion, 12-inch loudspeaker having a 3-inch diameter edgewound copper ribbon voice coil operating in a magnetic field of 10,000 gauss. The magnetic assembly, energized by an Alnico V magnet, weighs 6.5 pounds; free air resonance is approximately 22 Hz. The surface of the cone is coated with an exclusive damping formulation that provides mass and density to optimize bass performance, prevent spurious resonance and provide smooth performance extending into the midrange region.

Midrange Transducer

Transition to the midrange unit is made through a crossover frequency of 1500 Hz. The 5-inch transducer provides clarity and freedom from audible distortion, even at the high loudness levels encountered in professional applications. The transducer is energized by an Alnico V magnet housed in a closed assembly having a total weight of 2.75 pounds and creating a magnetic field of 16,500 gauss. The ⅞-inch diameter copper voice coil drives a 4-inch, edge-damped cone that operates as a true piston, providing smooth frequency response and wide dispersion throughout its operating range.

High Frequency Direct Radiator

Reproduction above 6000 Hz is accomplished by a 1.4-inch direct radiator. Its 1.6-pound magnetic assembly and ⅝-inch diameter copper voice coil drive a cone and center dome with controlled linearity assured by an impregnated cloth termination. The voice coil, suspended in a magnetic field of 15,000 gauss, is unusually large in relation to cone size for efficiency and exceptional transient response. The small cone diameter is responsible for wide, uniform dispersion of high frequency energy; a ring of dense foam surrounds the moving assembly to damp unwanted radiation and reflections.

Frequency Dividing Network

The frequency dividing network installed in the 4311 has been designed and tested to achieve the smoothest possible transitions between component loudspeakers. All network components are of the highest quality. Capacitors are non-inductive, non-polarized types with high AC current capacity built expressly for use in dividing networks and individually tested for conformity to rigid performance standards.

Enclosure

As with all JBL loudspeaker systems, the component transducers, frequency dividing network and enclosure are designed and tested to function as a single, integrated unit. The enclosure is solidly constructed of ¾-inch stock throughout with lock-mitered, wood-welded joints to prevent unwanted resonance. Internal padding absorbs spurious reflections and standing waves. All components mount directly to the baffle panel and are removable from the front of the enclosure. A ducted port provides proper acoustical loading of the low frequency loudspeaker.

Adjustable Response Contour

The frequency dividing network of the 4311 is provided with front panel controls to allow separate regulation of output in the 1500 to 6000 Hz "presence" range and the "brilliance" region above 6000 Hz. Controls are continuously variable from maximum to full off. With suitable settings of the two controls, the frequency response contour of the 4311 can be altered to compensate for almost any acoustical environment, or to achieve the tonal balance desired. Control scales are clearly marked so that special settings can be logged and easily reset when needed.

Performance Characteristics

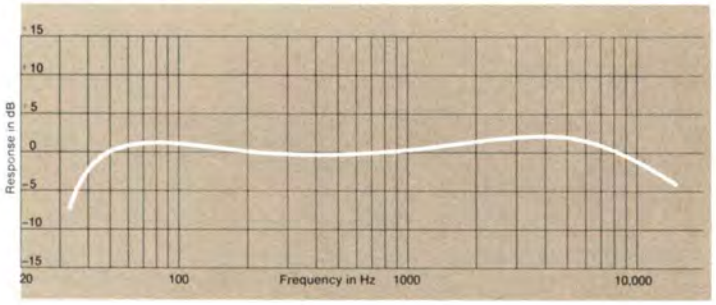
The accompanying graph and specifications were compiled from measurements made under standard laboratory test conditions. The loudspeaker system was mounted flush in the center of a large, flat baffle in an anechoic environment; a calibrated condenser microphone was suspended at a known distance from the sound source, sufficiently far to be safely out of the near field; and all electronic equipment was checked and calibrated before tests were run.

The on-axis frequency response of a typical 4311 does not vary more than ±3 dB from 45 to 15,000 Hz. Due to the wide-angle characteristics of the midrange and high frequency units and their physical orientation, response measured up to 45° off-axis, horizontally or vertically, does not deviate more than 6 dB from on-axis response at 2 kHz nor more than 10 dB at 8 kHz. The 4311's lack of distortion is equally outstanding. Distortion is inaudible even at high power levels and at very low frequencies, as shown in the photo at right.

While specifications indicate that the 4311 has impressive performance characteristics, they cannot convey the full impact of an extended listening evaluation. Clean, crisp, wide-range performance, even at very loud levels; powerful bass fundamentals without doubling and lifelike voice projection are qualities found in few loudspeaker systems, regardless of size or price. When heard from a monitor

occupying less than 2.5 cubic feet, the effect is little less than awesome. No other loudspeaker system approaches the JBL 4311 in its combination of versatility, outstanding performance, reliability and small size.

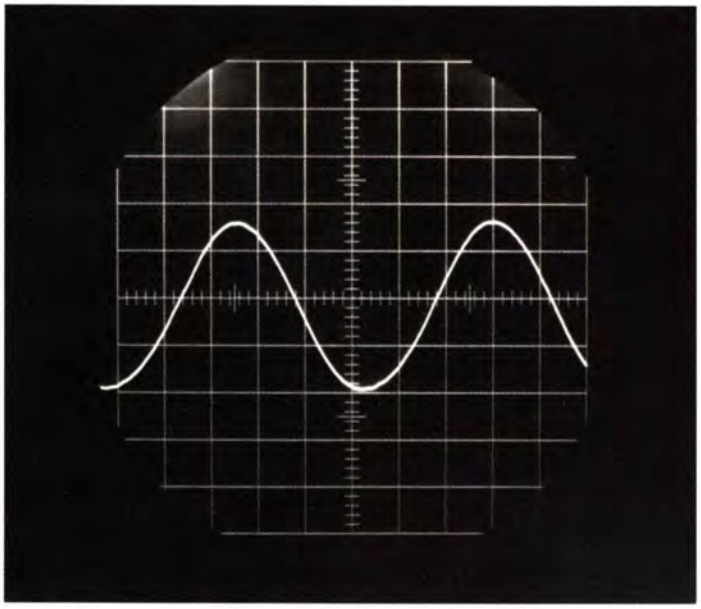
Bandwidth—On-Axis



Response contour of system with controls set "flat." (Presence set at "5," Brilliance set at "5.")

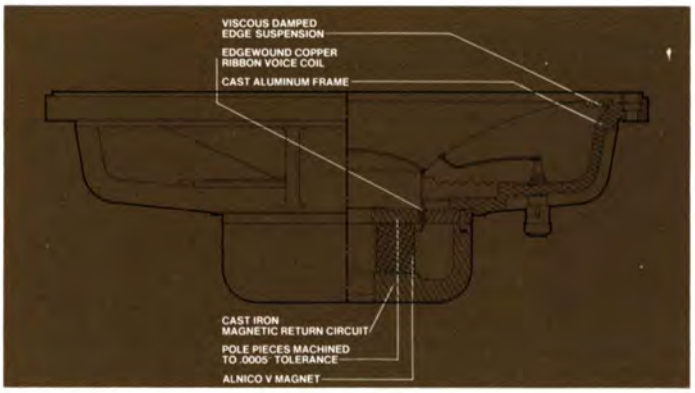
Measured on-axis response of a typical 4311, including all peaks and dips, does not deviate more than 3 dB from above curve.

35-Hz Output



This unretouched photo shows the acoustic output of the system when driven by a 50-Watt RMS sine wave signal at 35 Hz. A laboratory microphone was used to pick up the sound from the 4311. The signal from the microphone was connected directly to an oscilloscope and the trace photographed.

Sustained performance at this intensity would not be encountered during normal use. A 50-Watt sine wave represents a far more difficult job for the loudspeaker than its rated capacity of 75 Watts program material, particularly in the very low frequency range. Even so, it can be seen that the 4311 produces an almost perfect sine wave. (Note: Below 50 Hz, most loudspeaker systems produce substantial distortion with an input of only a few Watts.)



Section drawing of the 12-inch low frequency transducer.

Interior view of the 4311.

Architectural Specifications

The loudspeaker system shall consist of three direct-radiating transducers and a frequency dividing network installed in an enclosure tuned with a ducted port. Loudspeakers, network and enclosure are to be manufactured and assembled by a single manufacturer. Components shall be removable from the front of the enclosure.

The 12-inch low frequency loudspeaker shall have a 3-inch diameter edgewound copper ribbon voice coil operating in a magnetic field of at least 10,400 gauss. A heavy duty 5-inch transducer shall reproduce the range from 1500 to 6,000 Hz. It shall have a ⅞-inch diameter copper ribbon voice coil operating in a magnetic field of at least 16,500 gauss. Material above 6 kHz shall be reproduced by a third direct radiator having a cone diameter of approximately 1.4 inches, a ⅝-inch diameter copper voice coil and a gap flux density of at least 15,000 gauss.

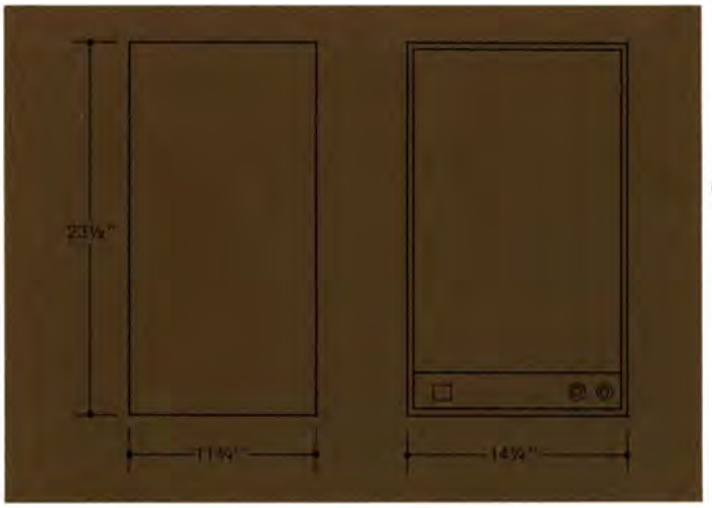
The frequency dividing network shall include two controls, accessible from the front of the system, to adjust relative intensities of the midrange and high frequency drivers. The controls shall be identified as "Presence" and "Brilliance" respectively.

Set for flattest output, the free-field frequency response of a typical system shall not vary more than ±3 dB from 45 to 15,000 Hz. Response measured up to 45° off-axis, horizontally or vertically, shall not deviate more than 6 dB from on-axis response at 2 kHz or more than 10 dB at 8 kHz. These specifications shall include the effects of the frequency dividing network and any interaction between transducers. Specifications extrapolated from the response curves of individual loudspeakers are not acceptable.

The loudspeaker system shall have a nominal impedance of 8 ohms and a power capacity of at least 35 Watts sine wave or 75 Watts program material. The EIA sensitivity of the system (measured at 30 feet on-axis with an input of 1 milliwatt) shall be approximately 42 dB.

The enclosure shall be solidly constructed of ¾-inch stock with all joints lock-mitered and glued. Overall dimensions shall be no greater than 24″ x 15″ x 12″ deep (61 x 38 x 30 cm). Finish shall be textured gray or oiled walnut with a black fabric grille.

The system shall be JBL Model 4311.



Specifications

Power Capacity[1]	75 Watts continuous program
Crossover Frequencies	1500 and 6000 Hz
Nominal Impedance	8 ohms
High Frequency Dispersion	90° horizontal and vertical
Frequency Response	45-15,000 Hz ±3 dB
Sensitivity[2]	42 dB at 30 feet (9.1m) with a 1-mW input swept from 500 to 2500 Hz, with controls set for flattest response. 91 dB at 1 meter (3.3 ft.) with a 1-Watt input, swept from 500 to 2500 Hz, with controls set for flattest response.
Finish	Textured gray or oiled walnut with black fabric grille.
Dimensions	23½″ x 14¼″ x 11¾″ deep 59.7 x 36.2 x 29.8 cm deep
Net Weight	42 lbs (19 kg)
Shipping Weight	49 lbs (22 kg)

[1]Continuous program power is defined as 3 dB greater than continuous sine wave power (RMS). It is a conservative expression of the loudspeaker system's ability to handle normal speech and music program material.

[2]Unlike many "theater type" loudspeaker systems that exhibit sensitivity peaks in the midrange, the JBL Control Monitor provides substantially the same sensitivity through the full range of audible frequencies. Measured sensitivity below 500 Hz or above 2000 Hz may be considerably greater than that of other systems with higher EIA sensitivity ratings.

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JBL continually engages in research related to product improvement. New materials, production methods and design refinements are introduced into existing products without notice, as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published description but is always warranted to equal or exceed the original design specifications unless otherwise stated.

JBL

Professional Series

Professional Division

James B. Lansing Sound, Inc., 8500 Balboa Boulevard, Northridge, California 91329

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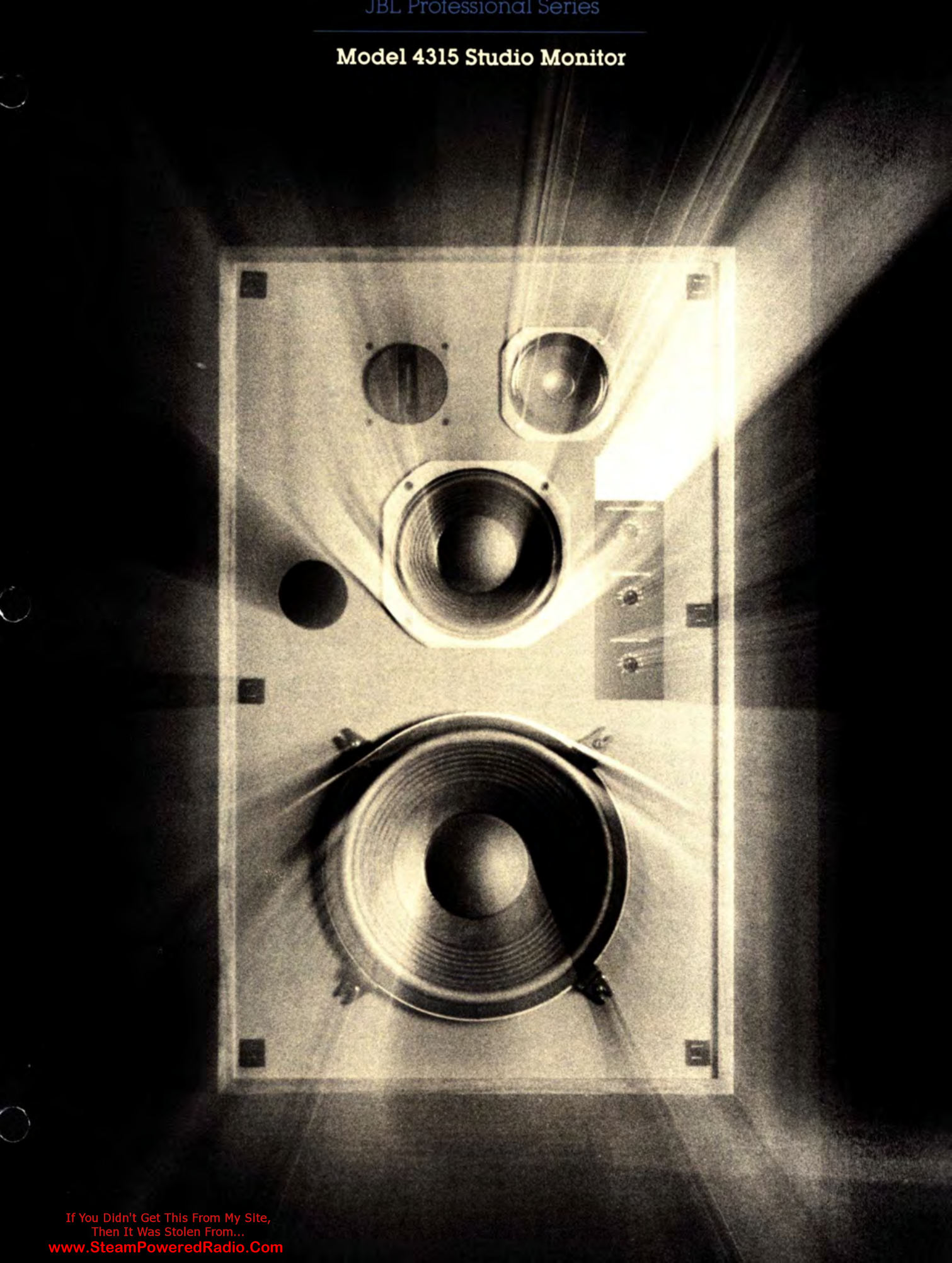
JBL Professional Series

Model 4315 Studio Monitor



Accurate, smooth reproduction from 35 to 20,000 Hz, ± 3 dB.

40 dB SPL at 30 feet with a 1-milliwatt input.

95 dB SPL at 10 feet at one-half rated power input.

Components: 12-inch low frequency loudspeaker, 8-inch midrange loudspeaker, 5-inch high frequency loudspeaker and ultra-high frequency transducer. Balance controls located behind the removable grille.

Oiled walnut or textured gray enclosure.

The 4315 Studio Monitor

The 4315, a compact studio monitor, is an extension of the research and development that produced JBL's latest high powered and most accurate monitors. The 4315 accurately reproduces the full range of musical fundamentals and overtones at sound pressure levels approaching those of the larger JBL systems.

The 4315 is characterized by exceptionally smooth, wide-band reproduction, clarity, transient response and a controlled dispersion pattern. Its performance is obtained through total integration of the components that make up its four-way system. Each transducer reproduces only that portion of the audio spectrum for which it is specifically designed, resulting in greatest utilization of each driver's frequency response, transient capability and dispersion characteristics. The effect is a true monitor system, compact in physical size, whose sound distribution pattern is such that the operator can be located relatively close to the enclosure.

Low Frequency Loudspeaker

The 12-inch low frequency loudspeaker features solid bass reproduction, smooth response well beyond its crossover frequency and excellent transient response combined with maximum efficiency consistent with the bandwidth of the driver. Mounted in a ported enclosure having an internal volume of 3.2 cubic feet, the unit is energized by a 13-pound magnetic assembly housing an Alnico V magnet. Closed construction and precise construction tolerances of the assembly concentrate a magnetic field of 12,000 gauss in the voice coil gap. A 4-inch voice coil, fabricated of copper wire milled to a ribbon and hand wound on edge, is mounted on a heat resistant support affixed to a rigid cone having optimum mass, density and rigidity. The cone is supported by a highly flexible termination that damps spurious resonances and allows the long, linear excursion necessary for high volume levels at very low frequencies.

Midrange Loudspeaker

The smooth performance and instantaneous transient response of the 8-inch midrange driver is responsible for the outstanding instrumental clarity and vocal definition of the system. A closed magnetic assembly, weighing 6½ pounds, concentrates all the energy of an Alnico V magnet in the voice coil gap. The 3-inch edgewound copper ribbon voice coil is suspended within a powerful magnetic field having a flux density of 10,200 gauss. The integrally stiffened cone is terminated with an exclusive JBL ring compliance that allows long excursions while maintaining linear travel.

High Frequency Loudspeaker

Smooth, widely dispersed high frequency reproduction is provided by a 5-inch cone transducer capable of considerable acoustic output and wide dispersion. It utilizes a ⅞-inch diameter edgewound copper ribbon voice coil suspended within a powerful magnetic field of 16,500 gauss generated by a 2¾-pound closed magnetic assembly containing an Alnico V magnet. The voice coil is edgewound for exceptional transient response and acoustic efficiency. Like the midrange loudspeaker, the unit is housed in a separate subchamber within the 4315 enclosure to prevent acoustical interaction with the other loudspeakers of the system.

Ultra-High Frequency Transducer

The exceptional clarity and realism of overtones lying above 8000 Hz is produced by the ultra-high frequency transducer. The unit consists of a compression driver and diffraction horn specifically designed for reproduction and dispersion of energy at the extreme high end of the audio spectrum. The compression driver

consists of a 3¼-pound magnetic assembly energized by an Alnico V magnet. Its 1.75-inch edgewound aluminum ribbon voice coil, suspended within a field having a flux density of 16,500 gauss, is affixed to a heat resistant support bonded to a ring diaphragm pneumatically formed of .0022-inch thick aluminum stock. Output from the integral diffraction horn, which produces the unit's wide high frequency dispersion pattern.

Frequency Dividing Network

The 4315 is provided with a high level, passive frequency dividing network having circuitry designed with consideration for the various performance characteristics of the drivers and their location on the enclosure baffle panel. The network has been designed for continuous high power application; capacitors are non-inductive, non-polarized types with high AC current capacity, and special inductors are used to minimize power losses within the network. Each inductor is calibrated on a sensitive electronic bridge and its value set precisely.

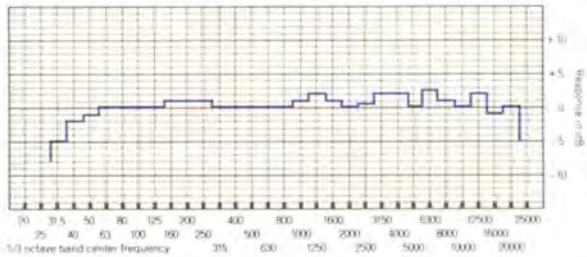
Enclosure

In keeping with current trends in studio design that encourage creativity, JBL studio monitor enclosures feature contemporary styling and are offered in two finishes, each with a complementary grille color. The enclosure, however, contributes much more than striking appearance. The low frequency loudspeaker is housed in a chamber having an internal volume of 3.2 cubic feet. The mid-range loudspeaker is enclosed in a separate, isolated sub-chamber having an internal volume of 0.1 cubic feet. The internal volume of the acoustic chambers and physical configuration of the ducted ports are carefully selected to properly load the low frequency and midrange loudspeakers for optimum bass response and to control cone excursion, thus minimizing distortion and maximizing power handling capacity of the drivers. To minimize resonance, the enclosure is constructed of dense ¾-inch thick stock with a 15-ply baffle panel; all joints are carefully interlocked and glued; the back, side, top and bottom panels are lined with acoustic damping material and are each stiffened by multiple braces glued and screwed to the panel and to the adjacent surfaces of the enclosure.

Test Conditions

The accompanying graph and specifications were compiled from measurements made under carefully controlled conditions. The loudspeaker system was mounted flush in the center of a large, flat baffle in a non-reverberant environment. Laboratory condenser microphones were suspended in a spherical pattern around the acoustic center of the system sufficiently distant to be out of the near field so that data taken would reflect the total output of the combined transducers. In keeping with accepted laboratory practice, all equipment was checked and calibrated before tests were run.

Response



Frequency response of the 4315 taken with ½-octave band pink noise. Measured response contour of a typical system averaged through an inclusive arc of 80° in the horizontal and 60° in the vertical planes does not deviate more than 2 dB from the above curve.

Specifications

Maximum Power Input[1]	60 watts continuous sine wave	
Nominal Impedance	8 ohms	
Power Output[2]	97 dB SPL measured at 3.0 m (10 ft) in a room volume of 57 m³ (2000 cu ft) with ½ rated power input (−3 dB)	
Frequency Response		
Sine Wave, On-Axis	35 to 20,000 Hz, ±3 dB	
½-Octave Band (400 Hz Reference)	−5 dB at 31.5 Hz +2 dB at 6.3 kHz 0 dB at 20 kHz	
Polar Response	No less than −3 dB at 80° horizontal and 60° vertical to 16 kHz	
Sensitivity[3]	89 dB SPL measured at 1m (3.3 ft) with a 1-watt input averaged from 100 to 1000 Hz 40 dB SPL measured at 9.1m (30 ft) with a 1-milliwatt input averaged from 100 to 1000 Hz	
Distortion ½ Power, 95 dB SPL/3.0 m (10 ft.), Single Frequency	0.5% or less third harmonic generation from 35 to 20,000 Hz	
Crossover Frequency	400, 2000 and 8000 Hz	
Finish	Textured gray or oiled walnut	
Grille	Black fabric with the gray finish; Dark Blue fabric with walnut	
Enclosure Volume		
Low Frequency Chamber	91 litres	3.2 cu ft
Midrange Chamber	2.8 litres	0.1 cu ft
Enclosure Dimensions	854 mm x 521 mm x 327 mm 33⅝ in x 20½ in x 12⅞ in	
Net Weight	43 kg	95 lb
Shipping Weight	49 kg	107 lb

[1] Power amplifier headroom recommendation is 3 dB minimum, i.e., for a 60-watt rating use a 120-watt amplifier.

[2] Power output measured with a B&K Impulse Precision Sound Level Meter.

[3] Unlike many "theater type" loudspeaker systems that exhibit sensitivity peaks in the midrange region, the 4315 provides substantially the same sensitivity through the full range of audible frequencies. Measured sensitivity below 500 Hz or above 2000 Hz may be considerably greater than that of other systems with higher sensitivity ratings.

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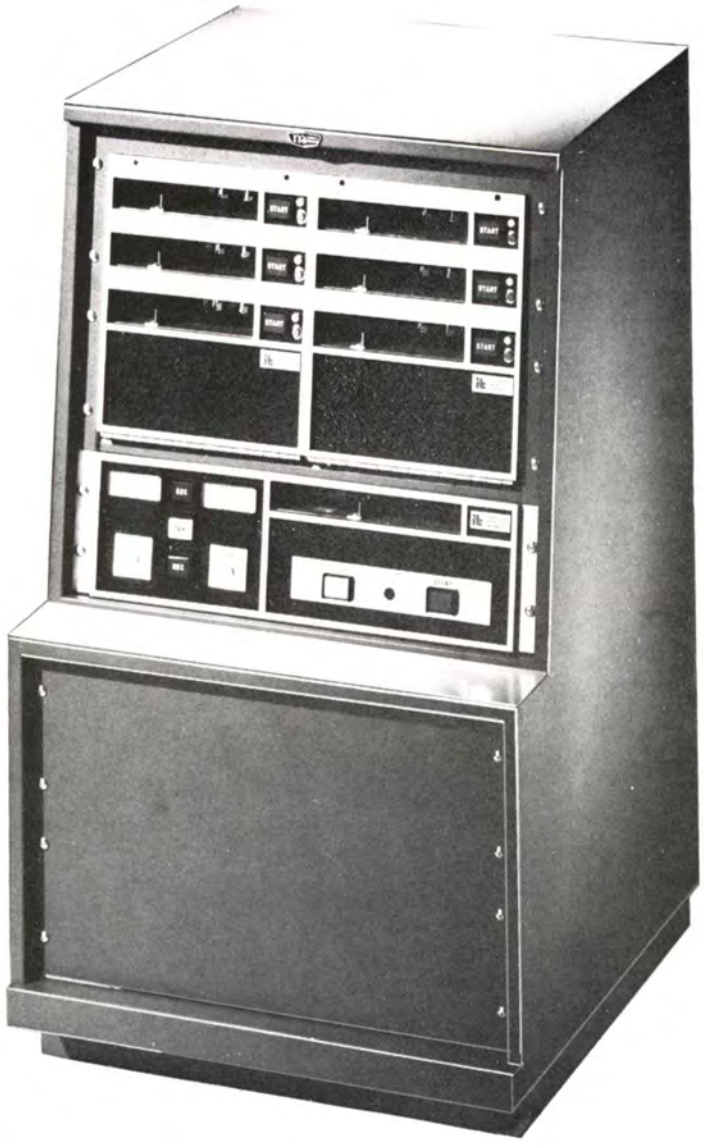
Professional Division
James B. Lansing Sound, Inc.
8500 Balboa Boulevard
Northridge, California 91329

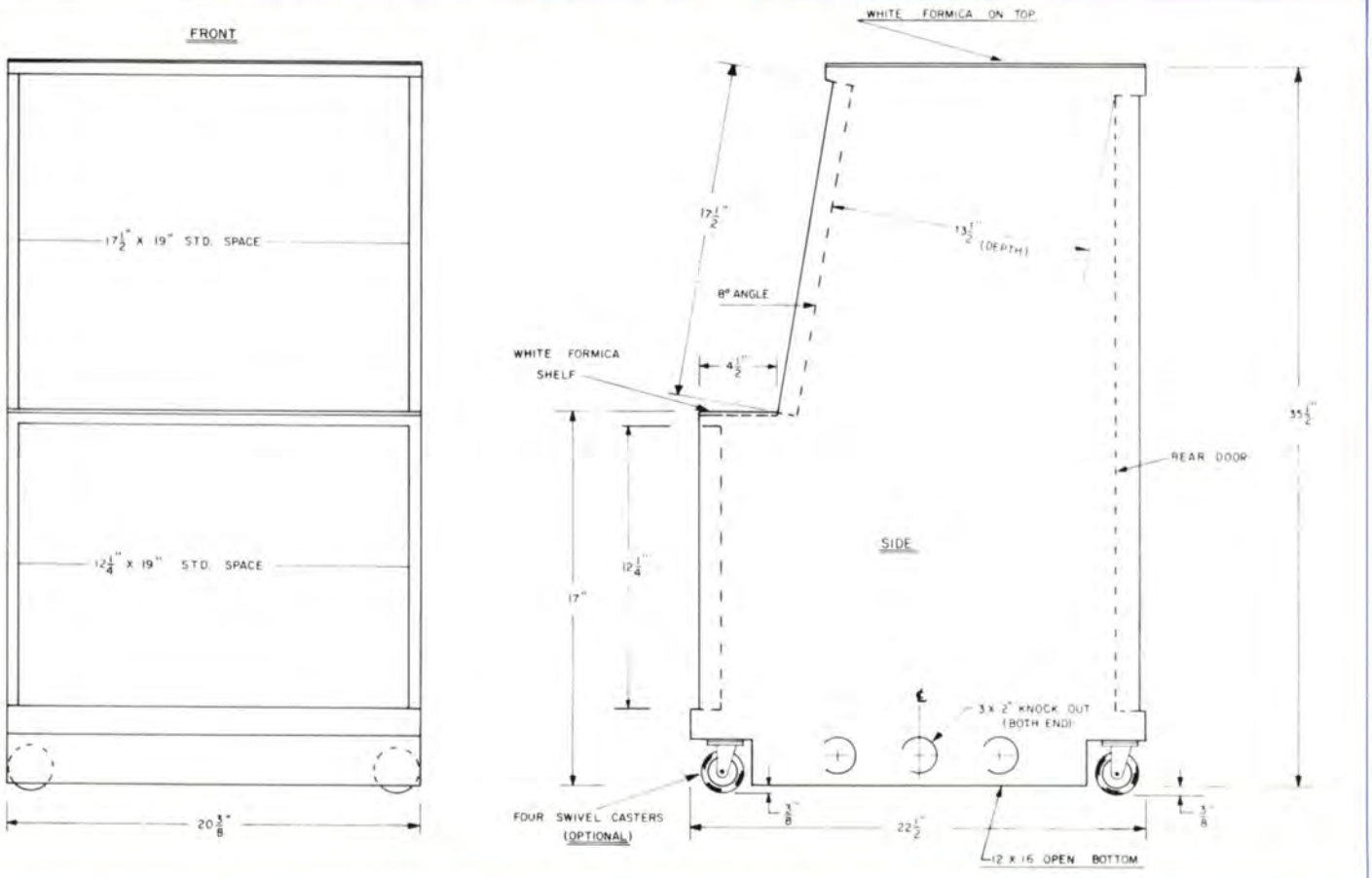
SA10044

modular enclosure



McCurdy

description & specifications



The SA10044 is another in the Series of Modular Enclosures providing versatility and convenience for mounting a variety of equipment. Designed specifically for cartridge tape machines, several different mounting arrangements may be chosen to place equipment in a convenient operating position while maintaining an all over attractive appearance. 17½-Inches of rack space for 19-inch panels is provided in the top section at an 10° angle, 12¼-inches is available at the bottom. These enclosures are of rugged steel construction and finished in MRI textured blue. For cable entry, knockouts are provided in the base of the unit. Since there is no bottom panel, cabling may also be brought up through the floor. The SA10044 auxiliary housing comes complete with panel mounting hardware and a rear door.

ACCESSORIES

Where the 19-inch wide equipment panels do not utilize all the vertical space in the SA10044, it is desirable to fill in empty areas with blank panels. Panels of the following heights are available:

SA11021: 1¾ in.
SA11022: 3½ in.
SA11023: 5¼ in.
SA11024: 7 inches.
SA11025: 8¾ in.
SA11026: 10½ in.
SA11027: 12¼ in.

ORDER units and accessories by type number and name.

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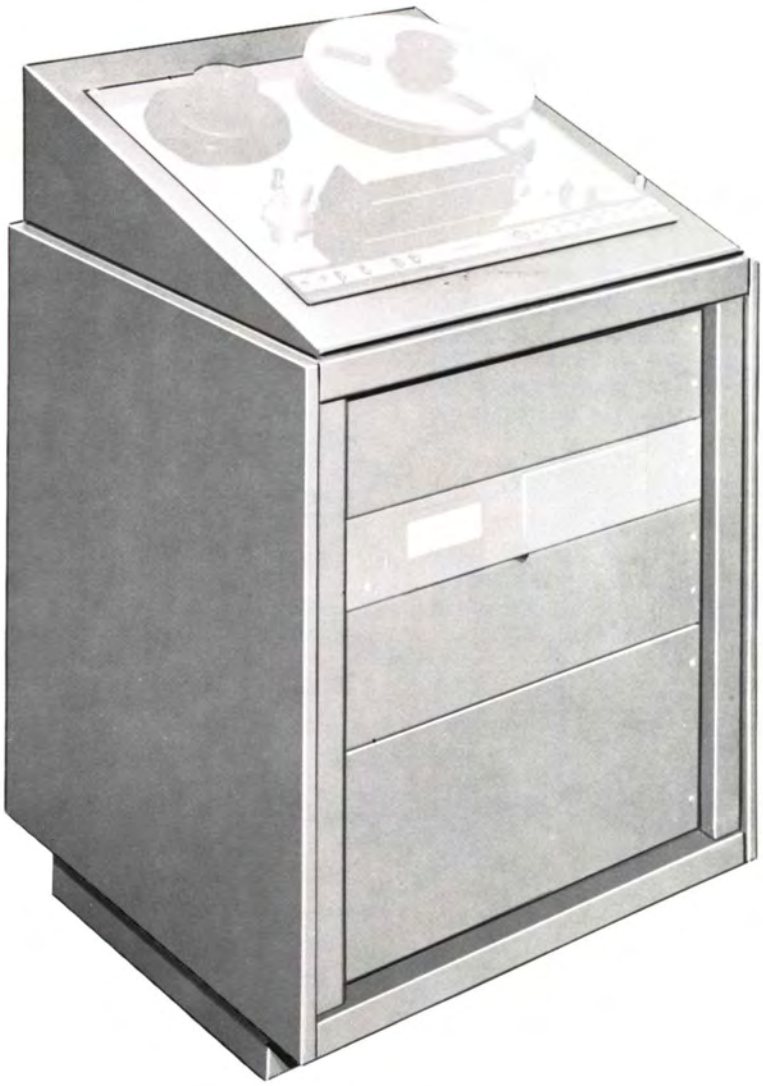
SA10040

modular enclosure



McCurdy

description & specifications

The SA10040 Modular Enclosure provides versatility and convenience in mounting a variety of equipment. All enclosures are of rugged steel construction and finished in MRI textured blue. For cable entry, knockouts are provided in the base of each unit, with additional knockouts in the side panel. Since there is no bottom panel, cabling may also be brought up through the floor.

SA10040 PEDESTAL

The SA10040 pedestal is adaptable to accommodate panel-mounted equipment and a turntable or tape unit. The basic pedestal consists of a rugged framework providing 22-3/4 inches of rack space for 19-inch wide panels. When fitted with one of the adapter tops, the SA10040 matches various MRI console desks both in dimensions and color scheme. The following accessory units are available, as shown under Mechanical Details.

SA10041 TAPE RECORDER ADAPTER.

This is a sloped housing which accommodates 19-inch panels and may be used for tape units or control panels. The front of the SA10041 adapter is hinged to the SA10040 pedestal so that it may be tilted forward for servicing. The back of the SA10041 is louvered for ventilation.

SA10045 TURNTABLE MOUNTING BOARD

The SA10045 allows mounting an MRI type CH12 turntable (custom cutouts for other types can be made on special order). The mounting board is made of wood laminated with white Formica. The total thickness is 1-5/8 inches to provide optimum damping effect.

SA10045-1 TURNTABLE ARM GUARD

This guard is made of 1/8-inch anodized aluminum and fits behind the turntable mounting board. It is useful to prevent accidental playback arm displacement.

SA10046 BLANK TOP

The blank top fits in place of the SA10045 and is constructed of the same materials.

SA10047 REMOVABLE DOORS.

The doors may be used to cover the front and rear of the pedestal, when equipment panels are not used. They are louvered to allow ventilation of the interior. Installation and removal are simplified by the use of a single quick-fastener on each door.

SA10048 END BELLS

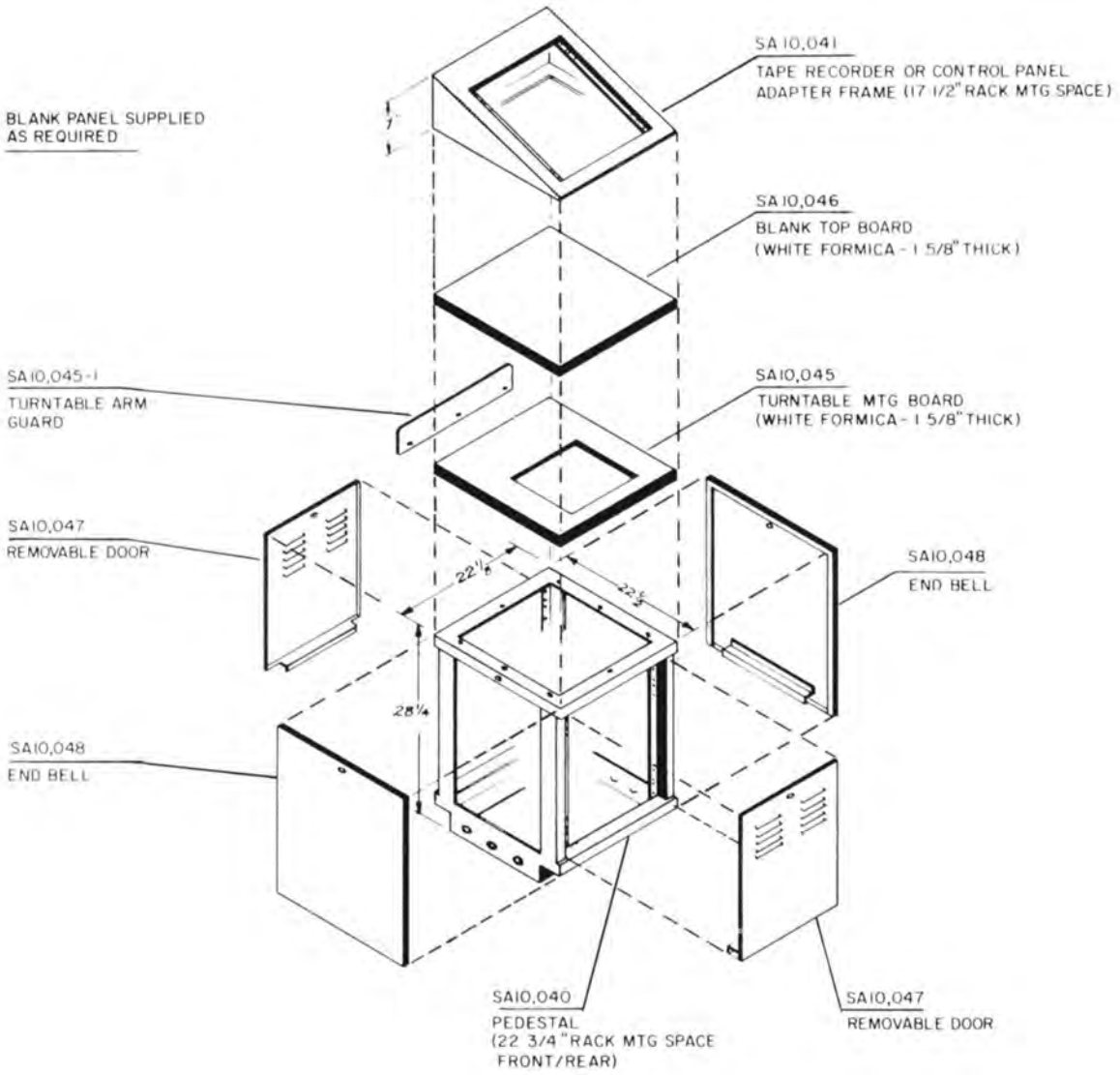
Used to close the sides of the pedestal when it is not butted against other equipment. Each end bell is secured by one quickfastener.

BLANK PANELS

Where the 19-inch wide equipment panels do not utilize all the vertical space in the SA10040, it is desirable to fill in empty areas with blank panels. Panels of the following heights are available:

SA11021: 1-3/4 in.
SA11022: 3-1/2 in.
SA11023: 5-1/4 in.
SA11024: 7 in.
SA11025: 8-3/4 in.
SA11026: 10-1/2 in.
SA11027: 12-1/4 in.

mechanical details



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1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

EAST COAST OFFICE: SADDLE RIVER, N.J. P.O. BOX 86, ZIP 07458, PHONE (201) 327-0750, TWX 610-492-3219

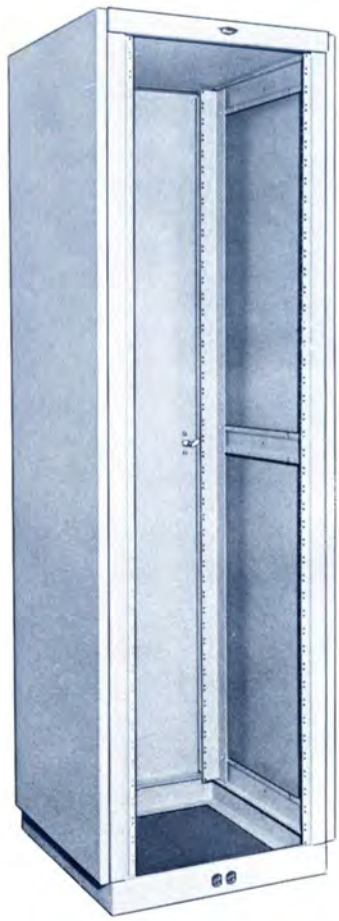
SA10410
SA10420 EQUIPMENT RACKS

DESCRIPTION

The SA10410 and SA10420 Equipment Racks combine strength and versatility to meet a wide variety of installation requirements. Each type of rack provides 77 inches of vertical mounting space for 19-inch wide panels, the only difference in the two models being the front-to-rear dimension which is 22 inches for the SA10410 and 25-1/2 inches for the SA10420 (see dimensional diagram). The racks are of all-welded construction; the framework is ruggedly formed of 12-gauge C.R. steel to accommodate the heaviest of rack-mounting units, with side panels and doors of 18-gauge steel.

The most outstanding features of these racks are the results of design techniques that achieve flexibility in use:

- Basic rack can be used where side panels or doors not required.
- Side panels and doors easily installed or removed without the use of tools, providing the ultimate in installation ease and equipment accessibility.
- Doors can be mounted front and/or rear, to open from left or right, and can be fitted with locks.
- Mounting angles for equipment panels may be positioned for flush or recess mounting at front or rear, or for attachment to both front and rear of equipment (see detail photo).
- Two or more racks may be bolted together for perfectly-aligned multiple installations. Specially-formed crossbraces with welded spacers ensure positive joins without danger of distortion.



Ventilation by convection may be provided by a perforated top panel which is available as an optional extra. Included as standard equipment is a full-length plugmold strip, with twelve ac outlets, through which ac power can be supplied to the rack-mounted units. In addition, a convenience outlet is installed at the bottom front of the rack for test equipment, etc.

Installation dimensions are shown in the dimensional diagram. The weight of the basic framework is 110 lb.; add 32 lb. for each side panel and 30 lb. for each door required. A complete line of blank panels from 1-3/4 inches to 12 inches is available (see Catalog Price List). The standard rack finish is blue vinyl, but other finishes are available on request.

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(416) 751-6262
TELEX 02-21660

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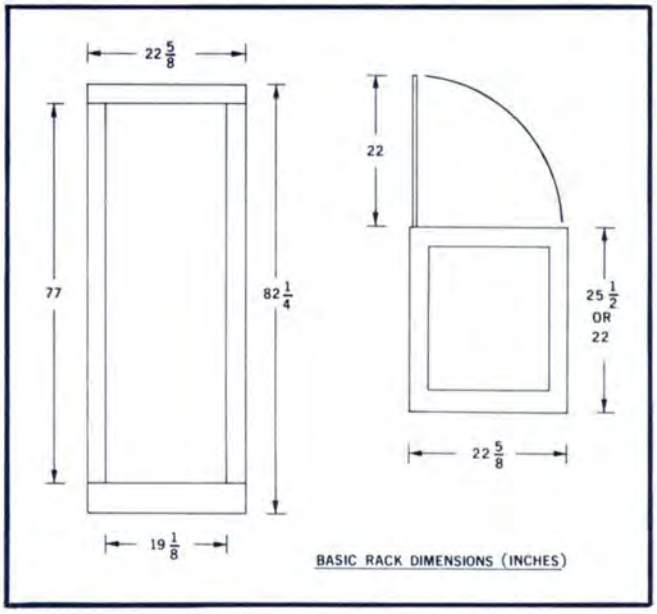
1051 CLINTON STREET BUFFALO N.Y. 14206
(716) 854-6700

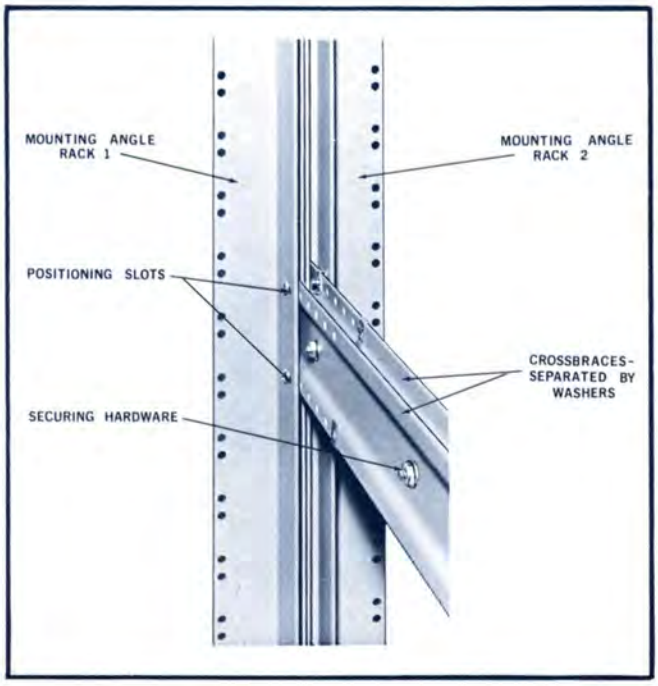
The height of 77 inches provides for 44 rack units (a rack unit = 1-3/4 inches); the mounting holes are spaced to accommodate any combination of one-unit panels and multiples thereof.

Each side panel adds 1 inch to the width of the basic rack; each door adds 1-1/4 inch not including the handle, which protrudes another 1-5/8 inch.

The rack may be fastened to the floor by means of the four mounting holes provided in the base flange, if desired. The recommended fasteners are 3/8-inch by 4-inch lag screws. However, the rack is adequately stable for normal stationary installations without bolting down.



BASIC RACK DIMENSIONS (INCHES)



Shown here are two racks bolted together; the units are joined at all three crossbraces although only one join is shown here. The welded-on, 1/8-inch thick washers take the full stress of assembly and keep the strain off structural members, thereby ensuring a rigid, positive join without any distortion of framework, panels, etc.

The mounting angles may be positioned anywhere from extreme front and rear to center. However, where a door is installed, 1/2 inch allowance must be made for the door closing. Also, if the equipment next to the door has knobs or other protrusions, further allowance must be made for these.

No. 12-24 speednuts and bolts are provided for simple, easy installation of the angles to any of the holes in the crossbraces. In addition to this positioning, the mating cutouts in the angles are 1-inch slots to permit exact positioning.

ORDERING INFORMATION

ORDER

SA10410 Equipment Rack (22 in. deep)
OR
SA10420 Equipment Rack (25-1/2 in. deep)

(All hardware included).

OPTIONAL ACCESSORIES

See Catalog Price List for:
(1) Side panels
(2) Doors
(3) Rack Top
(4) Blank panels

SS4386A

6-mixer single-channel audio console

McCurdy

description

Six mixer channels, all equipped with preamplifiers and slide attenuators.

Two inputs per mixer channel, selectable by input key.

Choice of three amplifiers for microphone or high-level applications.

Balanced mixer bus.

2-Watt cue system with ten-position pushbutton assembly, amplifiers, and speaker.

Monitor control and feed for external monitor amplifier.

Nine amplifiers and regulated power supply within console, all plug-in modules and completely silicon solid-state.

Three additional unwired utility keys with provision to add three more.

Above-desk dimensions 6 in. high, 18-1/2 in. deep, 28 in. wide.

The SS4386A Audio Console is a six-mixer single-channel console providing professional facilities for the mixing, monitoring, and control of audio program material. The SS4386A is designed for installations such as News Booth or Disc Jockey areas which require a compact console meeting full broadcast specifications.

The SS4386A includes a cue system and is self-powered by means of an internal, regulated, power supply. All amplifiers and the power supply are standard McCurdy plug-in modules incorporating proven silicon solid-state circuitry.

The SS4386A is designed for mounting in a cutout in a desk top (see Dimensional Outline Diagram). The extremely low silhouette permits the operator an unobstructed view into adjoining areas — a desired feature in many installations.

The control panel presents a highly attractive appearance with its damage-resistant overlay of wood-grain vinyl and clear-anodized aluminum trim. The full-width vu meter panel is enclosed in a housing of solid, oiled walnut. The console end bells are also constructed of oiled walnut.

Operating controls are arranged for optimum separation combined with grouping of related functions.

FACILITIES

The facilities of the SS4386A are shown in the Block Diagram. The console incorporates six mixer channels, one program channel, and a cue system, along with monitor and PA feeds.

PROGRAM CIRCUITS

Each mixer accommodates two inputs, selectable by a three-position lever key; the center position of the key is a terminated 'off' position. The key selections are identified by means of designation strips, rather than engraving, so that the customer may designate these as desired.

The mixer channels employ McCurdy AT284, AT285, or AT286 Amplifiers depending upon the input level and configuration. Except for the input level accommodated, and possible input pad requirements, these amplifiers are directly interchangeable without wiring changes. The console is normally equipped with AT284 Preamplifiers in all mixers, with one low-level input and one high-level input per mixer (the low-level input is not possible with the AT285 or AT286). The complete range of amplifiers and their operating levels are shown in the inset.

The mixing level is adjusted by means of slide attenuators which are connected in the interstage sections of the amplifiers. The balanced mixer bus feeds the single program channel which uses a McCurdy AT299 Program Amplifier. The final output level is adjusted by means of a high-quality potentiometer which controls the gain of the AT299. Two program output splits are provided, consisting of one Line output and one Auxiliary output, both at +8 vu, 600 ohms.

MONITORING AND PA

Continuous visual monitoring of the program channel is provided by a full-size A-scale illuminated VU meter. Local aural monitoring is available at a headset Jack (0.78v, 5k) located on the front of the console. In addition, two-10 vu 600-ohm outputs are provided for feeding external monitor and Pa amplifiers. A muting relay for the monitor, and a common gain control for both outputs, are supplied as standard equipment. Complete 10-watt speaker-amplifier assemblies are available to accommodate these outputs (model LSA608 or LSA609).

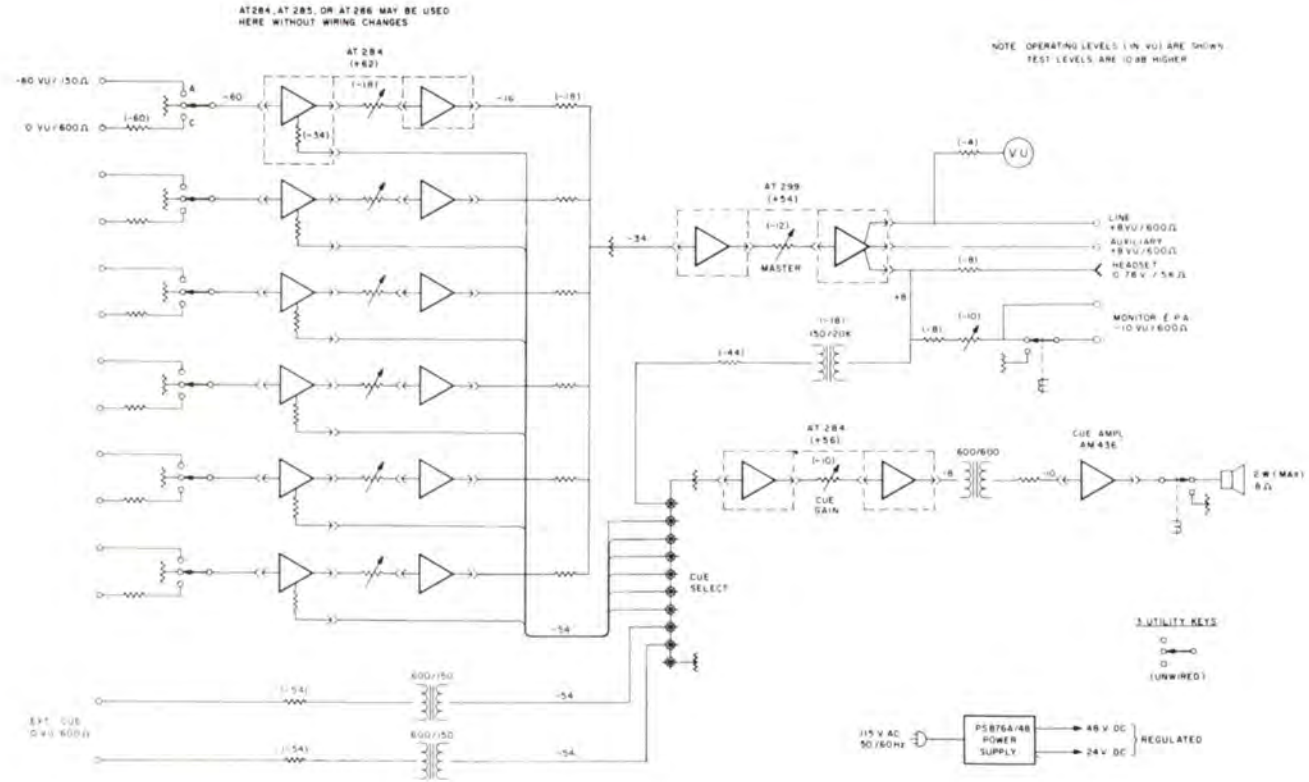
CUE SYSTEM

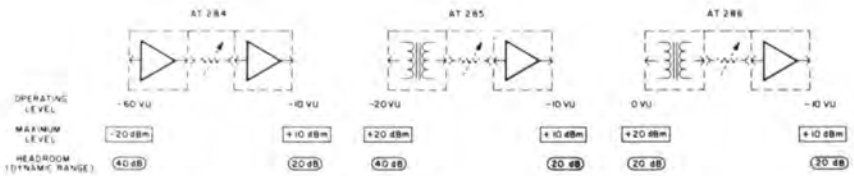
Each amplifier provides a continuous cue output which is taken off ahead of the mixer attenuator; these outputs are fed to six separate pushbuttons in the CUE SELECT BANK. The program channel also provides a cue output via a 20,000-ohm bridging transformer to a cue pushbutton, and provision is made for two external inputs.

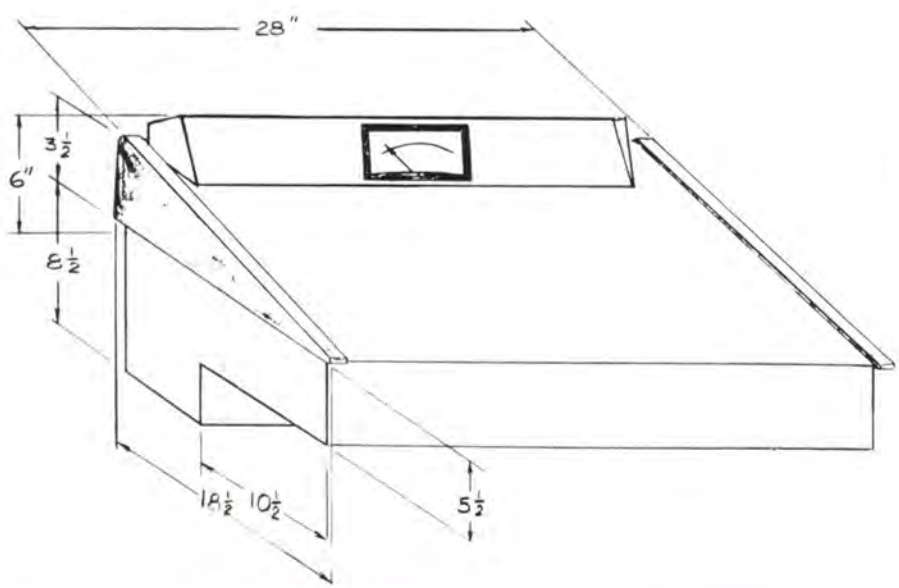
The cue channel provides up to 2 watts to the built-in speaker, with a front panel control providing level adjustment. A muting relay is included. A cue headset output bypasses the muting relay.

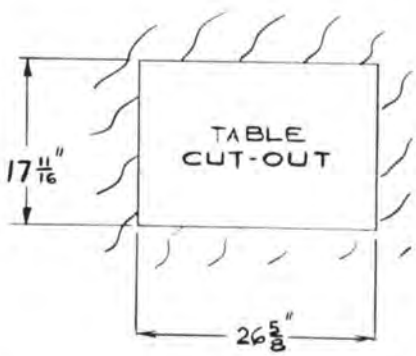
UTILITY KEYS

Three, three-position, utility keys are supplied as standard equipment, with provision to add three more as an extra-cost option. These can be used for dc control of external equipment. The utility keys are unwired on the standard console.









specifications

Inputs:
(1) 12 mixer inputs selectable to six channels: -60 vu 150 ohms, -20 vu 600 ohms, or 0 vu 600 ohms depending on input amplifier (see Ordering Information).
(2) Two external cue inputs; 0 vu (+10 dBm) 600 ohms.

Outputs:
(1) One program line output, +8 vu (+18 dBm) 600 ohms (matching).
(2) One auxiliary output, +8 vu (+18 dBm) 600 ohms (bridging).
(3) One program headset output, 0 vu (0.78v equiv) 5,000 ohms.
(4) One cue headset output, 0 vu (0.78v equiv) 5,000 ohms.
(5) One program monitor output, -10 vu (0 dBm) 600 ohms. Muting relay included.
(6) One PA output, -10 vu (0 dBm) 600 ohms.
(7) Built-in cue speaker; 2 watts max, 8 ohms.

Maximum Gain (1 dB):
(1) Low-level input (-60 vu) to program output; 92 dB.
(2) Medium-level input (-20 vu) to program output; 52 dB.
(3) High-level input (0 vu) to program output; 32 dB.
(4) For input to monitor or PA output; subtract 8 dB from above figures.

Frequency Response (ref 1 kHz): For any input to program, monitor, or PA output at normal attenuator settings: 1 dB from 30 Hz to 15 kHz.

Noise: Relative Input Noise: -122 dBm, unweighted, measured over 10 Hz to 100 kHz bandwidth at -3 dB points.

Harmonic Distortion (at normal attenuator settings):
(1) For any input to program output: less than 0.5% from 30 Hz to 15 kHz at +18 dBm output.
(2) For any input to monitor output: less than 0.5% from 30 Hz to 15 kHz at 0 dBm output.

Transients: The operation of any relay in the console will not degrade the noise figure by more than 6 dB.

Power Requirements: 115 vac, 50/60 Hz, single phase, 30 va approximately.

Ambient Temperature: °C to 55°C.

Overall Dimensions: 28 in. (71.1 cm) wide, 18-1/2 in. (47 cm) deep, 6 in. (15.24 cm) high plus 8-1/2 in. (21.6 cm) projection below desk top.

ordering information

ORDER

SS4386A 6-Mixer Single-Channel Audio Console and specify the input amplifier for each of the mixers:
AT284 Preamplifier; -60 vu nominal, -20 dBm max, 150 ohms.
AT285 Amplifier; -20 vu nominal, +20 dBm max, 600 ohms.
AT286 Amplifier; 0 vu nominal +20 dBm max, 600 ohms.
VU designates normal operating levels: DBm designates peak or test levels.

OPTIONAL EQUIPMENT

(1) Up to three extra Utility Keys. Specify configuration (momentary, locking, or combination of these).
(2) LSA608 or LSA609 10-Watt Speaker-Amplifier Assembly.

The price listed for the standard console does not include optional equipment nor the installation of optional equipment.

Printed in Canada

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SS4388A

8-mixer single-channel audio console

McCurdy

description

Eight mixer channels, all equipped with preamplifiers and rotary step attenuators.

Two inputs per mixer channel, selectable by input key.

Choice of three input amplifiers for microphone or high-level applications.

Balanced mixer bus.

Complete cue system with ten-position pushbutton assembly, amplifier, and speaker.

Monitor control and feed for external monitor amplifier.

Ten amplifiers and regulated power supply within console, all plug-in modules and completely silicon solid-state.

Four additional unwired utility keys with provision to add four more.

Special feature — provision for optional, console-mounting, recessed pushbuttons for remote control of external equipment such as turntables, tape machines, etc.

Desk-top dimensions 6 in. high, 18-1/2 in. deep, 28 in. wide.

The SS4388A Audio Console is an eight-mixer single-channel console providing professional facilities for the mixing, monitoring, and control of audio program material. The SS4388A is designed for installations not requiring the use of a full-size console, such as News Booth or Disc Jockey areas. In this regard, the SS4388A offers compactness and convenience whiel maintaining full broadcast specifications. These important features are achieved without over-miniaturization or crowding of internal and external components.

The SS4388A includes a comprehensive cue system and is self-powered by means of an internal, regulated, power supply. All amplifiers and the power supply are standard McCurdy plug-in modules incorporating proven silicon solid-state circuitry.

Operating controls are arranged for optimum separation combined with grouping of related functions, and recessed panels are provided for dc control switches (optional).

The SS4388A is designed for mounting in a cutout in a desk top (see Dimensional Outline Diagram). The extremely low silhouette permits the operator an unobstructed view into adjoining areas — a desired feature in many installations.

The front panel presents a highly attractive appearance with a full-width vu meter housing and damage-resistant overlay of wood-grain vinyl. This is set between a pair of oiled-walnut end bells.

FACILITIES

The facilities of the SS4388A are shown in the Block Diagram. The console incorporates eight mixer channels, one program channel, and a complete cue system, along with monitor and PA feeds.

PROGRAM CIRCUITS

Each mixer accommodates two inputs, selectable by a three-position lever key; the center position of the key is a terminated 'off' position. The key selections are identified by means of designation strips, rather than engraving, so that the customer may designate these as desired.

The mixer channels employ McCurdy AT284, AT285, or AT286 Amplifiers depending upon the input level and configuration. Except for the input level accommodated, these amplifiers are directly interchangeable without wiring changes. The Block Diagram shows AT284 Preamplifiers in use, with one low-level input and one high-level input (the low-level input is not possible with the AT285 or AT286). The complete range of amplifiers and their operating levels are shown in the inset.

The mixing level is adjusted by means of premium-quality rotary attenuators which are connected in the interstage sections of the amplifiers. The balanced mixer bus feeds the single program channel which uses a McCurdy AT299 Program Amplifier. The final output level is adjusted by means of a high-quality potentiometer which controls the gain of the AT299. Two program output splits are provided, consisting of one Line output and one Auxiliary output, both at +8 vu, 600 ohms.

MONITORING AND PA

Continuous visual monitoring of the program channel is provided by a full-size A-scale illuminated VU meter. Local aural monitoring is available at a headset jack (0.78v, 5k) located on the front of the console. In addition, two -10 vu 600-ohm ouputs are provided for feeding external monitor and PA amplifiers. A muting relay for the monitor, and a common gain control for both outputs, are supplied as standard equipment. Complete 10-watt speaker-amplifier assemblies are available to accommodate these outputs (model LSA608 or LSA609).

CUE SYSTEM

Each amplifier provides a continuous cue output which is taken off ahead of the mixer attenuator; these outputs are fed to eight separate cue pushbuttons in the CUE SELECT bank. Also, each mixer attenuator, in the extreme counterclockwise position, operates a cue switch which feeds a common bus connected to one pushbutton. And, finally, the program channel provides a cue output via a 20,000-ohm bridging transformer to a cue pushbutton.

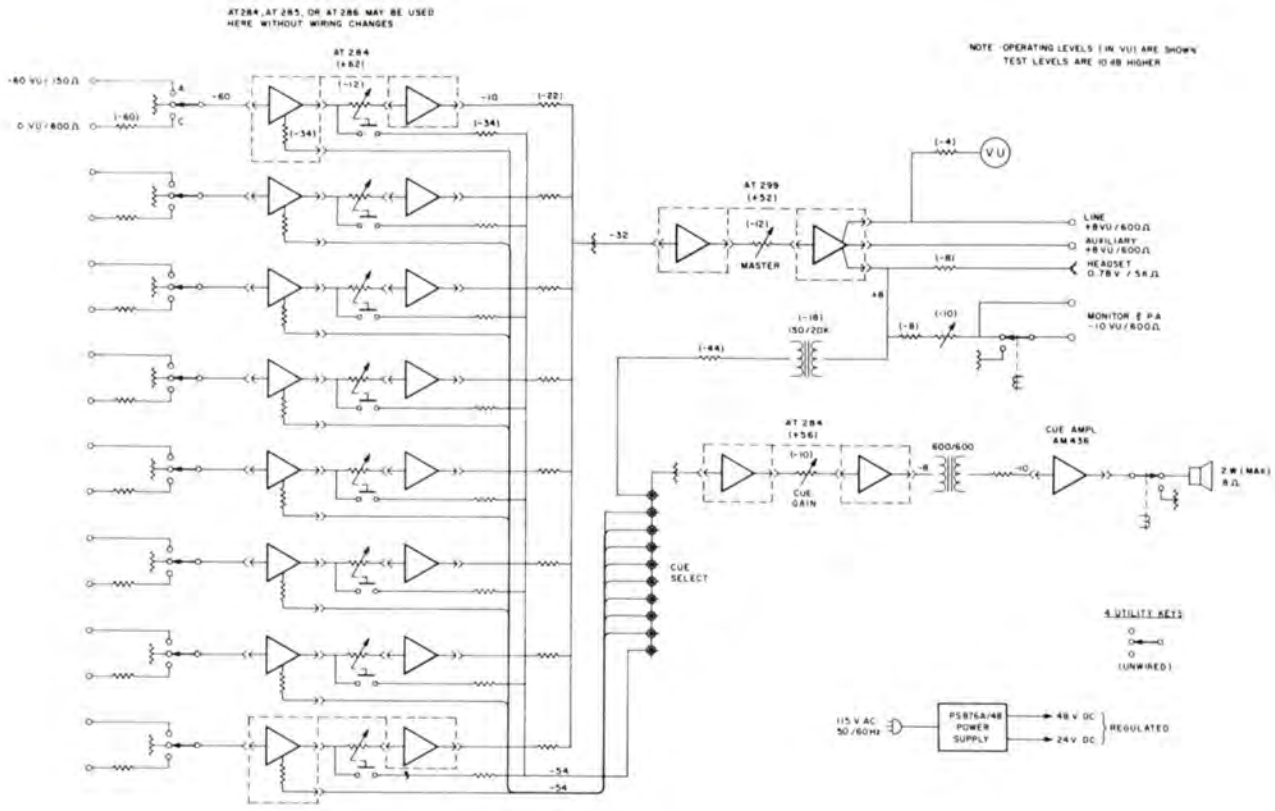
The cue channel provides up to 2 watts to the built-in speaker, with a front panel control providing level adjustment. A muting relay is included.

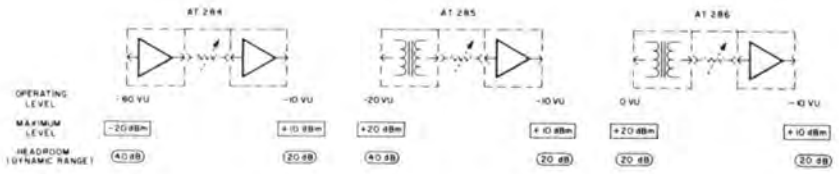
UTILITY KEYS

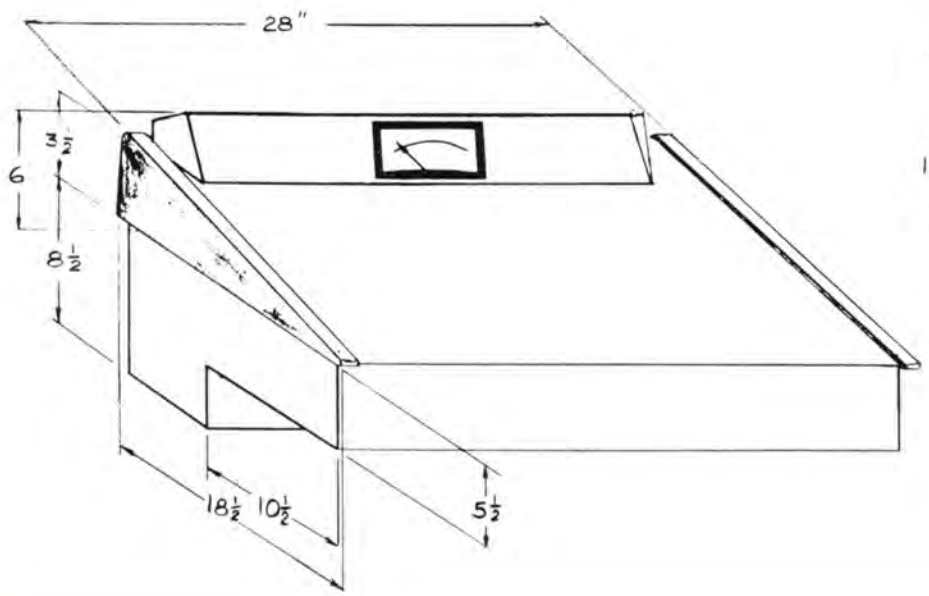
Four, three-position utility keys are supplied as standard equipment, with provision to add four more as an extra-cost option. These can be used for dc control of external equipment. The utility keys are unwired on the standard console.

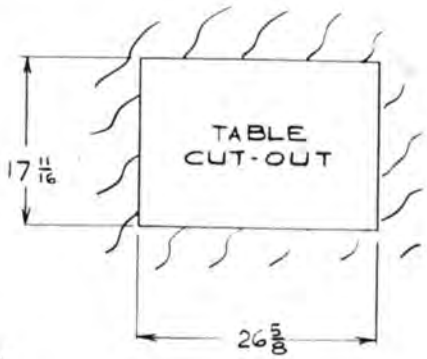
OPTIONS

Four recesses in the lower part of the front panel are designed to accommodate optional pushbutton assemblies for dc control of turntables, tapes, etc. McCurdy Radio Industries has a complete line of these assemblies. (See Ordering Information).









specifications

Inputs: 16 mixer inputs selectable to eight channels; -60 dBm 150 ohms, -20 dBm 600 ohms, or 0 dBm 600 ohms (see Ordering Information).

Outputs:
(1) One program line output, +8 vu (+18 dBm) 600 ohms (matching).
(2) One auxiliary output, +8 vu (+18 dBm) 600 ohms (bridging).
(3) One program headset output, 0 vu (0.780v equiv.) 5,000 ohms.
(4) One program monitor output, -10 vu (0 dBm) 600 ohms. Muting relay included.
(5) One PA output, -10 vu (0 dBm) 600 ohms.

Maximum Gain (± 1 dB)
(1) Low level input to program output: 92 dB.
(2) High level input to program output: 32 dB.
(3) Low level input to monitor output: 84 dB.
(4) High level input to monitor output: 24 dB.

Frequency Response (ref 1 kHz): For any input to program, monitor, or PA output at normal attenuator settings: 1 dB from 30 Hz to 15 kHz.

Noise: Relative Input Noise: -122 dBm, unweighted, measured over 10 Hz to 100 kHz bandwidth at -3 dB points.

Harmonic Distortion (at normal attenuator settings)
(1) For any input to program output: less than 0.5% from 30 Hz to 15 kHz at +18 dBm output.
(2) For any input to monitor output: less than 0.5% from 30 Hz to 15 kHz at 0 dBm output.

Transients: The operation of any relay in the console will not degrade the noise figure by more than 6 dB.

Power Requirements: 115 vac, 50/60 Hz, single phase, 30 va approximately

Ambient Temperature: 0°C to 55°C.

Overall Dimensions: 28 in. (71.1 cm) wide, 18-1/2 in. (47 cm) deep, 6 in. (15.24 cm) high plus 8-1/2 in. (21.6 cm) projection below desk top.

ordering information

ORDER

SS4388A 8-Mixer Single-Channel Audio Console and specify the input amplifier for each of the mixers:
AT284 Preamplifier; -60 dBm nom, -20 dBm max, 150 ohms.
AT285 Amplifier; -20 dBm nom, +20 dBm max, 600 ohms.
AT286 Amplifier; 0 dBm nom, +20 dBm max, 600 ohms.
The price listed for the standard console does not include optional equipment nor the installation of optional equipment.

OPTIONAL EQUIPMENT

(1) SS4388-8 Turntable Remote Start Pushbuttons.
(2) SS4388-9 Reel Tape Remote Start PUshbuttons.
(3) SS4388-10 Cartridge Remote Start Pushbuttons.
(The SS4388 will accommodate any four of the above assemblies).
(4) Up to four extra Utility Keys. Specify configuration (momentary, locking, or combination of these).
(5) LSA608 or LSA609 10-Watt Speaker-Amplifier Assembly.

Printed in Canada

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SS 4312 series

am audio program production console

McCurdy

description

The SS4312 is a fully self-contained 12-Mixer Dual-Channel Monaural Audio Console designed specifically for professional use in audio program production in AM-FM-TV Broadcasting. The contemporary design features and styling of the SS4312 provide a low-silhouette, desk mounting console of elegant appearance, for control centers requiring a compact console with the extensive facilities needed for mixing and monitoring of audio program material for production. Many facets of design engineering creativity are combined with functional design planning to achieve a practical compact console of exceptional dependability and versatility, with modular ease of assembly and service, and operating convenience.

In addition to rugged construction and high performance specifications along with complete program mixing, monitoring and control, the SS4312 provides a comprehensive Cue/Talkback system, P.A. feeds for Control Room and Studio monitoring, a pre-mixer assembly of 10 remote mixer inputs, that effectively and economically expands the console's input mixing facilities, and two program output channels.

The console is designed for desk or table-top mounting, resting on rubber feet and therefore stable without bolting down. The sloping front panel facilitates both manual and visual access to controls. This functional design planning enhances the front panel to provide operational convenience, by locating all controls within close easy operating reach from a sitting position without crowding, and in groups of related usage. The attenuator panel is covered with a plexiglass escutcheon with the lettering on the inside to avoid wear. The control panel features McCurdy designed contoured control knobs that accommodate the most desirable features required to allow smooth fingertip operation. Also, the low-silhouette design provides the operator with an unobstructed view into adjoining areas.

The total design of the SS4312 allows for ease of integration with ancillary equipments such as turntables, tapes, cartridges, etc. All amplifiers, relay muting/transfer circuits, and the power supply are plug-in modules housed within the console's sloping metal cabinet. The self-contained power supply provides individual regulated outputs for the program amplifiers, cue amplifiers, and monitor amplifiers. All amplifiers and the power supply encompass the latest state-of-the-art electronic solid-state techniques. The front panel and top cover are hinged to permit ease of access to all components, modules and wiring. Incoming and outgoing cables can be easily connected to terminal blocks.

All facilities of the SS4312 are illustrated in the functional block diagram.

Mixer-Channel Inputs to Program-Channel Outputs.

MIXER-CHANNEL INPUTS TO PROGRAM-CHANNEL OUTPUTS

A choice of four input modules in any or all of the 12 mixer-channel inputs makes it possible to accommodate any nominal mixer input level from –70 dBm to 0 dBm, with 20 to 40 dB Headroom (dynamic range) in reserve for microphone peaks, depending on the input module (level) used and the configuration. The four modules and their respective input levels and impedances are:

1. AT284 Input Module accommodates low-level (microphone) inputs from –60 dBm nominal to –20 dBm maximum/150 ohms. 40 dB Headroom.
2. AT285 Input Module accommodates medium-level inputs from –20 dBm nominal to +20 dBm maximum/600 ohms matching. 40 dB Headroom.
3. AT286 Input Module accommodates high-level inputs from 0 dBm nominal to +20 dBm maximum/bridging a 600 ohm line. 20 dB Headroom.
4. Optional CP 287 Input Module accommodates low-level inputs of –70 dBm nominal to –40 dBm maximum/150 ohms for a 2 dB change at the output. 30 dB Headroom.

The mixer output level in each of the 12 channels is adjustable by a high-quality slide attenuator (fader).

EACH MIXER-CHANNEL CONTAINS:

Two inputs selectable by a 3-position (center off) lever key.

A rotary type attenuator with a Cue position.
Two balanced mixer busses.

Two 3-position program-channel assign lever keys in the output to the mixer busses.
Channels 1 and 2 have Studio control ON-OFF relays in the amplifier output.

Channels 11 and 12 have their A inputs wired directly to remote input pushbutton selector switch banks each with a 5-input capability expanding the mixer input capabilities.

The output of each mixer-channel is fed to the balanced mixer busses and are selected by program-channel assign keys to drive the two program output amplifiers. Two +8 dBm/600 ohm (matching) outputs from each program amplifier are routed to a 3-position (center off) line select lever key to feed the Program Output Lines A and B. Each program amplifier also provides four auxiliary +8 dBm/bridging a 600 ohm line outputs. Two of these are used separately to drive a VU meter and to provide a monitor channel input. Level adjustment of the program output from each amplifier is provided by a high-quality master gain control located on the control panel.

CUE/TALKBACK

Each mixer attenuator in the extreme CCW position operates a Cue switch providing a mixer cue to the cue bus which drives the Cue and Talkback module. Three –20 dBm/600 ohms (bridging) external Cue inputs selectable by a rotary switch, and two Talkback inputs (Studio and Booth) selectable by momentary-on pushbutton relay controls are provided in the module. A built-in Talkback Microphone is also provided. An Intercom key permits use of the Cue system or allows the incoming talkback to be heard on the cue speaker when in the Listen position. In the Talk position, the console operator speaks to the Studio selected. The module provides a maximum 2W/16 ohms to the built-in Cue/Talkback speaker. A muting relay is provided for the speaker. A Cue Headset jack is provided on the front of the console. Level adjustment is provided by a rotary gain control. Relay modules within the Cue/Talkback channel either switch the Talkback Microphone output to a remote Studio or Booth, or switch Talkback Audio from a remote Studio or Booth to the Cue speaker and headset jack.

MONITORING

Continuous visual monitoring of the program-channels is provided by full size A-scale illuminated VU meters. Local aural program monitoring is provided by both a Control Room monitor amplifier with one switchable (mutable) and one direct output at a level of –10 dBm/bridging a 600 ohm line, and a single 2W (maximum)/16 ohm Control Room Headset monitor amplifier output to a front panel jack. A 2W/16 ohm Talkback feed to the headset monitor is also provided through contacts of a muting relay. A third monitoring facility is provided by a Studio Monitor channel having both a direct and switchable output at an output level of –10 dBm/bridging a 600 ohm line. All three monitoring facilities have selectable inputs from the two program output amplifiers and two external +8 dBm inputs to bridge a 600 ohm line. Each monitor channel has a master gain control. Provision is available for Talkback feeds to the Studio and Control Room monitoring channels.

Optional McCurdy 10-watt LSA609 and 50-watt LSA611 speaker-amplifier assemblies are available to accommodate the –10 dBm output of the Studio and Control Room Monitor-channels.

POWER SUPPLIES

Two Regulated DC Power Supplies power the console. One supply powers all the mixer and program-channel amplifiers, and the Studio/Control Room Monitor-channels with +48 Vdc, and the VU lamps with +24 Vdc. The second supply powers the Control Room Headset Monitor and Cue/Talkback-channel amplifiers, and the relay modules with +24 Vdc. Both supplies are provided with overload and short-circuit protection features with provision for sensing of remote load conditions. These supplies are functionally-proven and have reliable silicon solid-state circuitry.

modules & functions

STANDARD MODULES

AT284 PREAMPLIFIER — Microphone input, –60 dBm nominal to –20 dBm maximum, 150 ohms, 40 dB Headroom. Output with gain control, –10 dBm nominal to +10 dBm maximum, 20 dB Headroom.

AT285 MEDIUM-LEVEL AMPLIFIER — Medium-level input, –20 dBm nominal to +20 dBm maximum, 600 ohms matching, 40 dB Headroom. Output with gain control, –10 dBm nominal to +10 dBm maximum, 20 dB Headroom.

AT286 HIGH-LEVEL BRIDGING AMPLIFIER — High-level input, 0 dBm nominal to +20 dBm maximum, bridging a 600 ohm line, 20 dB Headroom. Output with gain control, –10 dBm nominal to +10 dBm maximum, 20 dB Headroom.

AT299 PROGRAM AMPLIFIER — Two program output splits at +8 dBm/600 ohms matching and three auxiliary output splits at +8 dBm/bridging a 600 ohm line.

AM7471 POWER AMPLIFIER — Typically used as a Cue Channel Amplifier to provide a 2W/16 ohm output with gain control to a speaker and headset jack from the Cue bus and/or three –20 dBm/bridging 600 ohm sources.

AM7472 POWER AMPLIFIER — Typically used as a Headset Amplifier to provide a 2W/16 ohm output with gain control from a +8 dBm/bridging a 600 ohm input.

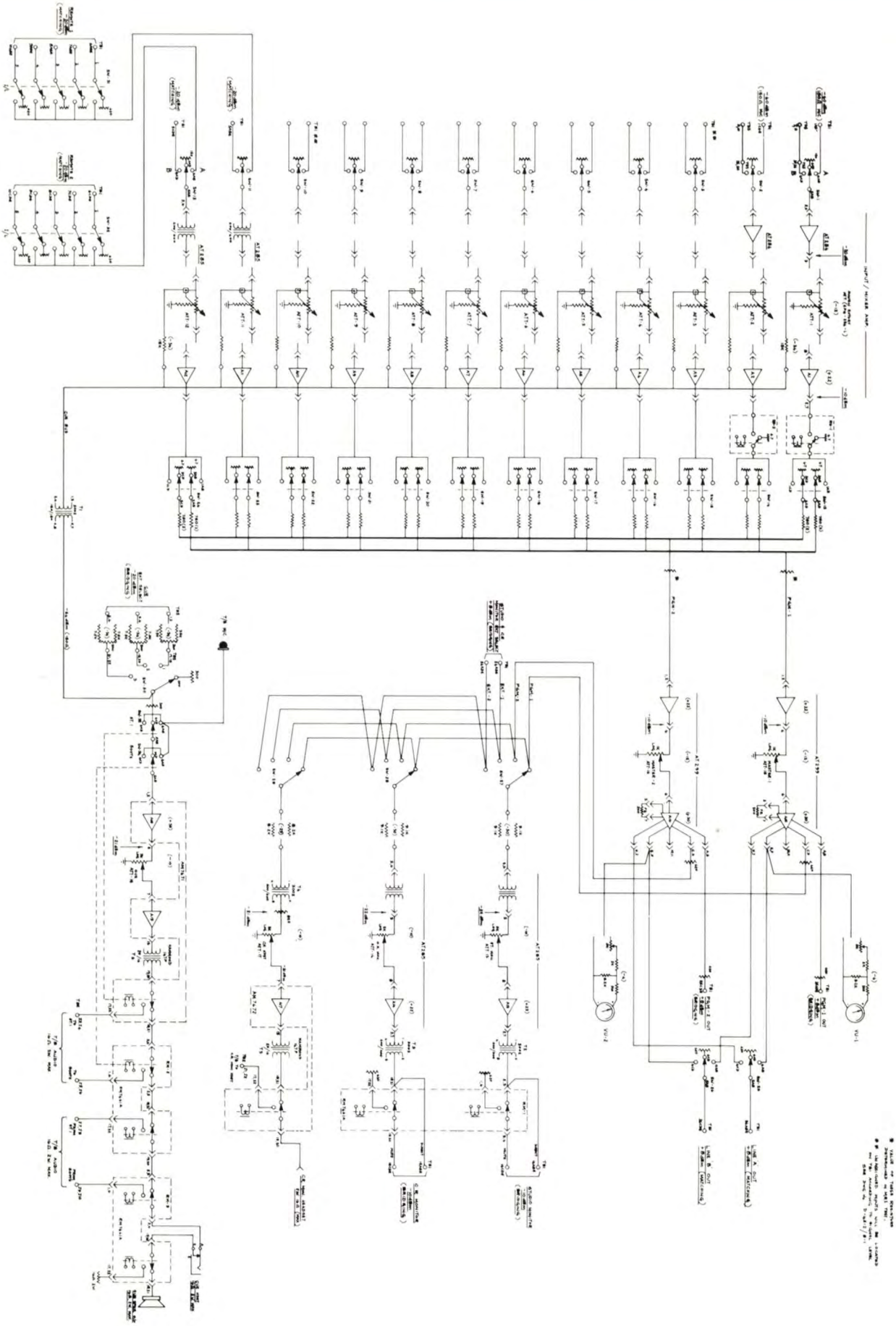
RM7461A RELAY MODULE — +24 Vdc relay module typically used as a muting/transfer relay in the monitor and cue/talkback channels.

PS876A/48 REGULATED DC POWER SUPPLY — Regulated +48 Vdc to all amplifier modules except the AM7471 and AM7472 modules, and +24 Vdc to the lamps.

Lambda LM-B-24 REGULATED DC POWER SUPPLY — Regulated +24 Vdc to AM7471 and AM7472 Power Amplifiers and the RM7461A Relay modules.

OPTIONAL MODULES

CP287 MICROPHONE PREAMPLIFIER WITH AGC — Electrically identical to AT284 module when AGC is not being used. Input level with AGC is –40 dBm/150 ohms. With AGC operating the output level of the module, –10 dBm/600 ohms will increase by 2 dB for an increase of 30 dB at the input (i.e. increase from –70 to –40).



functional

summary of facilities

1. 32 mixer inputs selectable to 12 mixer-channels.
2. Rotary attenuators on all mixer-channels.
3. Mixer inputs on channels 1 through 10 are selectable by a 3-position (center off) lever key.
4. Channels 1 and 2 have relay controlled feeds to the mixer busses.
5. One 5-position pushbutton selector for five remote mixer inputs on each of channels 11 and 12 plus a single fixed input slectable by a 3-position (center off) lever key.
6. Two balanced mixer busses.
7. Cue on all mixer-channels.
8. Two program channels each with four wired splits, a master gain control and VU meter.
9. Four selectable program outputs to two Program lines.
10. Studio and Control Room monitor-channels for external speaker-amplifier feeds, each with a gain control and muting relay.
11. Control Room Headset Monitor channel with gain control and muting relay.
12. Cue/Talkback system with three external cue inputs, studio and booth talkback inputs and outputs, speaker with muting relay, and a headset jack.

PROGRAM INPUT SELECTION

1. Two inputs on channels 1 through 10.
2. Five remote and one fixed input on channels 11 and 12.
3. Channels 1 to 12 capable of accommodating low, medium and high-level inputs depending on the input module installed:
   (a) Low-level inputs; Input Module AT284, –60 dBm/150 ohms.
   (b) Medium-level inputs; Input Module AT285, –20 dBm/600 ohms matching.
   (c) High-level inputs; Input Module AT286, 0 dBm/bridging a 600 ohm line.
   (d) Optional Input Module CP287, Low-level inputs with AGC, –70 dBm/150 ohms.

AUXILIARY INPUTS

1. Channels 11 and 12 accommodate medium-level inputs using the AT285 module connected to one input and a 5-position selector switch connected to the second input for remote medium-level inputs.
2. Three external inputs to cue speaker channel; –20 dBm/bridging a 600 ohm line.
3. Two external inputs to monitor input selector; +8 dBm/bridging a 600 ohm line.
4. Built-in talkback microphone.
5. Four spare inputs to monitors and cue muting/transfer relays.
6. Studio and Booth talkback inputs to cue/talkback channel via muting/transfer relays; 2W (maximum)/16 ohms.

OUTPUTS

1. Four program output splits switchable to two lines; +8 dBm/600 ohms matching.
2. Two fixed program output splits; +8 dBm/bridging a 600 ohm line.
3. Two program output splits to studio, control room and control room headset monitor selectors; +8 dBm bridging a 600 ohm line.
4. One program output to input feed-back split.
5. Two studio monitor amplifier outputs with gain control; –10 dBm/bridging a 600 ohm line. Muting relay in one output line.
6. Two control room monitor amplifier outputs with gain control; –10 dBm/bridging a 600 ohm line. Muting relay in one output line.
7. One control room monitor headset amplifier output with gain control; 2W (max)/16 ohms. Muting/transfer relay for talkback monitor.
8. One cue/talkback channel headset jack output; 2W (max)/16 ohms.
9. One cue/talkback channel speaker output; 2W (max)/16 ohms; with muting relay.
10. Two talkback outputs; 2W (max)/16 ohms with muting/transfer relays.

Note: Optional McCurdy 10-watt LSA609 and 50-watt LSA611 speaker-amplifier systems for the Control Room and Studio Monitor outputs are external.

specifications

GAIN (±1 dB)

1. Low-level input (–60 dBm) to program output 92 dB.
2. Medium-level input (–20 dBm) to program output; 52 dB.
3. High-level input (0 dBm) to program output 32 dB.
4. Remote line input to program output, 52 dB.

FREQUENCY RESPONSE (ref 1 kHz)

For any input to program or monitor output at normal attnuator settings; ±1 dB from 30 Hz to 15 kHz.

SIGNAL-TO-NOISE-RATIO

Relative Input Noise: –124 dBm, unweighted (i.e. 64 dB below +8 for a –60 dBm microphone input) measured over 10 Hz to 100 kHz bandwidth at –3 dB points.

HARMONIC DISTORTION (TYPICAL PROGRAM PATHS)

Measured at 10 dB above normal operating levels (i.e. at maximum levels specified).

1. For any input to program output: less than 0.5% from 30 Hz to 15 kHz at +18 output.
2. For any input to studio or control room monitor output: less than 0.5% from 30 Hz to 15 kHz at 0 dBm output.

CROSSTALK

At least 60 dB below +18 dBm output level when feeding one channel and measuring an unused channel, 30 Hz to 15 kHz, at normal attenuator settings (12 dB in-hand).

TRANSIENTS

The operation of any relay in the console will not degrade the noise figure by more than 10 dB.

POWER REQUIREMENTS

117/230 Vac, 50/60 Hz, 3-wire, single-phase, 40 va. (Normally connected for 117V operation).

AMBIENT TEMPERATURE

0°C to 55°C (32°F to 131°F)

OVERALL DIMENSIONS

48 in. wide (121.92 cm), 9 in. high (22.86 cm), and 20 in. deep (50.80 cm).

SS7400 series

monaural audio production consoles

McCurdy

description

The SS7400 is one of the McCurdy series of low-silhouette desk-mounting consoles, designed specifically for control centers requiring a compact console, with the extensive facilities needed for mixing and monitoring of Radio and TV production. Many facets of design engineering are combined to achieve modular ease of assembly and service.

In addition to complete program mixing, monitoring and control, the SS7400 Series provides a comprehensive Cue/Talkback system, and P.A. feeds for Control Room and Studio monitoring. A full range of options are available which include Equalizers, Compressors, Microphone Preamplifier Input Module with AGC, Normalled jack inputs and outputs, and Remote Controls.

Through advanced pre-engineering of the basic design, the SS7400 automatically lends itself to customizing. This inherent feature assists the customer to easily determine from his requirements, both the general mechanical and electrical layout for his particular application. This ensures the total design is completely integrated to the user's requirements and facilities.

Functional design planning enhances the control panel to provide operational convenience, by locating all controls within close easy operating reach from a desk-sitting position without crowding, and in groupings of related usage. A full width low-silhouette VU meter and speaker panel housing is an integral part of the control panel and provides the operator with an unobstructed view into adjoining areas. All panels are covered with a woodgrain vinyl overlay, surrounded by style strips of clear anodized aluminum which presents an attractive glare-free appearance. For maximum accessibility, the complete control panel lifts upwards from the front on a standard piano type hinge located at the rear.

The convection cooled power supply is a modular part of the console.

The console is supported on a mounting desk or table, either supplied by the customer or purchased from McCurdy Radio as an optional equipment item.

The standard and optional facilities of the SS7400 are illustrated in the functional block diagram on page 5.

MIXER-CHANNEL INPUTS TO PROGRAM-CHANNEL OUTPUTS

A choice of five input modules in any or all of the 12 input mixer-channels makes it possible to accommodate any nominal mixer input level from —70 dBm to +8 dBm with 12 to 40 dB dynamic range (headroom) in reserve for microphone peaks, depending on the input module (level) used and the configuration.

NOTE: The standard AT284 Input Module accommodates input levels from —60 dBm nominal, to —20 dBm maximum/150 ohms. The standard AT285 and AT286 Input Modules accommodate input levels of —20 dBm nominal to +20 dBm maximum/600 ohms matching and 0 dBm nominal to +20 dBm maximum/bridging a 600 ohm line, respectively. The optional AT288 Input Module accommodates input levels from +8 dBm nonimal to +20 dBm maximum bridging a 600 ohm line (40 K ohm input.) The optional CP287 Input Module with AGC accommodates microphone inputs of —70 dBm nominal to — 40 dBm maximum/150 ohms for a 2 dB change at the ouptut.

The mixer output level in each of the 12 channels is adjustable by a high quality slide attenuator. Optional EQ155 Variable Equalizers may be selected to any of the 12 mixer, or two program-channels.

EACH MIXER CONTAINS:

Two inputs selectable by a 3-position (center off) lever key.
A detent type Cue Position associated with the mixer slide attenuator.
A single 3-position program channel assign lever key.
Provision for an optional remote-operated microphone ON/OFF relay in mixer channels 1 and 2.

The output of each mixer-channel is fed to two balanced mixer busses which drive the two program output amplifiers. Three +8 dBm/600 ohm program outputs and three +8 dBm/600 ohm auxiliary outputs are provided on each program-out channel. Two of the +8 dBm outputs from each program amplifier are selectable by lever keys (an output line-on function) to program out lines A and B. Level adjustment is provided by high-quality master gain controls located on the control panel. The third +8 dBm output drives an AM7472 Headset Amplifier via pushbutton selects to provide a 16 ohm/2W (maximum) headset monitor output. Optional compressor modules are available for insertion in the line outputs of systems requiring this facility.

AGC

An optional CP287 mixer-channel Input Module performs the same function as the standard AT 284 Input Module but has in addition AGC, selectable by a single pole 2-position (SPDT) toggle switch. With AGC, the sensitivity is increased by 10 dB to accommodate low microphone input levels. When AGC is selected, the output level of the module will increase by 2 dB for an increase of 30 dB at the input.

CUE /TALKBACK

Each mixer attenuator in the infinity position provides a mixer cue to the cue bus which feeds the Cue/Talkback module. Three —20 dBm external Cue inputs selectable by interlocking push-buttons and two studio Talkback inputs selectable by momentary-on push-button relay controls are provided in the module in addition to a Talkback Microphone input facility. The module provides a maximum 2W/16 ohms to the console Cue/Talkback speaker. An integral front panel gain control provides level adjustment. A muting relay is provided for the speaker. An optional —60 dBm/150 ohms Talkback Microphone is available.

MONITORING

Continuous visual monitoring of the program-channels is provided by full size A-scale illuminated VU meters. Local aural monitoring of program and cue is provided by a headset jack (16 ohms/2W maximum) located on the front of the console. These outputs plus one of three external +8 dBm/600 ohms monitor inputs to the Headset Amplifier are selectable by interlocking push-buttons. Control Room and Studio monitoring of he program-channels is provided by interlocking select pushbuttons, that feed Program 1 and Program 2 outputs to the Monitor Amplifier modules. Three external 0 dBm/600 ohm auxiliary inputs, selectable in the same manner as the program outputs, are fed to these amplifier modules which provide —10 dBm/600 ohm outputs for feeding external monitor amplifiers. Separate control panel gain controls are provided for each amplifier output. Both outputs may be muted by separate muting relays provided. Optional 10-watt and 50-watt speaker-amplifier systems (McCurdy models LSA609 and LSA611 respectively) are available to accommodate these outputs.

POWER SUPPLY

A single Regulated DC Power Supply module powers the console, providing +48 Vdc for the amplifiers and +24 Vdc for the lamps and relays. This supply is provided with overload and short-circuit protection features with provision for remote sensing of load conditions. The Power Supply is functionally-proven, and has reliable silicon solid-state circuitry.

modules & functions

STANDARD MODULES

AT284 PREAMPLIFIER — Microphone input; −60 dBm nominal to −20 dBm maximum, 150 ohms, 40 dB Headroom. Output with gain control, −10 dBm nominal to +10 dBm maximum, 20 dB Headroom.

AT285 MEDIUM-LEVEL AMPLIFIER — Medium-level input; −20 dBm nominal to +20 dBm maximum, 600 ohms matching, 40 dB Headroom. Output with gain control, −10 dBm nominal to +10 dBm maximum, 20 dB Headroom.

AT286 HIGH-LEVEL BRIDGING AMPLIFIER — High-level input; 0 dBm nominal to +20 dBm maximum bridging a 600 ohm line, 20 dB Headroom. Output with gain control, −10 dBm nominal to +10 dBm maximum, 20 dB Headroom.

AT299 PROGRAM AMPLIFIER — Three auxiliary program output splits at +8 dBm nominal 600 ohms, one Headset Amplifier feed split at +8 dBm nominal 600 ohms, and two program output splits to Program Lines at +8 dBm nominal 600 ohms.

CM7441 CUE AND TALKBACK MODULE — 2W/16 ohms output with 3-external Cue inputs, 2-external Talkback inputs, and a Talkback Microphone input facility.

PS876A/48 REGULATED DC POWER SUPPLY — Regulated +48 Vdc to amplifiers and +24 Vdc to lamps and relays.

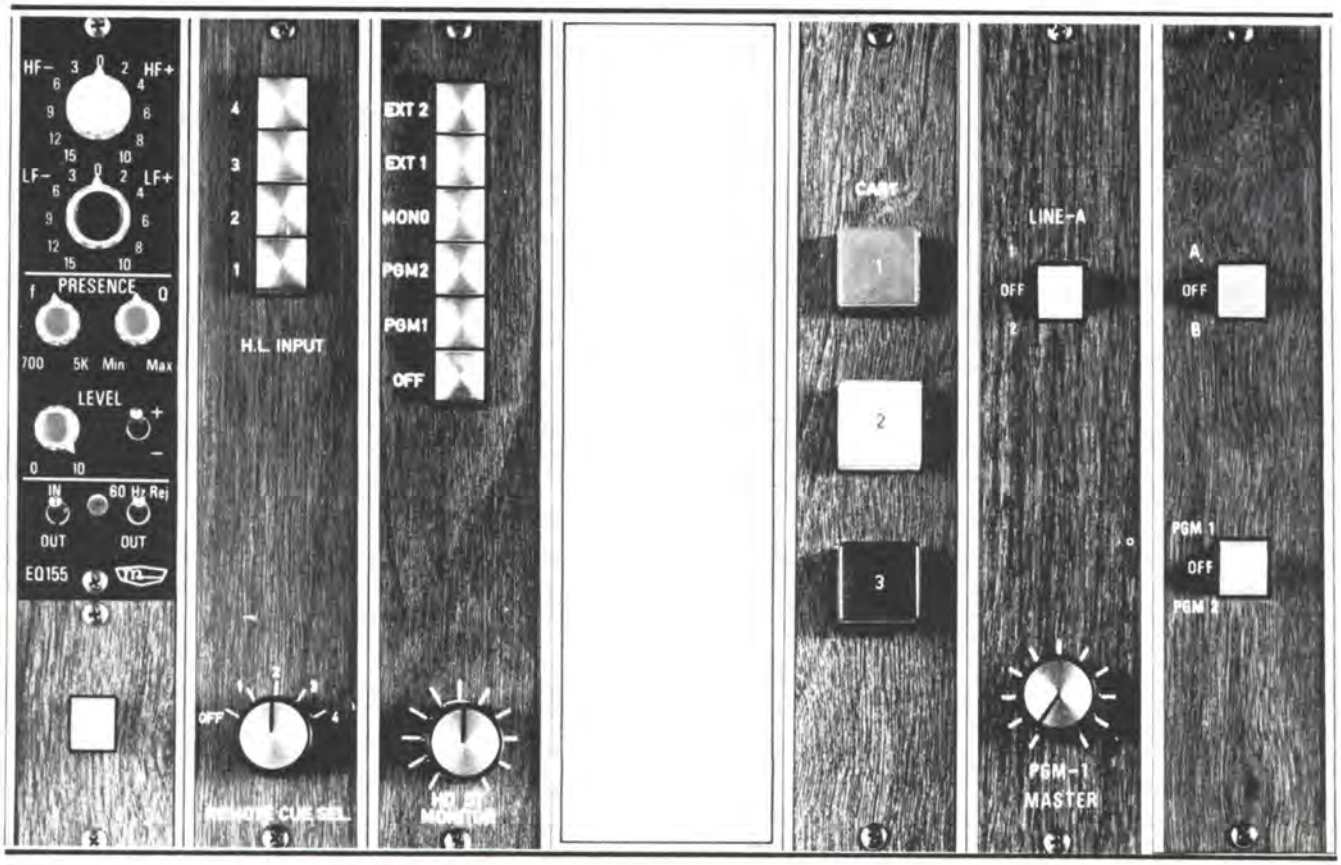
AM7472 POWER AMPLIFIER — Typically used as a Headset Amplifier to provide a 2W/16 ohm output with gain control from a +8 dBm/600 ohm input.

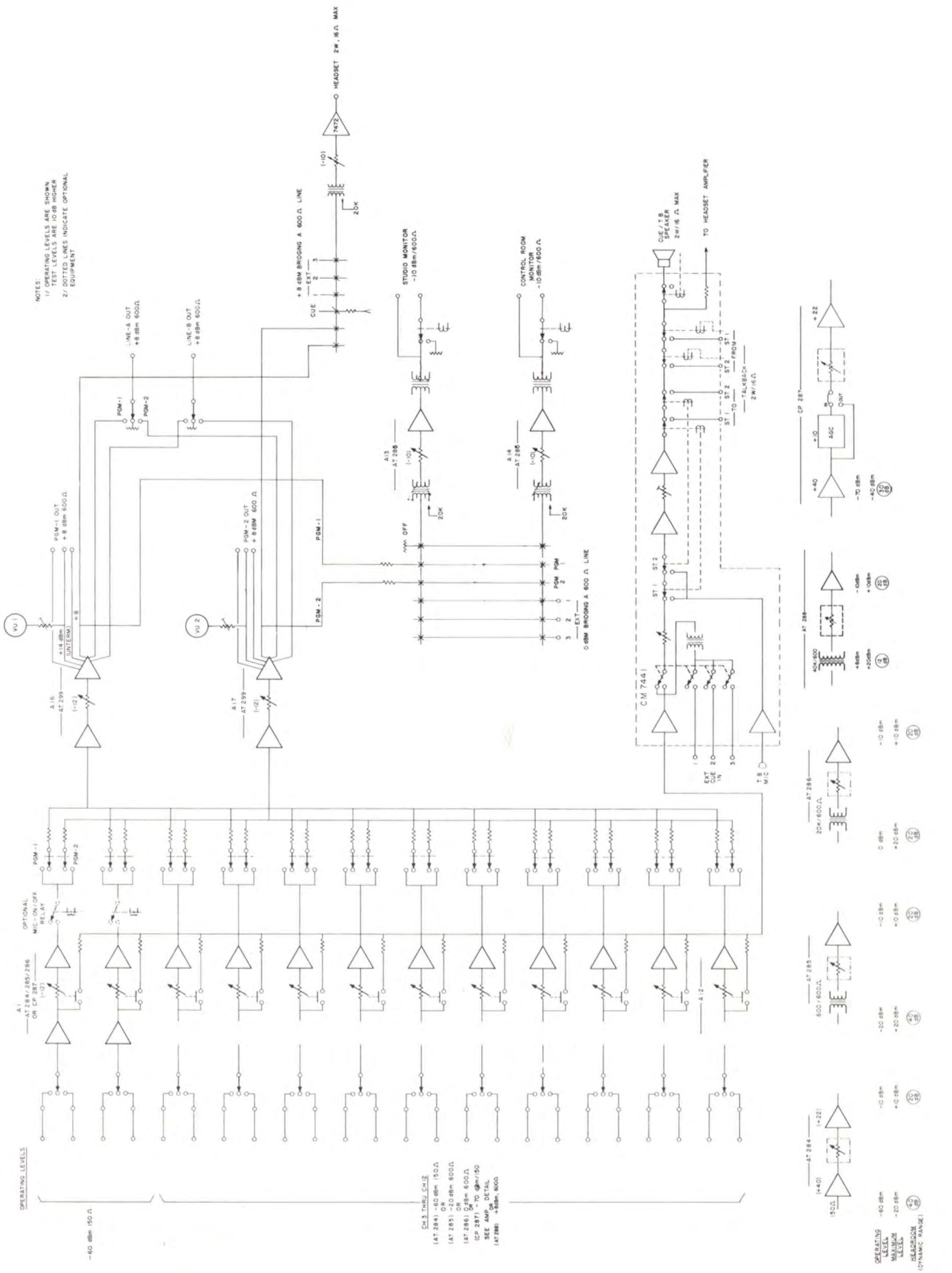
OPTIONAL MODULES

CP287 MICROPHONE PREAMPLIFIER WITH AGC — Electrically identical to AT284 module when AGC is not being used. Input level with AGC is −70 to −40 dBm/150 ohms. With AGC operating the output level of the module, −10 dBm/600 ohms, will increase by 2 dB for an increase of 30 dB at the input (i.e. increase from −70 to −40).

AT288 High Level Bridging Amplifier high level input: +8 dBm nominal to +20 dBm maximum bridging a 600 ohm line, 20 dB headroom. Output with gain control, -10 dBm nominal to +10 dBm maximum, 20 dB headroom.

TYPICAL SS7400 SERIES CONTROL PANEL MODULES





summary of facilities

1. 24 mixer inputs selectable to 12 channels.
2. Two program output amplifiers each with six splits and a master gain control.
3. Four selectable program outputs to two Program Lines.
4. Straight-line faders (slide attenuators) on all mixer-channels.
5. Cue on all mixing channels.
6. Optional Equalizer insertion facility on all mixing channels.
7. Two Program Monitor VU meters.
8. Talkback Microphone input facility to Cue channel.
9. Cue/Talkback Speaker.
10. Optional Compressor insertion facility in the program outputs.
11. Talkback Controls.
12. Studio and Control Room Monitors.
13. External Cue inputs.
14. External Monitor inputs.
15. Optional remote ON/OFF Microphone relay control facility in mixer 1 and 2.
16. Headset Amplifier output.

PROGRAM INPUT SELECTION

1. Two inputs on each mixer-channel.
2. All channels capable of accommodating low, medium and high-level inputs depending on the input module installed:
   (a) Low-level inputs; Input Module AT284, — 60 dBm/150 ohms.
   (b) Medium-level inputs; Input Module AT285, — 20 dBm/600 ohms matching.
   (c) High-level inputs; Input module AT286, 0 dBm bridging a 600 ohm line.
   (d) Optional low-level inputs; Input Module CP287, — 70 dBm/150 ohms with AGC.
   (e) Optional high level inputs; input module AT288 +8 dBm bridging a 600 ohm line.

AUXILIARY INPUTS

1. Three external Cue inputs; — 20 dBm/600 ohms.
2. Three external Monitor channel inputs; 0 dBm/600 ohms.
3. Two external Talkback Inputs; 2W (maximum) /16 ohms.
4. Three external monitor inputs to Headset Amplifier channel; +8 dBm/600 ohms.
5. Optional Talkback Microphone.

OUTPUTS

1. 12 Program Output splits (total):
   (a) Four splits selectable to two Program Lines. Level: +8 dBm/600 ohms.
   (b) Six auxiliary output splits. Level: +8 dBm/600 ohms.
   (c) Two splits to Headset Amplifier. Level: +8 dBm/600 ohms.
2. Headset Amplifier output with gain control. Level: 2W (maximum)/16 ohms.
3. Separate Studio and Control Room monitor outputs with gain controls and muting relays. Level: — 10 dBm/600 ohms. (Optional McCurdy 10-watt LSA609 and 50-watt LSA611 speaker-amplifiers are external).
4. Cue/Talkback channel output: Level: 2W (maximum)/16 ohms.

specifications

GAIN (±1 dB)

1. Low-level input (— 60 dBm) to program output; 92 dB.
2. Medium-level input (— 20 dBm) to program output; 52 dB.
3. High-level input (0 dBm) to program output 32 dB.
4. High-level input (+8 dBm) to program output; 24 dB.

FREQUENCY RESPONSE (ref 1 kHz)

For any input to program or monitor output at normal attenuator settings; ±1 dB from 30 Hz to 15 kHz.

SIGNAL-TO-NOISE-RATIO

Relative Input Noise: — 124 dBm, unweighted (i.e. 64 dB below +8 for a — 60 dBm microphone input) measured over 10 Hz to 100 kHz bandwidth at — 3 dB points.

HARMONIC DISTORTION (TYPICAL PROGRAM PATHS)

Measured at 10 dB above normal operating levels (i.e. at maximum levels specified).

1. For any input to program output: less than 0.5% from 30 Hz to 15 kHz at +18 dBm output.
2. For any input to studio or control room monitor output: less than 0.5% from 30 Hz to 15 kHz at 0 dBm output.

CROSSTALK

At least 60 dB below +18 dBm output level when feeding one channel and measuring an unused channel, 30 Hz to 15 kHz, at normal attenuator settings (12 dB in-hand).

TRANSIENTS (RMS)

Better than 60 dB below output (test level) when operating a relay or pushbutton.

POWER REQUIREMENTS

115 V ac, 50/60 Hz, 3-wire single phase, 35 va approximately (can be supplied for 230V operation on special order).

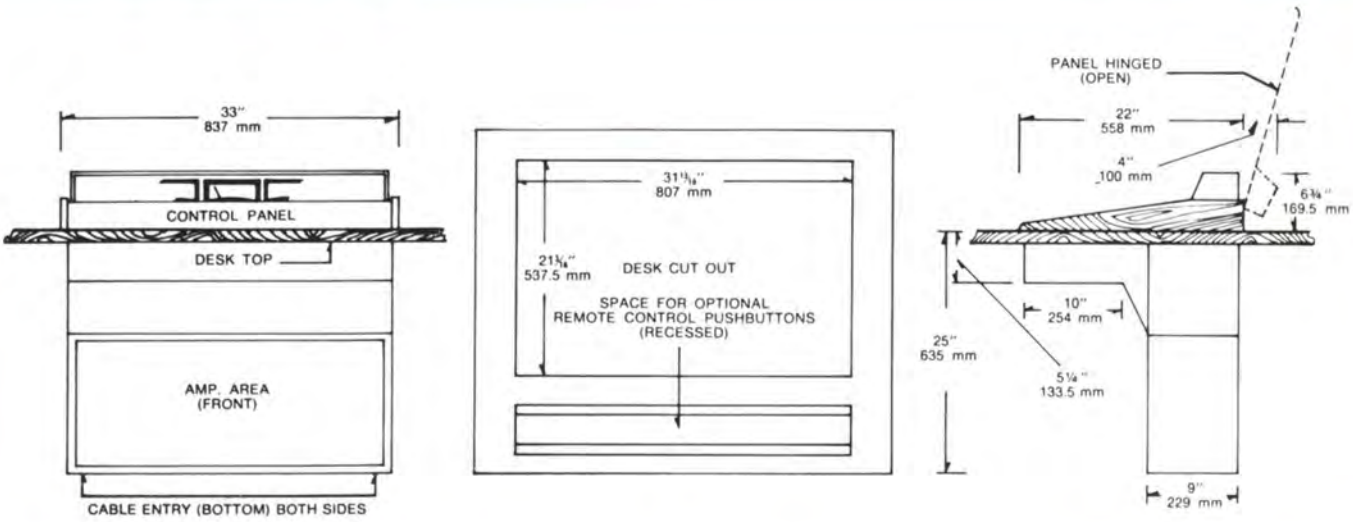
AMBIENT TEMPERATURE

0°C to 55°C (32°F to 131°F).

OVERALL DIMENSIONS

33 ins (83.82 cm) wide, 22 ins (55.88 cm) deep, and 6¾ ins (17.14 cm) high.

installation



ordering information

STANDARD EQUIPMENT

1. For the standard console, order SS7400 12-Mixer Dual-Channel Monaural Audio Console. As shown in the Block Diagram, the standard console includes prewired provision for 12 dual-channel mixer inputs, a cue system, two program-channels, headset amplifier channel with three external monitor inputs, control room and studio monitor-channels with three external monitor inputs plus inputs from the program-channels, cue/talkback channel with associated speaker and talkback microphone input facility and three external cue inputs. All amplifiers, controls and power supply for the above are included.
2. Specify type and quantity of input modules desired from the following:
   (a) AT284 Preamplifier; −60 dBm nominal, −20 dBm maximum, 150 ohms.
   (b) AT285 Medium-Level Amplifier; −20 dBm nominal, +20 dBm maximum, 600 ohms matching.
   (c) AT286 High-Level Bridging Amplifier; 0 dBm nominal, +20 dBm maximum, bridging a 600 ohm line.
3. The price for the standard console does not include optional equipment nor the installation of optional equipment.

OPTIONAL EQUIPMENT

1. CP287 Microphone Preamplifier with AGC; −70 dBm nominal, −40 dBm maximum, 150 ohms.
2. Microphone ON-OFF relays for remote control.
3. 10-watt LSA609 or 50-watt LSA611, speaker-amplifier assemblies (external to console) to accommodate Studio and Control Room Monitor outputs of −10 dBm/600 ohms.
4. Talkback Microphone.
5. Compressors for insertion in the program outputs.
6. EQ155 Variable Equalizers for insertion in the mixer-channel outputs.
7. Remote control pushbutton for Tapes, Carts and Turntables.
8. Mounting desk or table.

Printed in Canada

McCURDY RADIO INDUSTRIES LIMITED
108 CARNFORTH ROAD, TORONTO, ONTARIO M4A 2L4 (416) 751-6262, TELEX: 06-963533

McCURDY RADIO INDUSTRIES INCORPORATED
1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

EAST COAST OFFICE: SADDLE RIVER, N.J. P.O. BOX 86, ZIP 07458, PHONE (201) 327-0750, TWX 610-492-3219

SS7500 series

stereo audio production consoles

McCurdy

description

The SS7500 Stereo Audio Console is another of the McCurdy series of compact low-silhouette desk mounting consoles. This console has been designed specifically for control centers requiring a compact console, with the extensive and flexible professional facilities needed for mixing and monitoring of stereo Radio and TV program production, with performance specifications well within recognized broadcast standards. As with all other McCurdy studio system consoles, many facets of design engineering are combined to achieve modular ease of assembly and service, practical operational convenience and flexibility, and a mechanically rigid structure neatly styled and physically attractive.

Besides providing complete program mixing, monitoring and control, the SS7500 Series also provides P.A. stereo feeds for external monitoring, a comprehensive Cue/Talkback system, a Stereo Headset Monitor output and external Cue and Monitor input facilities. A full range of options are available which include amplifiers for Stereo Audition outputs, amplifiers and VU meter for Monaural Program-Channel outputs, two additional mixer-channels, Microphone Preamplifier input module with AGC, remote ON-OFF relays for studio control, Normalled jack inputs and outputs and Equalizers.

In conjunction with the practical operational flexibility accorded the console through advanced pre-engineering of the basic design, the SS7500 inherently lends itself to customizing to suit individual needs in any facility. This planned progressive feature assists the customer to easily determine from his requirements both the general mechanical and electrical layout for his particular application. Such flexibility ensures that the total design of the end-product is completely integrated to the user's requirements and with his current facilities.

Pre-engineering of the basic design includes functional design planning of the control panel. This enhances the control panel to provide operational convenience, by locating all controls within close easy operating reach from a desk-sitting position without crowding, and in groupings of related usage. Thought planning of this degree virtually eliminates the inadvertent operation of controls. This functional design planning further enhances the console by dividing the control panel into individually removable segments that are compatible with the dimensions of commonly used faders, equalizers, etc. This division greatly facilitates the addition of new components and controls for simplicity of custom configuration expansion.

A full width low-silhouette VU meter and speaker panel housing is an integral part of the control panel, providing the operator with an unobstructed view into adjoining areas. All panels are covered with a stain resistant wood-grain vinyl overlay, surrounded by style strips of clear anodized aluminum which presents an attractive glare-free appearance. The control panel is set between a pair of genuine hand-rubbed solid walnut end bells. For ease of accessibility, the complete control panel lifts upwards from the front on a rear located piano type hinge.

The console is supported on a mounting desk or table either purchased from McCurdy Radio Industries as an optional equipment item or supplied by the customer.

The convection cooled power supplies are located in an external frame separate from the console, and away from the audio circuits.

McCurdy field-proven solid-state plug-in modules comprise the full complement of electronics.

facilities & options

The standard and optional facilities of the SS7500 are illustrated in the functional block diagram on page 5.

Mixer-Channel Inputs to Program-Channel Outputs.

A choice of four input modules in the mixer-channels makes it possible to accommodate any nominal input level from –70 to 0 dBm with 20 to 40 dB of headroom (dynamic range) in reserve for microphone peaks, depending on the input module (level) used and the configuration.

Note: The standard AT284 Input Module accommodates input levels from –60 dBm nominal to –20 dBm maximum/150 ohms. The standard AT285 and AT286 Input Modules accommodate input levels of –20 dBm nominal to +20 dBm maximum/600 ohms matching and 0 dBm nominal to +20 dBm maximum/bridging a 600 ohm line respectively. The optional CP287 Input Module with AGC accommodates microphone inputs of –70 dBm nominal to –40 dBm maximum/150 ohms for a 2 dB change at the output.

Channels 1 to 12 accommodate any combination of the standard low, medium or high-level input modules and the optional low-level microphone input module CP287 with AGC.

The mixer output level in each channel is adjustable by a high-quality slide attenuator. An optional EQ155 Variable Equalizer may be selected to any mixer-channel or program-channel.

EACH MIXER CONTAINS:

Two stereo inputs selectable by a 3-position (center off) lever key.

A Cue bus and a detent type Cue position associated with the mixer output slide attenuator.

A 3-position (center off) program channel assign lever key.

Provision for an optional remote-operated audio control microphone on-off relay in channels 1 and 2.

Balanced mixer busses.

Four stereo high-level cue select inputs via pushbutton selector; 0 dBm/bridging a 600 ohm line.

The output of each mixer-channel is fed to two balanced mixer busses which drive the stereo program output amplifiers. Each amplifier provides a Program Output level of +8 dBm/600 ohms, three auxiliary program splits at +8 dBm/bridging a 600 ohm line, one headset split to the headset amplifier at +8 dBm/600 ohms and a –32 dBm monaural split to drive the Mono Program Output amplifier. A 3-position center off lever key which functions as an output line-on switch, selects between Program Out Left and Right, and Program Audition Out Left and Right. Level adjustment is provided by high-quality master gain controls located on the control panel. Left and Right VU meters provide visual monitoring of the program output. Each meter is wired to a 5-position switch that selects between Program Out, Program Audition, two External Program inputs and OFF.

AGC

An optional CP287 mixer-channel Input Module performs the same function as the standard AT284 Input Module but has in addition AGC, selectable by a single pole 2-position toggle switch. With AGC, the sensitivity is increased by 10 dB to accommodate low microphone input levels of –70 to –40 dBm. When AGC is selected, the output level of the module will increase by 2 dB for an increase of 30 dB at the input.

STEREO AUDITION

This is an optional feature of the SS7500 which uses AT299 Program Amplifiers driven by the balanced mixer-channel busses. Each amplifier provides six output splits as follows:

(a) One split at +8 dBm/600 ohms to the Line-On switch in the Stereo Program Output circuit.
(b) Three auxiliary splits at +8 dBm/bridging a 600 ohm line.
(c) One VU meter split.
(d) One headset monitor amplifier split at +8 dBm/600 ohms.

MONAURAL PROGRAM OUT

This feature is optional in the SS7500. A single AT299 Program Amplifier driven by –32 dBm from the Stereo Program Amplifiers provides a single Mono PGM Output split at +8 dBm/600 ohms and five auxiliary output splits at +8 dBm/bridging a 600 ohm line. An optional VU meter monitors one auxiliary output line and is selectable to two +8 dBm/600 ohm monaural external inputs by a 4-position rotary switch.

CUE/TALKBACK

Each mixer attenuator in the infinity position provides a mixer cue to the cue bus which feeds the Cue and Talkback module. Three –20 dBm external Cue inputs selectable by interlocking pushbuttons and two studio Talkback inputs selectable by momentary-on pushbutton relay controls are provided in the module, in addition to a Talkback Microphone input facility. The module provides a maximum 2W/16 ohms to the console Cue/Talkback speaker. A front panel gain control provides level adjustment. A muting relay is provided for the speaker. An optional –60 dBm/150 ohms Talkback Microphone is available. In addition, a 5-position rotary Cue select switch provides four external cue feeds at 0 dBm/bridging a 600 ohm line, from a pushbutton selector wired to the mixer-channel high-level inputs.

MONITORING

Visual monitoring of the Program and Program Audition channel is provided by two full size A-scale illuminated VU meters which also provide monitoring of external program inputs. A third and optional VU meter monitors the monaural program output plus two external monaural inputs. Local aural monitoring is provided by stereo headset jacks (2W maximum at 16 ohms) located on the front of the console. These jacks are fed from the AM7472 stereo headset amplifiers. Program, Program Audition, Cue and three external +8 dBm/600 ohm Program feeds are selectable by interlocking pushbuttons. Studio monitoring of the Program, Program Audition, Mono Program and two external 0 dBm/bridging a 600 ohm line inputs, is provided by the AT286 stereo monitor-channel amplifiers selectable by interlocking pushbuttons. These amplifiers provide –10 dBm/600 ohm output splits with a muting relay for feeding external monitor amplifiers. Optional McCurdy 10-watt and 50-watt speaker-amplifier systems, models LSA609 and LSA611 respectively, are available to accommodate these outputs.

POWER SUPPLY

Two regulated dc power supply modules power the console, providing +48 Vdc for the amplifiers and +24 Vdc for the lamps and relays. These supplies are provided with overload and short-circuit protection features with provision for remote sensing of load conditions. Each supply is functionally-proven and has reliable silicon solid-state circuitry.

modules & functions

STANDARD MODULES

AT284 PREAMPLIFIER — Microphone input; –60 dBm nominal to –20 dBm maximum, 150 ohms, 40 dB Headroom. Output with gain control, –10 dBm nominal to +10 dBm maximum, 20 dB Headroom.

AT285 MEDIUM-LEVEL AMPLIFIER — Medium-level input; –20 dBm nominal to +20 dBm maximum, 600 ohms matching, 40 dB Headroom. Output with gain control, –10 dBm nominal to +10 dBm maximum, 20 dB Headroom.

AT286 HIGH-LEVEL BRIDGING AMPLIFIER — High-level input; 0 dBm nominal to +20 dBm maximum, bridging a 600 ohm line, 20 dB Headroom. Output with gain control, –10 dBm nominal to +10 dBm maximum, 20 dB Headroom.

AT299 PROGRAM AMPLIFIER — Three auxiliary program output splits at +8 dBm nominal 600 ohms, one Headset Amplifier feed at +8 dBm nominal, 600 ohms, and two program output splits to Program Lines at +8 dBm nominal, 600 ohms.

CM7441 CUE AND TALKBACK MODULE — 2W/16 ohms output with 3-external Cue inputs, 2-external Talkback inputs, and a Talkback Microphone input facility.

AM7472 POWER AMPLIFIER — Typically used as a Headset Amplifier to provide a 2W/16 ohm output with gain control from a +8 dBm/600 ohm input.

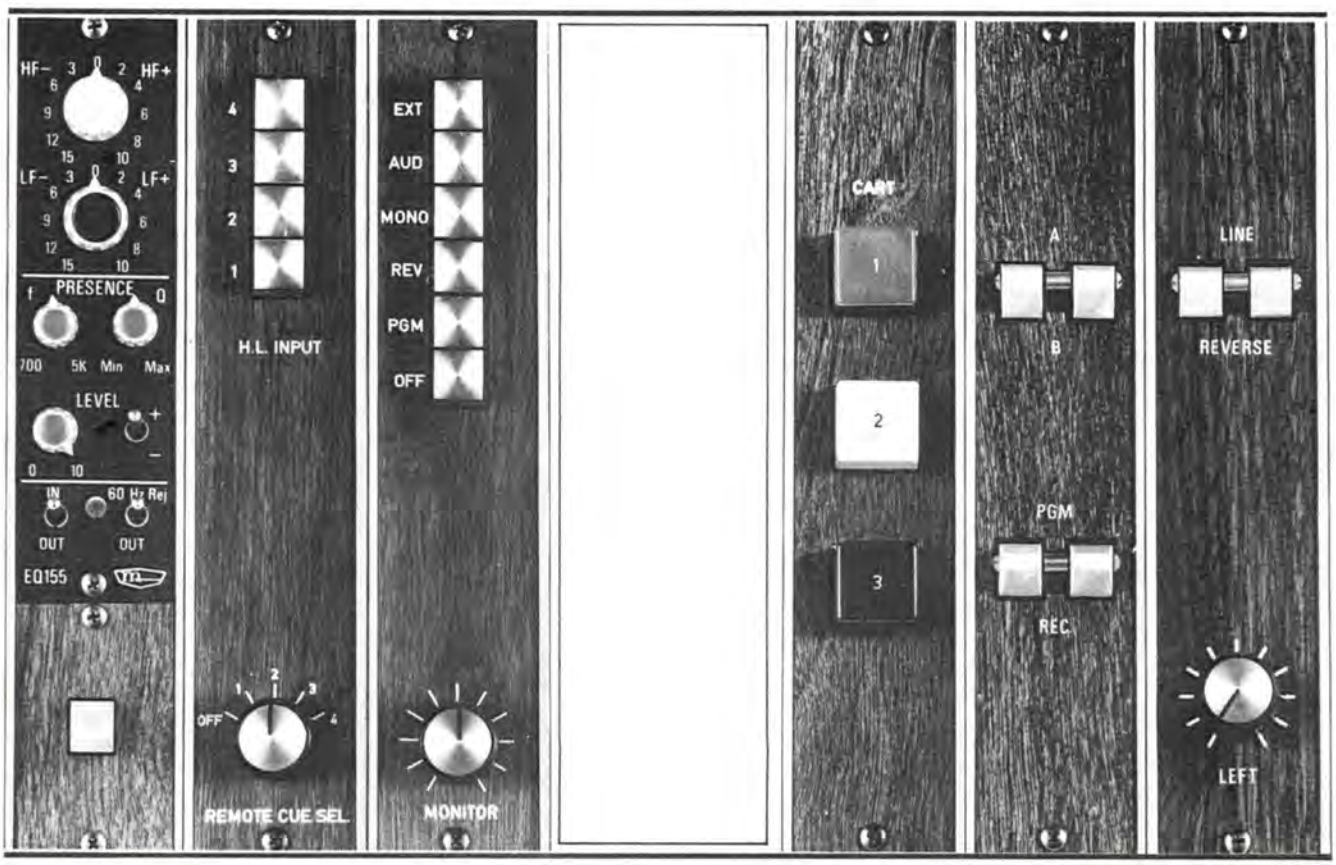
PS876A/48 REGULATED DC POWER SUPPLY — Regulated +48 Vdc to amplifiers and +24 Vdc to lamps and relays.

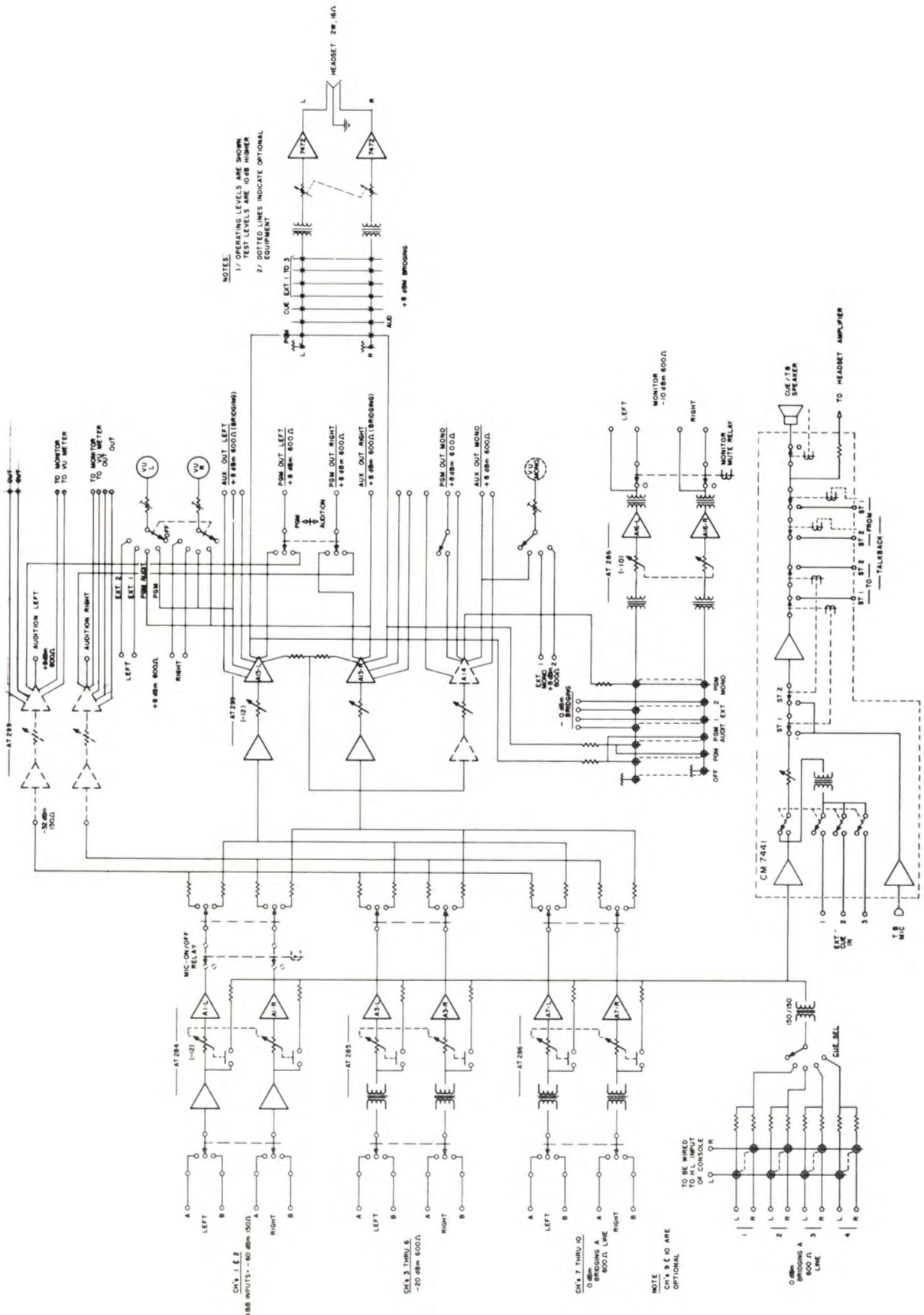
OPTIONAL MODULES

CP287 MICROPHONE PREAMPLIFIER WITH AGC — Electrically identical to AT284 module when AGC is not being used. Input level with AGC is –70 dBm to –40 dBm, 150 ohms. With AGC operating the output level of –10 dBm/600 ohms will increase by 2 dB for an increase of 30 dB at the input (i.e. increase from –70 to –40).

AT288 High Level bridging amplifier high level input; +8 dBm nominal to +20 dBm maximum bridging a 600 ohm line, 20 dB headroom. Output with gain control, -10 dBm nominal to +10 dBm maximum, 20 dB headroom.

TYPICAL SS7500 SERIES CONTROL PANEL MODULES





summary of facilities

1. 16 stereo mixer inputs selectable to 8 stereo mixer-channels (channels 1 to 8).
2. Stereo mixer inputs expandable to 20 and selectable to 10 stereo mixer-channels with the inclusion of optional channels 9 and 10.
3. Two stereo microphone mixer input channels (channels 1 and 2).
4. Straight-line slide attenuator faders (with cue detent action) on all mixer channels.
5. Cue on all mixer channels.
6. Optional equalizer insertion facility on all mixer and program output channels.
7. Four stereo high-level inputs via remote line pushbutton selectors.
8. One gain controlled stereo output program-channel with VU meters and six splits from both output amplifiers (LEFT and RIGHT).
9. Stereo Headset Amplifier channel.
10. Stereo Monitor channel.
11. Cue/Talkback channel.
12. Optional Stereo Audition channel.
13. Optional Monaural output program-channel with VU meter.
14. Optional remote on-off microphone relay facility for studio control in mixer channels 1 and 2.
15. Talkback Microphone input facility to Cue channel.
16. Talkback controls.
17. External Program Inputs.
18. External Cue inputs.
19. External Monaural inputs.
20. External Monitor inputs.
21. Muting relays in Monitor and Cue channels.

PROGRAM INPUT SELECTION

1. Stereo inputs on each mixer-channel.
2. Mixer channels 1 to 12 capable of accommodating low, medium and high-level inputs depending on the input module installed:
   (a) Low-level inputs; Input Module AT284, –60 dBm/600 ohms.
   (b) Medium-level inputs; Input Module AT285, –20 dBm/600 ohms matching.
   (c) High-level inputs; Input Module AT286, 0 dBm/bridging, a 600 ohm line.
   (d) Optional low-level inputs; Input Module CP287, –70 dBm/150 ohms with AGC.

AUXILIARY INPUTS

1. Four stereo high-level inputs; 0 dBm/bridging a 600 ohm line.
2. Three external Cue inputs; –20 dBm/600 ohms.
3. Two external Stereo Program inputs; +8 dBm/600 ohms.
4. Two external Monaural Program inputs; +8 dBm/600 ohms.
5. Two external Monitor-Channel inputs; 0 dBm/bridging a 600 ohm line.
6. Two external Talkback inputs; 2W (max)/16 ohms.
7. Three external Monitor inputs and one internal Cue input to Headset Amplifier channel; +8 dBm/600 ohms.
8. Optional Talkback Microphone.

OUTPUTS

1. 12 Program Output splits:
   (a) Two program splits selectable to two Program Lines (PGM OUT RIGHT and PGM OUT LEFT). Level: +8 dBm/600 ohms.
   (b) Six auxiliary program splits (3-RIGHT and 3-LEFT) with separate right and left VU metering on two lines. Level: +8 dBm/bridging a 600 ohm line.
   (c) Two splits to Headset Amplifier. Level: +8 dBm/600 ohms.
   (d) Two splits to optional monaural program out amplifiers. Level: –32 dBm.
2. 12 Program Audition Output splits (Optional).
   (a) Two splits selectable to Program Output Lines. Level: +8 dBm/600 ohms.
   (b) Six auxiliary splits (3-RIGHT and 3-LEFT). Level: +8 dBm/bridging a 600 ohm line.
   (c) Two VU meter splits.
3. Six Monaural Program Output splits (Optional).
   (a) One switchable Mono Program Out. Level: +8 dBm/600 ohms.
   (b) One optional VU meter split.
   (c) Four Auxiliary Mono Program Out splits. Level: +8 dBm/bridging a 600 ohm line.
4. Four stereo Monitor Channel Output splits; two direct and two mute relay controlled. Level: –10 dBm/600 ohms. (Optional McCurdy 10-watt LSA609 and 50-watt LSA611 speaker-amplifiers are external).
5. Stereo Headset Amplifier Channel output with gain control. Level: 2W (max)/16 ohms.
6. Cue/Talkback Channel output with muting relay: Level: 2W (max)/16 ohms.

specifications

GAIN (± 1 dB)

1. Low-level input to program output; 92 dB.
2. Medium-level input to program ouptut; 52 dB.
3. High-level input to program output; 32 dB.

FREQUENCY RESPONSE (ref 1 kHz)

For any input to program or monitor output at normal attenuator settings: ±1 dB from 30 Hz to 15 kHz.

SIGNAL-TO-NOISE RATIO

Relative Input Noise: –124 dBm, unweighted (i.e. 64 dB below +8 for a –60 dBm microphone input) measured over 10 Hz to 100 kHz bandwidth at –3 dB points.

HARMONIC DISTORTION (TYPICAL PROGRAM PATHS)

Measured at 10 dB above normal operating levels (i.e. at maximum levels specified).

1. For any input to program output: less than 0.5% from 30 Hz to 15 kHz at +8 dBm output.
2. For any input to monitor output; less than 0.5% from 30 Hz to 15 kHz at 0 dBm output.

CHANNEL SEPARATION (CROSSTALK)

At least 55 dB below +18 dBm output level, when feeding one channel with –50 dBm (150 ohms) and measuring on unused channel, with normal attenuator settings (12 dB in-hand) 30 Hz to 15 kHz.

TRANSIENTS

The operation of any relay in the console will not degrade the noise figure by more than 10 dB.

POWER REQUIREMENTS

115 Vac, 50/60 Hz, 3-wire single phase, 50 VA approximately. (May be supplied for 230v on special order).

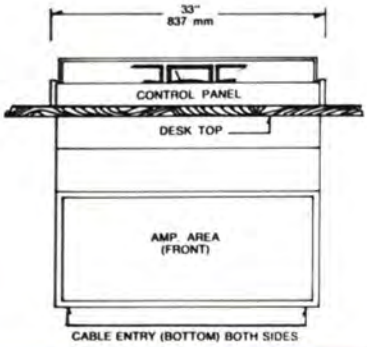
AMBIENT TEMPERATURE

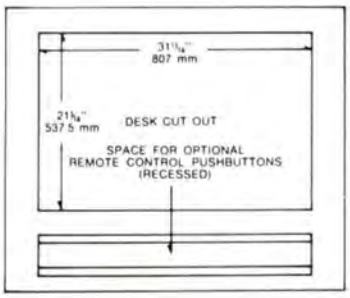
0° to 55°C (32°F to 131°F).

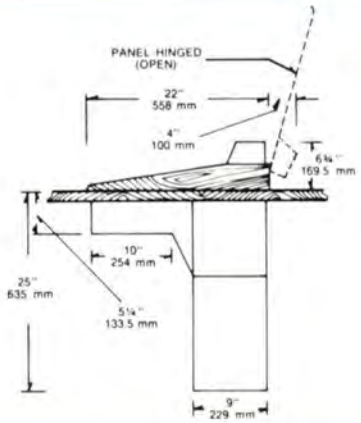
OVERALL DIMESIONS

33 ins (83.82 cm) wide, 22 ins (55.88 cm) deep, and 6¾ ins (17.14 cm) high.

installation







ordering information

STANDARD EQUIPMENT

1. For the standard console, order SS7500 8-Mixer Stereo Audio Console. As shown in the Functional Block Diagram, the standard console includes pre-wired provision for eight mixers, a Cue system, Stereo program-channel with program line, auxiliary and headset outputs; Stereo monitor-channel for external monitor amplifier feed, with Program, Program Audition, Program Mono and two external inputs; Stereo Headset Amplifier-channel with Program, Audition, Cue and three external inputs; a Cue/Talkback-channel with associated speaker, Talkback microphone input facility and three external Cue inputs; and Remote Line selector. All amplifiers and associated VU meters plus power supplies for the above are included.
2. For the 10-mixer version, order SS7500-C10 Custom Stereo Audio Console.
3. Specify type and quantity of input mixer amplifiers as required.
   (a) AT284 Preamplifier; –60 dBm nominal, –20 dBm maximum, 150 ohms.
   (b) AT285 Medium-Level Amplifier; –20 dBm nominal, +20 dBm maximum, 600 ohms matching.
   (c) AT286 High-Level Bridging Amplifier; 0 dBm nominal, +20 dBm maximum, bridging a 600 ohm line.

The price listed for the standard console does not include optional equipment nor the installation of optional equipment.

OPTIONAL EQUIPMENT

1. CP287 Microphone Preamplifier with AGC for input mixer-channels.
2. Microphone ON-OFF relays for remote studio control of input mixer-channels 1 and 2.
3. AT299 Program Amplifier modules for Stereo Program Audition-channel.
4. AT299 Program Amplifier module for Monaural Program-channel and associated VU meter.
5. Additional input mixer amplifiers for input channels 9 and 10; SS7500-C10 only.
6. EQ155 Variable Equalizers for insertion in the mixer-channel outputs.
7. Talkback Microphone.
8. Remote control pushbuttons for Tapes, Carts and Turntables.
9. Mounting desk or table.
10. 10-watt LSA609 or 50-watt LSA611 speaker-amplifier assemblies (external to console) to accommodate monitor output of –10 dBm/600 ohms.

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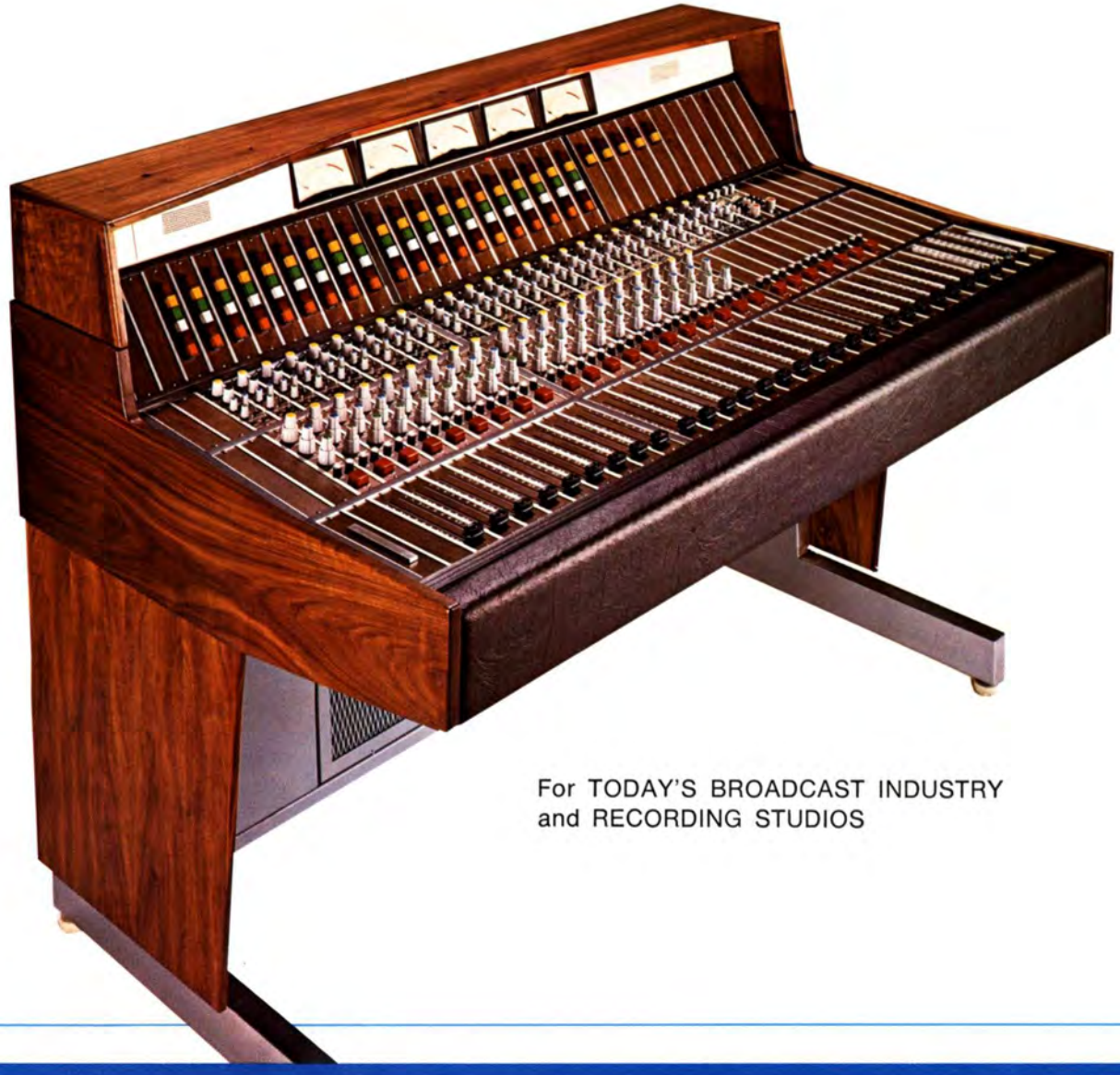
McCURDY RADIO INDUSTRIES LIMITED
108 CARNFORTH ROAD, TORONTO, ONTARIO M4A 2L4 (416) 751-6262, TELEX: 06-963533

McCURDY RADIO INDUSTRIES INCORPORATED
1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

EAST COAST OFFICE: SADDLE RIVER, N.J. P.O. BOX 86, ZIP 07458, PHONE (201) 327-0750, TWX 610-492-3219

SS7700 series

modular audio production consoles



For TODAY'S BROADCAST INDUSTRY
and RECORDING STUDIOS

McCurdy

description

The SS7700 Series of modular audio consoles provides complete professional facilities for mixing and shaping today's complex audio material. The equipment features modular construction, which combines an almost unlimited scope for customizing with maximum economy, a carefully thought-out control panel layout, based on providing maximum operating comfort and convenience in the minimum adequate space, performance specifications well within recognized broadcast standards, and, of course, a pleasing appearance.

In addition to complete program mixing, monitoring and control, SS7700 Series consoles provide PA feeds and comprehensive Solo/Cue, Echo-Send/Receive, Foldback and Talkback system facilities. A full range of options is also available including Equalizers, Compressors, Program Assign with Pan, and Remote Controls.

EASY TO CUSTOMIZE AND EXPAND

The modular basis of SS7700 Series design makes it easy and economical to customize a console to meet the exact requirements of a particular application. Similarly, later expansion to a maximum of 26 functional channels (which may consist of almost any mix of input channels, submasters and masters) is simply a matter of installing the desired modules in prewired receptacles in the control panel. An optional companion housing styled similarly to the console is available to accommodate the ancillary equipments required for some applications.

A PLEASURE TO OPERATE

SS7700 Series consoles are designed to provide the maximum degree of operating comfort and convenience, consistent with the realities of human and equipment dimensions. To the greatest extent possible, all controls are located in uncrowded groupings of related usage, within easy reach from a sitting position. All control knobs and switch buttons are large enough to permit positive, precise operation and are placed so that their operation does not interfere with adjacent controls. The large, easy-to-read VU meters are located in a low-silhouette panel which gives the operator an unobstructed view of adjoining areas.

RELIABLE AND EASILY MAINTAINED

Field-proven McCurdy solid-state plug-in modules are used throughout the console. When servicing is required, the complete control panel hinges upward, providing maximum accessibility.

ATTRACTIVE STYLING

While the philosophy behind the design of the SS7700 Series equipment has been to provide a superbly functional and flexible product, aesthetic aspects have not been neglected. The console end bells and the VU meter housing are made of richly-toned, hand-rubbed, oiled walnut. The surface of the control panel is finished in a woodgrain pattern overlay, surrounded by style strips of clear anodized aluminum which eliminates glare and reflections, and resists damage. A padded arm rest adds to both the appearance and the operating comfort of the console.

FACILITIES AND OPTIONS

The standard and optional facilities of SS7700 Series consoles are illustrated in the functional block diagram on page 4.

MIXER-CHANNEL INPUTS TO PROGRAM-CHANNEL OUTPUTS

A choice of six input modules including Echo-Return accommodates any mixer input level from —70 to +8 dBm nominal. Input sensitivity switches compensate for higher and lower input levels. The normal complement of input mixer-channels is up to 20 and may be expanded to 26 if required. The standard IM7701 Input Module in each mixer-channel nominally accepts microphone (low-level) inputs of —70 to —20 dBm and high-level inputs of —20 to +8 dBm, at impedance levels of 150 and 600 ohms respectively, with 40 dB dynamic range in reserve for microphone peaks. A sensitivity selector with phase reversal provides a convenient means of accommodating various inputs from microphone to line-level at the turn of a switch. The selector is calibrated for the most common level/impedance combinations used in the industry.

NOTE: The optional IM7702, IM7704, IM7705, and IM7706 High-Level Amplifier Input Modules accommodate input levels of —10 dBm nominal to +20 dBm maximum (depending on the attenuator setting used)/600 ohms matching. The optional IM7703 High-Level Bridging Input Module accommodates inputs of +8 dm nominal to +20 dBm maximum.

The mixer output level in each channel is adjustable by a high-quality slide attenuator. An optional EQ155 Variable Equalizer module may be inserted in the output of each mixer-channel.

EACH MIXER CONTAINS:

A channel-on (CH ON) latching type pushbutton. Solo and Cue momentary-on pushbuttons.

Two 3-position (center-off) rotary switches for selection of PRE/POST Fade modes of Echo-Send and Foldback respectively.

A calibrated rotary step selector switch for sensitivity and input impedance adjustment, concentric with a separate switch for Phase Reversal of the input signal.

Mixer outputs are bussed to the SM7715 Sub Assign Modules consisting of 4-Submaster and 2-Master Select latching type pushbuttons. Any number of mixers may be grouped and assigned to any one or all submasters. An optional feature of the basic Assign Module is provision of sub-bypass pushbuttons (Master Select) which allows the inputs to be mixed into the masters directly.

Appropriately grouped mixer outputs are fed to the SM7711 Summing and Booster Amplifier Submaster Modules. These modules use the same type of slide attenuators and optional variable equalizers as used in the mixer modules. This module also has an output CH ON latching pushbutton plus Solo and Cue feeds selected by momentary-on pushbuttons. An optional SM7712 Submaster Module performs the same functions as the SM7711 and has in addition Echo-Send and Foldback feeds with gain controls.

Outputs from the SM7711 modules are routed as follows:

Either ahead of the output CH ON pushbutton to their respective Submaster Auxiliary Amplifier input, bypassing the PM7725 Program Assign Module, to provide VU meter indication, monitor select and auxiliary recording output splits at +8 dBm or, via the CH ON pushbuttons and the PM7725 Program Assign Modules directly to the respective Master Program-Channel selected.

Submasters selected by the Program Assign pushbuttons are routed to the PM7722 Summing and Program Amplifier Modules. The output gain of these modules is controlled by a slide attenuator on the control panel. Each program-channel provides a line output via a CH ON pushbutton, and two direct outputs at a nominal output level of +8 dBm/600 ohms plus separate VU meter and Monitor Select splits. However, as with other facilities of the SS7700 Series, the output configuration can be varied. An optional PM7721 Program Module performs the same functions as the PM7722 but with an integral rotary gain control. Optional compressor modules are available for insertion in the line outputs of systems requiring this facility.

facilities & options

SOLO/CUE/TALKBACK

Each mixer, submaster, and the echo-return input module can be cued or selected as a solo by momentary-on pushbuttons to separate busses, which feed their respective amplifier modules. Their gains are adjusted by control panel attenuators associated with their output amplifiers. Muting of these outputs is possible by means of relays provided. The Solo bus feeds an SN292 Summing Amplifier that drives an AT285 Medium-Level Amplifier providing a nominal monitor output level of —10 dBm/600 ohms. The Cue bus feeds a CM7441 Cue and Talkback Amplifier Module, providing a maximum 2 watts/16 ohms to a console speaker. Three —20 dBm external Cue inputs selectable by interlocking pushbuttons, and two studio Talkback inputs selectable by momentary-on pushbutton relay controls, are provided in the CM7441 module, in addition to a Talkback Microphone input.

ECHO-SEND/ECHO-RETURN

Each channel input module contains a 3-position center-off rotary Echo-Send switch that selects either PRE or POST Fade Echo-Send modes. A rotary level control feeds the selected Echo-Send output to a PM7721 Program Module. Two balanced Echo-Send outputs, controlled by a common rotary gain control, are provided by the PM7721 at a nominal output level of +8 dBm/600 ohms.

An Echo-Return level of —10 dBm may be applied to the 600-ohm matching input of the IM7704 Medium-Level Input Amplifier Module. The output is fed via a gain control and CH ON pushbuton to the sub and master select pushbutton circuits of the SM7715 Sub-Assign Module. The submaster and master select pushbuttons may select the Echo-Return to any or all submasters and master program outputs. An optional IM7705 module performs the same functions and has in addition a Foldback facility.

FOLDBACK

Each channel input module contains a 3-position center-off rotary Foldback switch, and a concentric level control, that selects either PRE or POST Fade Foldback modes. The level control feeds the selected Foldback output to a second PM7721 Program Module. Two balanced Foldback outputs, controlled by a common rotary gain control, are provided at a nominal output level of +8 dBm/600 ohms. This system is electrically identical to the Echo-Send facility.

PAN

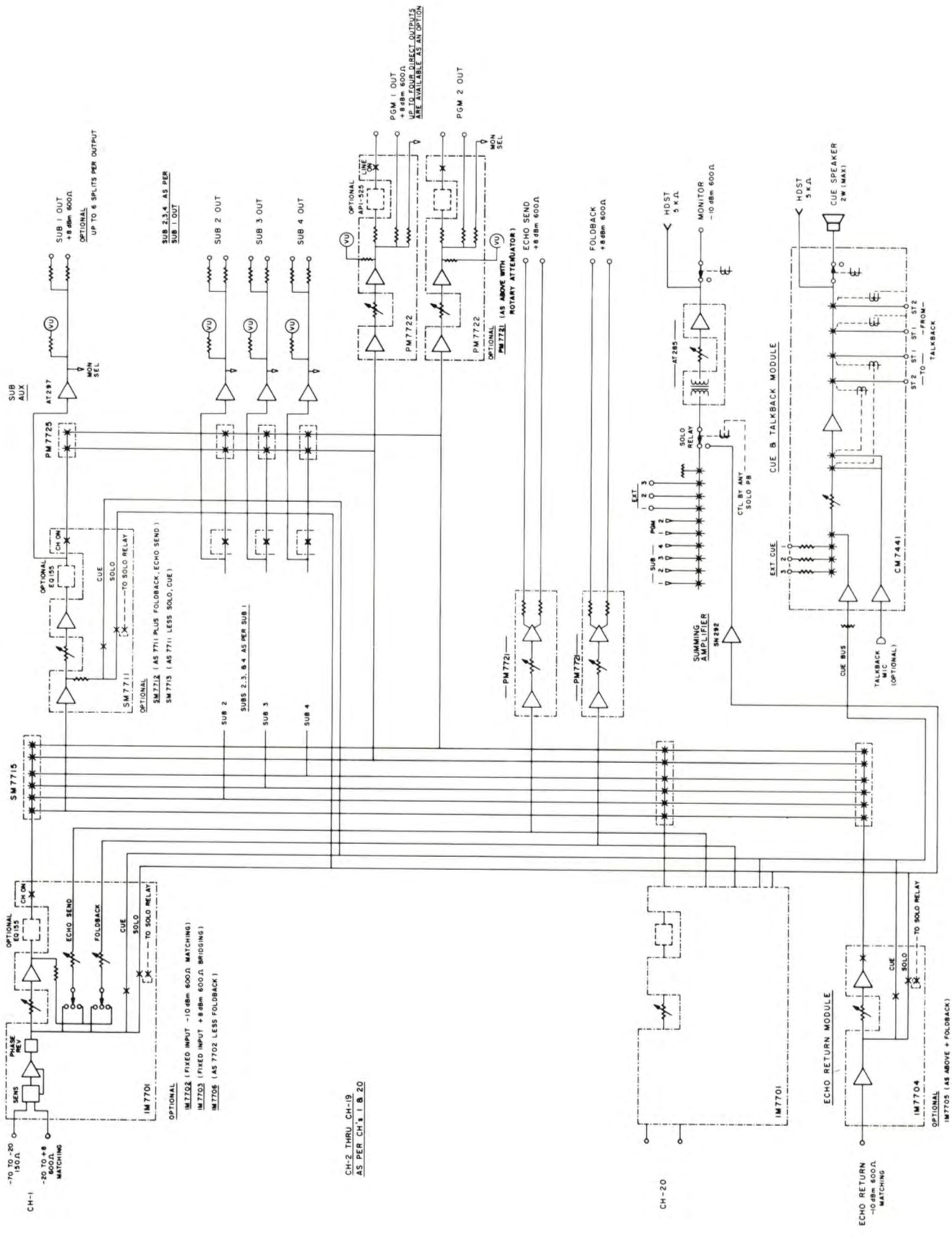
As an optional feature, a PP7751 Program Assign Module with PAN may be used in place of the PM7725 Program Assign Module, to provide an adjustable PAN input between the two master program-channels. PAN is selectable by a latching type pushbutton.

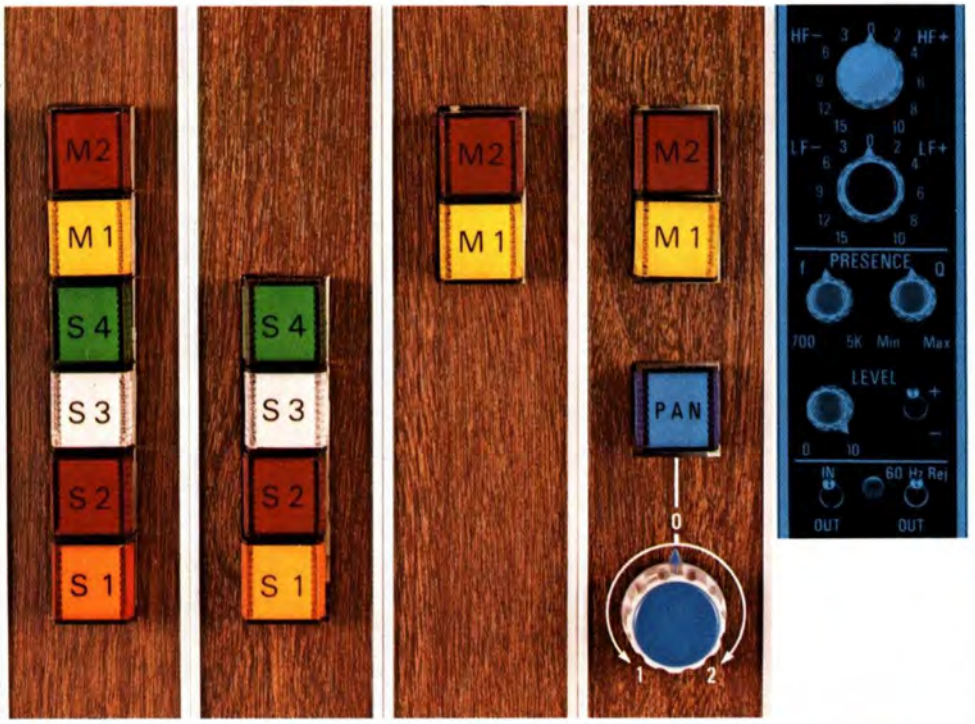
MONITORING

Continuous visual monitoring of each submaster and master program-channel is provided by separate full size A-scale illuminated VU meters. Audio monitoring is provided by two headset jacks (0 dBm/5K-ohms) located at the front of the console below the control panel. Interlocking Monitor Select pushbuttons permit selection of a submaster or master program-channel, or one of three external feeds to the monitor-channel. All inputs are bussed via a pair of normally-closed contacts on the Solo relay to an AT285 Medium-Level Input Amplifier, providing a nominal gain controlled output level of —10 dBm. A muting relay is provided. Optional 10-watt or 50-watt speaker-amplifier systems, McCurdy types LSA609 or LSA611 respectively, are available for this monitor output.

POWER SUPPLIES

Four PS876A/48 Regulated DC Power Supplies are used in the SS7700 Series. DC distribution throughout the entire console is so arranged that failure of any one supply will cause only a minimum of inconvenience. The amplifiers are powered by +48 Vdc and all lamps and relays by +24 Vdc. These power supplies are provided with overload and short-circuit protection features with provision for remote sensing of load conditions. The PS876A/48 is a functionally-proven, high reliability power supply of silicon solid-state circuitry.





SM7715 SM7711 PM7725 PP7751 EQ155

(A) Faders
(B) Input Modules
(C) CH-ON
(D) Solo
(E) Cue
(F) Echo Send
(G) Foldback
(H) Sensitivity
(I) Equalizers
(J) Sub Assigns
(K) Master Assigns
(L) Talkback Speaker
(M) VU Meters
(N) Cue/Talkback Speaker
(O) Equalizers
(P) Compressors
(Q) Echo Return
(R) Sub-Master Program
(S) Master Program
(T) Talkback Controls
(U) Studio Monitor
(V) Control Room Monitor

IM7701 IM7702 IM7706 IM7704 PM7721 PM7722 CM7441

modules & functions

STANDARD MODULES

IM7701 INPUT MODULE — Microphone and high-level inputs with sensitivity switch; —70 to —20 dBm/150 ohms and —20 to +8 dBm/600 ohms.

IM7704 INPUT MODULE — Medium-level input; —10 dBm/600 ohms matching. Typically used as Echo-Return input.

SM7715 SUB ASSIGN MODULE — 4 Sub and 2 Master selects.

SM7711 SUB MODULE — Summing and Booster Amplifier

PM7725 PROGRAM ASSIGN MODULE — 2 Master Selects.

PM7722 PROGRAM MODULE — Summing and Program Amplifier, controlled by a slide attenuator (fader).

PM7721 PROGRAM MODULE — Summing and Program Amplifier, controlled by a rotary attenuator. Typically used in Echo-Send and Foldback amplifiers.

CM7441 CUE AND TALKBACK MODULE — 2W/16 ohms output with 3 external Cue inputs, 2 external Talkback inputs, and a Talkback Microphone input.

SN292 SUMMING AMPLIFIER — Typically used as Solo amplifier to monitor output.

AT285 MEDIUM-LEVEL AMPLIFIER — with rotary gain control. Typically used as monitor output amplifier, —10 dBm/600 ohms.

AT297 HIGH-LEVEL BRIDGING AMPLIFIER — capable of six output splits. Typically used as Submaster auxiliary output.

PS876A/48 REGULATED DC POWER SUPPLY — Regulated +48 Vdc output to amplifiers and +24 Vdc to the lamps and relays.

OPTIONAL MODULES

IM7702 INPUT MODULE — optional to IM7701. Fixed input, —10 dBm/600 ohms matching.

IM7703 INPUT MODULE — optional to IM7701. Fixed input, +8 dBm/bridging 600 ohms.

IM7705 INPUT MODULE — optional to IM7704 with Foldback added.

IM7706 INPUT MODULE — optional to IM7704 with Echo-Send added.

SM7712 SUB MODULE — optional to SM7711 with Foldback and Echo-Send added.

SM7713 SUB MODULE — optional to SM7711 less Solo and Cue.

PM7721 PROGRAM MODULE — optional to PM7722, with an integral rotary gain control.

PP7751 PROGRAM ASSIGN MODULE — optional to PM7725 with PAN added.

summary of facilities

1. Up to 20 mixer-channels, 4 submasters and master program channels as required.
2. Straight-line faders (slide attenuators) on all channels.
3. Cue and Solo on all mixing channels via momentary-on pushbuttons.
4. Echo-Send and Foldback busses.
5. Sensitivity and Phase Reversal on all mixing channels.
6. Equalizer insertion facility on all mixing channels.
7. Sub and Master Assign pushbuttons on all channels.
8. Up to 8 Program and Submaster VU meters.
9. Cue and Talkback Speakers including an external Talkback Speaker facility.
10. Compressor insertion facility in the program outputs.
11. Echo-Return Control.
12. Talkback Controls.
13. Studio and Control Room Monitors.
14. External Cue Inputs.

PROGRAM INPUT SELECTION

1. Two inputs on each mixer-channel; microphone and high-level.
2. All channels have capability to accommodate low, medium or high-level inputs depending on the input module installed or whether input sensitivity selectors are installed;

   (a) Low and high-level inputs; Input Module IM7701, —70 to —20 dBm/150 ohms and —20 to +8 dBm/600 ohms, balanced or unbalanced, with sensitivity switch and phase reversal. Optional input modules IM7702 fixed input —10 dBm/600 ohms matching and IM7703 fixed input +8 dBm/bridging 600 ohms.

   (b) Medium-level inputs: Input Module IM7704, —10 dBm/600 ohms matching, slide attenuator with Cue and Solo. Optional input modules IM7705 and IM7706, same as IM7704 with Foldback and Echo-Send respectively added.

AUXILIARY INPUTS

1. One Echo-Return to mixers, —10 dBm/600 ohms matching.
2. Three external Cue inputs.
3. Three external Monitor inputs.
4. Two external Talkback inputs.
5. Optional Talkback microphone.

OUTPUTS

1. Submaster and Master program-channels as required, individually VU meter monitored. Each channel is selectable to a program line via CH ON pushbuttons. Level: +8 vu (+8 dBm) 600 ohms balanced.
2. Monitor-channel has a muting relay and gain control. Level: —10 dBm/600 ohms. Optional LSA609, or LSA611 speaker — amplifiers are external.
3. One Echo-Send channel output. Level: +8 dBm/600 ohms.
4. One Foldback channel ouput. Level: +8 dBm/600 ohms.
5. One Cue/Talkback speaker output. Level: 2W (maximum)/16 ohms.
6. Two Headset outputs. Level: 0 dB/5K ohms .

specifications

GAIN (± 2 dB)

1. Microphone input to program output: 114 dB maximum with submasters.
2. Medium-level input to program output: 54 dB with submasters.
3. High-level input to program output: 36 dB maximum with submasters.

FREQUENCY RESPONSE (REFERENCE 1 kHz)

1. For any input to any program output at normal attenuator settings (i.e. 10 dB below maximum levels specified): ±0.5 dB from 30 Hz to 15 kHz; ±1.0 dB from 20 Hz to 20 kHz.
2. For any input to monitor output at normal attenuator settings (with 10 dB in monitor) ±1.0 dB from 30 Hz to 20 kHz.

TOTAL HARMONIC DISTORTION (TYPICAL PROGRAM PATHS)

Measured at 10 dB above normal operating levels (i.e. at maximum levels specified):

1. Low-level inputs: 0.5% or less at any frequency from 30 Hz to 20kHz.
2. High-level inputs: 0.5% or less at any frequency from 30 Hz to 20 kHz.
3. Monitor Channel: Less than 0.5% from 30 Hz to 15 kHz

SIGNAL-TO-NOISE RATIO

Low-level inputs: Equivalent input noise of —124 dBm for —70 dBm input unweighted, (i.e. 64 dB below +8 for a —70 dBm microphone input) measured over a bandwidth of 10 Hz to 100 kHz at the —3 dB points.

CROSSTALK

At least 60 dB below +18 dBm output level when feeding one channel and measuring an unused channel, 30 Hz to 15 kHz, at normal attenuator settings 12 dB in-hand.

TRANSIENTS

The operation of any attenuator or switch in the console shall not degrade the noise figure by more than 10 dB.

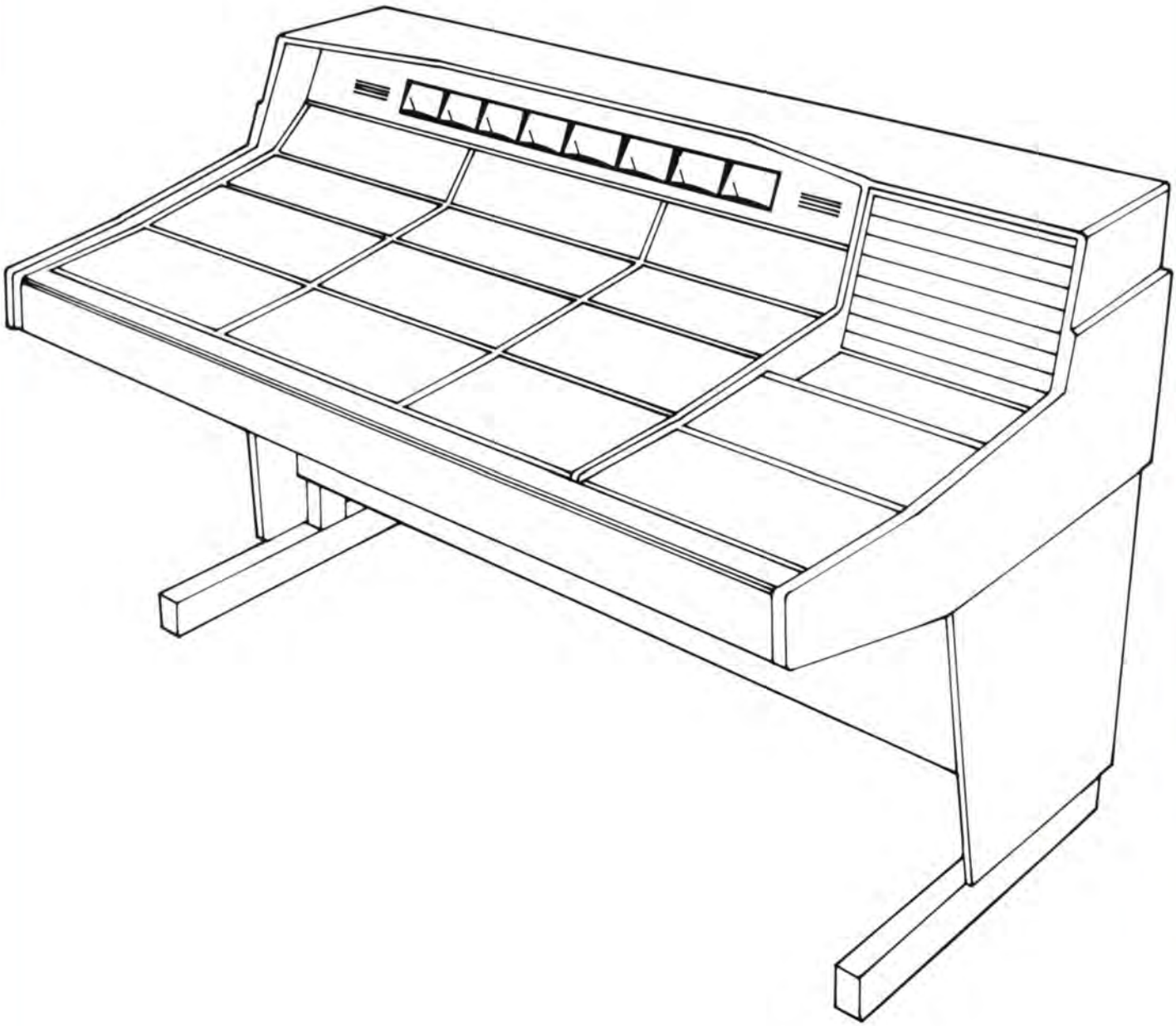
POWER REQUIREMENT

117 Volts ac, 50/60 Hz, 3-wire single phase, 950 VA maximum. (Can be supplied for 230 Volts on special order).

expansion to SS7800

The expansion of the basic SS7700 console to an SS7800 incorporates a console structure 18 inches longer, providing additional space for 11 extra modules. Within this expanded area, additional facilities may be added which would include the following:

(a) the inclusion of jackfield facilities.
(b) Ancillary equipment controls such as machine controls for tapes, carts, turntables, etc.
(c) Further expansion of the mixer or other inputs, submaster and master program channels.



ordering information

STANDARD EQUIPMENT

1. Specify type and quantity of input module desired from the following:
   (a) IM7701 Microphone and High-Level Module, —70 to —20 dBm/150 ohms and —20 to +8 dBm/600 ohms matching, c/w sensitivity switch and phase reversal, PRE and POST Fade Echo-Send and Foldback feeds and CH ON pushbutton.
   (b) Optional IM7702 Fixed Input Module, —10 dBm nominal to +20 dBm/600 ohms matching, PRE/POST Fade Echo-Send and Foldback feeds, Solo and Cue feeds.
   (c) Optional IM7703 Fixed Input module, +8 dBm nominal to +20 dBm/bridging a 600 ohm line, PRE/POST Fade Echo-Send and Foldback feeds, Solo and Cue feeds.
2. Specify type and quantity of submaster modules desired from the following:
   (a) SM7711 Summing and Booster Amplifier Module c/w Solo and Cue feeds and CH ON pushbuttons.
   (b) Optional SM7712 Summing and Booster Amplifier Module — Same as SM7711 plus Echo-Send and Foldback feeds.
   (c) Optional SM7713 Summing and Booster Amplifier Module — Same as SM7722 less Solo and Cue feeds.
3. Specify type and quantity of master program assign modules desired from the following:
   (a) PM7725 Master Program Assign Module with 2-Master Selects.
   (b) Optional PP7751 Master Program Assign Module — Same as PM7725 but with PAN added.
4. Specify type and quantity of master program output modules desired from the following:
   (a) PM7722 Summing and Program Amplifier Module, +8 dBm/600 ohms, c/w VU meter and Monitor Select feeds, latching type Line ON pushbutton and slide attenuator gain control.
   (b) Optional PM7721 Summing and Program Amplifier Module — Same as PM7722 but with an integral rotary gain control.
5. Specify type of echo-return input module desired from the following:
   (a) IM7704 Medium-Level Input Amplifier Module, —10 dBm/600 ohms matching, external gain control, Solo and Cue feeds, and a latching CH ON pushbutton.
   (b) Optional IM7705 Medium-Level Input Amplifier Module — Same as IM7704 plus a Foldback feed.
   (c) Optional IM7706 Medium-Level Input Amplifier Module — Same as IM7704 plus an Echo-Send feed.

OPTIONAL EQUIPMENT

1. EQ155 Variable Equalizers.
2. Compressors.
3. Additional Monitoring Channels.
4. LSA609 or LSA611 Monitor Speaker-Amplifiers (external to console).
5. Talkback Microphone.
6. Companion housing for jackfield and ancillary equipment installation.

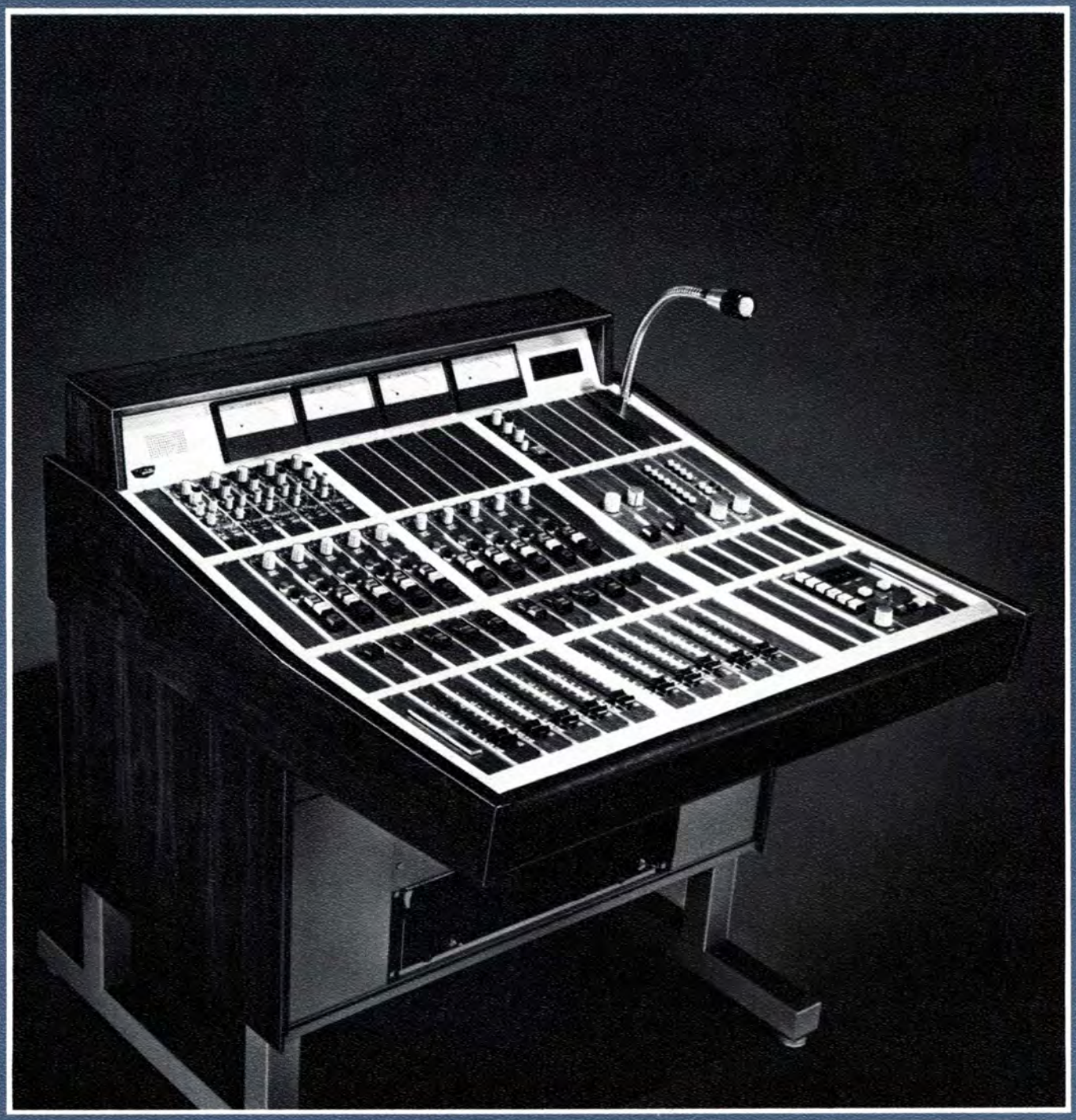
As with all consoles of the SS7700 Series, the possible combination of facilities available are too numerous to list, and are therefore left for discussion when the console requirements are being determined.

Printed in Canada

McCURDY RADIO INDUSTRIES LIMITED
108 CARNFORTH ROAD, TORONTO, ONTARIO M4A 2L4 (416) 751-6262, TELEX 02-21660
McCURDY RADIO INDUSTRIES INCORPORATED
1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700

SS 8400

modular mono production console



McCURDY

standard equipment & options

The McCurdy SS8400 mono console is a fully modular, professional audio mixing unit. Standard features with available, additional options fulfill the most exacting requirements for 'On Air' use in AM radio facilities. The SS8400 console's capabilities provide the nucleus for total Broadcast Production Packages.

Quality Features of the Series 8000 Module

a) Integrated circuit technology
b) Balanced input and output stages
c) Provision for insertion of "Audio Processing Equipment"– equalizers, compressor/limiters, etc.
d) SILENT! "Momentary Action" pushbutton for "channel-on" switching
e) Front panel plug-in capability
f) Complete compatability with other modules in the 8000 series, with available options suited to specific requirements

Standard Equipment on the SS8400 Mono Console

- 12 input mixing channels, complete with A/B switching, allowing for 24 audio sources.
- Each mixer equipped with specially designed "conductive plastic" slide attenuator (fader).
- Cue switching provided with fader in maximum attenuator position, *and* front panel pushbutton to facilitate production procedures.
- Output from each input mixer is available to either program channel or both simultaneously.
- Input sensitivity switching (2 position), to suit specific mix requirements. Customer choice at time of purchase.
- 2 identical program output channels, each equipped with "channel-on" switching, rotary gain controls and VU meters.
- 2 monitor preamplifier and control systems, complete with 8 input selections.
- One cue/talkback system allowing 3-station communication.
- Extender module.

Available Options for the SS8400 Mono Console

Provision is made for the insertion of:

1) Machine remote control modules
2) EQ 155 equalizers
3) CP 159 compressor
4) OT 157 multi-frequency oscillator
5) Foldback system
6) Echo-send and return
7) 'Solo' monitor feature
8) Real-time digital clock SA138A
9) Elapsed-time digital counter and control panel SA137A
10) Distribution amplifier systems

Sensible Styling

The SS8400 mono console is housed within a one-piece welded steel enclosure for maximum shielding in high RF environments.

Completely free-standing, self-supporting console. Control panel hinges upward to facilitate service and routine test procedures.

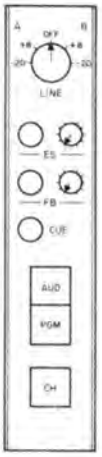
Console end bells and VU meter housing are richly toned, hand-rubbed, oiled walnut.

Woodgrain finish on control panel surface, highlighted with engraved style strips.

Padded armrest adds to both the appearance and operating comfort of the console.

Ease of operation is assured with controls arranged in easily accessible, uncrowded groupings for related functions.

IM 8401-00-02



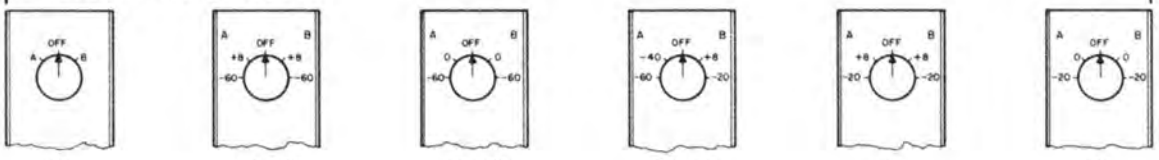
IM 8408-00-06

facilities & options

Series 8400 Mixer Module Options

OPTIONS	8401	8402	8403	8404	8405	8406	8407	8408	8409	8401-01	8402-01	8408-01	8409-01
02	●		●		●				●	●			●
03									●				●
04									●				●
05									●				●
06		●		●		●	●	●			●	●	
07		●		●		●	●	●			●	●	
CHANNEL ON	●	●	●	●	●	●	●	●	●	●	●	●	●
PROGRAM	●	●	●	●	●	●	●	●	●				
AUDITION	●	●	●	●	●	●	●	●	●				
CUE	●	●	●	●	●	●	●	●	●	●	●	●	●
SOLO			●	●	●	●	●						
ECHO SEND					●	●		●	●			●	●
FOLDBACK							●	●	●			●	●

Series 8400 Input Options



MIC — 02

MIC / LINE — 03

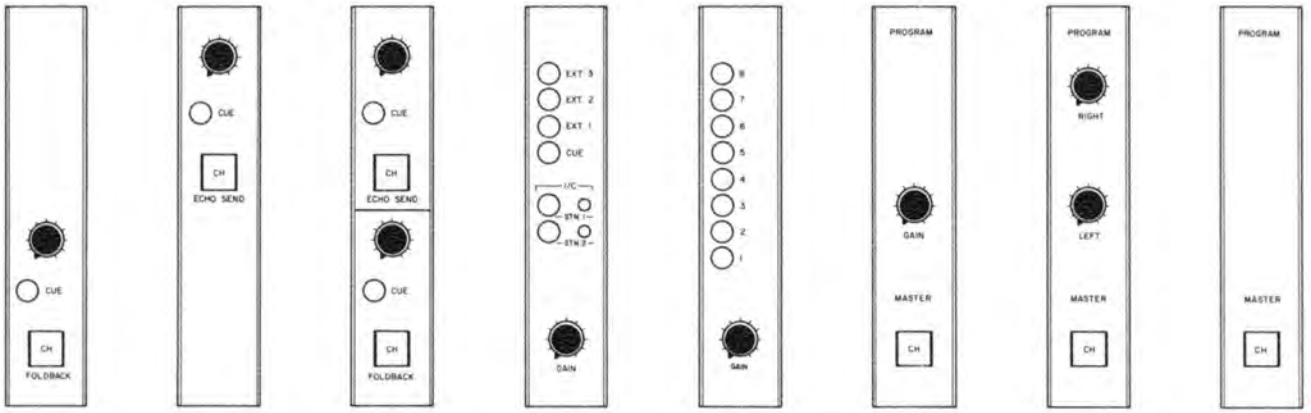
MIC / LINE — 04

MIC / LINE — 05

LINE — 06

LINE — 07

Series 8400 Output & Auxiliary Modules



FM 8446 (MONO) — FOLDBACK MASTER

EM 8446 (MONO) — ECHO SEND MASTER

EFM 8446 (MONO) — FB / ES MASTER

CM 8441 — TALKBACK / CUE MODULE

MM 8431 (MONO) — MONITOR MODULE

PM 8421 / AUD 8421 (0dBm OUT) / PM 8423 / AUD 8423 (+4dBm OUT)

PM 8521 / AUD 8521 (0dBm OUT)

PM 8422 / AUD 8422

PROGRAM / AUDITION MODULES

SS8400 Mono Console

specifications

INPUT LEVEL: (nominal)
−60 dBm/150 for microphone select or as per options, switchable, 2 inputs.
For microphone input impedance at least 10 times source.
For high-level at least 10k Ohms.

OUTPUT LEVELS: (nominal)
+8 dBm/600 Ohms balanced
(PM8423 – Program)
0 dBm/600 Ohms balanced.
(PM8421 – Program)
– 10 dBm/600 Ohms balanced.
(MM8431)
Maximum 3 Watts/i Ohm, balanced/unbalanced, (CM 8441, cue)

GAIN: (Maximum ±1 dB)
Microphone/Program Module 84 dB.
Line/Program Module 44 dB.
Microphone/Program/Monitor 84 dB.
Line/Program/Monitor 44 dB.

FREQUENCY RESPONSE:
(30 Hz to 15 kHz)
Any input to program output ±0.5 dB.
typically ±0.25 dB.
Any input to monitor ±1 dB.
typically ±0.5 dB.

SIGNAL TO NOISE:
(10 Hz to 100 kHz)
Equivalent input noise −124 dBm for microphone channel (option 02), better than 78 dB below test level for line inputs (option 06). Test level is 10 dB above program.

DISTORTION: (THD)
(30 Hz to 15 kHz)
Any path less than 0.25% at test level (10 dB above program) typically less than 0.1%, at maximum dynamic range less than 0.5%.

CROSSTALK: (30 Hz to 15 kHz)
At least 60 dB below test level, when feeding −50 dBm into −60 dBm microphone input and measuring an unused channel with normal attenuator setting.

TRANSIENTS: (RMS)
Better than 60 dB below output (test level) when operating a relay or pushbutton.

POWER REQUIREMENT:
115 V ac, 60 Hz, 3 wire single phase, 50 Va (230 V ac, 50 Hz upon request).

AMBIENT TEMPERATURE:
0°C to +55°C (32°F to 131°F)

OVERALL DIMENSIONS:
Height: 36″
Width: 33.5″
Deep: 35″

SS8400 Mono Console:

Standard Compliment:

a) INPUT MODULES:
Total of twelve (12) consisting of:
IM8401-00-02 (Microphone) or
IM8402-00-06 (line +8, −20) or
IM8402-00-07 (line 0, −20)

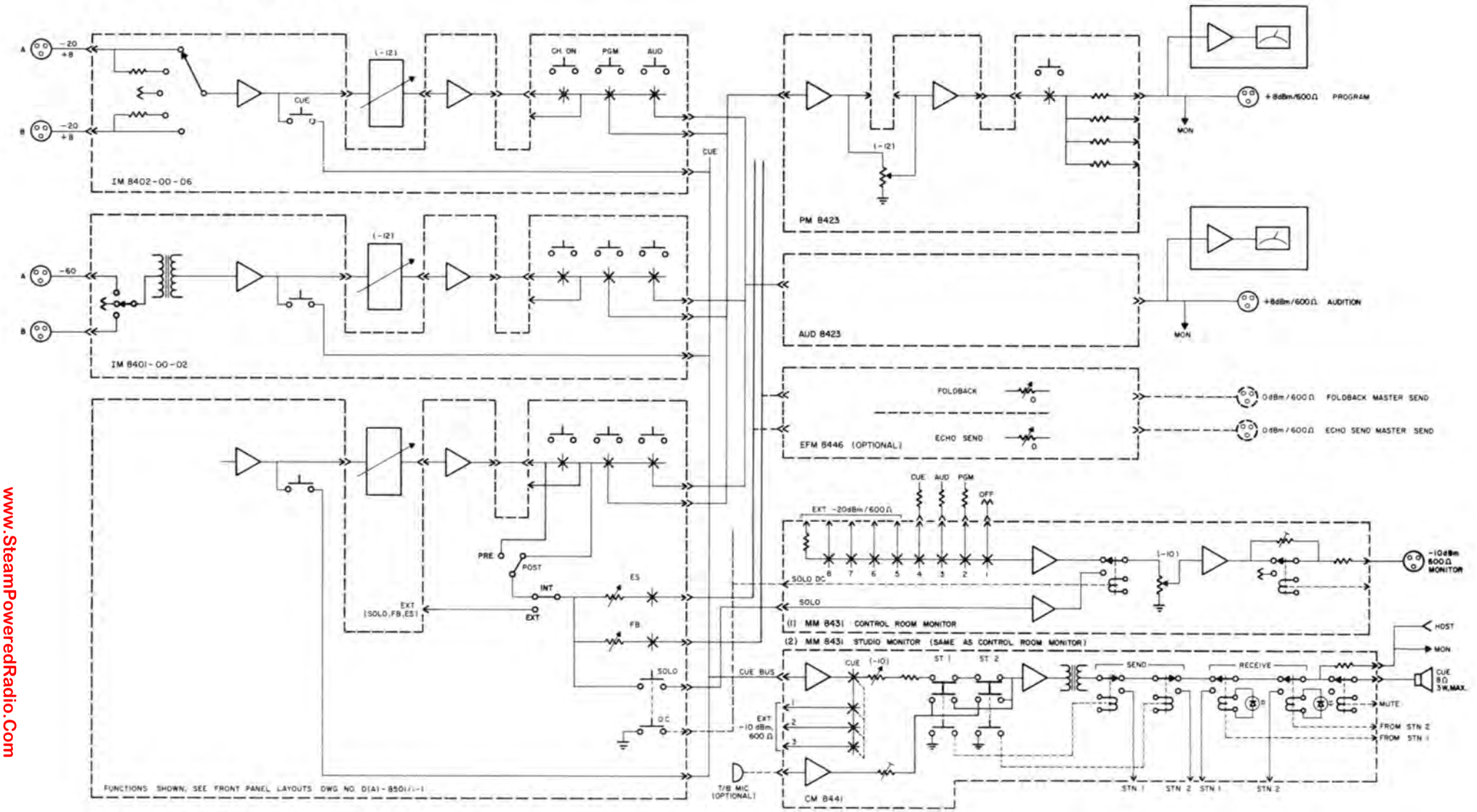
b) OUTPUT MODULES:
Total of two (2) PM8423
+8 dBm, 4 split output
Option: PM8421
0 dBm output Mono

c) CUE MODULE:
CM8441 (one)

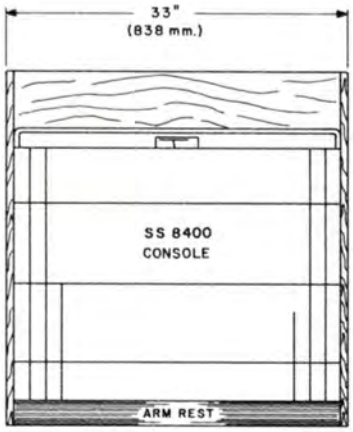
d) MONITOR MODULE:
MM8431 (two)

e) VU METERS:
Two (Program 1, audition).

functional



installation



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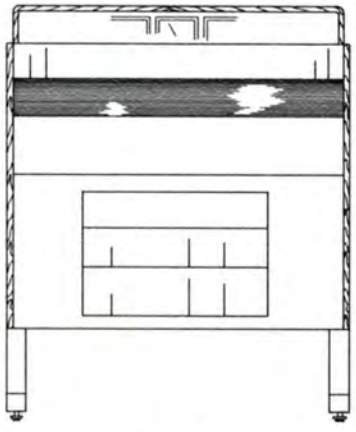

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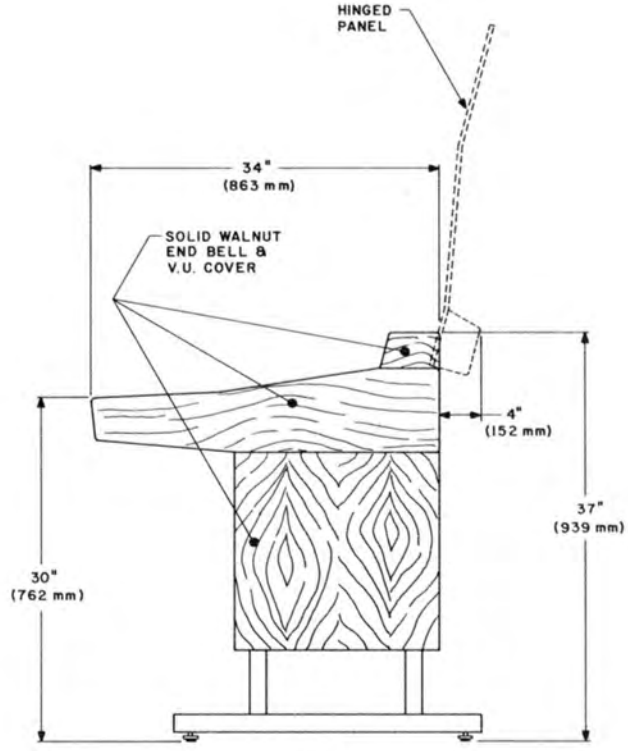


SIDE

McCurdy Radio Industries reserves the right without notice to make such changes in equipment, design, specifications, or components, as progress in engineering or manufacturing techniques may warrant, to improve the performance of the product.

Printed in Canada • SS8400 Console/Issue 2/12.76

McCurdy Radio Industries Limited,
108 Carnforth Road, Toronto, Ontario M4A 2L4 (416) 751-6262 Telex: 06-963533

McCurdy Radio Industries Incorporated, **TWX: 610-492-3219**
1051 Clinton Street, Buffalo, N.Y. 14206 (716) 854-6700 Telex: 06-963533

U.S.A. East Coast Office,
Saddle River, N.J. P.O. Box 86, 07458 (201) 327-0750

SS 8500

modular stereo production console

McCURDY

standard equipment & options

The McCurdy SS8500 stereo console is a fully modular, professional audio production unit. It is ideally suited for use as an 'ON AIR' mixing desk, or as a master control centre in FM radio facilities. Standard features with available, additional customer options produce a custom-tailored, reliable FM Broadcast Production Package.

Quality Features of the Series 8000 Modules

a) Integrated circuit technology

b) Balanced input and output stages

c) Provision for insertion of "Audio Processing Equipment" – equalizers – compressor/limiters, etc.

d) SILENT! "Momentary Action" pushbutton for "channel-on" switching

e) Front panel plug-in capability

f) Complete compatability with other modules in the 8000 series, with available options suited to specific requirements

Standard Equipment on a SS8500 Stereo Console

- 10 Stereo input mixing channels, complete with A/B switching, allowing for 20 audio sources.
- Each mixer equipped with specially designed "conductive plastic" stereo slide attenuator (fader)
- Cue switching provided with fader (in maximum attenuator position, *and* front panel pushbutton, to facilitate production procedures.
- Separate 'Program' and 'Audition' pushbutton switch on each input mixer operates two channels simultaneously and/or independently.
- Output from each input mixer is available to either program channel, or both simultaneously.
- Input sensitivity switching (2 position), to suit specific mix requirements. Customer choice at time of purchase.
- Stereo program output channel complete with VU meters.
- Provision for audition and mono output channels.
- 2 monitor preamplifier and control systems, complete with 8 input selections.
- Cue/talkback system allowing 3-station communication.
- Extender module.

Available options for the SS8500 Stereo Console

Provision is made for the insertion of:

1) Machine remote control modules
2) EQ 155 equalizers
3) CP 159 compressor
4) OT 157 multi-frequency oscillator
5) Foldback system
6) Echo-send and return
7) Real-time digital clock, SA138A
8) Elapsed-time digital counter and control panel, SA137A
9) Distribution amplifier systems

Sensible Styling

The SS8500 stereo console is housed within a one-piece welded steel enclosure for maximum shielding in high RF environments.

Complete free-standing, self-supporting console. Control panel hinges upward to facilitate service and routine test procedures.

Console end bells and VU meter housing are richly toned, hand-rubbed, oiled walnut.

Woodgrain finish on control panel surface, highlighted with engraved style strips.

Padded armrest adds to both the appearance and operating comfort of the console.

Ease of operation is assured with controls arranged in easily accessible, uncrowded groupings for related functions.

IM 8501-00-02

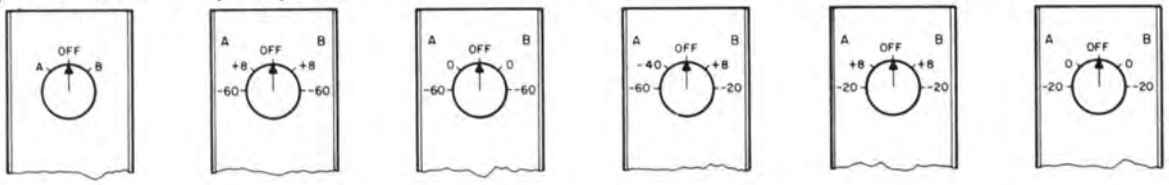
IM 8508-00-06

facilities & options

Series 8500 Mixer Module Options

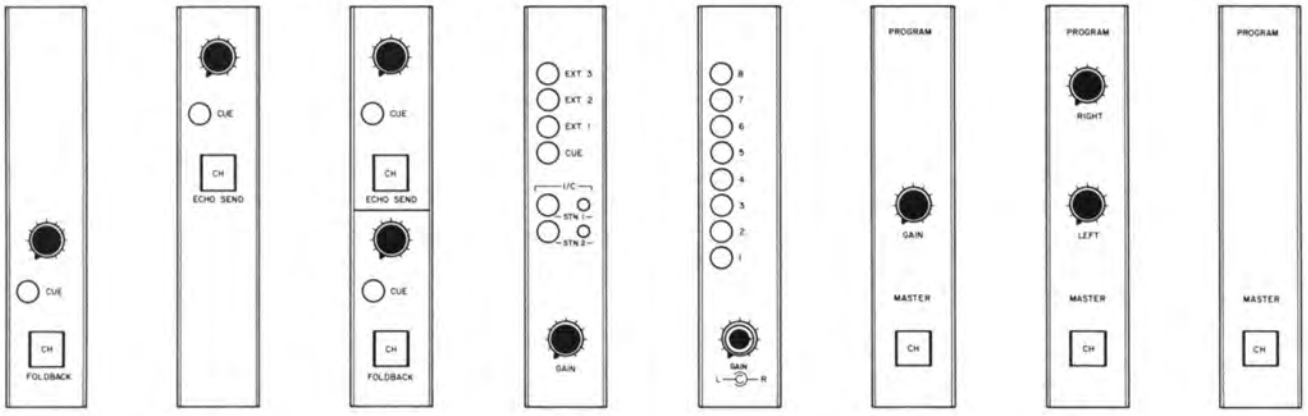
OPTIONS	8501	8502	8503	8504	8505	8506	8507	8508	8509	8510
02	●				●				●	●
03										
04										
05										
06		●				●		●		
07		●				●		●		
CHANNEL ON	●	●			●	●		●	●	●
PROGRAM	●	●			●	●		●	●	●
AUDITION	●	●			●	●		●	●	●
CUE	●	●			●	●		●	●	●
ECHO SEND					●	●		●	●	●
FOLDBACK								●		
PAN									●	●

Series 8500 Input Options



MIC 02 | MIC / LINE 03 | MIC / LINE 04 | MIC / LINE 05 | LINE 06 | LINE 07

Series 8500 Output & Auxiliary Modules



FM 8446 (MONO) — FOLDBACK MASTER

EM 8446 (MONO) — ECHO SEND MASTER

EFM 8446 (MONO) — FB / ES MASTER

CM 8441 — TALKBACK / CUE MODULE

MM 8431 (MONO)
MM 8531 (STEREO)
MONITOR MODULE

PM 8421
AUD 8421 (0dBm OUT)
PM 8423
AUD 8423 (+8dBm OUT)

PM 8521
AUD 8521 (0dBm OUT)

PM 8422
AUD 8422

PROGRAM / AUDITION MODULES

SS8500 Stereo Console:

specifications

INPUT LEVEL: (nominal)
−60 dBm/150 for microphone select or as per options, switchable, 2 inputs.
For microphone input impedance at least 10 times source.
For high-level at least 10k Ohms.

OUTPUT LEVELS: (nominal)
0 dBm/600 Ohms balanced.
(PM8521 – Stereo Program)
+8 dBm/600 Ohms balanced
(PM8423 – Program, Mono)
−10 dBm/600 Ohms balanced
(MM8531 – Monitor, Stereo)
Maximum 3 Watt/8 Ohm, balanced/unbalanced, CM8441, cue.

GAIN: (Maximum ±1 dB)
Microphone/Program Module 84 dB.
Line/Program Module 44 dB.
Microphone/Program/Monitor 84 dB.
Line/Program/Monitor 44 dB.

FREQUENCY RESPONSE:
(30 Hz to 15 kHz)
Any input to program output ±0.5 dB.
typically ±0.25 dB.
Any input to monitor ±1 dB.
typically ±0.5 dB.

SIGNAL TO NOISE:
(10 Hz to 100 kHz)
Equivalent input noise −124 dBm for microphone channel (option 02), better than 78 dB below test level for line inputs (option 06). Test level is 10 dB above program.

(30 Hz to 15 kHz)
Any path less than 0.25% at test level (10 dB above program) typically less than 0.1%, at maximum dynamic range less than 0.5%.

CHANNEL SEPARATION:
(30 Hz to 15 kHz)
At least 50 dB below test level, when feeding −50 dBm into −60 dBm microphone. Left input and measuring terminated right channel.

TRANSIENTS: (RMS)
Better than 60 dB below output (test level) when operating a relay or pushbutton.

POWER REQUIREMENT:
115 V ac, 60 Hz, 3 wire single phase, 50 Va (230 V ac, 50 Hz, upon request).

AMBIENT TEMPERATURE:
0°C to +55°C (32°F to 131°F).

OVERALL DIMENSIONS:
Height: 36″
Width: 33.5″
Deep: 35″

SS8500 Stereo Console:

Standard Compliment:

a) INPUT MODULES:
Total of ten (10) consisting of:
IM8501-00-02 (Microphone) or
IM8502-00-06 (line +8, −20) or
IM8502-00-07 (line 0, −20)

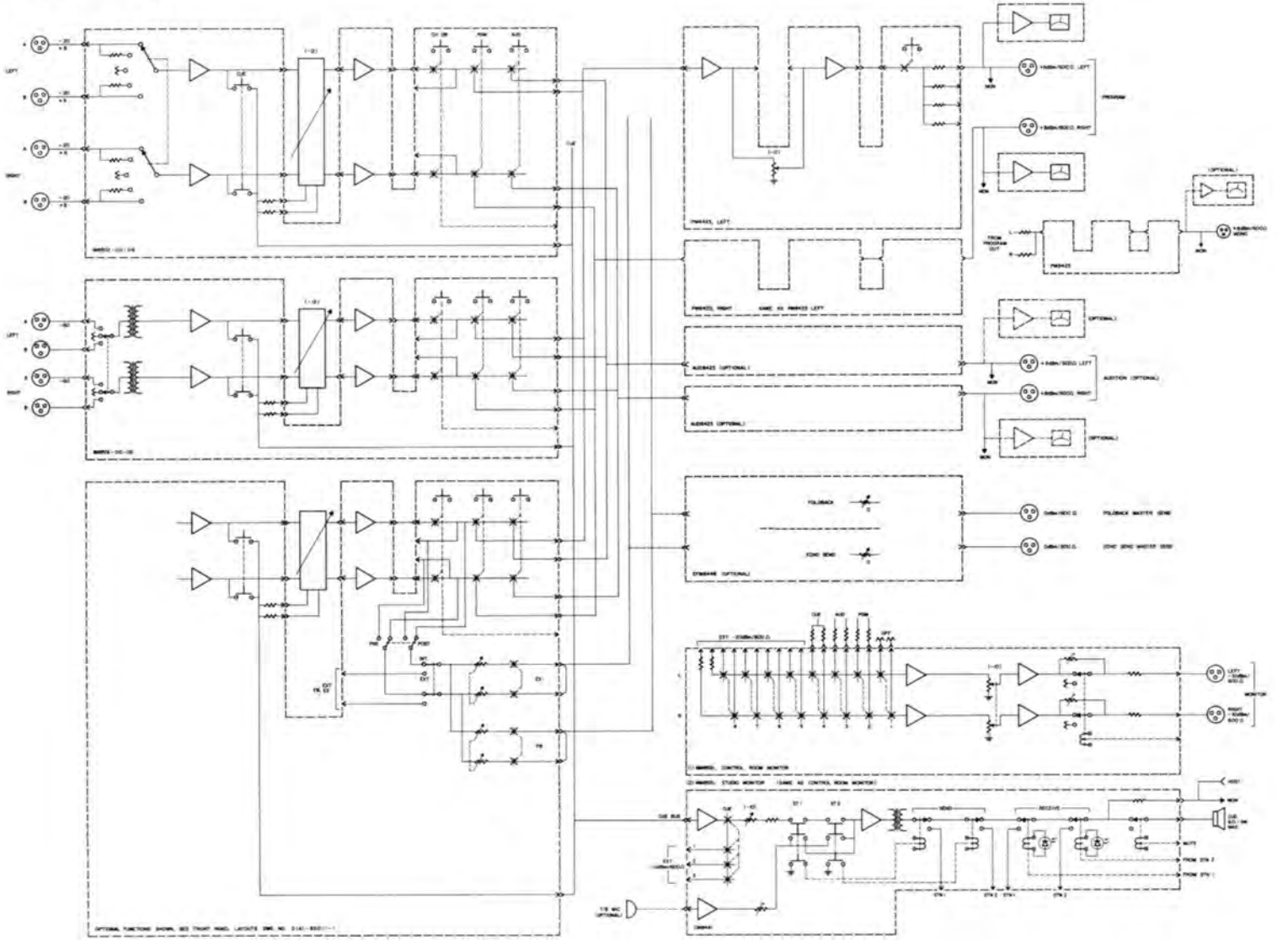
b) OUTPUT MODULES:
Total of two (2) PM8423.
+8 dBm, 4 split output
Option: AUD. 8423 (same as above but audition)
PM. 8521,0 dBm/600 Ohms
AUD. 8521,0 dBm/600 Ohms

c) CUE MODULE:
CM8441 (one) Mono.

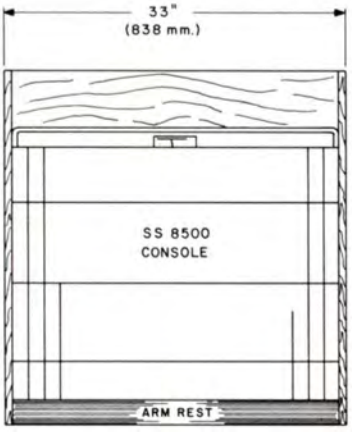
d) MONITOR MODULE:
MM8531 (two)

e) VU METERS:
Two (2) Program left, Program right.
Option: Audition left, Audition right, Mono.

functional



installation



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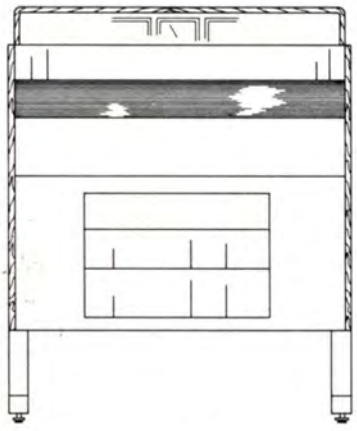

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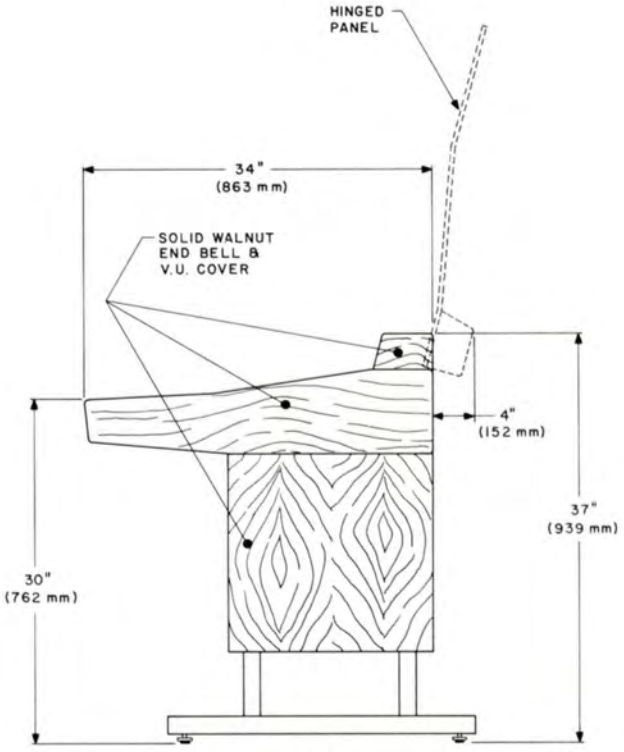

SIDE

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Printed in Canada • SS8500 Console/Issue 2/12.76

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U.S.A. East Coast Office,
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SS 8800

modular stereo audio console

McCurdy

SS8800 description

The McCurdy SS8800 stereo eight-channel audio console is a fully modular system providing complete facilities for the mixing, monitoring and control of audio program material in broadcast or other professional applications. It provides all the basic features of larger consoles in an attractively styled, unusually compact, desk mounting package. It is ideally suited to installations requiring compactness in a quality console meeting full broadcast specifications. The extremely low silhouette of the SS8800 allows the operator an unobstructed view into adjacent areas, an important consideration in many installations. Its small overall size is achieved without compromising operator or servicing convenience and without over-crowding of internal or external components.

Each SS8800 is built with all optional features prewired, allowing them to be supplied by merely inserting the proper modules into the spaces and connectors provided. Thus, allowing a high quality, full-feature console to be made available at an unusually attractive price. All options to be supplied must be specified when ordering. Refer to ordering information for details.

SS8800 package features

- Fully modular, all modules, amplifiers, controls and power supplies plug-in to the console panel or auxiliary frames and connectors for ease of maintenance.
- All units employ the latest technology in reliable silicon solid-state circuitry.
- The console housing is a one-piece enclosure fabricated of all-welded heavy-gauge steel for strength and maximum RF shielding. It is finished in scratch-resistant, textured blue baked enamel.
- The control panel pivots upward, allowing free access to all internal wiring.
- The console mounts in an easily-made rectangular desk top cutout. Its moderate weight does not require any brackets or elaborate supports.
- The console control panel is finished in heavy-gauge, damage resistant dark blue vinyl clad steel inset into etched, extruded aluminum panels.
- The console end bells and meter housing are constructed of richly grained hand-rubbed oiled walnut.
- The meter panel is finished in scratch and mar resistant matte ivory baked enamel and is inset into the walnut meter housing.
- For ease of operation, all controls are easily accessible and arranged in uncrowded groupings according to related functions.
- All input/output connections are made to telephone-type terminal blocks easily accessible from the rear of the console. Front terminal block access or rear-mounted connectors are available.
- A headset monitor jack is provided on the lower front console housing.
- The power supply mounts under the desk top in a slide-in bracket and is connected to the console via a plug-in 6 ft. (2 m) cable. Longer cables and a frame for rack or pedestal mounting of the power supply are available.

SS8800 specifications

Input level:
1) Microphone; −60dBm to −45dBm, 150 ohms, balanced and floating
2) Line; −20dBm to +10dBm, 600 ohms, balanced and bridging

Input impedance:
1) Microphone; 5 times source, minimum
2) Line; 10,000 ohms, balanced, bridging

Inputs provided:
Two switch selected inputs per mixer channel.

Output level:
1) Program 1 output; +8dBm, 600 ohms, balanced
2) Program 2 output; +8dBm, 600 ohms, balanced
3) Mono-Sum output; +8dBm, 600 ohms, balanced
4) Monitor output; +8dBm, 600 ohms, balanced
5) Headset output; +8dBm, equivalent, 5000 ohms
6) Telephone line output; −10dBm, 600 ohms, balanced
7) Pre-Fade listen (Cue) output; 2 Watts, maximum, 8 ohms

SS8800 specifications

Frequency response:
Any input to any 600 ohm output; ±0.5dB, 30 Hz to 15 kHz, reference 1 kHz

Noise:
1) Microphone input; −125dBm, or better, equivalent input noise, 20 Hz to 20 kHz, weighted, −60dBm input sensitivity
2) Line input; better than 80dB below test level, 10dB above program level, 20 Hz to 20 kHz, weighted

Transients:
Better than 60dB below output, at test level, when operating a relay or pushbutton.

Distortion:
Any input to any 600 ohm output; 0.25% maximum at test level, 10dB above program level, 30 Hz to 15 kHz

Stereo tracking:
Within ±0.5dB over normal attenuator operating range

Headroom:
1) Input stage; 35dB
2) Mixer bus; 30dB
3) Outputs; 16dB

All with normal in-hand attenuator settings of 12dB

Power requirements:
105 to 125 volts (220 to 240 volts, optional), 50/60 Hz, 250VA

Ambient temperature:
0° to 55° C (32° to 131° F), operating

Overall dimensions:
Height: 24.88 in. (63.2 cm)
Height: above table top; 8.75 in. (22.23 cm)
Width: 24.2 in. (61.47 cm)
Depth: 22.63 in. (57.48 cm)

Weight:
80 lbs. (36.4 kg), approximately

SS8800 available options

All options on the SS8800 console are prewired, allowing them to be supplied by merely inserting the proper modules or other equipment into the spaces and connectors provided. The following range of standard options is available:

A) Input selector module, eight station.
B) Program 2 and auxiliary output channels.
C) Channel-on switches, with indicators, for program 1 and mono-sum output channels.
D) Channel-on switches, with indicators, for program 2 and auxiliary output channels, when supplied.
E) Auxiliary outputs on each input module connected ahead of, instead of after, channel-on switch.
F) Mono-sum VU meter.
G) Peak program meters in place of the two standard VU meters.
H) Mono-sum peak program meter.
I) Front access to input/output terminal blocks.
J) Input/output connections made to connectors, XLR type for audio, rack and panel type for DC controls, instead of terminal blocks. All are mounted on a hinged rear panel.
K) Frame for rack or pedestal mounting of power supply.
L) Power supply interconnect cables longer than standard 6 ft. (2 m) length.
M) Redundant power supply system with automatic changeover. Including frame and additional power supply.
N) Operation on 220 to 240 Volt AC power.

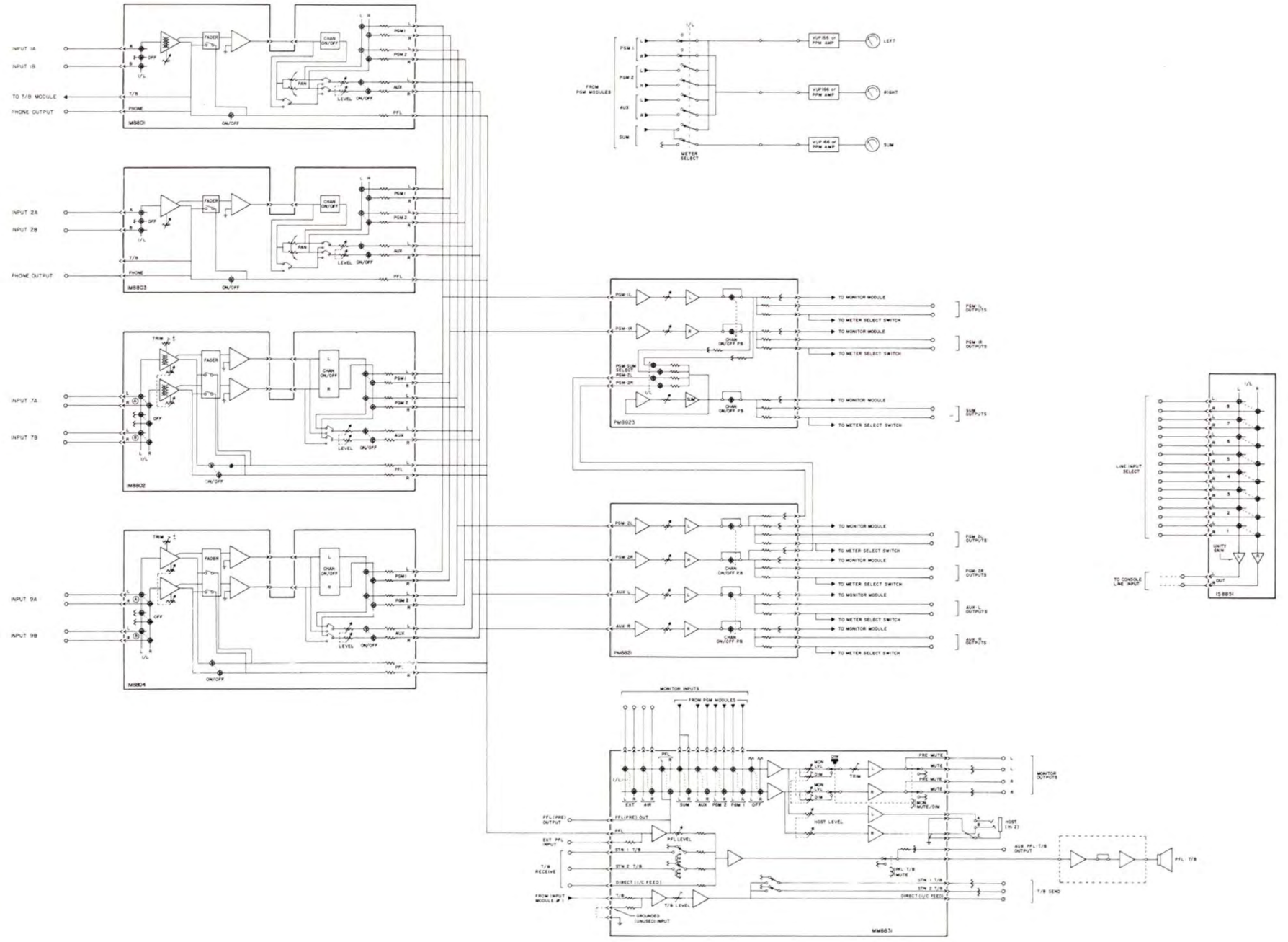
A full range of audio equipment is available from McCurdy Radio Industries which may be used in conjunction with, but not included in, the SS8800 stereo audio console. Some of the equipment types available include:

- Distribution amplifier systems.
- Monitor power amplifiers and speakers.
- Prewired jackfields.
- Real time digital clock with internal battery to prevent loss of time during power failures and capability to drive remote displays.
- Digital up/down counter with control panel, capable of driving remote displays and remote control from machine starts.
- Turntables and stereo disc reproducer systems.
- Solid-state intercoms.
- Variable equalizers.
- Compressors
- Test Oscillators

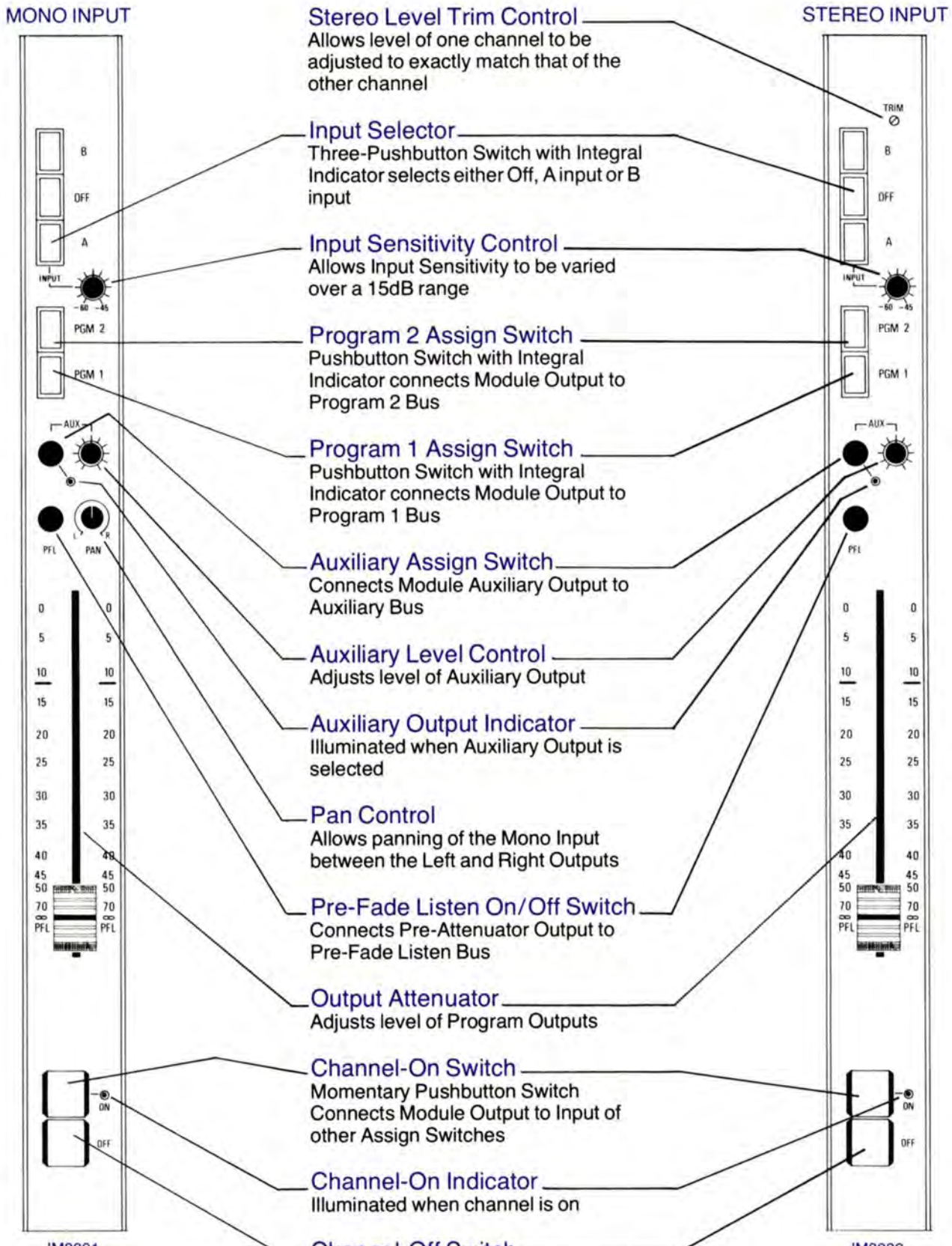
SS8800 operational facilities

- A maximum of eight stereo input channels are provided, each complete with A/B source switching, allowing for sixteen stereo audio sources.
- Each mixer is equipped with a specially designed Penny and Giles conductive plastic stereo slide attenuator with greater than 80dB attenuation before cutoff, excellent stereo tracking and separation.
- Pre-fade listen (cue) switching is provided in the maximum attenuation position of each attenuator along with a front panel pushbutton on each input module.
- Pre-fade listen monitoring is provided by a loudspeaker contained in the meter housing. The level is adjustable via a control on the monitor/talkback module.
- Indicating type program 1 and program 2 selector pushbuttons are provided on each input module to allow operation to both output channels, where equipped, simultaneously or each independently.
- Each input module is equipped with an auxiliary select pushbutton, long-life light emitting diode indicator and level control allowing the channel output to be connected to the auxiliary output channel, where equipped.
- Programming jumpers within each input module may be set to connect the auxiliary output either before or after the channel-on switch.
- Provision is made in each input channel for the insertion of externally mounted equalizers or other processing equipment.
- A pre-fader telephone line output is provided from the first or second mono microphone input channel.
- A maximum of three stereo output channels and one mono-sum output channel can be provided. Each is supplied with two output splits, allowing its output to be taken from either the program 1 or program 2 output channels.
- Monaural input modules are supplied with a pan control to enable panning of the single (mono) input between the two (stereo) module outputs.
- Each input channel is provided with a level control to allow accommodation of all normal microphone and line input levels.
- Each stereo input module is equipped with a screwdriver-adjustable level trim control to allow exact left to right channel gain setting.
- Channel on/off switching is controlled by two separate, silent momentary pushbuttons. A light emitting diode indicator is illuminated when the channel is on.
- A current sink is provided from the channel-on and channel-off switches on each input module for the control of external DC functions.
- Two control lines for start and stop control of an external counter are provided from the channel-on/off switches in each input module.
- Two momentary dry contacts, one closed by the channel-on switch and one closed by the channel-off switch, for the control of external DC functions are provided for each of the A and B inputs on all input modules.
- The input selector module, when supplied, can be wired to any one of the eight input channels equipped with a line input, providing a further eight stereo sources.
- Alternate-action channel-on switches with separate light emitting diode indicators are available for each output channel.
- Output amplifier modules are supplied with internal rotary level controls. Separate right and left channel controls on stereo outputs.
- Two VU meters are provided along with a select switch to allow monitoring of all console outputs. A separate mono-sum output VU meter is available.
- Peak program meters for all outputs are available.
- Complete monitor facilities are provided, including an eight-station monitor selector, separate monitor and monitor headset level controls and a dim circuit allowing dimming of the monitor output to a preset level by a pushbutton on the monitor/talkback module.
  The dim output level is set by a screwdriver-adjustable control provided on the module front panel. A light emitting diode indicator is illuminated when the output is dimmed.
- A comprehensive talkback system is included, allowing full two-station intercommunication. Talkback is mixed with PFL (cue), preventing loss of PFL during intercommunication.
- The microphone connected to one of the mono microphone input channels is utilized as the talkback microphone.
- All microphone inputs are balanced and floating.
- All line inputs are balanced and bridging.
- All outputs are active, balanced.
- All interconnecting buses within the console are balanced.

SS 8800 functional



microphone input modules



Stereo Level Trim Control
Allows level of one channel to be adjusted to exactly match that of the other channel

Input Selector
Three-Pushbutton Switch with Integral Indicator selects either Off, A input or B input

Input Sensitivity Control
Allows Input Sensitivity to be varied over a 15dB range

Program 2 Assign Switch
Pushbutton Switch with Integral Indicator connects Module Output to Program 2 Bus

Program 1 Assign Switch
Pushbutton Switch with Integral Indicator connects Module Output to Program 1 Bus

Auxiliary Assign Switch
Connects Module Auxiliary Output to Auxiliary Bus

Auxiliary Level Control
Adjusts level of Auxiliary Output

Auxiliary Output Indicator
Illuminated when Auxiliary Output is selected

Pan Control
Allows panning of the Mono Input between the Left and Right Outputs

Pre-Fade Listen On/Off Switch
Connects Pre-Attenuator Output to Pre-Fade Listen Bus

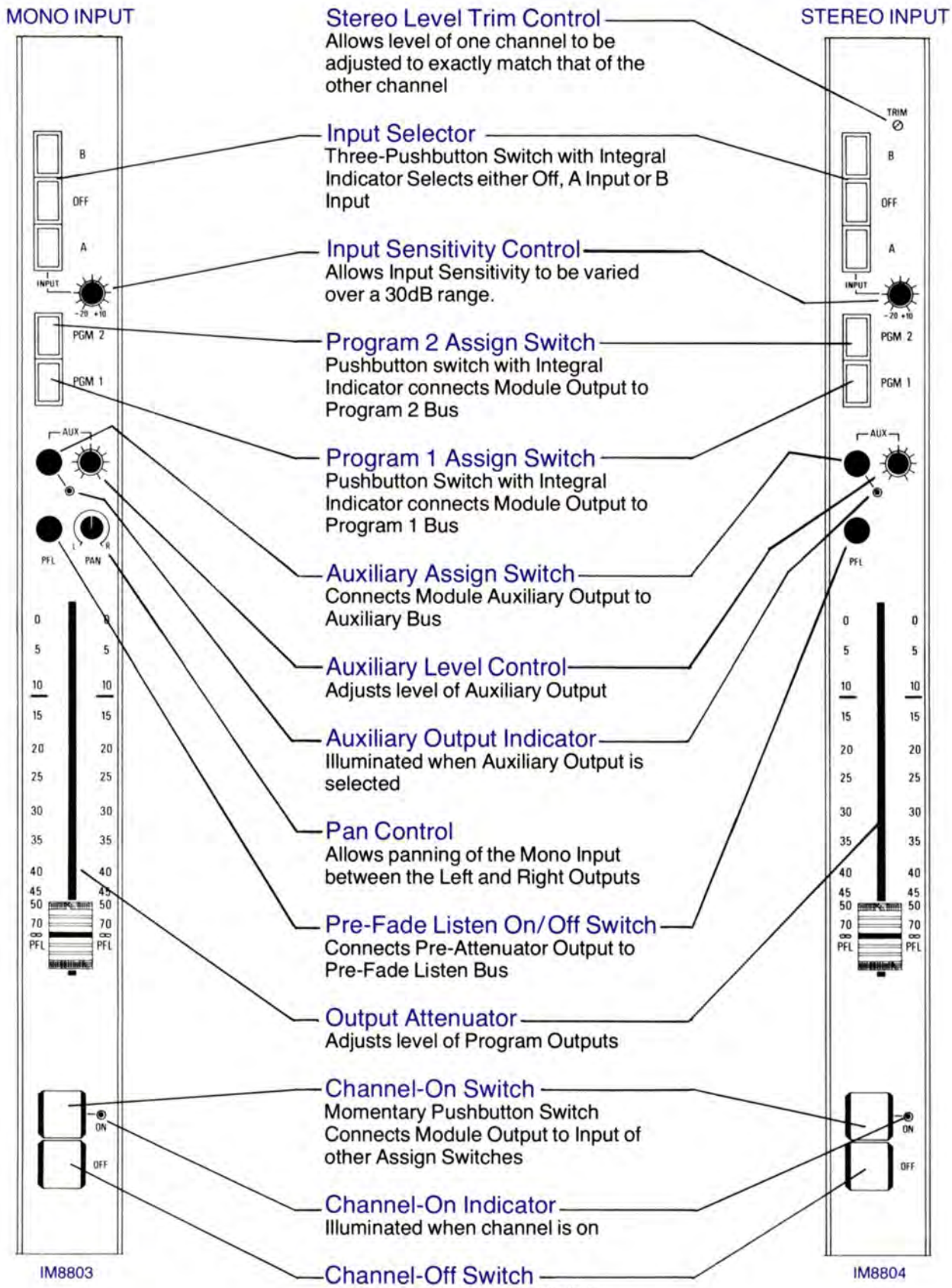
Output Attenuator
Adjusts level of Program Outputs

Channel-On Switch
Momentary Pushbutton Switch Connects Module Output to Input of other Assign Switches

Channel-On Indicator
Illuminated when channel is on

Channel-Off Switch
Momentary Pushbutton Switch disconnects Module Output from input of other Assign Switches

line input modules



Stereo Level Trim Control
Allows level of one channel to be adjusted to exactly match that of the other channel

Input Selector
Three-Pushbutton Switch with Integral Indicator Selects either Off, A Input or B Input

Input Sensitivity Control
Allows Input Sensitivity to be varied over a 30dB range.

Program 2 Assign Switch
Pushbutton switch with Integral Indicator connects Module Output to Program 2 Bus

Program 1 Assign Switch
Pushbutton Switch with Integral Indicator connects Module Output to Program 1 Bus

Auxiliary Assign Switch
Connects Module Auxiliary Output to Auxiliary Bus

Auxiliary Level Control
Adjusts level of Auxiliary Output

Auxiliary Output Indicator
Illuminated when Auxiliary Output is selected

Pan Control
Allows panning of the Mono Input between the Left and Right Outputs

Pre-Fade Listen On/Off Switch
Connects Pre-Attenuator Output to Pre-Fade Listen Bus

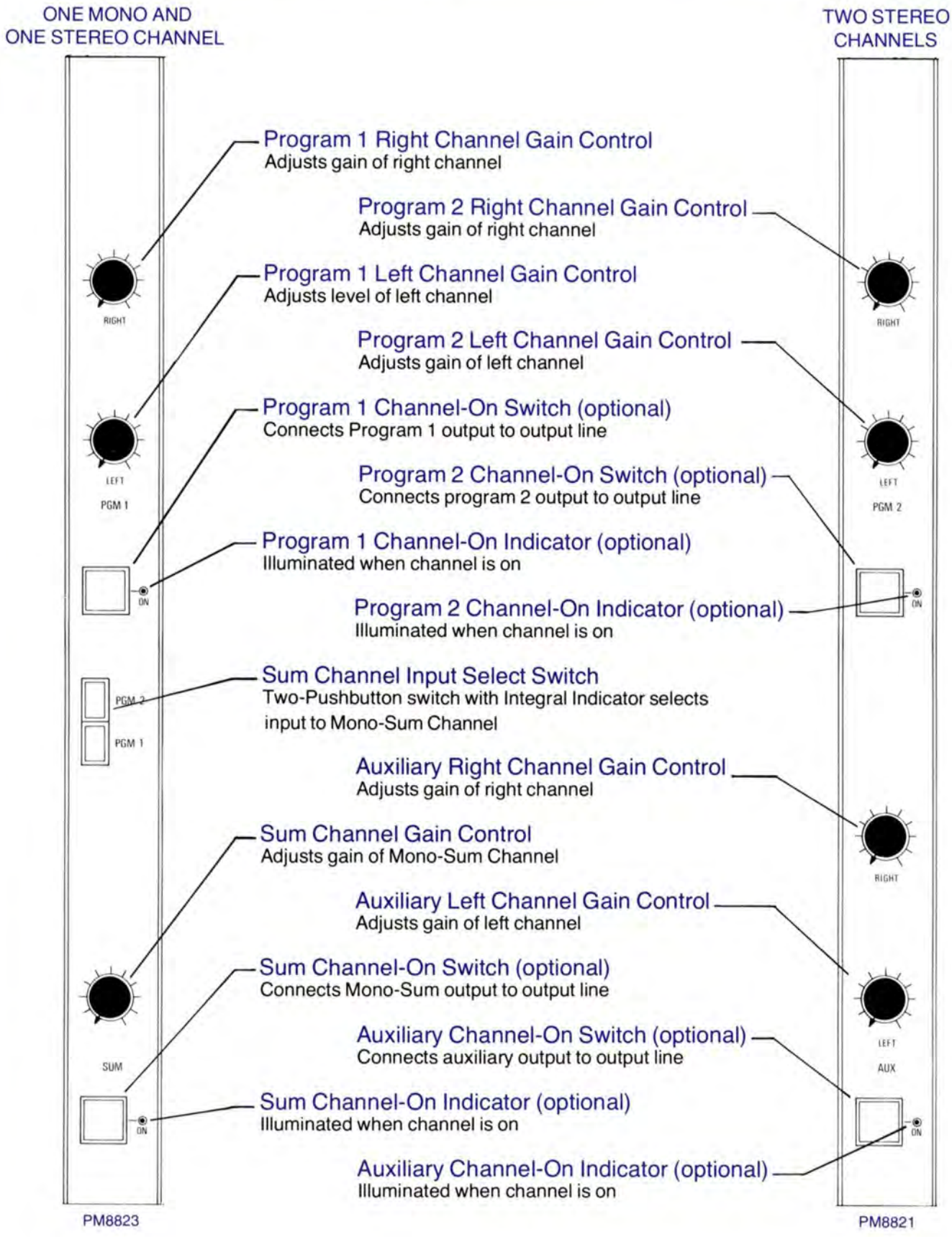
Output Attenuator
Adjusts level of Program Outputs

Channel-On Switch
Momentary Pushbutton Switch Connects Module Output to Input of other Assign Switches

Channel-On Indicator
Illuminated when channel is on

Channel-Off Switch
Momentary Pushbutton Switch disconnects Module Output from Input of other Assign Switches

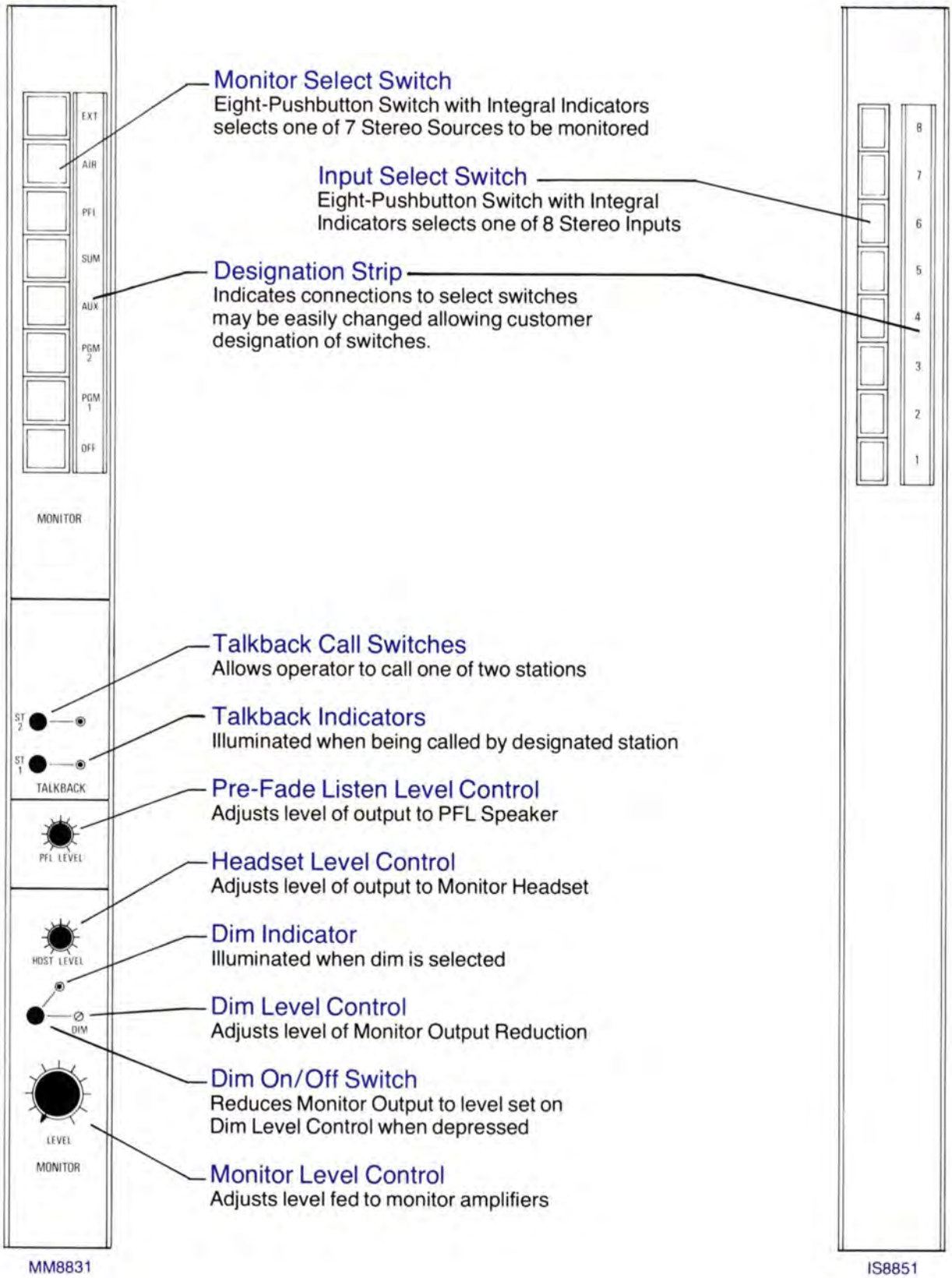
program modules



auxiliary modules

MONITOR/TALKBACK MODULE

INPUT SELECTOR MODULE



Monitor Select Switch
Eight-Pushbutton Switch with Integral Indicators selects one of 7 Stereo Sources to be monitored

Input Select Switch
Eight-Pushbutton Switch with Integral Indicators selects one of 8 Stereo Inputs

Designation Strip
Indicates connections to select switches may be easily changed allowing customer designation of switches.

Talkback Call Switches
Allows operator to call one of two stations

Talkback Indicators
Illuminated when being called by designated station

Pre-Fade Listen Level Control
Adjusts level of output to PFL Speaker

Headset Level Control
Adjusts level of output to Monitor Headset

Dim Indicator
Illuminated when dim is selected

Dim Level Control
Adjusts level of Monitor Output Reduction

Dim On/Off Switch
Reduces Monitor Output to level set on Dim Level Control when depressed

Monitor Level Control
Adjusts level fed to monitor amplifiers

MM8831

IS8851

SS8800 ordering information

The modular design of the SS8800 along with the prewired nature of the options allows all the desired features to be easily specified when ordering. Specify the basic model number, SS8800, and the letter designations for the options required as indicated in the Available Options section of this brochure. A standard SS8800 includes the following:

Two VU meters, one each for left and right channel.
Rear access terminal blocks for input/output connections.
Under desk mounting bracket for the power supply.
Power supply interconnect cable 6 ft. (2 m) long.
Front panel module complement as follows, spaces indicated from left to right, not counting the two blank panels at each end:

1. Blank panel.
2. IM8801, Mono microphone input module.
3. IM8801, Mono microphone input module.
4. IM8802, Stereo microphone input module.
5. IM8803, Mono line input module.
6. IM8804, Stereo line input module.
7. IM8804, Stereo line input module.
8. IM8804, Stereo line input module.
9. IM8804, Stereo line input module.
10. PM8823, Program 1/mono-sum output module, without channel-on switches.
11. Blank panel.
12. MM8831, Monitor/talkback module.

Talkback microphone wired to input channel one.
Telephone line outputs provided from channel one.

When ordering an SS8800 console differing from the standard as described above, the following points, along with the desired options, must also be specified:

1. If a different input module complement is desired, specify the module type required for each input channel. Also, specify which mono microphone input module is to be connected to the talkback microphone and which mono input channel is to have the telephone line output. When fewer than eight channels are required, indicate which channels are to be deleted.
2. When the input selector module (Option A) is ordered, the input channel to which it is connected must be specified. It will normally be wired to the first channel equipped with a stereo line input. The input selector cannot be used with microphone inputs.
3. When a longer power supply interconnect cable is ordered (Option L), its length must be specified.

Contact the nearest McCurdy Radio office for additional engineering assistance, application and pricing information.

Printed in Canada

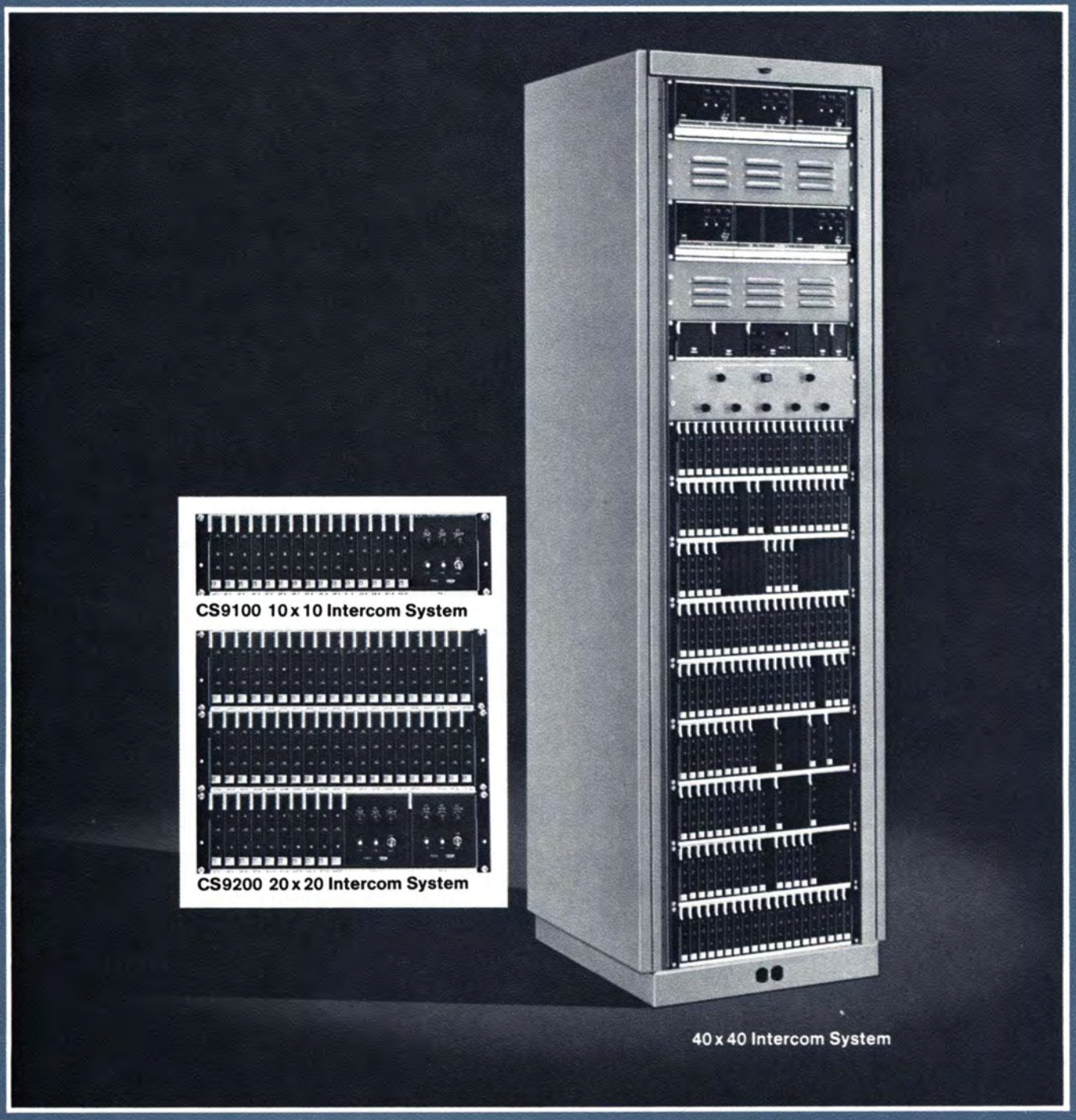
McCURDY RADIO INDUSTRIES LIMITED
108 CARNFORTH ROAD, TORONTO, ONTARIO M4A 2L4
(416) 751-6262, TELEX 06-963533, TWX 610-492-1373

McCURDY RADIO INDUSTRIES INC.
1711 CARMEN DRIVE, ELK GROVE VILLAGE, ILLINOIS 60007,
(312) 640-7077, TWX 910-222-0436

INTERCOM EQUIPMENT

SERIES 9000

intercom systems



CS9100 10 x 10 Intercom System

CS9200 20 x 20 Intercom System

40 x 40 Intercom System

McCURDY

description

CS 9000 Intercom System

- 100% solid state balanced crosspoints guarantee reliable switching.
- All required crosspoints supplied in 10x10 matrix allowing for future changes.
- 3 basic input/output configurations, 10x10, 20x20, and 30x30. Custom units and larger configurations on request.
- Each input amplifier may be switched to accommodate carbon, dynamic microphone or line input.
- Automatic gain control circuitry for input amplifier is easily strapped in or out of circuit.
- Customer insert capability between input amplifier and matrix (e.g. Jackfield)
- Full 3-watt output available into 8 ohms (+35 dBm/600 ohms equivalent)
- Integrated circuits and silicon discrete transistors used throughout.
- Discrete 10 wire or BCD input available for control.
- Basic systems may be conveniently and inexpensively enlarged and expanded
- Local and/or remote tally with or without full or partial mute available.
- Inexpensive plug-in dual balanced crosspoints
- The CS9100 - 10 x 10 is completely wired to connectors (Audio in, out and discrete control) to speed on-location installation. Larger systems are wired to terminal blocks.

The McCurdy Series 9000 Intercom Systems offer application flexibility and performance reliability to satisfy the majority of professional requirements.

The basic 10x10 configuration includes all input and output amplifiers, crosspoints and power supply. Compactly housed in a standard 19" equipment frame, only 5¼" in height.

To complete intercom systems, McCurdy Radio Industries supplies optional key panels, microphones and speakers to suit specific installations.

AP 276 Intercom Preamplifier and Matrix Crosspoint Card

The AP276 may be switched to accomodate a carbon microphone, dynamic microphone or line input. Wide variations in input levels are accommodated by activating the automatic gain control section, by simply changing a non-soldering jumper on the card. The 10 crosspoint sockets, associated with the input amplifier, are contained on this card. As shown on the accompanying functional diagram, these crosspoints determine the audio routing from input source to the desired output.

Crosspoint selection is handled by discrete wire input, or by an optional binary-coded decimal signal received from a suitably strapped key panel.

In the event of systems larger than 10 x 10, i.e. 20 x 20, 30 x 30 or larger custom units, only the first matrix card in any line contains the input preamplifier. Only crosspoints and input logic are present on all other cards in each buss.

AM 278 & AM 478T Output Amplifiers

This series of amplifiers encompasses 2 optional output arrangements.

The AM 278 consists of two amplifiers, with a +18 dBm active-balanced output from each.

The AM 478T consists of two identical amplifiers. Each features a +18 dBm active-balanced output, and an isolated 3-watt 8 ohm transformer-coupled output. Both outputs from each amplifier are individually adjustable, with partial and/or full muting control.

Power Supply

A fully regulated ±15 Volt power supply is provided as standard equipment with each intercom system. The type of power supply will depend on the current requirements of the particular intercom system.

modules & functions

AP 276 Intercom pre-amp, AGC and Matrix Crosspoint Card

SPECIFICATIONS:
Input/output levels with AGC section by-passed.

INPUT LEVEL:
Nominal:
−60 dBm/150 ohms, Dynamic
−25 dBm/50 ohms, Carbon
0 dBm/600 ohms, Line.
Max.:
(Interstage preset adjusted accordingly)
−25 dBm, 0 dBm, +18 dBm resp.

OUTPUT LEVEL:
(Output section)
−10 dBm Nom.
+10 dBm Max.

AGC SECTION:
Input Level: with AGC circuit
−70 dBm to −60 dBm Linear Gain.
−60 dBm to −30 dBm, 2 dB change at output.

FREQUENCY RESPONSE:
±1 dB 100 Hz to 10 KHz.

DISTORTION:
‹ 1%, 100 Hz to 10 KHz, at 10 dB above nominal levels.

EQUIVALENT INPUT NOISE:
−115 dBm, unweighted, typically >120 dBm.

POWER REQUIREMENTS:
±15 Volt, 50 mA. and ±4 Volt.

SIZE:
14″ x 4½″ x ¾″.

CROSSPOINTS:
10 supplied.

CONTROL:
Discrete (BCD Optional).

MUTING:
Drive Control to ground on card from all crosspoints, 50 mA max.
AP176, AP376, AP476 See ordering information.

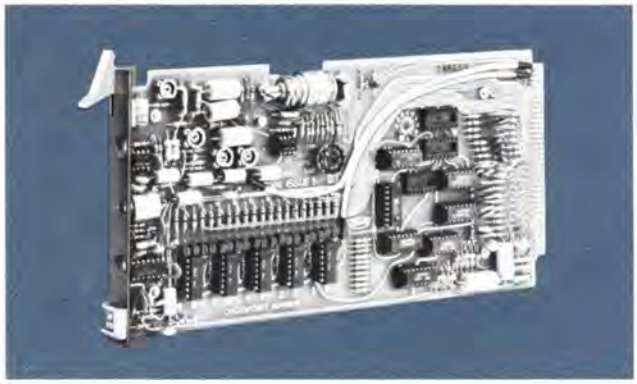
GAIN:
Dynamic Mic. 50 dB.
Carbon 15 dB.
Line −10 dB
Gain adjusted by feed back and input pads to achieve max. S/N benefit.

INPUT IMPEDANCE:
At least 10X source.

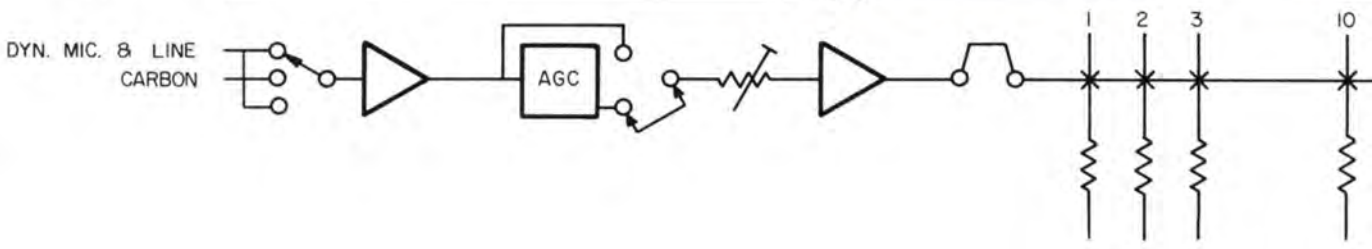
OUTPUT IMPEDANCE:
600 ohms. (output of Booster Amp.)

Output of Preamplifier/Booster section and input of Matrix brought out to pins to accommodate ext. insertion of jackfields. Normally jumpered on connector.

Isolation build-outs part of card.



AP- 276



modules & functions

AM478 Intercom Output Amplifiers

SPECIFICATIONS: Input Level:
–10 dBm/600 ohms at input of combining resistors. (Part of input Amp/Matrix Card).
0 dBm/600 ohms for 3 watts/8 ohms (max. +10 dBm/600 ohms with pre-set control adjusted accordingly).
OUTPUT:
+18 dBm/600 ohms and 3 Watts/8 ohms max. (+35 dBm/600 ohms equivalent).
DISTORTION:
<1%, 100 Hz to 10 kHz.
FREQUENCY RESPONSE:
±1 dB, 100 Hz to 10 kHz.
S/N:
80 dB below rated output.
POWER REQUIREMENTS:
±15 Volts, 400 mA.

AM278

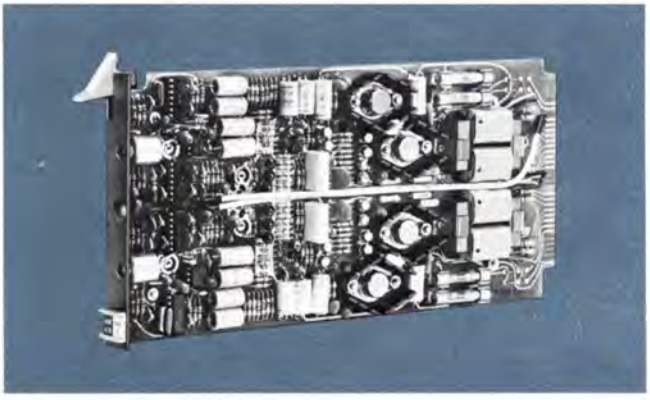
Consists of two, +18 dBm amplifiers as above.

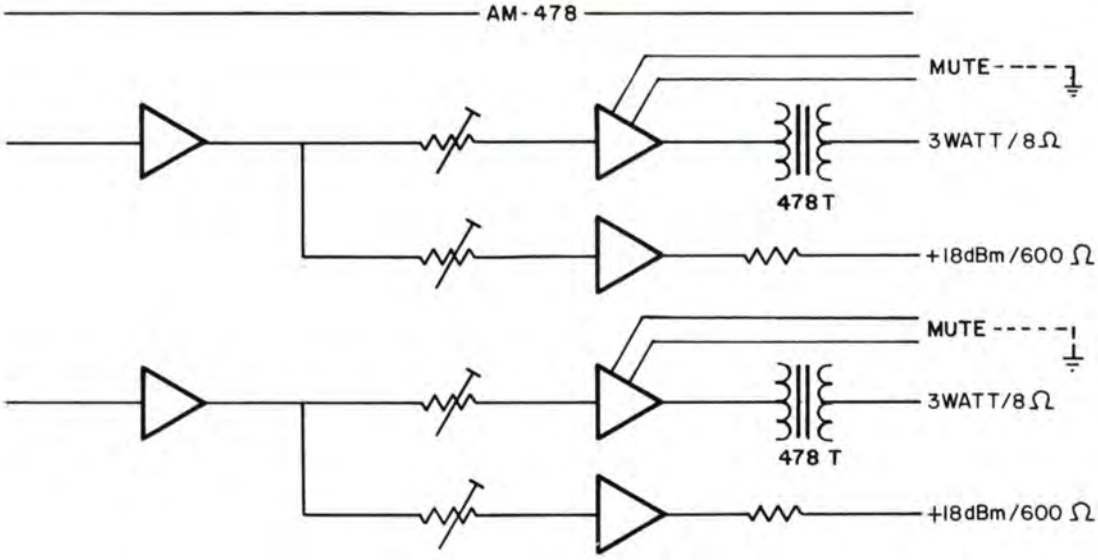
AM478T

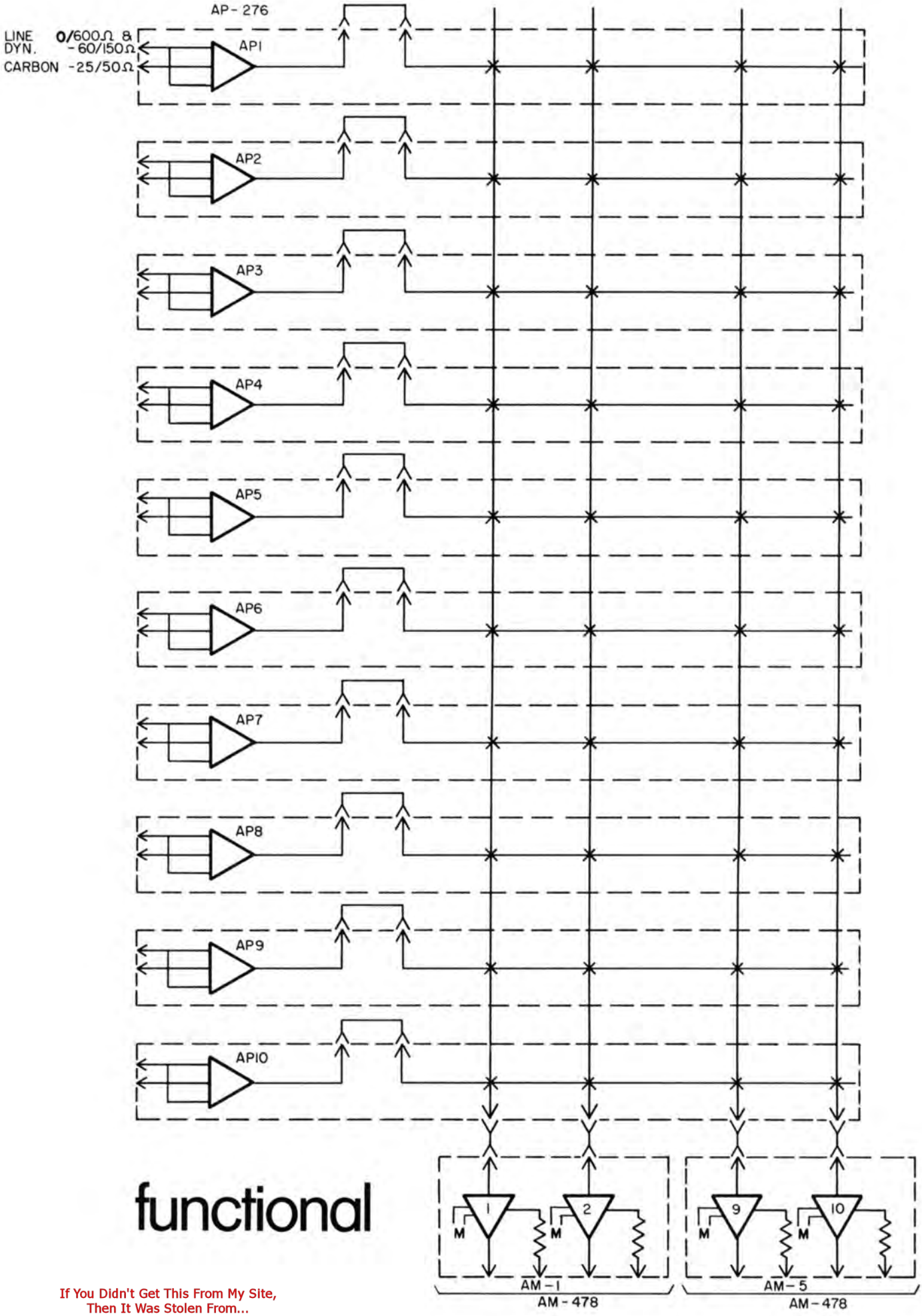
Complete with Output Transformers

PS852 Intercom Power Supply

SPECIFICATIONS:
INPUT:
105 V to 125 V/60Hz.
(220 V/50 Hz on Request)
OUTPUT:
±15V.
Fully Regulated.
Electronic Short Circuit protection.
Over-voltage protection.
Sufficient power to drive one CS9100 Intercom under normal operating conditions.
Other Power Supplies available with higher ratings, for larger systems.

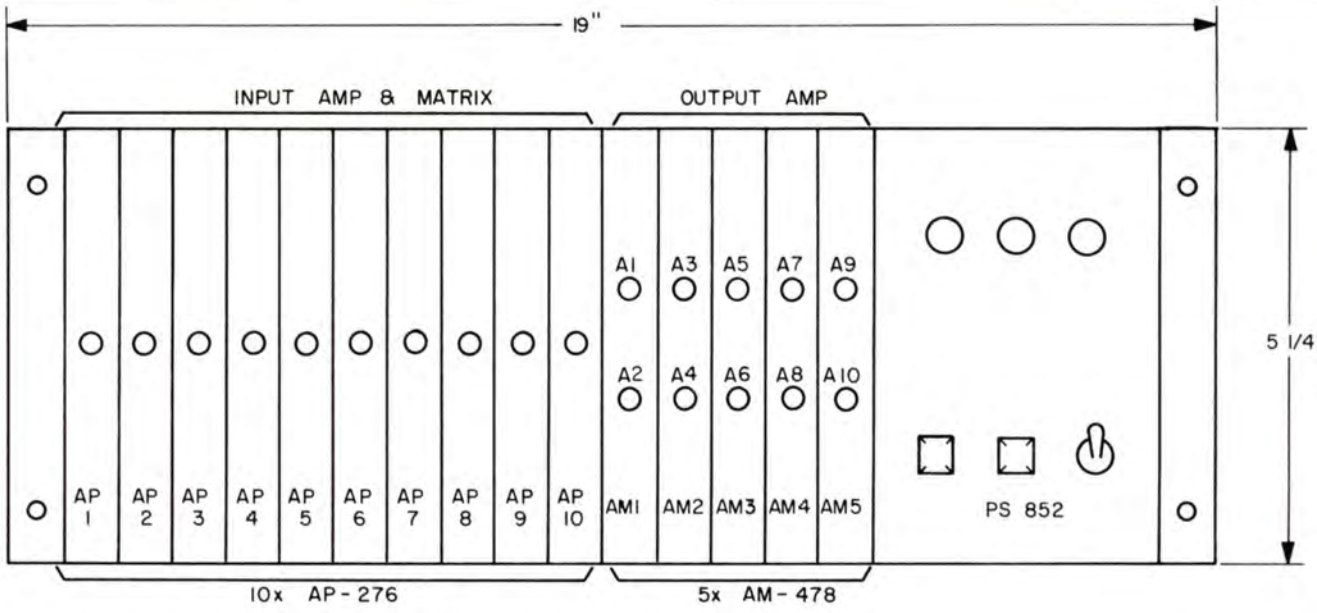






functional

installation



Front Panel, CS9100 Intercom System

Ordering Information

Input Amplifiers and Crosspoint Cards

AP 176 Discrete Control, No Crosspoints.
AP 276 Discrete Control, All Crosspoints.
AP 376 Discrete & BCD Control, No Crosspoints.
AP 476 Discrete & BCD Control, All Crosspoints.
AP 276 Supplied with Standard CS9100 10 x 10 Intercom.
AP 176 Supplied as Standard in 20 x 20 and larger systems.

Matrix Cards (without Pre-Amp and AGC)

XP 177 Discrete Control, No Crosspoints.
XP 277 Discrete Control, All Crosspoints.
XP 377 Discrete & BCD Control, No Crosspoints.
XP 477 Discrete & BCD Control, All Crosspoints.
XP 177 Supplied as Standard in 20 x 20 and larger systems.

Output Amplifiers

AM 278 Two output amps, +18 dBm outputs only.
AM 478T Two output amps, +18 dBm and 3W/8 ohm outputs.

Custom configurations available with Tally, Remote On, Custom Key Panels, Custom Housings and other features.

For engineering assistance and application information, contact the nearest McCurdy office.

McCurdy Radio Industries reserves the right without notice to make such changes in equipment, design, specifications, or components, as progress in engineering of manufacturing techniques may warrant, to improve the performance of the product.

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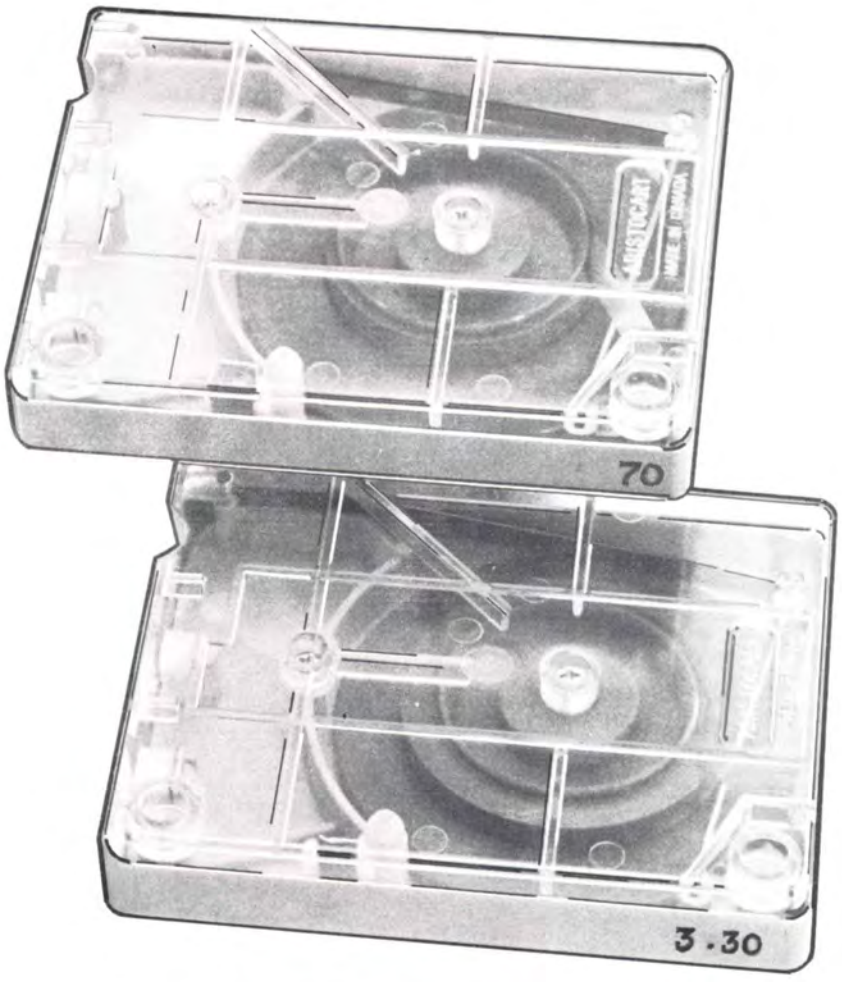
McCurdy Radio Industries Limited,
108 Carnforth Road, Toronto, Ontario M4A 2L4 (416) 751-6262 Telex: 06-963533

McCurdy Radio Industries Incorporated, TWX: 610-492-3219
1051 Clinton Street, Buffalo, N.Y. 14206 (716) 854-6700 Telex: 06-963533

U.S.A. East Coast Office,
Saddle River, N.J. P.O. Box 86, 07458 (201) 327-0750

aristocart

stereo cartridge tapes



A MUST FOR STEREO OPERATIONS

McCurdy

description

Through remarkable new design achievements, Aristocart cartridge tapes approach the performance and fidelity of reel-to-reel equipment.
Aristocarts meet or exceed all applicable NAB Specifications.
Consistent phase relationship ensures complete mono/stereo compatibility (maximum loss is less than 3 dB at 12 kHz).
Wow and flutter are minimized by a unique design in which part of the tape acts as a mechanical filter.
A new guide arrangement reduces strain and wear, thus greatly increasing tape and transducer life.

Guide design and careful assembly procedures also help to maintain the special uniformity characteristic between Aristocart cartridges.
Mounted in Lexan shatterproof housing.

Also available are optically-aligned sweep frequency alignment cartridges with rapid sweep from 50 Hz to 15 kHz.

***The amazing new Aristocart Cartridge Tapes are now distributed by McCurdy Radio Industries.**

unit price

	loaded			empty	
TIME	1-99	100-249	250-499		
20 sec.	$3.45	$3.25	$3.00	1- 99	2.90
40 sec.	3.30	3.25	3.05	100-249	2.70
63 sec.	3.60	3.40	3.15	250-499	2.50
70 sec.	3.60	3.40	3.15	500-999	2.40
100 sec.	3.70	3.50	3.25	1000-up	2.30
2½ min.	3.80	3.55	3.35		
3½ min.	4.00	3.75	3.50		
4½ min.	4.05	3.90	3.65		
5½ min.	4.15	4.05	3.80		
7½ min.	4.65	4.35	4.10		
8½ min.	4.80	4.50	4.25		

For other times use price of next highest time given.

Alignment cartridge sweeps frequencies from 50 Hz to 15 kHz.

5% Discount on 250-499 price for quantities of 500 to 999

10% Discount on 250-499 price for quantities of 1000 up

Printed in Canada

McCURDY RADIO INDUSTRIES LIMITED
108 CARNFORTH ROAD, TORONTO, ONTARIO M4A 2L4 (416) 751-6262, TELEX: 06-963533

McCURDY RADIO INDUSTRIES INCORPORATED
1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

EAST COAST OFFICE: SADDLE RIVER, N.J. P.O. BOX 86, ZIP 07458, PHONE (201) 327-0750, TWX 610-492-3219

SM8

audio switcher

McCurdy

description

The SM8 Switching Module is the basic building-block for sophisticated, low-transient, audio switching systems. A full-complement module accommodates eight high-reliability reed relays, a silicon-transistor hold-cancel circuit, and resistive isolation pads. The use of silicon diodes in the relay switching circuits virtually eliminates transients and prevents back-coupling.

The circuitry is ruggedly constructed on a glass-epoxy printed-circuit card which attaches to a front panel and a rigid backing plate.

The full SM8 module is an 8 x 1 switcher and/or mixer, providing one output from any one or all eight inputs, depending on the wiring configuration of the hold-cancel circuit. However, less than the full complement of circuits may be ordered on any module in order to suit the needs of individual system requirements. Conversely, modules may be stacked or paralleled to increase the input-to-output ratio from the basic 8 x 1 system.

A wide variety of control configurations and switch types may be used with these switchers, including momentary or alternate action pushbuttons, or lever keys. A few examples are given in the following paragraphs and accompanying diagrams

Figure 1: Up to eight relays only; an alternate action pushbutton is required to hold the relay in. There is no loss in the matrix crosspoint.

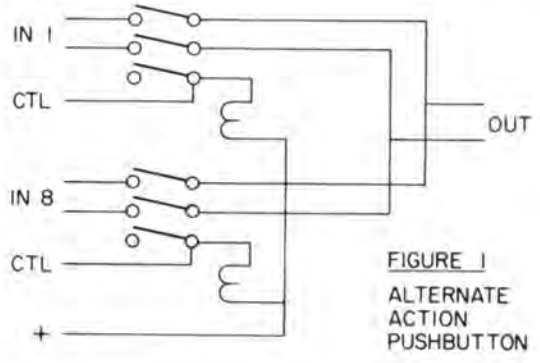


FIGURE 1
ALTERNATE ACTION PUSHBUTTON

Note: The circuits shown here are for negative dc control. These can be supplied for positive dc control (SM8P).

Figure 2: Same as Figure 1 but with bridging pads, with a loss of 40 dB, inserted in the input lines. High isolation between crosspoints.

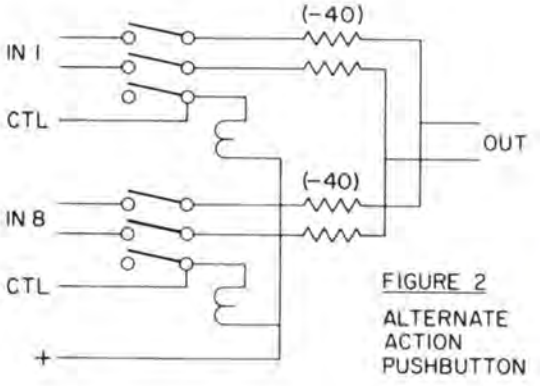


FIGURE 2
ALTERNATE ACTION PUSHBUTTON

Figure 3: Up to eight relays with a holding circuit through an extra 'A' contact on each relay. A relay can be operated with a momentary pushbutton and, after depressing this button, the relay will hold in. An external normally-closed puhsbutton is required in the negative supply line to cancel the relays. There is no loss in the matrix crosspoint.

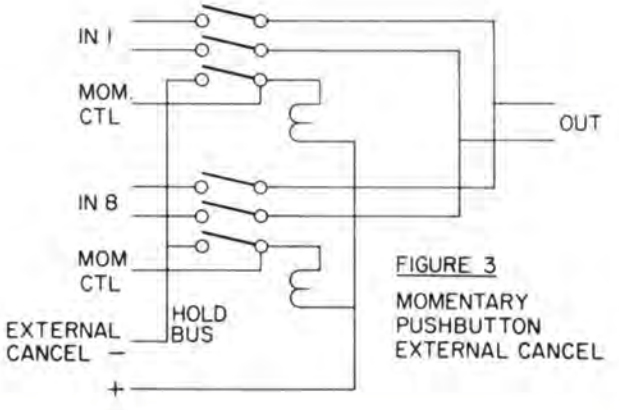


FIGURE 3
MOMENTARY PUSHBUTTON EXTERNAL CANCEL

Figure 4: Same as Figure 3 but with bridging pads added in the input circuits. The crosspoint loss is 40 dB. High isolation between crosspoints.

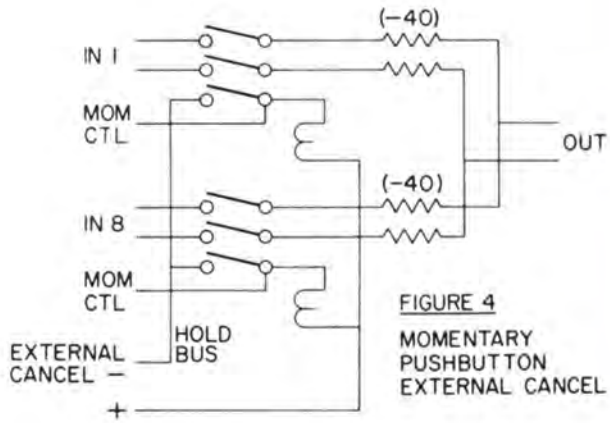


FIGURE 4
MOMENTARY PUSHBUTTON EXTERNAL CANCEL

Figure 5: Up to eight relays with a holding circuit through an extra 'A' contact on each relay, and a transistorized hold-cancel circuit. Relays are operated by momentary pushbuttons. The holding circuit is a transistorized switch that changes its state when a negative potential is applied to the external cancel connection; or, by inserting diodes in the proper locations, the relay(s) are cancelled by the next selection.

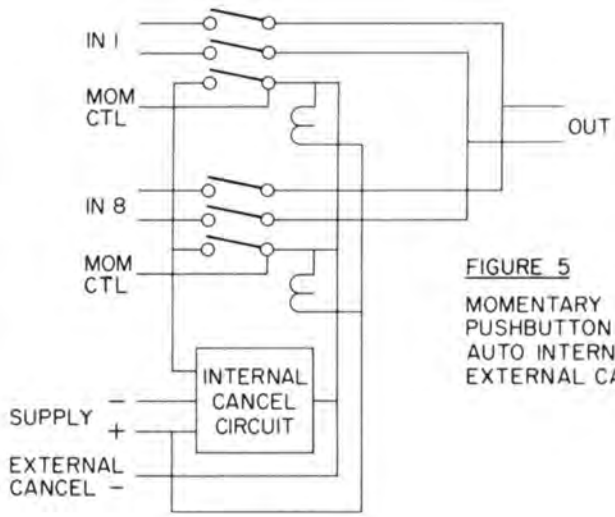


FIGURE 5
MOMENTARY PUSHBUTTON AUTO INTERNAL/ EXTERNAL CANCEL

Figure 6: Same as Figure 5 but with bridging pads inserted in the inputs. Insertion loss is 40 dB. High isolation between crosspoints.

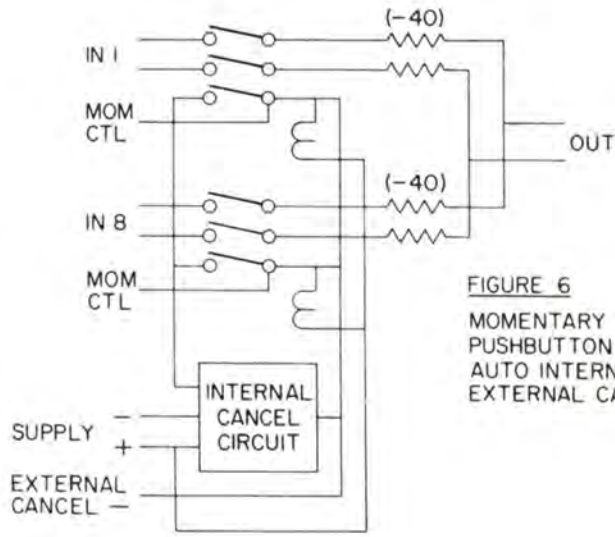


FIGURE 6
MOMENTARY PUSHBUTTON AUTO INTERNAL/ EXTERNAL CANCEL

specifications

System Quantities: Eight relays per module. Twenty modules per frame.
Card Dimensions: 13/16 in. wide, 3 in. high, 10-3/4 in. long. Frame occupies 3-1/2 in. of vertical space in a 19 in. rack.

Operating Voltage: 24v dc unregulated.
Current: 10 mA per reed relay.

ordering information

ORDER

(A) SM8 Module for negaitve dc control.
(B) SM8P Module for positive dc control.
(C) Isolation pads.
(D) Transistor hold-cancel circuit.

OPTIONS

(A) FR904 Equipment Frame. Holds 20 SM8 Modules.
(B) FR904-2 Frame Receptacle Kit. One required per SM8.
(C) Power Supply, 24v dc.
(D) Power Supply Mounting Frame.

Printed in Canada

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1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

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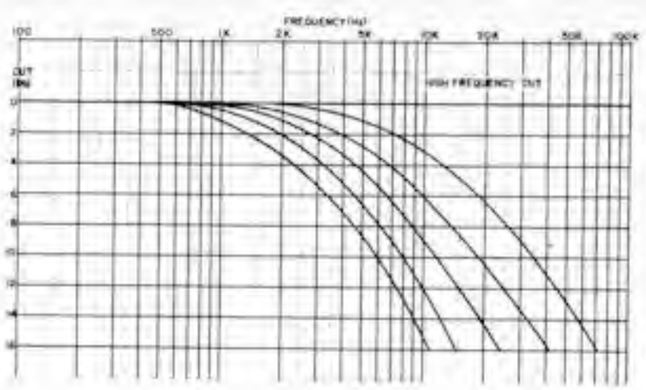
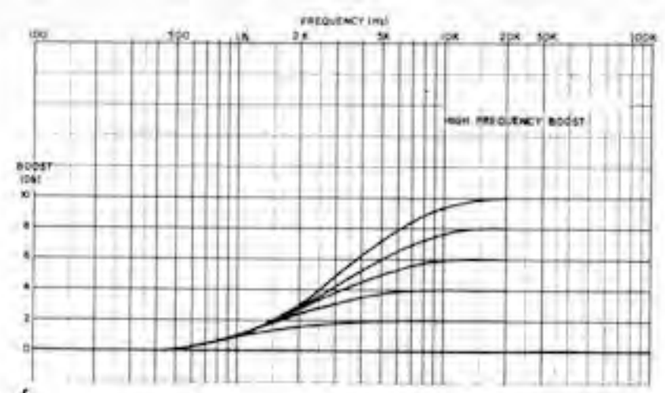
EQ155A

variable equalizer

McCurdy

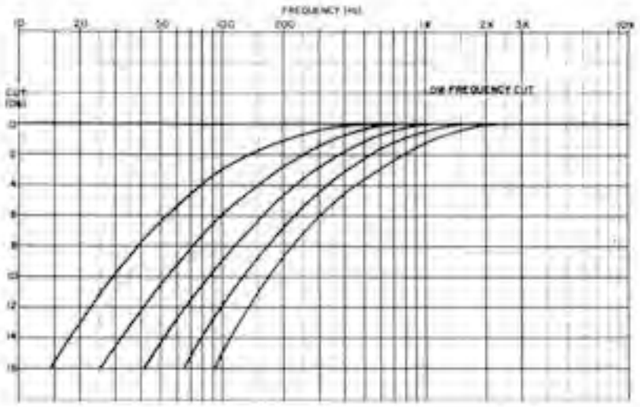
HF CUT SWITCHABLE IN 5 STEPS OF 3 DB AT 10 KHZ

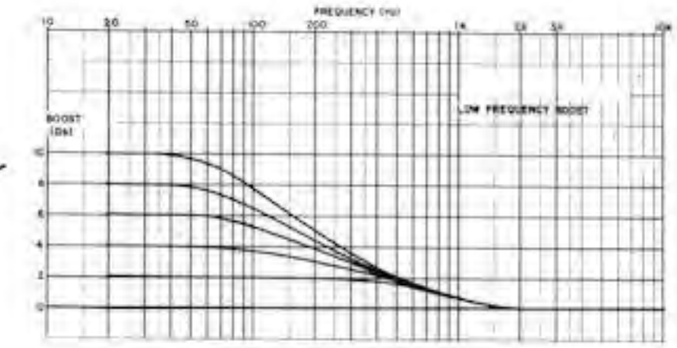




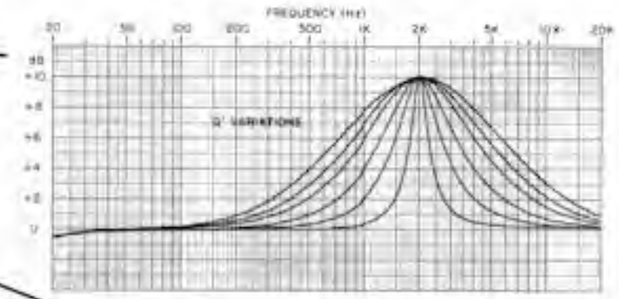
HF BOOST 5 STEPS OF 2 DB AT 15 KHZ

LF CUT SWITCHABLE IN 5 STEPS OF 3 DB AT 100 HZ



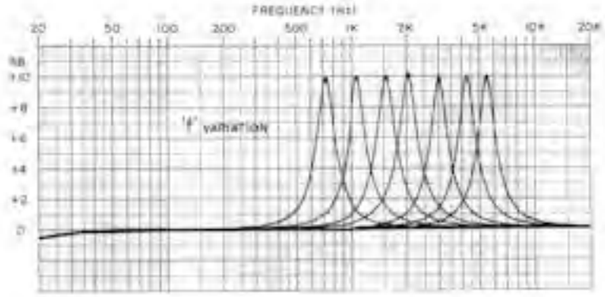


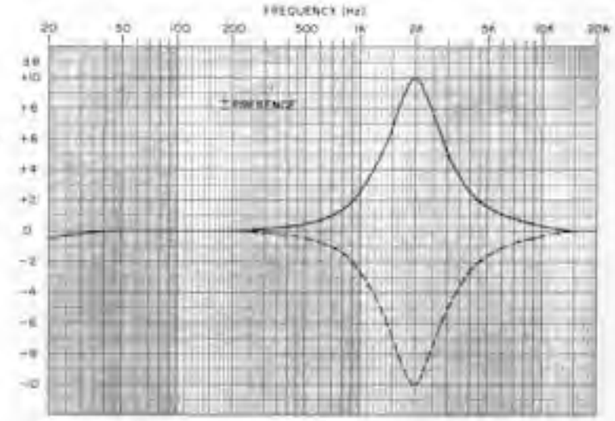
LF BOOST 5 STEPS OF 2 DB AT 40 HZ



VARIABLE PRESENCE "Q" AT ANY SETTING OF FREQUENCY OR LEVEL - INFINITELY VARIABLE IN BOTH POSITIVE AND NEGATIVE MODE

VARIABLE FREQUENCY CONTROL, ALLOWING PEAKING OF ANY FREQUENCY BETWEEN 700 HZ AND 5 KHZ

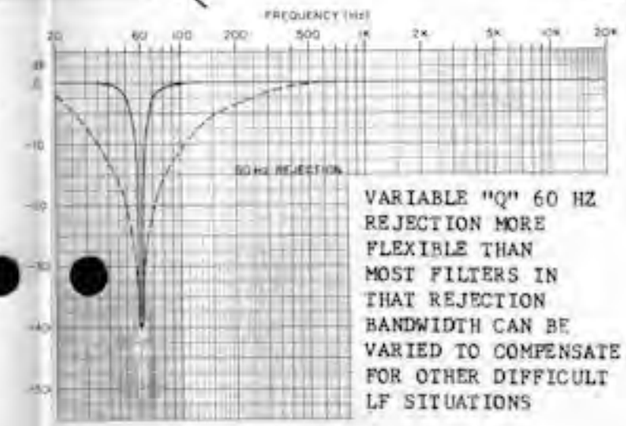




± PRESENCE ALLOWING ADDITION OR SUBTRACTION OF PRESENCE FROM FREQUENCY BAND AVAILABLE AT ANY FREQUENCY OR "Q" SETTING

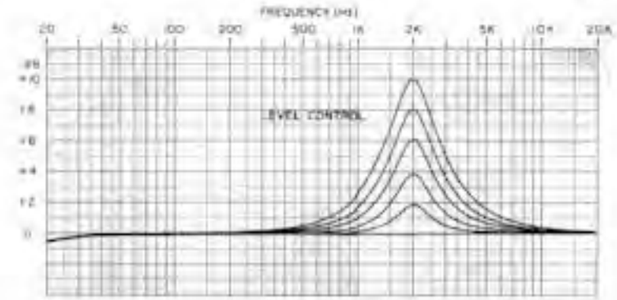
IN/OUT SWITCH

ON/OFF LIGHT



VARIABLE "Q" 60 HZ REJECTION MORE FLEXIBLE THAN MOST FILTERS IN THAT REJECTION BANDWIDTH CAN BE VARIED TO COMPENSATE FOR OTHER DIFFICULT LF SITUATIONS

LEVEL CONTROL. ALLOWS UP TO 10 DB OF PRESENCE TO BE ADDED TO MAIN SIGNAL



description & specifications

An Equalizer designed for operational ease with many new features in one package.

Styling and size compatibe with standard fader dimensions.

+18 dBm output capability for maximum use of console headroom.

Unique variable "Q" presence equalization, with continuously variable level, "Q", and frequency controls.

Built-in positive/negative presence equalization.

Variable "Q" 60 Hz rejection.

Balanced inputs and outputs.

All curves algebraically add or subtract depending on settings.

The EQ155 Variable Equalizer offers a range of equalization facilities previously requiring two or more equalizers. Thus, with the EQ155 even the smallest installation can now employ full audio program equalization of the highest quality.

The equalizing capabilities of the EQ155 are illustrated graphically in the enclosed Functional Diagram. An IN-OUT switch permits prior setup of the controls before insertion in the program circuit, or instant bypass when equalizing is not required. A pilot lamp indicates when the EQ155 is inserted.

Advanced integrated-circuitry design techniques permit packaging the EQ155 in a case measuring only 1-9/16 by 5-1/4 by 6-1/8 inches. The shape and dimensions are compatible with modern in-line attenuator design, making the EQ155 ideal for incorporation in new consoles as well as in existing facilities.

The EQ155 is installed in a panel cutout by means of two screws. Electrical connections are made via an edge-connector which facilitates removal and installation of the equalizer when required.

Gain: Unity ± 1 dB.
Input Level: -20 dBm nom, +18 dBm max.
Input Impedance: 10k ohms bridging, balanced. Provision for 600-ohm matching input with use of internal resistor.
Output Level: -20 dBm nom, +20 dBm max.
Load Impedance: 600 ohms, balanced, bridging or matching.
Output Impedance: Less than 50 ohms.

Distortion: Less than 0.5%, 30 Hz to 20 kHz, at any output level up to +20 dBm.
Noise: (all controls flat), 10 Hz to 100 kHz bandwidth. Better than -115 dBm absolute.
Power Requirement: 42v to 48v dc, 50 ma.
Ambient Temperature: 0° to 55°C.
Overall Dimensions: 1-9/16 in. wide, 5-1/4 in. high, 6-1/8 in. deep.
Weight: 1-1/2 lb approx.
Frequency Response: Controls set for flat response (no equalization): ± 0.5 dB 30 Hz to 20 kHz, ref 1 kHz.

ordering information

ORDER

EQ155 Universal Equalizer which includes 15-pin edge connector for external wiring.

Printed in Canada

McCURDY RADIO INDUSTRIES LIMITED
108 CARNFORTH ROAD, TORONTO, ONTARIO M4A 2L4 (416) 751-6262, TELEX: 06-963533

McCURDY RADIO INDUSTRIES INCORPORATED
1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

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OT 157

multi·frequency oscillator

McCurdy

description & specifications

The OT157 multi-frequency oscillator is designed for installation within a system to provide reference tones for equipment alignment, or individual unit assessment.

19 Selectable frequencies are available from 20 Hz to 20 KHz, and output levels are adjustable in 11 pre-set steps from –70 to +18 dBm.

A Vernier output control is provided giving a variance of ± 2 dB from each calibrated setting. A meter is also provided for output indication and calibration.

Two output impedances are available selected by the output level control. Levels of –70, –60, and –50 are at 150 ohms. Levels from –30 to +18 are at 600 ohms.

State of the Art integrated circuitry permits packaging the OT157 in a case measuring only 1 1/16 W x 5 1/4 H x 6 1/8 D., compatible with other McCurdy modules.

Installation is by 2 screws from the front panel, electrical connections are made via an edge connector at the rear.

Power requirements are either 48V or ±15V allowing use with either existing uni-polar or newer bi-polar systems.

SPECIFICATIONS

FREQUENCY

Selectable: 20 Hz, 30 Hz, 40 Hz, 50 Hz, 100 Hz, 150 Hz, 200 Hz, 300 Hz, 400 Hz, 500 Hz, 1 Khz, 1.5K, 2K, 3K, 4K, 5K, 10K, 15K and 20K.

OUTPUT LEVELS:

(a) –70, –60, –50 dBm 150 ohms balanced.
(b) –30, –20, –10, 0, +4, +8, +14, +18 dBm. 600 ohms balanced.

TOTAL HARMONIC DISTORTION:

Less than .25% 20 Hz to 20 KHz.

AMPLITITUDE STABILITY:

Within ± .2 dB for any selected frequency.

FREQUENCY STABILITY:

Within ±10%.

POWER REQUIREMENTS:

(a) 48V regulated negative ground 50 ma.
(b) ± 15 V.

AMBIENT TEMPERATURE:

0° to 55° C.

DIMENSIONS:

1 1/16" W x 5 1/4" H x 6 1/8" D

WEIGHT:

1½ pounds.

Printed in Canada

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SA10100-S

prewired jackfields

McCurdy

description

The SA10100S Series of Prewired Jackfields consist of a standard rack mounting strip, containing 24 type 239A tip-ring-sleeve jacks, wired to a terminal block having 5 rows of 24 terminals each. The first four rows terminate the jack springs, with the fifth row strapped vertically and reserved for shield and ground termination. Since all springs are wired to the block, cross-jumpering and circuit changes may be accomplished without soldering directly on the jacks.

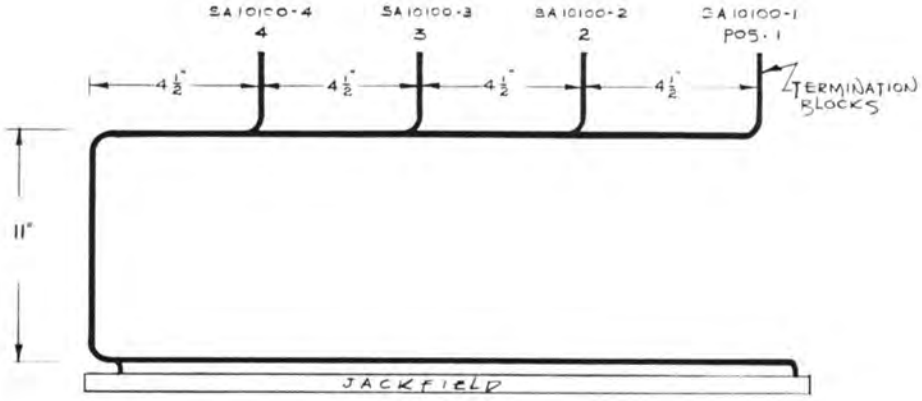
A designation strip is included on the jack assembly, and mounting bars for the terminal block are provided as standard equipment. One pair of mounting bars will accommodate four terminal blocks.

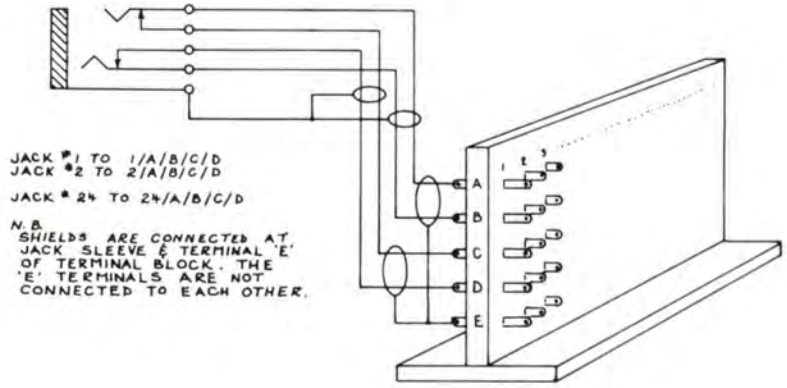
Four cable layouts are available; these are used when more than one terminal block is mounted on a set of bars, and are designated SA10100S-1, -2, -3, and -4. (See Cable Layout). In large jackfields, after the -4 block is used, the -1 may be repeated, etc.

A similar jackfield (SA10100) is available with unshielded cable. This should be used only where levels in adjacent cables are the same, so that the danger of crosstalk if minimized.

Accessory patch cords are available in the following lengths:

Patch Cord No.	Length
SA10131	12 inches
SA10132	24 inches
SA10133	36 inches
SA10136	72 inches





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1051 CLINTON STREET, BUFFALO, N.Y. 14206 (716) 854-6700, TWX 610-492-3219

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SA14021A

extended-range audio level meter

McCurdy

description & specifications

The SA14021A Extended-Range Audio Level Meter is a self-contained, solid-state instrument designed for the measurement of audio system transmission levels in dbm. The SA14021A can accommodate audio input levels from -50 dbm to +30 dbm (sine wave) with zero meter reading. A front panel switch selects two ranges, -50 dbm to +10 dbm and -30 dbm to +30 dbm, and a calibrated attenuator provides fine selection in 2 db steps within these ranges.

Two balanced inputs are provided, one for 600 ohms matching and the other for 20,000 ohms bridging. A high impedance output permits monitoring by headset without affecting the meter reading.

An amplifier and a power supply circuit are mounted on printed-circuit boards inside the instrument cabinet. These circuits are all solid-state, with silicon devices used throughout for maximum reliability. The cabinet is designed for standard 19-inch rack mounting and occupies only 5-1/4 inches of rackheight. The front panel hinges forward to permit access to internal components and mounts the operating controls, input and monitoring jacks, and a 4-1/2 inch meter.

External power connections are made by plugging the line cord into the required ac source. A terminal board is mounted on the rear of the unit for making extension connections to remote jacks if desired.

Range: Two ranges, in 2 db steps, for zero indication:
(1) -50 to +10 dbm
(2) -30 to +30 dbm

Input Impedance:
(1) 600 ohms matching, balanced, 10%
(2) 20,000 ohms bridging, balanced

Frequency Response: Within 0.5 db, 20 hz to 20 khz

Distortion: (at +30 dbm input):
(1) Less than 1%, 50 hz to 15 khz
(2) Less than 1.5% 20 hz to 20 khz

Signal-to-noise ratio: Better than 40 db below any full-scale reading

Attenuator Tracking: Within 0.25 db per step (non-accumulative)

Meter Ballistics: Complies with audio level meter standards

Monitor Output: 0.15 volt into 20,000-ohm headset

Power Requirements:
105 to 125 v/210 to 230 v ac,
50/60 hz, single phase,
5 va approx

Dimensions: 5-1/4 in. (13.33 cm) high, 5-1/4 in. (13.33 cm) deep, 19 in (48.26 cm) wide

Weight:
(1) Shipping: 15 lb (6.8 kg) (2) Installed: 13 lb (5.9 kg)

ordering information

ORDER

SA14021A Extended-Range Audio Level Meter; specify line voltage and frequency

ACCESSORIES (not supplied)

(1) SA10132 two-foot patch cord
(2) SA10133 three-foot patch cord
(3) SA10136 six-foot patch cord

Printed in Canada

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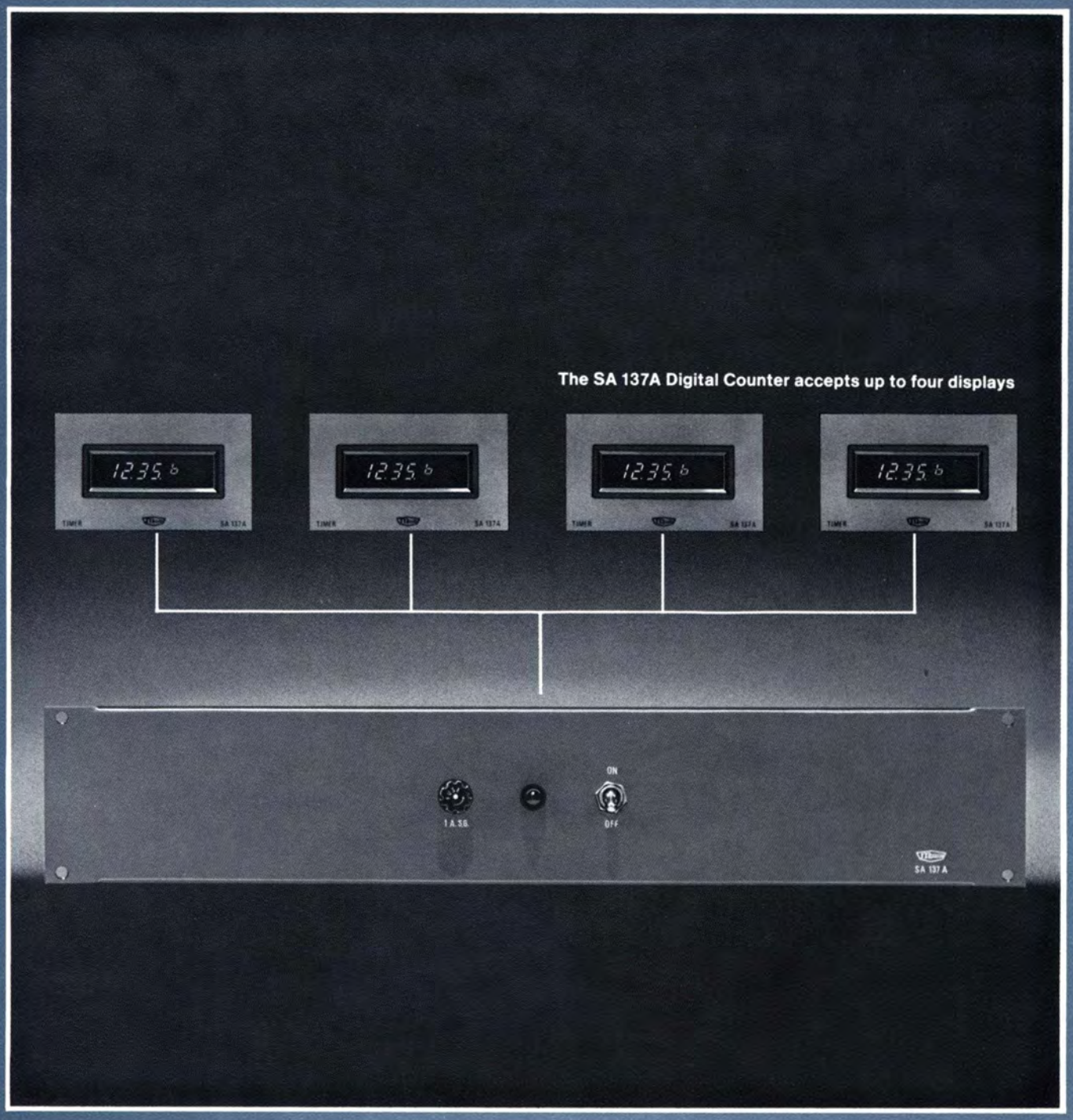
SA 137A
digital counter



McCURDY

SA 137A DIGITAL COUNTER

specifications

1. Compact master unit, only 3½" in height, mounts in standard 19" equipment rack.

a) Maximum power requirement at 117V, 60 Hz is 1A.

b) All cable connections are to the rear of the unit.

c) 60 Hz power line frequency is used as the counter time base.

2. The SA137A Digital Timer accepts a maximum of 4 display units.

a) Each remote may be a maximum of 100' from the master (Cable length).

b) The remotes are connected to the master with 25 conductor ribbon cable. Conventional cable may also be used. (option)

c) The remote may be mounted in the console VU housing, or any other panel. It occupies 2 15/16" x 5" of panel space and 1 7/16" behind the panel. It mounts in a standard VU meter cutout.

d) Each readout is equipped with five digits, tens and units of minutes and seconds and tenths of seconds. For ease of reading, the tenths of seconds only displays even tenths, 2, 4, 6, 8, 0. The maximum elapsed time displayed is 99 minutes 59.8 seconds.

e) The minutes and seconds displays are 0.510" high, red LED types and the tenth seconds display is a 0.300" high, red LED type. A colon is provided between the minutes and seconds digits and a decimal point between the seconds and tenths of seconds.

3. Two standard control panels are available. One mounts in four unit widths of the console remote control tray (3 15/16 x 4 5/8). The other mounts in a standard 7½", double width (3⅛"), attenuator module. Both are designed to be compatible with modular consoles, mounting directly on the console control panel. The controls provided and their functions are as follows:

a) Four thumbwheel switches for setting tens and units of seconds and minutes.

b) Start switch – starts counter.

c) Stop switch – stops counter, display remains at stop time.

d) Hold switch – holds display, counter continues to run. When switch is released the display updates to counter.

e) Clear switch – clears display and resets counter to zero.

f) Load switch – enters time set on thumbwheel switches into counter.

g) Up/Down switch – sets counter operating mode, either counting up or down from a preset time.

4. Remote control connections are available on the master unit for starting and resetting the counter when other equipment, such as tape machines, are started or stopped. This can be used for automatic timing of running time.

5. In the down-count mode, a ground going signal is available momentarily upon reaching zero. The counter remains at zero, flashing the display to indicate duration count is ended.

Ordering information/model types

a) Master unit – SA 137A

b) Remote display, VU Meter Mounts – SA 137A-01

c) Remote display, cue speaker mount – SA 137A-02

d) Control panel:
Attenuator module mounting: SA 137A-06
Remote control tray mounting: SA 137A-07

e) Interconnecting cables – SA 137A-C – (Last two digits give cable length in feet, i.e. SA 137A-C00 is a 100 ft. cable and SA 137A-C07 is a 7 ft. cable.)

Printed in Canada · SA 137A Digital Timer/Issue 3/12.76

McCurdy Radio Industries Limited,
108 Carnforth Road, Toronto, Ontario M4A 2L4 (416) 751-6262 Telex: 06-963533

McCurdy Radio Industries Incorporated, **TWX: 610-492-3219**
1051 Clinton Street, Buffalo, N.Y. 14206 (716) 854-6700 Telex: 06-963533

U.S.A. East Coast Office,
Saddle River, N.J. P.O. Box 86, 07458 (201) 327-0750

SA 138A
digital clock

The SA 138A Digital Clock accepts up to four additional displays

McCURDY

SA 138A DIGITAL CLOCK

specifications

1. Compact master unit, only 3½" in height, mounts in standard 19" equipment rack.

a) Maximum power requirement at 117V, 50/60 Hz is 1A.

b) All cable connections are to the rear of the unit.

c) The master unit includes a display and all setting controls.

d) Seven switches are used to set the clock, the run/hold to stop and start the count and the others to individually set each digit. Each time a set button is pressed, the digit being set will increase by one. The setting switches are activated when the run/hold switch is depressed.

e) The clock is normally delivered for operation on 60 Hz power and to display the time in the twelve-hour format. It can be changed to operate on 50 Hz or to display in the twenty-four hour format by simply changing the position of the select switches on the PC board.

f) The standard SA 138A uses the power line frequency as a time base.

g) A crystal-controlled time base and battery is available as an option.

1. When this option is installed, a long-life nickel-cadmium battery is supplied, enabling the clock to keep the correct time if the AC power fails.
2. The clock will operate for 24 hours on a fully charged battery. On battery operation, the counting circuits only are powered, the displays are off. When AC power is restored, the displays will come on, displaying the correct time.
3. The battery is charged when the clock is operating on AC.

2. The SA 138A Digital Clock accepts a maximum of 4 external display units.

a) Each remote may be a maximum of 100 ft. from the master (cable length).

b) The remotes are connected to the master with 25 conductor ribbon cable. Conventional cable may also be used. (option)

c) The remote may be mounted in the console VU housing, or any other panel. It occupies $2^{15}/_{16}$" x 5" of panel space and $1^{7}/_{16}$" behind the panel. It is designed for mounting in a standard VU meter cutout.

d) Each readout is equipped with 6 digits, tens and units of hours, minutes and seconds.

e) A remote display with a larger front panel for mounting in place of a cue speaker is also available.

Order information/model types

a) Master Unit – SA 138A

b) Display to be mounted in master unit (SA 138A-2)

c) Remote display, VU meter mount – SA 138A-01

d) Remote display, Cue Speaker mount – SA 138A-02

e) Crystal time base/battery option – SA 138A-05

f) Interconnecting cables – SA 137-C – (Last two digits give cable length in feet i.e. SA 137-C00 is a 100 ft. cable and SA 137-C07 is a 7 ft. cable.)

Printed in Canada • SA 138A Digital Clock/Issue 3/12.76

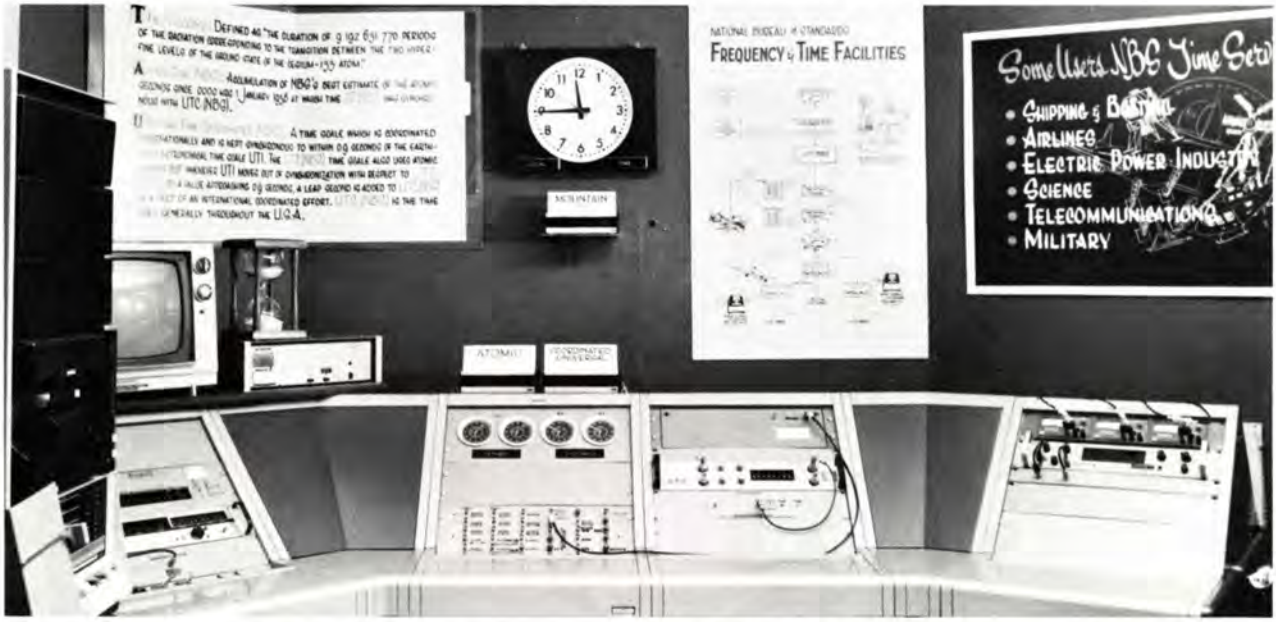
McCurdy Radio Industries Limited,
108 Carnforth Road, Toronto, Ontario M4A 2L4 (416) 751-6262 Telex: 06-963533

McCurdy Radio Industries Incorporated, TWX: 610-492-3219
1051 Clinton Street, Buffalo, N.Y. 14206 (716) 854-6700 Telex: 06-963533

U.S.A. East Coast Office,
Saddle River, N.J. P.O. Box 86, 07458 (201) 327-0750

In the beginning,
Time was a reflection
of motion
in the universe.

Today, Time is earth-bound...
...measured precisely by action of the Cesium-133 atom.



Leitch Precision Impulse Clock plays prominent role at the National Bureau of Standards, Boulder, Colorado.

Today's timepiece, the Leitch Precision Impulse Clock.

The craftsmen at Leitch Broadcast Products Limited have developed the Leitch Precision Impulse Clock to provide accurate time for broadcasters who demand precision time control with cool illumination. It will not upset the carefully balanced lighting of control room equipment.

Each clock is equipped with Leitch's "Videglo" self illumination system that brightens the clock face without spilling over light into the control room.

Operation is totally silent. The clocks may be hooked up to existing impulse master clocks, or they may be obtained with internal impulse drive systems built in. Each internal driver is capable of driving six slave clocks. Speed-up and stop controls are readily accessible on the front panel whenever adjustment is required. This adjustment is provided on both slave and master clocks. Four sizes are available; diameters measure 16", 12", 8", and 5½" for console mounts. Full servicing is offered in both the United States and Canada.

In Canada:
leitch broadcast products limited
705 Progress Avenue
Scarborough, Ontario M1H 2X1
Tel: (416) 438-5060.

Exclusive U.S. distributor:
leitch video incorporated
230 Mineola Blvd.,
Mineola, New York 11501.
Tel: (516) 248-4858.

MASTER CLOCK CLK-1

FEATURES

- USES NTSC COLOR SUBCARRIER
- NO RACK SPACE REQUIRED
- INTEGRAL BATTERY BACKUP
- MOUNTS ON STD 12" TELE–NOVA CLOCK
- INTERNAL STANDBY CRYSTAL
- DELIVERS 12–VOLT ALTERNATING PULSES
- DRIVES UP TO 10 CLOCKS

The Model CLK–1 Master Clock provides a simple, accurate and inexpensive Clock Drive System for the broadcaster.

It is ideally suited to use in satellite studios, production suites or mobile units.

The electronic assembly delivers standard alternating-polarity 12-volt pulses, one per second, such as required by Tele-Nova, Favag, or equivalent clocks.

Time accuracy is achieved by utilizing the broadcaster's own NTSC subcarrier frequency which is highly stable and accurately controlled. Alternatively, a built-in crystal oscillator delivers this reference frequency in the case of unavailability of color subcarrier.

Operational controls permit adjustment of all clocks simultaneously. Controls permit holding all clocks, phasing to external reference, running at twice speed, or running at five times speed.

The circuitry required mounts completely inside a Tele-Nova 12-inch clock, with a small control apron below for operator accessibility. Connections are made behind the clock. Required inputs are 117 VAC 60 Hz and TV color subcarrier (3.579545 mHz) if available. The system drives the host clock and up to 9 'slave' pulse clocks, these slaves being connected to two screw-type terminals.

The system is equipped with controlled charge nickel cadmium batteries. If the power fails, all ten clocks will continue for two hours before an orderly shutdown.

OPERATIONAL CONTROLS

AC — This LED indicates presence of AC power and that the batteries are charging.

Ø — Each time this button is pushed, the counter circuit resets, to permit fine tuning of the system.

HOLD — This pushbutton causes all clocks to stop at the next second. A LED in the button confirms this holding condition.

2X — Causes all clocks to operate at twice speed, reverting to normal speed when it is released.

5X — If HOLD and 2X are depressed, the clocks operate at five times speed. Pushing Ø reverts clock to normal speed.

OFF — A switch permits the system to be shut off for an extended period of time without discharging the battery.

SPECIFICATIONS

Reference Input	3.579545 mHz, 0.5 – 2.0V peak-to-peak, 75Ω terminating, on BNC coaxial connector.
Output	Alternating polarity 12-volt pulses. One pulse per second. Maximum 100 ma current drain.
Battery Power	A 16.8 volt battery on trickle charge. Will drive 10 clocks for up to 2 hours from full charge.
Power Requirements	117 VAC nominal, 60 Hz, 4.5 VA. Max.

THE SLAVE CLOCKS

Any professional pulse/sec clock can be connected to this system, provided that it is of the 12-volt alternating polarity type. A typical Tele-Nova clock requires approximately 10 ma, and the system will drive 10 of these. If other clocks are connected, their total current requirement must not exceed 100 ma.

ORDERING INFORMATION

CLK–1 Master Clock drive electronics with 12 inch Tele-Nova pulse clock.*
*Also available without clock.

mccurdy radio industries inc.

1711 Carmen Drive
Elk Grove Village, IL 60007
Phone (312) 640-7077
TWX: 910-222-0436

1051 Clinton Street,
Buffalo, NY 14206
Phone (716) 854-6700
TWX: 910-492-1373

223 W. Saddle River Road
Saddle River, NJ 07458
Phone (201) 327-0750
TWX: 710-988-2254

Scully

Recording Instruments

280B Series

The Scully 280B Series Features

There are four Scully Recorder or Reproducer Series described in this brochure. Each has a specific application in which it performs most efficiently. Each makes use of Scully features described below, and is supported by Scully and your Scully distributor. We at Scully perform extensive quality control tests on each product before shipping, provide timely delivery, fast response to requests for parts, and trained engineers for service support. It is this support, plus features that contribute to better performance, reduced operating costs, and added operating convenience that have made Scully a leader in the broadcast and studio recording industry...and a good long term investment for you.

Motion-Direction Sensing

Long a pioneer in motion-sensing systems, Scully added direction-sensing logic in order to apply automatic dynamic braking to its tape handling system, when going directly from a fast mode to play mode. Dynamic braking provides smooth, positive direction changes and good tape packing. In tests, Scully 284B-8 transports using a full 14" (35.56cm) reel of tape and a 10½" (26.67cm) take-up reel can shuttle tape, change directions in fast wind modes, and still wind tape in a near perfect pack. Now Scully has added a new optical-control constant tape holdback tension system which further improves tape motion characteristics. Functionally illuminated pushbutton controls visually indicate actual modes, thus on the transport, or accessory remote control, you can see the action of the logic when making mode-to-mode operations.

Scully Varisync Accessory

This compact new production accessory for all servo-equipped Scully recorders provides a precise means of presetting tape speeds, adjusting speed or pitch as for special effects or expanding/compressing program material to fit a given time period. It also permits locking together, to other recorders—video, or audio—for synchronous recording and playback. Using VARISYNC and an external reference frequency it is possible to lock two Scully servo-equipped audio recorders to the source, record audio and control tracks simultaneously, and play all machines back in perfect sync. Many other special situations can be achieved with this new accessory. The Varisync panel includes a four-digit LED readout indicating actual tape speed in inches per second, accurate to two decimal places. A selector permits LED read-out of the recorder "capstan tachometer" or the tape "control track". Other controls are provided for variable speed control over a range of −25% to +50% of nominal tape speed. Two pushbuttons are provided for user to preset any desired speeds, within the −25% to +50% range, he may desire for repeat usage. When using an external sync input, the Varisync will accept any waveform, sine, square, or pulse, with voltages up to 3.0 volts, peak-to-peak.

DC Capstan Servo System

Standard on both the 284B and the 284B-8, the Scully Capstan Servo System is available as an option in the 280B Series—or as a kit for existing 280B models. The servo system includes a reliable printed circuit motor which offers outstanding high-torque characteristics. A crystal oscillator provides the basic tape speed reference with an optical tachometer serving as the functional reference. The capstan itself is of larger diameter, affording more contact with the tape, hence reduced tape slippage and more positive tape drive, especially at slower tape speeds.

ELECTRONICS

Scully field-proven 280B electronics have been one of the most popular Scully innovations. With exceptional low-noise and extended dynamic range characteristics, you not only enjoy great performance, but easily maintained and serviced units, thanks to the contemporary mother-daughter board architecture. All components are mounted in a convenient slide-out drawer with set-up and adjustment controls readily accessible from the front of the recorder. Extender boards are not required. Front panels include a 4" (10.2cm) illuminated VU meter, Record Input Level Control, Output Level Control with calibrate position, Record/Reproduce Monitor switch, and a single back lighted, tri-color 3-position selector switch to preset RECORD READY, SAFE or SYNC (selective synchronization). An operator can "punch in" or "punch out" of RECORD on a given channel without switching-transients while tape is moving...an aid for making edit inserts. Scully's SYNC response is approximately the same as normal playback response. Equalization is on plug-in boards to match the adjacent speed pairs of the Recorder/Reproducer. At customer's option these are supplied NAB, AES, or IEC (CCIR), as applicable.

Scully Variable Pitch Control

New, as a standard feature of the capstan servo system, is the Scully Variable Pitch Control. Mounted on the transport control panel, the Variable Pitch Control is a concentric two-position switch and continuously variable rotary control. After switching to the vary position, the rotary control will provide a ±20% variation of normal tape speed.

Electronics Specifications

Frequency Response *(3M 206 or equivalent tape used as reference.)*

30 in/s (76.2 cm/s)	±2 dB 50 Hz to 20 kHz.
15 in/s (38.1 cm/s)	±2 dB 30 Hz to 18 kHz.
7.5 in/s (19.05 cm/s)	±2 dB 30 Hz to 15 kHz.
3.75 in/s (9.52 cm/s)	±2 dB 30 Hz to 10 kHz.

Signal-to-Noise Ratio *(Using 3M 206 tape or equivalent.)*

Peak record level (500 nWb/m) to NAB weighted noise. (NAB Equalization, AES at 30 in/s (76.2 cm/s).)

	Full track ¼" (6.35mm)	Half track ¼" (6.35mm)	Two track ¼" (6.35mm)	Four track ¼" (6.35mm)	Four track ½" (12.7mm)	Eight track 1" (25.4mm)
30 in/s	72 dB	68 dB	68 dB	65 dB	68 dB	68 dB
15 in/s	72 dB	68 dB	68 dB	65 dB	68 dB	68 dB
7.5 in/s	72 dB	68 dB	68 dB	65 dB	68 dB	68 dB
3.75 in/s	68 dB	64 dB	64 dB	61 dB	64 dB	64 dB

Distortion 3rd harmonic distortion of 500 Hz signal; at peak record level (500 nWb/m): Less than 3%; at standard operating level (250 nWb/m): Less than 0.6%.

Inputs Floating bridging 10 kilohms minimum level 200 mV.

Output +24 dBm into 600 ohm load. (Output impedance 60 ohms.)

Bias and Erase Frequency 160 kHz.

Erase Efficiency Greater than 75 dB at 1 kHz.

Scully 280B Series

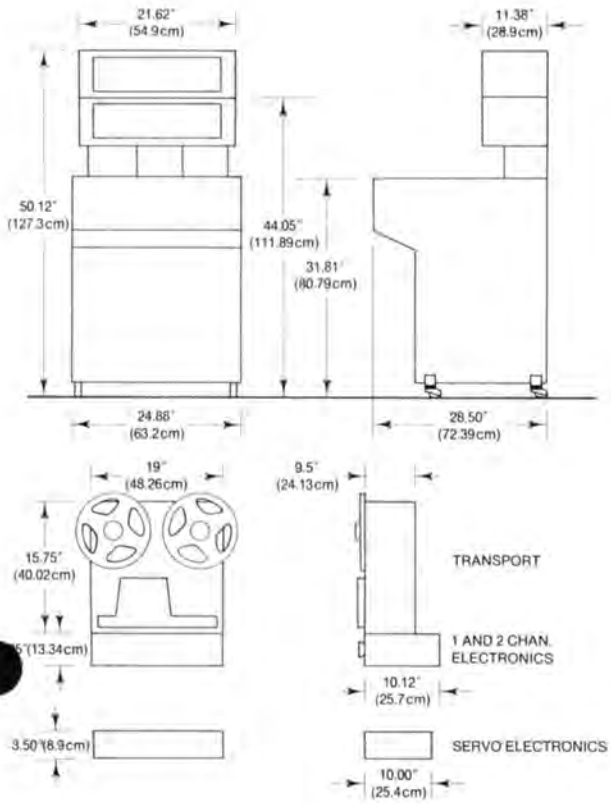
¼" (6.35mm) or ½" (12.7mm) tape, up to 11.5" (29.21cm) reels.

All the important features: the functionally-illuminated transport controls, motion-direction sensing, dynamic braking, and now a new constant tape tension control for improved tape handling are incorporated in the 280B Series Recorder/Reproducer.

Scully offers an optional DC capstan-servo drive with variable pitch control. Two advantages are gained, in addition to servo control: the ability to adjust pitch up or down to a desired level; and the more positive tape drive at all speeds afforded by the larger capstan and pinch roller in the servo system.

All this adds up to a standard in broadcast and studio recording where smooth, positive tape handling, low-noise electronics, and control convenience provide truly professional results.

The 280B is available in full or half track mono; 2 or quarter track stereo in ¼" (6.35mm) models, or 4-track (quad stereo) in ¼" (6.35mm) or ½" (12.7mm) tape width models. Options/Accessories: DC capstan servo system w/pitch control, VARISYNC accessory, console mount, remote transport control.



Transport Specifications

For electronic specifications, see page 3.

Flutter and Wow Weighted peak flutter (ANSI S 4.3-1972: I.E.C. 386-1972) using a prerecorded flutter tape.

Speed	DC Servo	AC Motor
30 in/s (76.2 cm/s)	.04%	—
15 in/s (38.1 cm/s)	.04%	.08%
7.5 in/s (19.05 cm/s)	.05%	.1%
3.75 in/s (9.52 cm/s)	.1%	.2%

Speed Accuracy ±0.1% with DC Servo; ±0.2% with AC motor throughout reel at all speeds using 1.5 mil tape.

Wind Time Less than 60 seconds for 2400 foot (731.5m) NAB reel, ¼" (6.35mm) tape.

Reel Sizes To 11.5-in (29.21cm) (CCIR).

Tape Speed Equalization switches automatically with speed. 3.75 in/s (9.52 cm/s) and 7.5 in/s (19.05 cm/s) or 7.5 in/s (19.05 cm/s) and 15 in/s (38.1 cm/s) or with DC Servo option, 15 in/s (38.1 cm/s) and 30 in/s (76.2 cm/s).

Motors Capstan: Direct Drive Hysteresis Synchronous or optional DC Servo. Reel: Induction Torque Motor (2).

Brakes Dynamic plus disc.

Remote Control Fast (FWD-RWD); Start/Stop; Record, and ATL Defeat (Fast FWD or RWD Button).

Transport Motion Controls Fast (FWD-RWD); Start; Stop; Record; Edit.

Power Requirements 105-125V or 220-240V AC, 50 or 60 Hz.
Power consumption at 117V AC-60 Hz:
1 & 2 channel = 223 VA;
4 channel = 328 VA.

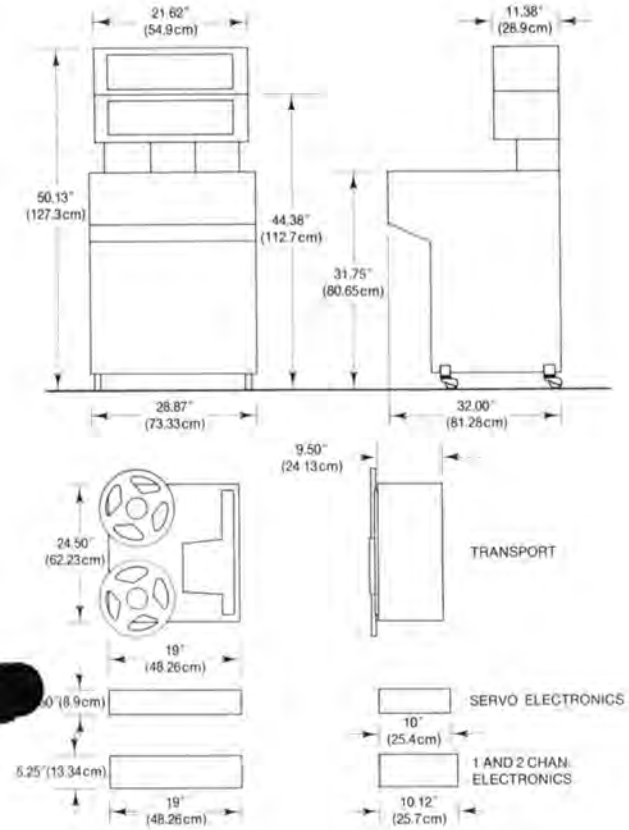
Head and Track Configuration
Full track mono ¼" (6.35mm)
Half track mono ¼" (6.35mm)
Two-track stereo ¼" (6.35mm)
Quarter-track stereo ¼" (6.35mm)
Four-track ¼" (6.35 mm)
Four-track ½" (12.7mm)

Weights (approx.) Shipping weights, standard carton.
Unmounted Recorders:
Mono—106 pounds (48 kg)
2 channel—106 pounds (48 kg)
4 channel—127 pounds (57.6 kg)
Empty consoles:
1 and 2 channel—103 pounds (46.7 kg)
4 channel—120 pounds (54.4 kg)

Scully 284B Series

¼" (6.35mm) or ½" (12.7mm) tape, up to 14" (35.56cm) reels.

This more specialized recorder accepts reels to 14" (35.56cm) in diameter for long play or record applications. All models are equipped with the Scully DC capstan servo, providing operation at 30 in/sec (76.2 cm/s) speed. Use of this higher speed and the larger reels offer high quality production/post-production capability with tape of realistic program recording and play length. All 284B models include: motion-direction sensing, dynamic braking, and the new constant tape tension control. Automatic start torque boost is provided in 14" (355.6mm) reel models. Any two specified adjacent speed-pairs are preset when machine is ordered. Other speed pairs can be preset by customer, if required. Speeds include: 3.75, 7.5, 15 and 30 in/sec (9.52, 19.05, 38.1 and 76.2 cm/s). Equalization is automatically switched with speed control. Configurations ¼" (6.35mm) full or half-track; ¼" (6.35mm) or ½" (12.7mm) four track. Accessories: VARISYNC Accessory, console mount, remote transport control.



Transport Specifications

For electronic specifications, see page 3.

Flutter and Wow Weighted peak flutter (ANSI S 4.3-1972: I.E.C. 386-1972) using a prerecorded flutter tape.

Speed	DC Servo
30 in/s (76.2 cm/s)	.04%
15 in/s (38.1 cm/s)	.04%
7.5 in/s (19.05 cm/s)	.05%
3.75 in/s (9.52 cm/s)	.1%

Speed Accuracy ±0.1% throughout reel at all speeds using 1.5 mil tape.

Wind Time Less than 60 seconds for 2400 foot (731.5m) NAB reel, ¼" (6.35mm) tape.

Reel Sizes To 14-inch (35.56cm).

Tape Speed Equalization switches automatically with speed. 3.75 in/s (9.52 cm/s) and 7.5 in/s (19.05 cm/s) or 7.5 in/s (19.05 cm) and 15 in/s (38.1 cm/s) or 15 in/s (38.1 cm/s) and 30 in/s (76.2 cm/s).

Motors Capstan: DC Servo.
Reel: Induction Type Torque Motor (2).

Brakes Dynamic plus disc.

Remote Control Fast (FWD-RWD); Start/Stop; Record, and ATL Defeat (Fast FWD or RWD Button).

Transport Motion Controls Fast (FWD-RWD); Start; Stop; Record; Edit.

Power Requirements 105-125V or 220-240V AC, 50 or 60 Hz.
Power consumption at 117V AC-60 Hz:
1 & 2 channel = 223 VA;
4 channel = 328 VA.

Head and Track Configuration
Full track mono, ¼" (6.35mm)
Half track mono, ¼" (6.35mm)
Two-track stereo, ¼" (6.35mm)
Quarter-track stereo, ¼" (6.35mm)
Four-track, ½" (12.7mm)
Four-track, ½" (12.7mm)

Weights (approx.) Shipping weights, standard carton.
Unmounted Recorders:
Mono—128 pounds (58 kg)
2 channel—128 pounds (58 kg)
4 channel—154 pounds (69.8 kg)
Empty consoles:
1 and 2 channel—160 pounds (75.6 kg)
4 channel—175 pounds (79.4 kg)

Scully 284B-8 Series

1″ (25.4mm) tape, up to 14″ (35.56cm) reels.

Scully's Master Recorder/Reproducer is available in an eight channel version using the popular low noise 280B electronics. These 284B-8's use 1″ (25.4mm) tape for maximum eight-channel separation and quality; up to 14″ (35.56cm) tape reels to provide a realistic supply of tape for program-length recording and post-production. The 284B-8 has motion-direction sensing, dynamic braking, and automatic start-torque boost for smooth, positive tape shuttling; uses Scully's new constant tension system for added tape handling precision in the PLAY/RECORD modes. Scully DC capstan servo drives are standard on all units, as is the variable pitch control. Any two specified adjacent speed-pairs will be present when the machine is ordered. Equalization is automatically switched with speed control. A sturdy console cabinet is included as standard equipment. These features make the Scully 284B-8 the most desirable eight-track system in its price range. Accessories: VARI-SYNC Accessory, remote transport control.

Transport Specifications

For electronic specifications, see page 3.

Flutter and Wow Weighted peak flutter (ANSI S 4.3-1972: I.E.C. 386-1972) using a prerecorded flutter tape.

Speed	DC Servo
30 in/s (76.2 cm/s)	.04%
15 in/s (38.1 cm/s)	.04%
7.5 in/s (19.05 cm/s)	.05%
3.75 in/s (9.52 cm/s)	.1%

Speed Accuracy ±0.1% throughout reel at all speeds using 1.5 mil tape.

Reel Sizes To 14 inches (35.56 cm).

Tape Speed Equalization switches automatically with speed. 3.75 in/s (9.52 cm/s) and 7.5 in/s (19.05 cm/s) or 7.5 in/s (19.05 cm/s) and 15 in/s (38.1 cm/s) or 15 in/s (38.1 cm/s) and 30 in/s (76.2 cm/s).

Motors Capstan: DC Servo.
Reel: Induction Torque Motor (2).

Brakes Dynamic plus disc.

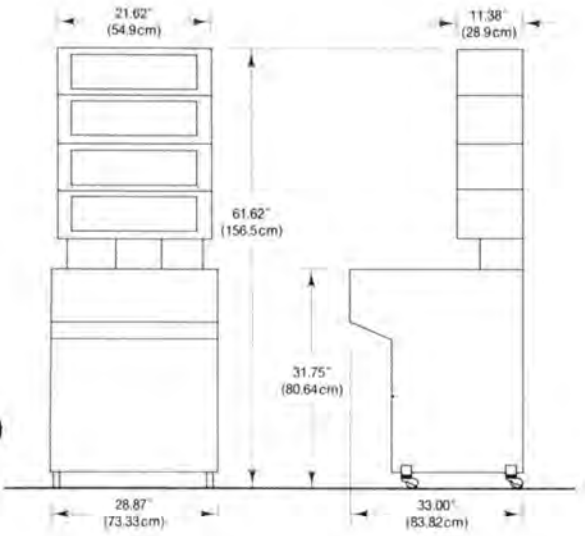
Remote Control Fast (FWD-RWD); Start/Stop; Record, and ATL Defeat (Fast FWD or RWD Button).

Transport Motion Controls Fast (FWD-RWD); Start; Stop; Record; Edit.

Power Requirements 105-125V, 50 or 60 Hz
220/240V optional extra) 440 VA.

Head and Track Configuration 8-track (1.00″) (25.4 mm).

Weights (approx.) Shipping weight, standard carton.
With console: Total—391 pounds (177.4 kg).

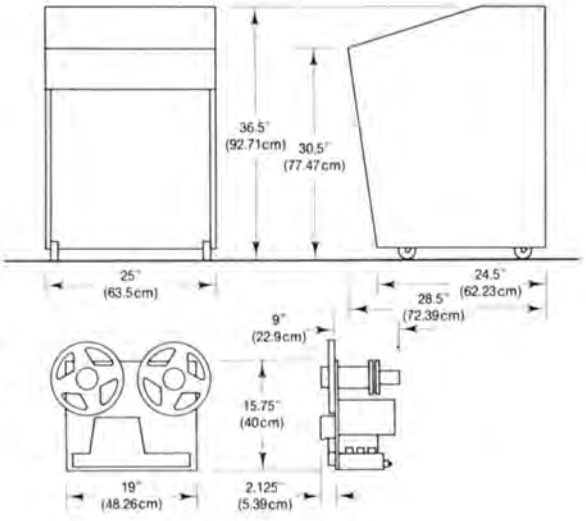


Scully 285B Reproducer

¼ " (6.35mm) tape, up to 11.5" (29.21cm) reels.

The Scully 285B Reproducer is a professional quality playback or editing system for broadcast or studio applications, as automated tape players, quality control monitors, broadcast control room reproducers, or music library reproducers. The 285B electronics include 600 ohm line output and 8 ohm (3 watt) speaker output for cueing, editing and monitoring. Speaker gain control is on the front panel.

Transport features found in the 280B Series are standard, such as motion-direction sensing logic, functionally-illuminated pushbuttons, edit control, and dynamic braking. Rack-mount units occupy only 15.75" (400mm) of vertical space—electronics are mounted behind the transport deck plate. Electronic set-up adjustments are accessible by removing the head cover. A monitor headset jack is mounted on transport panel for convenience. Configurations include: full-track mono, two or quarter-track stereo. Accessories: slope-front console, remote control.



Specifications

Frequency Response
(3M 206 or Equivalent)
15 in/s (38.1 cm/s) ± 2 dB
30 Hz to 18 kHz
7.5 in/s (19.05 cm/s) ±2 dB
30 Hz to 15 kHz
3.75 in/s (9.52 cm/s) ±2 dB
30 Hz to 10 kHz

Signal-to-Noise Ratio
(Using bulk erased 3M 206 tape or equivalent)
Peak record level (500 nWb/m) to NAB weighted noise.

	Full Track	Two Track	Quarter Track
15 in/s (38.1 cm/s)	72 dB	68 dB	65 dB
7.5 in/s (19.05 cm/s)	72 dB	68 dB	65 dB
3.75 in/s (9.52 cm/s)	68 dB	64 dB	61 dB

Flutter and Wow
Weighted peak flutter (ANSI S 4.3-1972: I.E.C. 386-1972) using a prerecorded flutter tape.

Speed	AC Motor
15 in/s (38.1 cm/s)	.08%
7.5 in/s (19.05 cm/s)	.1%
3.75 in/s (9.52 cm/s)	.2%

Distortion
3rd harmonic distortion of 500 Hz signal; at peak record level (500 nWb/m) less than 3%; at standard operating level (250 nWb/m) less than 0.6%. Speaker out 1% at 3.0 watts into 8 ohm resistive load.

Outputs
Line +17 dBm into 600 ohm load. Speaker 3.0 watts into 8 ohm resistive load.

Equalization
Automatically switched with transport speed. Specify NAB or I.E.C. (CCIR).

Speed Accuracy
±0.2% throughout reel at all speeds using 1.5 mil tape.

Reel Sizes
To 11.5 in. (29.21cm) (CCIR).

Brakes
Dynamic plus disc.

Power Requirements
105-125V or 220-240V AC, 50 Hz or 60 Hz.
Power consumption at 117V 60 Hz: 250 VA.

Weights (approx.)
Shipping weights, standard carton.
Unmounted Reproducer: 90 pounds (40.8 kg).
Empty console: 105 pounds (47.6 kg).

Scully 280B Series Support

A network of over 200 distributors throughout the world provide sales and service for Scully 280B Series Recorders and Reproducers. Scully field offices are staffed by factory-trained service engineers, and our Mountain View, California headquarters provides a complete back-up service facility and parts inventory. Call, Telex, cable or write to us. After 5 p.m. Pacific Time, calls to our Mountain View number (Area Code 415) 968-8389 will automatically be recorded and answered the next working day. Your emergency requirements will be handled rapidly.

Scully

Recording Instruments

Audio/Electronics Division of Dictaphone Corporation
475 Ellis Street, Mountain View, California 94043
Telephone: (415) 968-8389, Telex: 345524, Cable DICTAPHON MNTV

Regional Offices

285 County Road, Tenafly, New Jersey 07670
Telephone: (201) 568-4414

1005 8th Avenue South, Nashville, Tennessee 37203
Telephone: (615) 244-1546

3434 W. Peterson Avenue, Chicago, Illinois 60645
Telephone: (312) 583-7878

548 Kingsley Drive, Los Angeles, California 90020
Telephone: (213) 380-7980

International Sales Office

475 Ellis Street, Mountain View, California 94043, U.S.A.
Telephone: (415) 968-8389, Telex: 345524, Cable DICTAPHON MNTV

Printed in U.S.A. 4-77-20M 280

From Dictaphone:

400L Series

Professional Logging Recorders for Broadcast and Communication

Dictaphone

Audio / Electronics Division

400L Series

Maximum performance, flexibility and easy maintenance. You need all three in your logging recorder. And you get them in the 400L Series. This equipment is built for professionals—by professionals—at the Dictaphone, Audio/Electronic Division world leader in communications recording.

Dictaphone's 400L Series sets the pace with...

Up to 153 hours of unattended single-channel logging on 1 mil tape, and automatic track sequencing on single transport system.

Dual system with time code doubles unattended recording time or provides Fail-Safe auto transfer to stand-by transport.

Time code generator/reader for inserting time-of-day subaudible signal with input audio, and pinpointing correct hour, minute, second reference read-out with no need for dedicated track.

Six models offering you a choice of one, two or four channel operations. Single or dual systems.

Monitoring controls and confidence lights which allow a quick check of the complete system, and give essential indication of failure.

Fast, easy maintenance because the entire transport mechanism and all electronics are accessible from the front of the machine.

Designed To Meet Your Specific Needs...

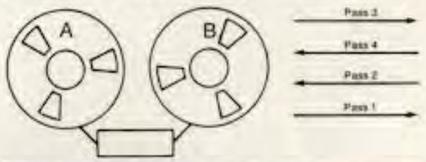
Three basic models can be used as single logging systems. Or they can be combined in Dictaphone's Fail-Safe Dual Logger Systems. Either way, your system has built-in reliability for the job you want done.

- Model 414L provides the longest unattended logging time—up to 153.6 hours of single-channel service.
- Model 422L gives unattended two-channel operation for up to 76.8 hours.
- Model 441L achieves unattended four-channel logging for up to 38.4 hours.

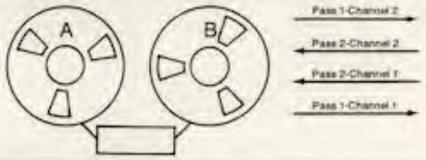
All models are single-speed, 5/16 in/sec (7.9mms) or 15/32 in/sec (11.9mms). 15/16 in/sec (23.8mms) available as option.

Why such extremely long unattended logging times? These advantages are attributable to the 400L Logger's metallic-tab actuated automatic reversing mechanism, plus very slow tape speeds.

Automatic 4-Pass pattern, One Channel



Automatic 2-Pass pattern, Two Channels



This concept is illustrated by the sketch above which shows how up to 153.6 hours of information is logged on one 10.5" reel of 1 mil tape.

Maximum storage is reached by using the 5/16 in/sec tape speed and 1.0 mil 3,600 ft. tape on 10.5" reel.

The advantages of these storage capabilities are obvious: tape costs are reduced up to 50%. (More than one week of 18-hour broadcast days can be logged on a single 10.5" reel of 1 mil tape). A single reel can also store 6.4 days of a 24-hour logging. At 15/32 in/s, tape cost savings are proportionate to 25.6 hours unattended time per pass on the logger.

With The Fail-Safe Dual Logger System You Don't Take Chances...

The dual system, illustrated on the cover of this brochure, does more than double the unattended logging capacity (to 307 hours of single channel operation). It also protects the entire recording operation by automatically switching to the stand-by logger in the event of a failure in the first logger. Meanwhile one logger can be used for playback, while the other is recording. And time code is being recorded on one logger while being read simultaneously on either one by selection.

Special circuitry accounts for this vital "Fail-Safe" feature. It actuates the stand-by unit when tape breaks or ends, or when a recording malfunction occurs in the "on-air" unit. Simultaneously with the automatic changeover, the control panel FAILURE confidence light goes on.

In case of power failure, the logic will remember which deck was recording and the pass and direction last in use.

When the power is restored, recording will automatically resume at the correct point on the tape. In addition, a stand-by battery enables the 4400BX Time Code Generator to continue generating the time of day code for over an hour.

Logger systems, with or without time code, are supplied ready for rack mounting. A portable case for the single transport and time code generator is available as an optional extra.

Fail-Safe Dual Logger Systems are available with optional custom cabinets, 72" high by 25" wide and 20-1/4" deep. The lower third of the custom cabinet is convenient for

storing tapes and accessories. Transports, controls and tape storage are guarded by a lockable plexi-glass paneled door.

So Easy To Operate...

Dictaphone 400L Logging Recorders are designed for long-term, hands-off operation. Yet if they occasionally require "in-service" checking and monitoring by both service and operator personnel, Dictaphone has made this a simple matter. Confidence lights not only show "fail" or "recording" conditions, but they indicate the track being recorded. The Monitor Selector and push buttons enable the monitoring of any channel individually or in combination in the record or play modes. The VU meter allows accurate checking of bias.

So Convenient To Service...

All electronics in 400L Series Loggers are solid-state, and are contained in a sliding drawer. Set-up and adjustment points are convenient for technicians. The entire transport tilts forward on hinges for ready access to all mechanisms. And it is fully operable in the tilted position.

The Remarkable 4400Time Code Generator/Reader...

Dictaphone offers two models to choose from. Both generate and display the time-of-day information, and insert the subaudible coded information with the input audio without the need for a separate time channel.
Both read and display time-of-day off the tape in hours, minutes and seconds.
The 4400L is equipped with a line lock feature for 60Hz service. The 4400BX is equipped with a crystal oscillator and a stand-by battery and battery charger. During power failure, it will continue to generate correct time for one hour. These units operate on either 50Hz or 60Hz.

Sheer Efficiency In The 400L Logger...

In addition to standard motion controls, 400L panels have CUE and PASS functions for manual coarse search operations. PASS indicator lamps identify the track being recorded or played. RECORD and FAIL confidence lights denote status of the logger. In the Fail-Safe Dual Logger Systems, tape motion sensing and tape-break detection circuits interact with FAIL indicator and automatic changeover circuitry.

The rugged 400L transport is designed for continuous duty. A high mass capstan flywheel is driven by an hysteresis-synchronous motor for best flutter and wow performance at slow speeds.

Solid-state plug in electronic modules are packaged in a sleeve-type drawer that slides out for easy set-up and maintenance adjustments. Built-in speaker, phone jack and VU meter allow complete monitoring flexibility.

Time Code Generators code and read time-of-day in hours, minutes and seconds. A digital code is generated and inserted with input audio. In PLAY mode, the actual time of original RECORDING is displayed.

Other features offered:

- Low cost single chassis unit, as opposed to the conventional two chassis units.
- It records time to one transport and can simultaneously display time played back by second transport.

Play Time in Hours – Various Speeds

Tape	No. of Passes	5/16 in/s	15/32 in/s	15/16 in/s (optional
1 Mil	1	38.4	25.6	12.8
3600 Ft.	2	76.8	51.2	25.6
	4	153.6	102.4	51.2

Specifications*

Frequency Response* (and available speeds)	5/16 in/s (7.9 mm/s) ±3 db, 300 to 2.0 kHz. 15/32 in/s (11.9 mm/s) ±3 db, 300 to 3.0 kHz. 15/16 in/s (23.8 mm/s) ±3 db, 300 to 6.0 kHz (optional extra).
Signal-to-Noise* Ratio & Crosstalk	40 db minimum below peak record level. (140 nWb/m)
Flutter & Wow	All speeds, less than 1.0% peak weighted.
Distortion*	3% third harmonic maximum at normal record level.

Channels & Pass Configurations

Channels	Passes	Model
1	4	414L
2	2	422L
4	1	441L

Winding Speed	3600 feet in 140 seconds
Start/Stop/Time	100 m sec. (VOX mode).
Reel Size	10.5" NAB, and 7" EIA.
Inputs	One per channel. 10 kilohm bridging. (−10 dBm input. −25 dBm with ALC record amplifier).
Outputs	Built-in monitor speaker and phone jack (1.0 watt into 45 ohms).
Power Source	105-125 volts, 60 Hz (50 Hz and 220-240 volt options).
Power Consumption	150 watts per transport
Tape Counter	4 digit resettable (driven through sprocket belt by take-up reel).
Tape	One mil, 0.25" (6.35 mm) 3M 296 Test Standard. (3M 177 approximate equivalent).
Three Motors Capstan	Hysteresis Synchronous.
Reel	Induction torque type (2)
Brakes	Proven Uniband™ construction automatically operates with power failure.
Automatic Reversing	Conductive tape activated on all multipass models.
Tape Break Sensing (optional)	Provides automatic shut-off in event of tape break.
Motion Sensing	Optac™ system (permits entering play mode from a fast mode without excessive tension on tape for added safety).
Transport Controls	Stop, Record, Play, Fast Forward, Rewind, Cue, (and Pass Advance on 2 and 4 pass loggers).

*Per Dictaphone Test Specification #200830

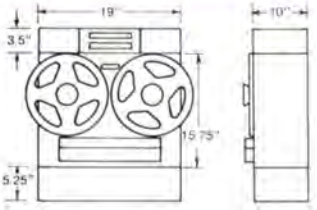
Options

Automatic Level Control (ALC)	Provides automatic level control, with approximate 6 to 1 compression ratio (50 mV RMS minimum).
VOX	Voice operated relay PC board with Manual-Vox switch. One board handles up to 4 input channels.
Auto Transfer	Automatic transfer for coupling two loggers (without time code) for automatic transfer to stand-by transport in event of tape break failure or end of tape.
Erase Head	Available on 1-pass units only.

Accessories

Time Code Generator/ Reader	Series 4400 Time Code Generator/ Reader with rack mount brackets are available in two versions: 4400L with Line Lock feature (60 Hz only), or 4400BX Crystal Oscillator and one hour Standby Battery option, (50 or 60 Hz). All are 105-125 volts, approximately 25 watts.
Time Clock	Provides for automatic turn-on of selected transport with a 24 hour time clock.
Remote Control	Provides control of all transport functions including "record" and "play" in a self-contained enclosure suitable for desk top use.
Portable Case	This is available for single logger and provides space for the time code unit.

Dimensions/Weight



Transport	38 pounds (17.2 Kg.); 17.25" (438.2mm) wide to fit 19" rack mount (brackets & trim supplied); 15.75" (400mm) high; 7.44" (188.9mm) deep.
Electronics	26 pounds (11.7 Kg); 17.25" (brackets & trim supplied) (438.2mm wide); 5.25" (118.3mm) high; 11.5" (292.1mm) deep.
Time Code Unit	8 pounds (3.6 Kg); 19" (482.6mm) wide including rack mount brackets; 3.5" (88.9mm) high; 10" (254mm) deep.

Dictaphone

Audio/Electronics Division

475 Ellis Street
Mountain View, California 94043
Telephone (415) 968-8389
Telex 345524
Cable Dictaphon MNTV

Regional Offices

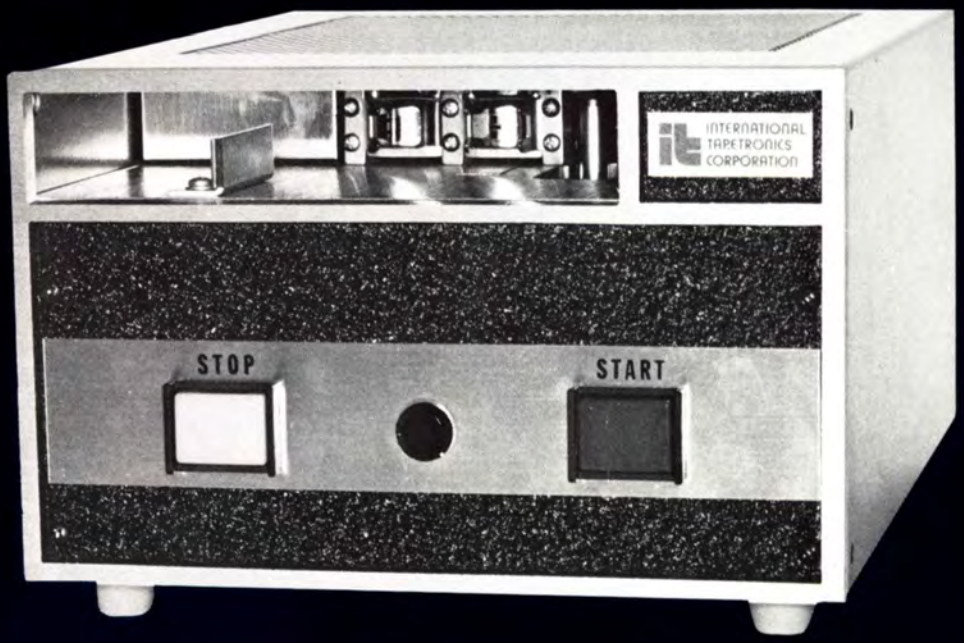
285 County Road
Tenafly, New Jersey 07670
(201) 568-4414

1005 8th Avenue South
Nashville, Tenn. 37203
(615) 244-1546

3434 W. Peterson Ave.
Chicago, Illinois 60645
(312) 583-7878

548 Kingsley Drive
Los Angeles, Calif. 90020
(213) 380-7980

SP/WP SERIES



SP Series Dual Mount

WP Series

"Make the machine quiet!" "Give us mechanics which will operate a million times without failure!" "Design it so that it can be easily serviced!" "Dependability is the key!"

Suggestions such as these came from broadcasters. We listened . . . and are still listening. And the result of our listening is the acceptance of ITC's SP and WP Series Cartridge Reproducers as the standards of the broadcasting industry . . . by broadcasters themselves, and by other manufacturers who have paid us the highest compliment . . . imitation.

By air damping a powerful solenoid, ITC was able to provide what can only be described as super-quiet, totally automatic mechanical operation. We added a Teflon coating to the solenoid plunger to eliminate any need for lubrication or cleaning. The result . . . quiet operation, improved performance and less maintenance.

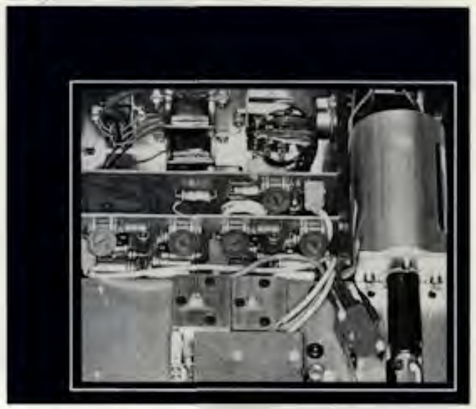
The mechanical linkage between the solenoid and the pressure roller assembly is the simplest, most reliable yet designed. We utilize a chain and sprocket with a minimum of moving parts. The outcome is a cartridge machine which has been tested for its ability to be started and stopped in excess of a million times without failure or the need for adjustment. ITC parts are easily accessible and adjustments, when required, are as simple and easy as any we are aware of.

For optimum tape drive, we employ a powerful direct drive motor with permanently lubricated ball bearings. The first step toward speed stability is the use of the time-proven hysteresis-synchronous design. To minimize wow and flutter and improve pulling power, we use a capstan shaft with the largest possible diameter. And to further assist in speed consistency, the capstan is chrome plated, microscopically roughened (vapor blasted), and hardened (electrolyzed). Summary results . . . highly stable speed accuracy, minimum wow and flutter, and no lubrication.

The program reproduce amplifier includes an IC electronic "squelch" circuit which turns off the audio output when the machine is idle and permits the mixing of several machines into one console input without sacrificing desirable signal to noise ratio. Detection of auxiliary cue tones (an option) is indicated by front panel indicator lamps and relay contact closures are provided to signal external equipment.

Both the compact SP and WP Series Reproducers are designed for either table-top or rack mounting (rack kits are optional). Two of the SP Series units may be mounted side by side in an equipment rack (as shown above). Slide-out housings are standard and the machines are fully operational when removed from their cases.

The SP and WP Series are available in monophonic or stereophonic; with single cue tone or secondary and tertiary cue tones added; **and with a high speed cue feature that permits the rapid advance of the tape (at four times regular speed) to the next cue tone either automatically or manually.**



Tape Transport

One of the outstanding features of the tape transport area is the heavy duty, rugged, ½" hardened aluminum tool plate deck. There's good reason for this accent on heavy duty. The ITC deck is guaranteed flat within .005 inch TIR. It won't warp under normal use, and presents the same flat stable surface to cartridges everytime assuring correct azimuth of heads and consistent playback performance time after time. Also visible in this photograph is the powerful, air-damped solenoid, the fool-proof linkage assembly and the direct drive capstan motor mentioned previously. All in all, this thoughtfully designed tape transport assures the consistent performance and high fidelity reproduction that is the desire of all concerned broadcasters.

Head Assembly

The head assembly is an important part of the tape transport. The entire assembly has been designed to accurately and easily achieve correct height, zenith and azimuth adjustments. Three tape guides can be adjusted independently for peak micro positioning and are made of stainless steel for long wear. Controlled by three adjustment screws, heads pivot on their center axis achieving the only true azimuth adjustment possible. Heads may be replaced quickly and easily. The tape guides, head assembly parts, and deck are non-magnetic so that they will not adversely affect the quality of audio.

Serviceability

Equal care and consideration have been given to the design and refinement of electronic circuitry. For reliability, only the latest silicon transistors, diodes, and integrated circuits have been included in ITC's conservative design. Transistor sockets are provided where the solid state device might require replacement. The program reproduce amplifier and the cue tone detector printed circuit cards are of plug-in design and have gold plated contacts. To optimize signal to noise and facilitate servicing and testing, head cables with gold plated contacts take the signal from the head directly to the input circuit on the PC card.

Dimensions:	SP Series: 8½" width, 11" depth, 5¼" height (add ⅜" for feet). WP Series: 17¼" width, 11" depth, 5¼" height (add ⅜" for feet).
Weight:	SP Series: 23 pounds. WP Series: 28 pounds.

MODEL DESIGNATIONS

SP Series Reproducers accept the NAB "A" and "B" size cartridges. WP Series Reproducers accept the NAB "A", "B", and "C" size cartridges, and have provisions for accepting recording amplifier electronics for ready conversion to recorder/reproducer.

SP-0001	**WP-0001**	Monophonic with 1 kHz primary cue.
SP-0002	**WP-0002**	Stereophonic with 1 kHz primary cue.
SP-0003	**WP-0003**	Monophonic with 1 kHz primary, 150 Hz secondary, and 8 kHz tertiary cues.
SP-0004	**WP-0004**	Stereophonic with 1 kHz primary, 150 Hz secondary, and 8 kHz tertiary cues.
***SP-0005**	***WP-0005**	Monophonic, Hi-Speed Cue with 1 kHz primary, 150 Hz secondary, and 8 kHz tertiary cues.
***SP-0006**	***WP-0006**	Stereophonic, Hi-Speed Cue with 1 kHz primary, 150 Hz secondary, and 8 kHz tertiary cues.

ACCESSORIES

SR-0001	Rack mounting kit—mounts one SP Series in 19" equipment rack.
DR-0003	Rack mounting kit—mounts two SP Series side by side in 19" equipment rack.
NR-0002	Rack mounting kit—mounts one WP Series in 19" equipment rack.

*NAB-type tape cartridges cannot be reversed. Therefore, the only way to quickly return the tape to "starting position" is to run it forward at a faster speed than the standard 7½ IPS. In the ITC system, Hi-Speed Cue runs at 30 IPS . . . **four times faster than the normal speed.** Hi-Speed Cue can be operated either manually or automatically. In either case, the machine runs the tape forward at 30 IPS to completion, then automatically reverts to 7½ IPS ready for the next play.

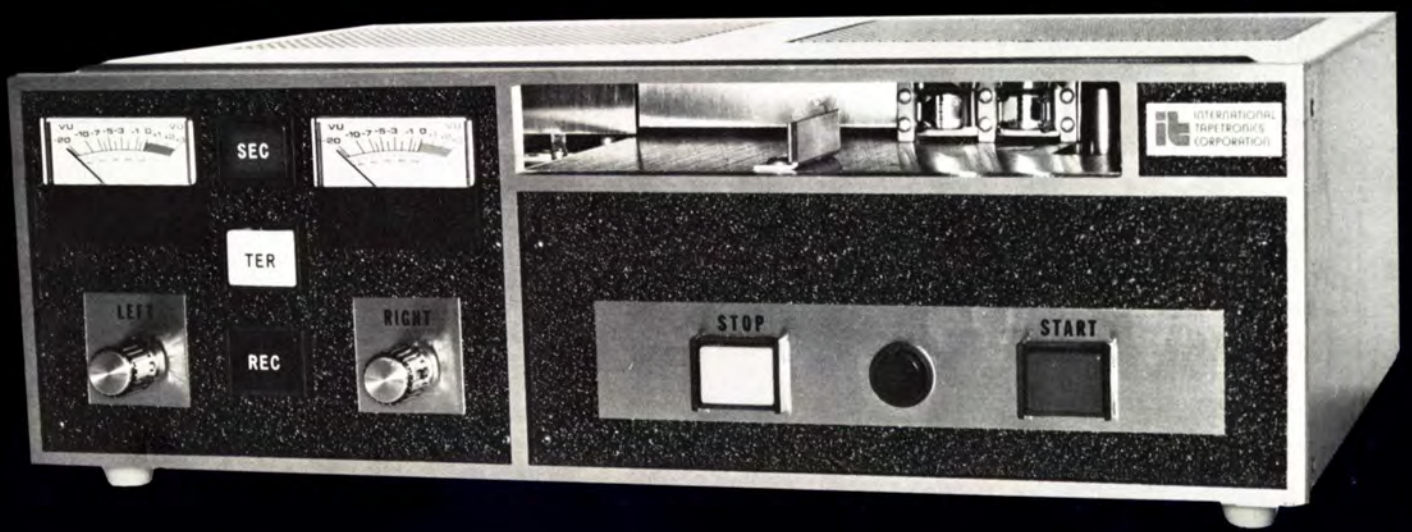
INTERNATIONAL TAPETRONICS CORPORATION
2425 South Main Street • Bloomington, Illinois 61701
Telephone: 309-828-1381

Marketed exclusively in Canada by McCurdy Radio Industries Ltd., Toronto

Form No. 100-0014-010

Printed in U.S.A.

RP SERIES



RP Series

What are the features most needed and most desired by the people who are going to use tape cartridge equipment? ITC engineers have always approached equipment design from the standpoint of the broadcaster. From this very logical approach has come a complete line of cartridge equipment covering the spectrum of broadcasters' needs.

The RP Series Master Recorder/Reproducer is an outstanding example of ITC's design approach. We've combined our RA Series recording amplifier with our WP Series reproducer to provide a compact recorder/reproducer incorporating those features most wanted by broadcasters.

Since reproducer capabilities are described in detail in ITC's SP/WP and 3D Series brochures, we'll concentrate here on the recording amplifier features. And, by the way, all the comments we make about recording amplifiers are also applicable to the WRA Series recording amplifier used in conjunction with the 3D Series reproducers.

Reliability, audio quality, and operational features were foremost in the minds of ITC engineers during the design of these recording amplifiers. The electronics are totally silicon solid state from the logic circuitry right on through the oscillators and amplifiers which have been designed to assure the transient free quality of audio recordings expected by the most demanding broadcasters.

We've even taken into consideration the varying operator requirements in the design of our front panel level controls. Take your choice . . . use the slotted control recessed behind the panel or add the extender shafts and knobs, furnished with each unit, and you have the traditional control accessible to everyone.

Auxiliary cue tone oscillators (optional) are designed to permit the secondary (150 Hz) and tertiary (8 kHz) tones to be added during the recording process or during playback. You can even add the auxiliary tones to existing cartridges. The secondary tone is normally used to indicate "end of message" either as lamp illumination in live operations or as a contact closure for control of automation systems. The tertiary tone may be used for such things as control for a lamp indication at the beginning and end of a live insert, to provide logging information in an automated system, or to control slide projectors in TV.

Another optional feature available on the RP Series is the high speed cue capability that permits the rapid advance of the tape (at 4 times regular speed) to the next cue tone either automatically or manually. The 150 Hz secondary cue tone is used for automatic control of the high speed cue function. However, during the recording process, ITC disables the automatic operation to facilitate the recording of multiple cuts on one cartridge.

Yes . . . we've been listening to the people who use cartridge equipment. And the RP Series Master Recorder/Reproducer is the product of this "joint effort".

Cue Tone Add and Defeat Switches

The **1 kHz** Cue Tone **Add** Switch permits the manual recording of a "stop" tone either during the recording or playback process. This facilitates recording multiple cuts on one cartridge without going through the stop, record set, start routine after each cut. Or, you can add stop tones to previously recorded material. The **1 kHz** Cue Tone **Defeat** Switch allows you to manually inhibit the automatic recording of the 1 kHz stop tone when the machine is started in the record mode. This permits electronic editing in that the recording process may be stopped and restarted without recording a new stop tone. These controls are located behind the front panel to prevent inadvertent operation, but the slide-out housing permits easy access. Or they may be remote controlled.

Meter Switch

The six position meter switch may be helpful to both the operator and the maintenance engineer. The operator may wish to visually check (A-B) the input to the recording amplifier against the output of the playback unit, or he may wish to have the meters always provide a playback indication. The Peak Recording Level position provides a meter indication of program level as related to tape saturation. By preventing the meter (in the peak level position) from exceeding the "zero" (100%) indication, the operator can create virtually distortion free recordings. The program and cue bias positions permit rapid check for the operation of the bias oscillators, and the cue play position provides a visual indication that cue tones have been properly recorded and are being received at the cue tone detector.

Serviceability

Even the most carefully designed tape recorders sometime need servicing, but here, too, ITC has tried to make your job the ultimate in simplicity. A slide-out housing is standard, and the machine is fully operational when removed from its case. All printed circuit electronics include the latest silicon solid state diodes, transistors, and integrated circuits. Printed circuit cards are of the plug-in variety for ease of replacement or repair, and extender cards are available for added accessibility of components during repair work. In the reproducer, the relays and motor plug-in also. Sheet metal parts are constructed of magnetic stainless steel for maximum shielding and durability of finish.

Tape Capacity:	NAB size A, B, and C cartridges. 2 seconds to 31 minutes with 1 mil lubricated tape at 7½ IPS.
Start Time:	0.1 second.
Stop Time:	0.1 second.
Ambient Temperature:	55 degrees C, 131 degrees F., maximum.
Remote Control:	All indicators and controls except meter switch.
External Connectors:	Latching type. Mating plugs furnished.
Mounting:	Table top mounting. Rack mounting adapters optional.
Dimensions:	17½" width, 11" depth, 5¼" height (add ⅜" for feet).
Weight:	39 pounds.

MODEL DESIGNATIONS

RP Series Recorder/Reproducers accept the NAB "A", "B", and "C" size cartridges and provide the complete recording and reproducing capability. RA Series Recording Amplifiers are designed for field addition to existing WP Series Reproducers.

RP-0001	**RA-0001**	Monophonic with 1 kHz primary cue.
RP-0002	**RA-0002**	Stereophonic with 1 kHz primary cue.
RP-0003	**RA-0003**	Monophonic with 1 kHz primary, 150 Hz secondary, and 8 kHz tertiary cues.
RP-0004	**RA-0004**	Stereophonic with 1 kHz primary, 150 Hz secondary, and 8 kHz tertiary cues.
***RP-0005**	***RA-0005**	Monophonic, Hi-Speed Cue with 1 kHz primary, 150 Hz secondary, and 8 kHz tertiary cues.
***RP-0006**	***RA-0006**	Stereophonic, Hi-Speed Cue with 1 kHz primary, 150 Hz secondary, and 8 kHz tertiary cues.

ACCESSORY

NR-0002	Rack Mounting Kit — mounts one RP Series in 19" equipment rack.

*NAB-type tape cartridges cannot be reversed. Therefore, the only way to quickly return the tape to "starting position" is to run it forward at a faster speed than the standard 7½ IPS. In the ITC system, Hi-Speed Cue runs at 30 IPS . . . four times faster than the normal speed. Hi-Speed Cue can be operated either manually or automatically. In either case, the machine runs the tape forward at 30 IPS to completion, then automatically reverts to 7½ IPS ready for the next play.

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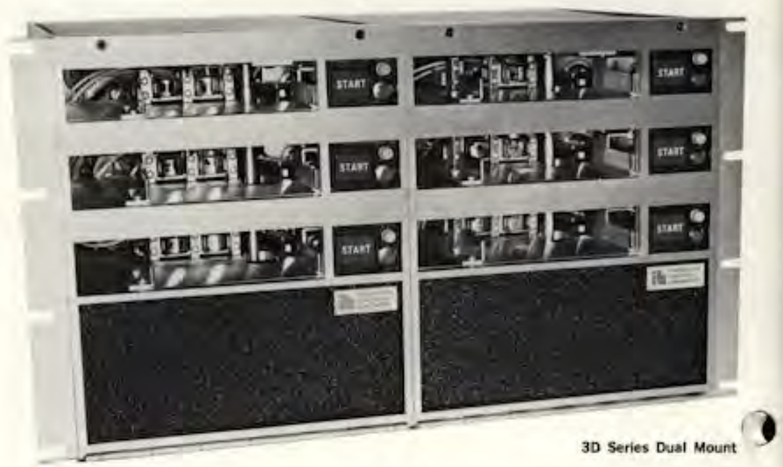
3D SERIES



3D Series Dual Mount

ITC research and design originates in broadcast studios across the nation. We listen for what experienced broadcasters want and need, then we concentrate our creative energies in designing a superlative cartridge machine that will best fill those demands. We heard an unmistakable request for a trend toward greater compactness. Our answer is the 3D Series . . . three cartridge reproducers in the space ordinarily devoted to two machines, providing even greater fingertip accessibility than before, and at a price less than the cost of three single machines!

Flexibility is a key feature of the 3D Series. All decks may operate at once supplying independent audio and control information. Audio may be fed to three separate console inputs or may be mixed or switched externally as desired. The program reproduce amplifiers include an IC electronic "squelch" circuit which independently turns off the audio output when the deck is idle and permits the mixing of all 3 decks into one console input without sacrificing desirable signal to noise ratio. (Mixing pads and audio switchers are available as accessory items.)

Automated breaks can be set up easily with each deck automatically starting the next through utilization of the optional 150 Hz cue. Detection of auxiliary cue tones is indicated by front panel indicator lamps and relay contact closures are provided to signal external equipment.

By air damping the powerful solenoids, ITC was able to provide what can only be described as super-quiet, totally automatic mechanical operation. We added a Teflon coating to the solenoid plungers to eliminate any need for lubrication or cleaning.

The mechanical linkage between the solenoid and the pressure roller assembly is the simplest, most reliable yet designed. We utilize a chain and sprocket with a minimum of moving parts. The outcome is a cartridge machine which has been tested for its ability to be started and stopped in excess of a million times without failure or the need for adjustment. ITC parts are easily accessible and adjustments, when required, are as simple and easy as any we are aware of.

WRA Series

For optimum tape drive, we employ a powerful direct drive motor with permanently lubricated ball bearings. The first step toward speed stability is the use of the time-proven hysteresis-synchronous design. To minimize wow and flutter and improve pulling power, we use a capstan shaft with the largest possible diameter. And to further assist in speed consistency, the capstan is chrome plated, microscopically roughened (vapor blasted), and hardened (electrolyzed).

The 3D Series Reproducer is designed for either table-top or rack mounting (rack kits are optional). Two of the units may be mounted side by side in an equipment rack (as shown above). The 3D Series is available in monophonic or stereophonic; with single cue tone or secondary and tertiary cue tones added.

Add the WRA Series Recording Amplifier and the bottom deck of the 3D Series machine functions as a complete recorder/reproducer. You now have a master recorder with two playback units which operate independently just as you might use several single deck units. For detailed information on the WRA Recording Amplifier, refer to the RP Series brochure.

Tape Transport

One of the outstanding features of the tape transport area is the heavy duty, rugged, ½" hardened aluminum tool plate decks. There's good reason for this accent on heavy duty. The ITC deck is guaranteed flat within .005 inch TIR. They won't warp under normal use and present the same flat stable surface to cartridges everytime assuring correct azimuth of heads and consistent playback performance time after time. Also visible in this photograph are the powerful, air-damped solenoid, the fool-proof linkage assemblies and the direct drive capstan motor mentioned previously. All in all, this thoughtfully designed tape transport assures the consistent performance and high fidelity reproduction that is the desire of all concerned broadcasters.

Head Assembly

The head assembly is an important part of the tape transport. The entire assembly has been designed to accurately and easily achieve correct height, zenith and azimuth adjustments. Three tape guides can be adjusted independently for peak micro positioning and are made of stainless steel for long wear. Controlled by three adjustment screws, heads pivot on their center axis achieving the only true azimuth adjustment possible. Heads may be replaced quickly and easily. The tape guides, head assembly parts, and deck are non-magnetic so that they will not adversely affect the quality of audio.

Serviceability

Removal of the cover grille provides accessibility to both mechanics and electronics. The top two decks readily slide from the housing, and either or both may be removed for service without affecting the remaining decks. For reliability, only the latest silicon transistors, diodes, and integrated circuits have been included in ITC's conservative design. Transistor sockets are provided where the solid state device might require replacement. The program reproduce amplifier and the cue tone detector printed circuit cards are of plug-in design and have gold plated contacts. To optimize signal to noise and facilitate servicing and testing, head cables with gold plated contacts take the signal from the head directly to the input circuit on the PC card.

WRA Series Recording Amplifier

Power:	Supplied by associated three deck Reproducers through interconnect cable.
Audio Input:	−20 to 0 dBm; accepts higher level by changing input pad. 600 ohms balanced. Bridging input available on special order.
Head Configuration:	NAB. Two tracks for monophonic, three tracks for stereophonic. Separate record and reproduce heads permit monitoring while recording.
Cue Signals:	NAB. Primary (stop) Cue, 1 kHz, standard; automatically applied at start of recording (may also be defeated and applied at user's discretion). Secondary cue, 150 Hz, and tertiary cue, 8 kHz, optional; may be applied during recording process or during playback. Individually adjustable oscillator for each tone.
Metering:	Taut-band movement with "A" scale. Internal meter switch allows selection for metering the following: Program Bias, Peak Recording Level, Normal Recording Level, Program Play, Cue Play, and Cue Bias.
Bias Oscillator:	Push-pull, 82 kHz; individual gates and level controls for program (separate left and right in stereophonic units) and cue.
Remote Control:	All indicators and controls except meter switch.
External Connectors:	Latching type. Mating plugs furnished.
Mounting:	Table top mounting. Rack mounting adapters optional.
Dimensions:	8½" width, 11" depth, 5¼" height (add ⅜" for feet).
Weight:	12 pounds.
Note:	All other specifications are the same as those shown under 3D Series Reproducers.

MODEL DESIGNATIONS

3D Series Reproducers accept the NAB "A" and "B" size cartridges and have provisions for interconnecting to recording amplifier electronics for ready conversion of bottom deck to recorder reproducer. WRA Series Recording Amplifiers are designed to interconnect with the 3D Series Reproducers to provide a recording capability on the bottom deck. The interconnecting cable and recording head are supplied with the WRA Series Recording Amplifiers.

3D-0001	**WRA-0001**	Monophonic with 1 kHz primary cue.
3D-0002	**WRA-0002**	Stereophonic with 1 kHz primary cue.
3D-0003	**WRA-0003**	Monophonic with 1 kHz primary, 150 Hz secondary, and 8 kHz tertiary cues.
3D-0004	**WRA-0004**	Stereophonic with 1 kHz primary, 150 Hz secondary, and 8 kHz tertiary cues.

ACCESSORIES

SR-0004	Rack Mounting Kit — mounts one 3D Series in 19" equipment rack.
SA-0014	Rack Mounting Shelf Assembly — mounts two 3D Series in 19" equipment rack.
SR-0001	Rack Mounting Kit — mounts one WRA Series in 19" equipment rack.
DR-0003	Rack Mounting Kit — mounts two WRA Series in 19" equipment rack.
MP-0009	Audio Mixing Circuit, three input/single output, 600 ohm, 9.5 dB insertion loss. Two required for stereophonic applications.
AS-0001	Audio Switcher, three input/single output, balanced audio switching, 0 insertion loss. Designed for either monophonic or stereophonic applications.

INTERNATIONAL TAPETRONICS CORPORATION
2425 South Main Street • Bloomington, Illinois 61701
Telephone: 309-828-1381

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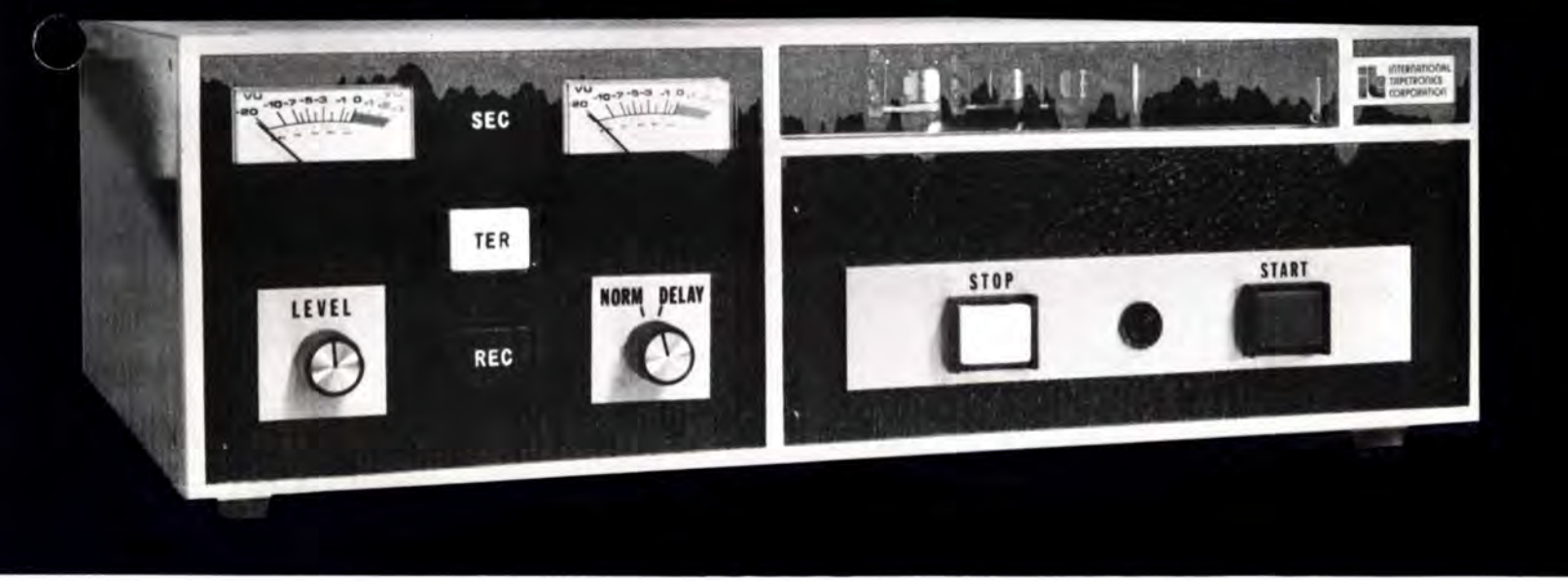
Form No. 100-0015-010

Printed in U.S.A.

RP DELAY



Now you can get the economy of having four different operations available in one cartridge machine--continuous program delay, network delay, normal recording, and normal playback--yet maintain all the dependability, all the specifications, all the quality associated with ITC. The RP Delay provides a means of protecting your station from damaging libel suits or FCC actions, and from antagonizing your audience or advertisers.

The RP Delay combines the features of ITC's RP Series Master Recorder/Reproducer with the additional capability of program delay. Use the RPD for normal cartridge recording and playback; but when the protection or convenience of a time lapse is needed, just turn the switch to "Delay".

CONTINUOUS PROGRAM DELAY

Even in "Delay", ITC engineers have matched or surpassed NAB standards through the use of a totally separate program delay head and amplifier. No longer is a head required to alternate between record and play functions. This means that no compromises are made in the frequency response or the signal-to-noise ratio, as occurs when the function of the heads is switched.* The extra head allows each of the three to be chosen for optimum performance in a single assignment--either recording or playback, but never both.

The third head (located on the far left) provides the delayed playback. The tape passes the erase/record head (center) and continues for the full cycle of the tape before again arriving at the delay playback head. (See the diagram on the reverse side.)

When the machine is set in "Delay", simply insert an erased "B" or "C" sized NAB cartridge (these allow the use of the third head), press "Record Set" and "Start", and the unit will operate as a continuous delay recorder/reproducer. The duration of the delay is determined by the amount of tape in the cartridge. For example, a seven second cartridge is often used to delay "live" interviews and telephone talk shows. This seven second time lapse provides an opportunity to edit words or comments that are not permissable.

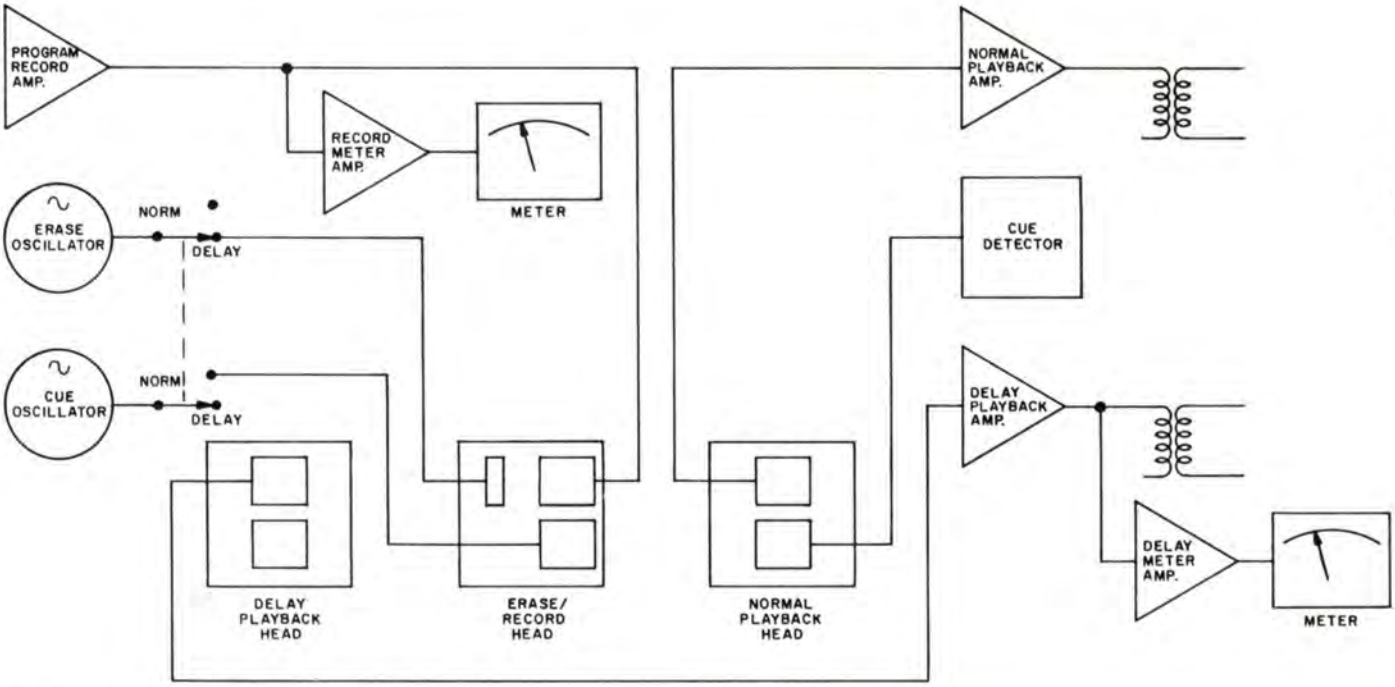
NETWORK PROGRAM DELAY

The RP Delay is also capable of automatically recording an entire program for playback at a later time. Choose a cartridge long enough to record the entire program (5½ minutes for a 5-minute news cast), and turn the selector switch to "Delay". When a "Record/Start" command is generated by a timer in an automation system or by network cue tones, the machine will erase any program material on the tape and record new information. A previously recorded cue tone will stop the tape when it has completed one cycle, and the machine will remain idle until instructed to start playback. At the time you have specified, it will begin to play the material recorded earlier, stopping on the cue tone, ready to repeat the cycle of erase/record and playback.

NORMAL CARTRIDGE OPERATION

Return the selector switch to "Norm" and your unit will function as a standard cartridge recorder/reproducer. Use "A", "B", or "C" sized NAB cartridges and make recordings in the conventional way. ITC has designed this machine for optimum performance as a normal recorder/reproducer and for dependable operation in the delay application. The only difference between the RP Series and the RPD Series is the additional ability of the RPD to function as a program delay unit.

The RP Delay is a cartridge machine for all broadcasters. For the station with regularly scheduled talk programs, the machine will perform reliably day after day as a delay unit, and provide backup for normal cartridge machines. For the station that doesn't regularly air "live" talk shows, it fills the need for a standard cartridge record/playback unit, yet is ready to act as a delay machine for that unexpected situation or future program. Since the extra cost of this protection is so small compared to the possible damaging repercussions, can you afford not to check into ITC's four-in-one cartridge recorder/reproducer/delay machine?



- "Delay" Mode—Erase oscillator is activated, primary (stop) cue oscillator is inhibited.
- No Head Lead Switching--No need for compromise adjustments necessary when an amplifier is switched between two heads. Adjust each amplifier for a maximum performance with one head.
- Third Head For "Delay" Playback--Heads are chosen for optimum performance in either recording or playback applications but never both.*
- Two VU Meters allow monitoring of input and "Delay" output simultaneously.
- Two Separate Playback Systems (head, playback amplifier, VU meter, output transformer, and output connection)--one for normal operation and one for delay. Use the external audio routings most convenient for your operation.

*ITC uses wide gap heads in recording applications to insure good frequency response and adequate recorded field depth. High impedance, narrow gap heads are used in playback applications for optimum frequency response and signal-to-noise ratio.

MODEL DESIGNATION

RPD Series Delay Recorder/Reproducers accept the NAB "A", "B", or "C" sized cartridges and provide complete recording and reproducing capabilities. The units require the use of either "B" or "C" sized cartridges for continuous program delay operations.

RPD-0011 Recorder/Reproducer/Delay, Monophonic, with 1 kHz Primary Cue Tone

RPD-0013 Recorder/Reproducer/Delay, Monophonic, with 1 kHz Primary, 150 Hz Secondary, and 8 kHz Tertiary Cue Tones

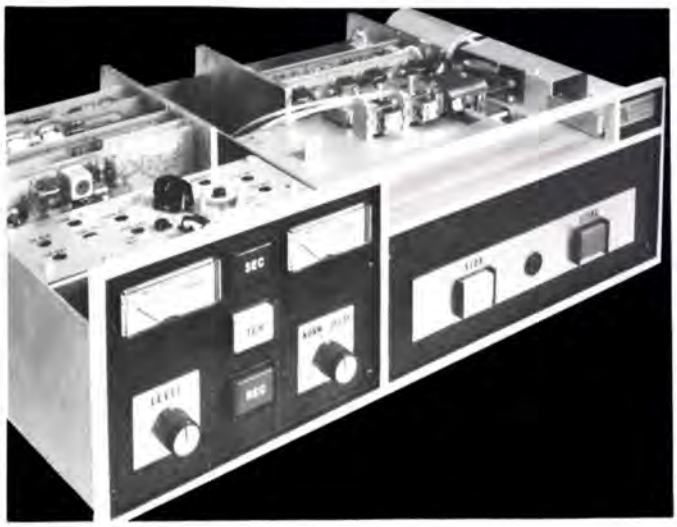
RPD-0015 Recorder/Reproducer/Delay, Monophonic, Hi-Speed Cue, with 1 kHz Primary, 150 Hz Secondary, and 8 kHz Tertiary Cue Tones

ACCESSORY

NR-0002 Rack Mounting Kit - mounts RPD Series in 19" equipment rack.

867-0014-001 NAB "B" size cartridge with additional pressure pads for use of third head in "Delay" operation. Loaded with 7 seconds of tape.

PLEASE SEE THE RP SERIES BROCHURE FOR COMPLETE SPECIFICATIONS.



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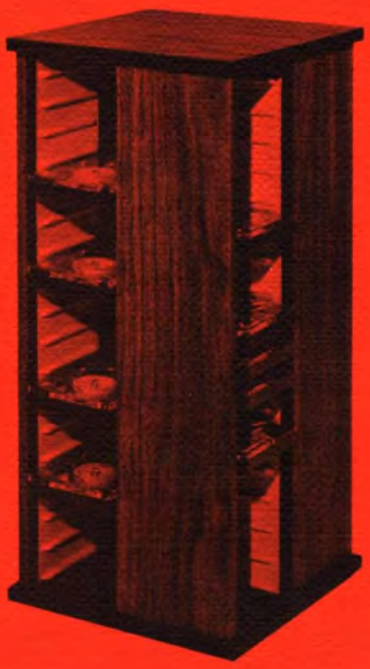


LAZY SUSAN RACK
MODEL L-72

The Model L-72 Lazy Susan Cartridge Tape Rack shown at the left is Micro-Trak's answer for an attractive and durable tape rack at a reasonable price. Designed to compliment the Series L studio Furniture line, the L-72 provides a small, but substantial rotary tape rack for use at the console. Only 10 1/2 inches square and 22 inches high, the L-72 packs in 72 of the most used spots for easy access by your DJs. The L72's clean stylish lines and its low cost make it an attractive addition to any studio. The wood grain formica covering with the contrasting black and white interior matches our Series L Furniture and will attractively compliment any studio decor.

TAPE CARTRIDGE RACKS

MICRO-TRAK CORPORATION

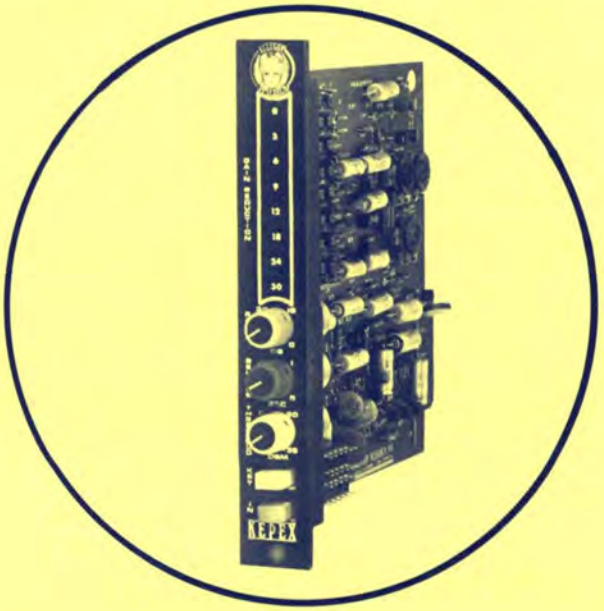
WALL OR CONSOLE RACK
L-90

The most useful member of the Series L Cartridge Rack group is the Model L-90. The L-90 can be used as a wall mounted unit, stacked from floor to ceiling, mounted on the inside and outside of a closet door, or as a stand alone unit at the console. Also with addition of simple 2 x 4 supports the L-90 can be mounted over the top of your turntables. Flexibility, low cost , attractive wood grain Formica brand covering, versatility are all reasons that you should equip your studio with several L-90s. The L-90 Rack is finished to match our Series L Turntable Furniture, and our newer System D equipment, and will also attractively compliment your present system.

620 RACE ST., HOLYOKE, MASSACHUSETTS 01040
USA

KEPEX™

Model 500



IN TODAY'S MULTITRACK STUDIO,NOISE MEANS MORE THAN THE TAPE HISS AND HUM,PRINT-THROUGH,INTERTRACK LEAKAGE (THROUGH INSUFFICIENT INSTRUMENT ISOLATION,OR A LEAKY BOARD,OR WHATEVER),AIR CONDITIONER RUMBLE,OUTSIDE TRAFFIC NOISE,OR ANY OTHER LOW LEVEL INTERFERENCE WITH PURE VIRGIN SIGNAL CAN BE REDUCED OR ELIMINATED WITH KEPEX.TRY IT TO DRY UP A REVERBERANT ROOM.FILM SOUND OPERATIONS USE KEPEX TO DISAPPEAR UNBLIMPED CAMERAS AND PASSING AIRPLANES.TV STATIONS USE KEPEX TO AUTOMATICALLY KILL UNUSED OPEN MIKES.RADIO STATIONS FIND KEPEX A HANDY TOOL IN THEIR PRODUCTION ROOMS.

KEPEX IS A WIDE BAND,LOW DISTORTION GAIN EXPANDER THAT CAN BE ADJUSTED TO ABSORB THE LOW LEVEL NOISES THAT YOU DECIDE ARE OBJECTIONABLE.INPUT SIGNALS GREATER THAN THRESHOLD LEVEL WILL RAISE THE GAIN OF KEPEX TO 0 DB (UNITY GAIN),AND SIGNALS BELOW THRESHOLD(THE SIGNALS THAT YOU DECIDE ARE "NOISE") WILL BE ATTENUATED BY THE AMOUNT SET ON THE RANGE CONTROL (UP TO 60 DB ATTENUATION).RELEASE TIME (TIME FOR GAIN TO DECREASE AFTER REMOVAL OF INPUT SIGNAL GREATER THAN THRESHOLD) IS ADJUSTABLE FROM 50 MILLISECONDS TO 6 SECONDS.

GAIN IS NORMALLY CONTROLLED AS A FUNCTION OF THE LEVEL OF THE INPUT SIGNAL,BUT AN EXTERIOR KEY INPUT IS PROVIDED WHICH CAN CONTROL THE GAIN WITH A SECOND INDEPENDENT AUDIO SIGNAL.THIS FEATURE ALLOWS SOME FAR OUT CONTROL FOR CREATING STEREO EFFECTS AND ELECTRONIC MUSIC SYNTHESIS.

PLUS,A UNIQUE GAIN REDUCTION METER PROVIDES INSTANTANEOUS VISUAL MONITORING OF WHAT KEPEX IS DOING.

THE KEPEX 500 IS A PRINTED CIRCUIT MODULE AND IS DESIGNED FOR MOUNTING IN EITHER THE CM-001 SINGLE CHANNEL CASE OR THE RM-160 MULTI-TRACK RACK MOUNTING CASE.

SPECIFICATIONS

ATTACK TIME -(TIME REQUIRED FOR GAIN TO INCREASE FROM -60 dB TO -1 dB AFTER THE APPLICATION OF A CONTROL SIGNAL WHOSE LEVEL EXCEEDS THRESHOLD) LESS THAN 20 MICROSECONDS.

RELEASE TIME - (TIME REQUIRED FOR GAIN TO DECREASE BY 30 dB AFTER REMOVAL OF A CONTROL SIGNAL) VARIABLE FROM 50 MILLISECONDS TO 6 SECONDS.

ACTIVE EXPANSION RATIO - 2:1 FROM 0 dB to 15 dB EXPANSION, INCREASING TO 4:1 AT 60 dB EXPANSION.

THRESHOLD OF EXPANSION - (MAGNITUDE OF CONTROL SIGNAL IN dBM REQUIRED TO CAUSE KEPEX TO REACH UNITY GAIN) VARIABLE FROM -35 dBM to +20 dBM.

INSERTION LOSS - 0 dB, INTERNAL ADJUSTMENT PROVIDES UP TO 20 dB GAIN.

FREQUENCY RESPONSE - ± 1 dB, 20 Hz to 40 KHz.

DISTORTION - LESS THAN 0.5% THD UNDER NORMAL OPERATING CONDITIONS. (MEASURED DISTORTION MAY EXCEED THIS FIGURE IF VERY SHORT RELEASE TIMES ARE USED. THE DESIGN ALLOWS OPERATION IN THIS REGION IN ORDER TO TAKE ADVANTAGE OF THE SPECIAL EFFECTS PRODUCED BY SUCH OPERATION.)

SIGNAL TO NOISE RATIO - MINIMUM 85 dB BELOW RATED OUTPUT.

INPUT IMPEDANCE - 3,000 OHMS IN NORMAL EXPANSION MODE.

OUTPUT IMPEDANCE - 600 OHMS (EMITTER FOLLOWER)

MAXIMUM INPUT AND OUTPUT LEVELS - +17 dBM.

POWER REQUIREMENTS - +24 VDC AT 75 mA
+100 VDC AT 3 mA
NEGATIVE GROUND

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

mccurdy radio industries inc.

1711 Carmen Drive
Elk Grove Village, IL 60007
Phone (312) 640-7077
TWX: 910-222-0436

1051 Clinton Street,
Buffalo, NY 14206
Phone (716) 854-6700
TWX: 910-492-1373

223 W. Saddle River Road
Saddle River, NJ 07458
Phone (201) 327-0750
TWX: 710-988-2254

GAIN BRAIN

Model 700

ALLISON REASEARCH INC. IS PLEASED TO INTRODUCE A SLIGHTLY REVOLUTIONARY LITTLE CHUNK OF PROFESSIONAL AUDIO EQUIPMENT- THE GAIN BRAIN. GAIN BRAIN IS A LIMITER. NOT JUST ANOTHER LIMITER, BUT A RATHER EXTRAORDINARY LIMITER. GAIN BRAIN IS A TIDY LITTLE PACKAGE CONTAINING A UNIQUE COMBINATION OF PEAK AND RMS LIMITERS PLUS ULTRA-FAST,ACCURATE AND RELIABLE LIGHT EMITTING DIODE READ-OUT.

IT IS HIGHLY USEFUL IN APPLICATION REQUIRING A DEGREE OF APPARENT LEVEL CONTROL UNOBTAINABLE BY CONVENTIONAL PEAK LIMITERS OR COMPRESSORS. IN USE, GAIN BRAIN IS DISTINGUISHED BY ITS PREDICTABILITY AND BY ITS FREEDOM FROM RESTRICTED PUMPING EFFECT NORMALLY ASSOCIATED WITH LIMITERS. GAIN BRAIN'S EMPLOYMENT IS PARTICULARY EFFECTIVE ON COMPLEX SIGNAL SOURCES WHICH ARE NORMALLY DIFFICULT TO LIMIT PROPERLY, SUCH AS DRUMS, HORNS,REEDS, PIANO, ELECTRONIC MUSIC AND CERTAIN VOCAL SOUNDS.

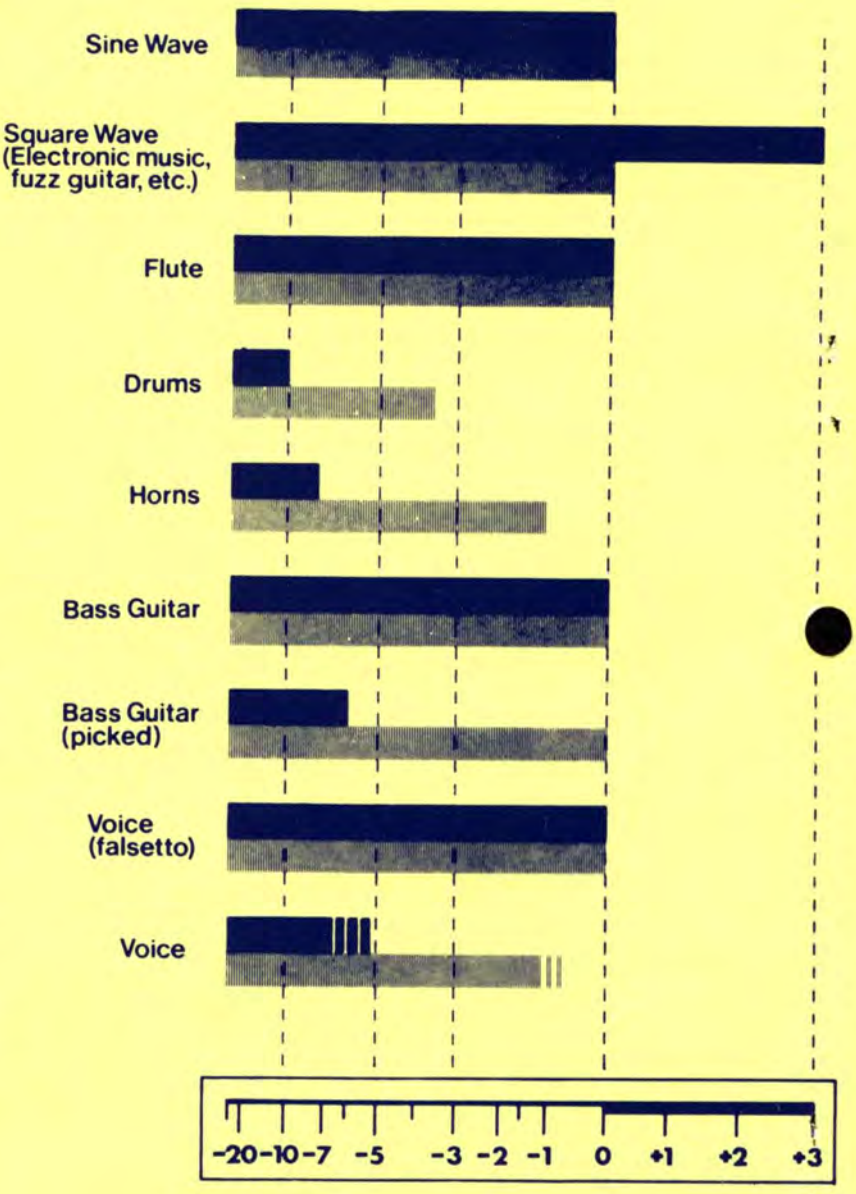
GAIN·BRAIN™ limiting or conventional Peak limiting?

A COMPARISON OF OUTPUT LEVELS FOR DIFFERENT PROGRAM MATERIALS

If you use a conventional limiter . . . this is what you get. Sure the peaks are level, but what about the sound? If you really want the horns 7db under the flutes or the bass 10db louder than the drums, go ahead and use your limiter; it doesn't recognize the apparent loudness of the program. It's activated only by the peak value of the input waveform and you know how little that resembles the actual audible power content.

GAIN·BRAIN™ knows what you want to hear. It's activated by both the peak and the RMS content of the input waveform. The result is a really accurate control of the output level, for *all* the instruments, plus an absolute control of peaks. Depending upon your needs, the GAIN BRAIN may be adjusted to act only as a peak limiter, or only as an RMS limiter or anywhere in between.

Light emitting diodes sequentially indicate the gain reduction and the mode of limiting.



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READ ALL ABOUT IT...

TECHNICAL DESCRIPTION

Fundamentally, GAIN BRAIN performs three distinctly separte limiting functions which are;

1. Ultra-fast attack and release time for inaudible transients
2. Moderate attack and variable release time for audible transients and for the peak component of sustained waveform
3. RMS activated attack and variable release time for the apparent level content of the input waveform

The relative limiting thresholds may be adjusted by the use of a front panel control (FUNCTION), as follows;

1. When rotated to "PEAK" position (CCW) all thresholds fall at the same point and GAIN BRAIN functions solely as a high performance peak limiter.
2. When rotated fully clockwise to "RMS" position the peak activated thresholds move up by 6dB, while the RMS activated threshold moves down by 6dB. Since this results in a separation of 12dB between the RMS and peak thresholds, the device performs essentially as an RMS limiter.
3. In mid position the RMS and peak thresholds are separated by 6dB. At this setting transients and complex signals (where the peak to RMS waveform ratio exceeds 6dB) will activate one or both of the peak limiter sections. Less complex waveforms will activate the RMS section

Limiters are employed primarily for two purposes;

1. To provide electrical control of peak excursions in order to prevent overload distortion, overmodulation, overcutting of discs, etc.
2. To increase or to control apparent level

It is obvious that neither a peak limiter nor an RMS limiter will do both jobs satisfactorily, hence, GAIN BRAIN.

METERING

In order to adequately monitor the complex functions of a device such as GAIN BRAIN, something more sophisticated than the mechanical VU or gain reduction meter must be used. Such a meter is simply too slow to accurately indicate the complex parameter changes involved. Additionally, the physical size vs readability ratio is not conducive to effective console mounting applications.

The gain reduction meter used in GAIN BRAIN is a 7 segment sequential light emitting diode (LED) array. It indicates gain reduction, incrementally, from 2dB to 24dB. Response time is considerably faster than that of the human eye, thereby allowing accurate reading of short duration, fast release time limiting. Thanks to solid state technology it is wear out and burn out proof.

Two additional indicators appear on GAIN BRAIN'S front panel. One indicates that limiting is being caused by the peak sections. The other indicates that limiting is being caused by the RMS section. They too are solid state LED devices.

RMS SECTION

It must be noted that the action of the RMS section of GAIN BRAIN is not the same as that of a slow attack limiter or compressor. In such devices the ultimate threshold is still determined by the peak value of the waveform. In the RMS section of GAIN BRAIN, the threshold is determined by the effective power content of the waveform (regardless of peak waveform excursions). This seemingly insignificant difference in parameters becomes one of major proportions since what the ear hears and what the VU meter indicates are RMS values. Since the peak to RMS ratios of music and speech waveforms vary drastically and are quite unpredictable, one cannot expect the apparent level output of a conventional peak limiter to remain constant from instrument to instrument. Conversly, a limiter which is strictly RMS activated cannot control waveform peaks.

PHYSICAL DESCRIPTION

The basic GAIN BRAIN 700 module is supplied in card form with 1" by 7" epoxy front panel complete with all metering, controls and knobs. It is terminated with a standard 10 pin PC connector. The model 700 card is designed to mount in either of two Allison Research metal cases. Case model CM001 mounts one 700 module and provides a standard interface with recording consoles (1½" x 7" x 7" deep). Case model RM160 rack mounts up to 16 GAIN BRAIN (or KEPEX) modules.

The RM160 requires only 7" of rack space and contains integral power supply providing all necessary operating power.

GAIN BRAIN front panels are black in color. All metal cases are sky blue.

SPECIFICATIONS

Gain Reduction Range	30dB
Noise Level (20Hz to 20kHz)	At least 83dB below threshold of peak limiting
Distortion	Total harmonic distortion is less than .3% from 40Hz to 15kHz
Attack Time - Peak Section	Less than 1.5dB overshoot one microsecond after application of 50kHz tone burst exceeding the threshold of limiting by 15dB
Attack Time - RMS Section	7 msec. to 40 msec. for 90% of ultimate gain reduction. Dependent on waveform complexity, amount of limiting and position of FUNCTION control
Release Time - Peak Section	
(for transients of less than 50 microseconds duration)	Less than one microsecond
(for other peak signals)	Variable by RELEASE control 50 msec. to 5 seconds
Release Time - RMS Section	Variable 250 msec. to 5 seconds
Limiting Ratio - Peak Section	Approx. 50 to 1
Limiting Ratio - RMS Section	Approx. 40 to 1
Limiting Thresholds	With FUNCTION control in PEAK position (CCW) all thresholds are at -20dBm with INPUT LEVEL control fully clockwise (variable to +30dBm (CCW)
Separation Between Thresholds	Rotating FUNCTION control from PEAK to RMS position raises peak thresholds 6dB, while lowering RMS threshold 6dB. This allows a separation of thresholds which is continuously variable from 0dB (PEAK position) to 12dB (RMS position)
Frequency Response	±1dB - 25Hz to 80kHz
Output Level	Up to +18dBm into 150 ohms or higher (+24dBm may be obtained by using a 150 ohm to 600 ohm output transformer)
Multiple Limiter Coupling	Connection provided for tandem limiting functions
Front Panel Controls (5)	INPUT LEVEL, OUTPUT LEVEL, RELEASE TIME, FUNCTION (PEAK/RMS), IN/OUT SWITCH
Power Requirements	Regulated 24VDC to 28VDC negative ground @ 70ma

METERING SPECIFICATIONS

Gain Reduction Meter	7 increment sequential light emitting diode array indicates gain reduction from 2dB to 24dB
Accuracy	±1dB (2dB to 12dB gain reduction) ±2dB (18dB to 24dB gain reduction)
Speed	Virtually instantaneous. Permits accurate reading of short term fast release limiting
Peak Limiting Indicator	Light emitting diode indicates when peak limiting is taking place
RMS Limiting Indicator	Light emitting diode indicates when RMS limiting is taking place

PHYSICAL SIZE

GAIN BRAIN 700 Module	Card form with high impact plastic panel, controls and metering. 1" wide, 7" high, 6½" deep

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Phone (201) 327-0750
TWX: 710-988-2254

ALLISON RESEARCH, INC.
2817 ERICA PL. PO Box 40288
NASHVILLE, TENN. 37204
Dial (615) "ALLISON"
Or (615) 385-1760

PRELIMINARY DATA
MARCH 20, 1975

VCA-3 VOLTAGE CONTROLLED AMPLIFIER

THE VCA-3 IS A FULLY PROFESSIONAL DEVICE SPECIFICALLY DESIGNED FOR USE IN QUALITY AUDIO SYSTEMS. FEATURES ARE EXTREMELY LOW NOISE AND DISTORTION, HIGH LEVEL INPUT AND OUTPUT CAPACITY AND A PACKAGING CONCEPT WHICH ALLOWS FOR SIMPLE PLUG IN USE, WITHOUT EXTERNAL CIRCUITRY.

A MULTIPLICITY OF LOGARITHMICALLY RESPONSIVE CONTROL INPUTS ARE PROVIDED, AS ARE PROVISIONS FOR ALTERING THE FREQUENCY RESPONSE AND SLEW RATE OF THE CONTROL CIRCUITS.

THE DEVICE, AS SUPPLIED, PROVIDES UNITY GAIN WITH ZERO CONTROL VOLTS. HOWEVER, PROVISIONS ARE MADE WHICH ALLOW OTHER GAINS AS "DESIGN CENTER" INCLUDING OPERATION AS A VOLTAGE CONTROLLED SUMMING AMPLIFIER.

PARTIAL SPECIFICATIONS
(DESIGN CENTER=UNITY GAIN)

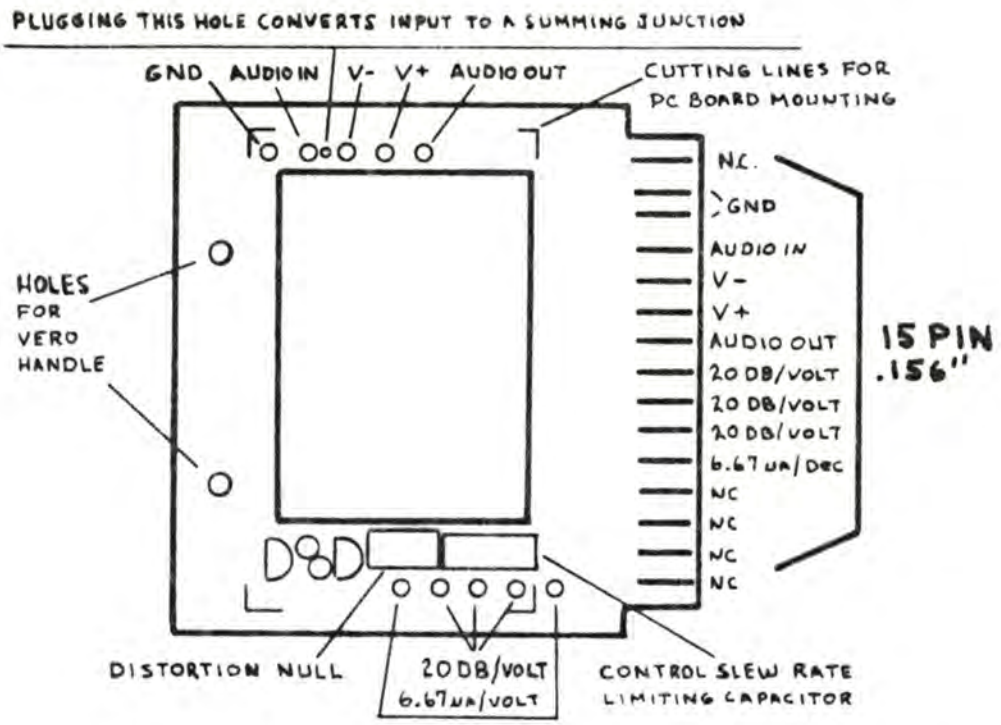
RANGE OF VOLTAGE CONTROLLED GAIN	+45DB TO -100DB
INPUT CLIPPING POINT ±24V POWERING	+35DBM
±15V POWERING	+30DBM
OUTPUT LEVEL INTO 600 OHMS OR HIGHER	
±24V POWERING	+26DBM
±15V POWERING	+22DBM
OUTPUT NOISE 20HZ-20KHZ @ UNITY GAIN	-98DBM
@+20DB GAIN	-80DBM
@-100DB GAIN	-105DBM
HARMONIC DISTORTION THD 20HZ TO 20KHZ	
TYPICAL OPERATING LEVELS	.03%
UP TO +20DBM IN AND OUT, +20DB TO -20DB GAIN.	.1%
@ +30DBM IN AND +24DBM OUT	.25%
FREQUENCY RESPONSE AUDIO SECTION	±1DB 10HZ TO 35KHZ (DC RESPONSE OBTAINABLE)
SLEW RATE AUDIO SECTION ±24V POWERING	8 VOLTS/MICROSECOND
±15V POWERING	5 VOLTS/MICROSECOND
CONTROL CIRCUIT PARAMETERS-VOLTAGE INPUTS	
GAIN @ ZERO CONTROL VOLTS	UNITY ±1DB
GAIN WITH NEGATIVE CONTROL VOLTAGES	20DB GAIN PER VOLT
GAIN WITH POSITIVE CONTROL VOLTAGES	20DB ATTENUATION PER VOLT
MAXIMUM RATE OF GAIN CHANGE (CONTROL SLEW RATE)	
(HOLES PROVIDED FOR SLEW RATE LIMITING CAP)	50 NANOSECONDS PER DB (20DB/MICROSECOND)

AUDIO INPUT IMPEDANCE	51.1K ±1% (SUMMING INPUT ACCESSABLE)
CONTROL INPUTS (VOLTAGES) (20DB/VOLT)	3 IMPEDANCE=150K OHMS ±1%
CONTROL INPUTS (CURRENT SUMMING)(6.67UA/DB)	1
POWERING	±15VOLTS TO ±24 VOLTS DC
CURRENT CONSUMPTION ±15V, NO SIGNAL	±3.5 MA
@±15V, OUTPUT=+21DBM INTO 600 OHMS	±9.5 MA
@±24V, NO SIGNAL	±6.5 MA
@±24V, OUTPUT=+25DBM INTO 600 OHMS	±16 MA

SPECIAL FEATURES

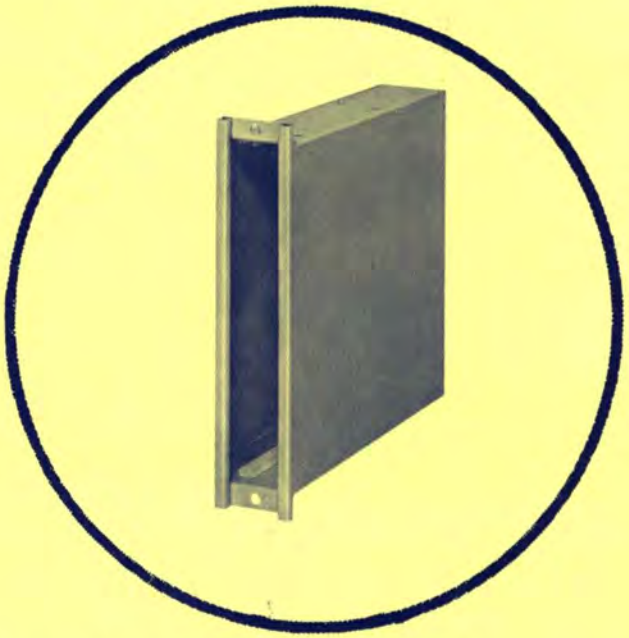
OUTPUT HAS SHORT CIRCUIT PROTECTION AND PROVIDES CURRENT LIMITING TO ±50MA.

PACKAGING ARRANGEMENT ALLOWS CARD FILE MOUNTING USING 15 PIN EDGE CONNECTOR, OR COMPACT CIRCUIT BOARD MOUNTING USING EITHER A PLUG ON OR SOLDER ON CONFIGURATION.



VCA-3 TOP VIEW - SIZE TO SCALE (1-1) HEIGHT = .525" MAX

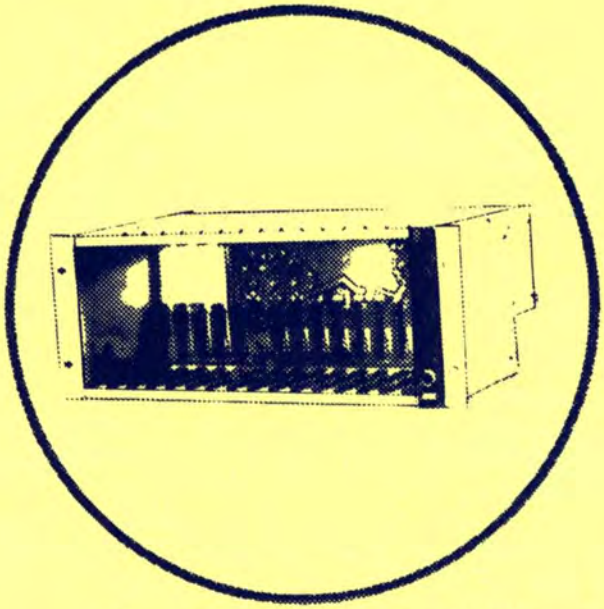
CM·001
Single Channel Enclosure



THE CM-001 ENCLOSURE ACCEPTS A SINGLE CHANNEL OF EITHER THE KEPEX 500 OR GAIN BRAIN 700 MODULES. IT IS WELDED STEEL CONSTRUCTION AND IS FITTED WITH A 10 PIN P.C. EDGE CONNECTOR READY FOR WIRING INTO YOUR INSTALLATION

DIMENSIONS: HEIGHT, 7 INCHES;WIDTH, 1 1/2 INCHES;DEPTH, 6 1/2 INCHES

COLOR: SKY BLUE



RM·160
Multi Channel Enclosure

THE RM-160 MULTI-CHANNEL RACK MOUNTING ENCLOSURE ACCEPTS UP TO 16 KEPEX 500 OR GAIN BRAIN 700 MODULES. IT INCLUDES A BUILT-IN POWER SUPPLY,A POWER SWITCHING AND FUSE MODULE,A BLANKING PANEL FOR 8 MODULE POSITIONS (IF THEY ARE NOT USED),AND A SET OF 16 AUDIO CONNECTORS WITH CRIMPING TOOL.

DIMENSIONS:HEIGHT,7 INCHES;WIDTH,19 INCHES;DEPTH,10 1/8 INCHES

COLOR:SKY BLUE

LX 100
Power Supply

KEPEX AND GAIN BRAIN, WHEN MOUNTED IN THE CM-001 ENCLOSURE, REQUIRE AN EXTERNAL POWER SUPPLY. THE MODEL LX-100 POWER SUPPLY DELIVERS THE PROPER VOLTAGES AND SUFFICIENT CURRENT TO POWER UP TO 8 MODULES.

SPECIFICATIONS, LX-100 POWER SUPPLY

INPUT VOLTAGE - STRAPPABLE FOR 105-125 AND 210-250 VAC, 50 OR 60 HZ.

REGULATED OUTPUT - + 24 VDC ± 0.5 %, 0.1 % RIPPLE AT 1 AMPERE.

NON-REGULATED OUTPUT - + 100 VDC, ± 10 % AT 75 MA

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

mccurdy radio industries inc.

1711 Carmen Drive
Elk Grove Village, IL 60007
Phone (312) 640-7077
TWX: 910-222-0436

1051 Clinton Street,
Buffalo, NY 14206
Phone (716) 854-6700
TWX: 910-492-1373

223 W. Saddle River Road
Saddle River, NJ 07458
Phone (201) 327-0750
TWX: 710-988-2254

Presenting the professional audio cost/performance leaders from Orban/Parasound

The following is a brief description with condensed specifications of our products. If you wish more detailed technical information, please contact your nearest ORBAN/PARASOUND professional audio distributor (listed below), or us directly.

orban/parasound

680 Beach Street
San Francisco, Ca. 94109
(415) 673-4544

Orban/Parasound products are manufactured by Orban Associates Division, Kurt Orban Co., Inc., San Francisco, CA.

Dual Spring Reverb, Model 111B

The industry's cost/performance leader, the Model 111B Stereo Reverb attacks the classic problems of spring reverbs—flutter, uneven frequency response, noise, and "sproing" sounds—by means of innovative signal processing electronics.

The integral "floating threshold limiter", exclusive to Orban/Parasound protects the spring against both overload and "boing" sounds. This circuit serves to eliminate sharp, sudden changes in level regardless of average level. This makes it possible to reverberate such instruments as guitar or drums for the first time with a spring system. The limiter makes sure that "twangs" are ducked out and masked by the direct sound mixed with the echo return.

Further versatility is achieved through a bass control and quasi-parametric midrange equalizer which permits continuously variable adjustment of the *frequency* of maximum equalization (1.5 to 5.5 kHz), the *amount* of equalization (up to ± 12 dB), and the *bandwidth* (Q's from 0.5 to 5.0).

Over the years the outstanding sound and reliability of O/P Reverb has resulted in sales to hundreds of recording studios, radio stations, and road shows. Unlike companies just entering the reverb business, we have refined our product through response to customer needs and have achieved a record of quality construction and reliable operation.

SPECIFICATIONS

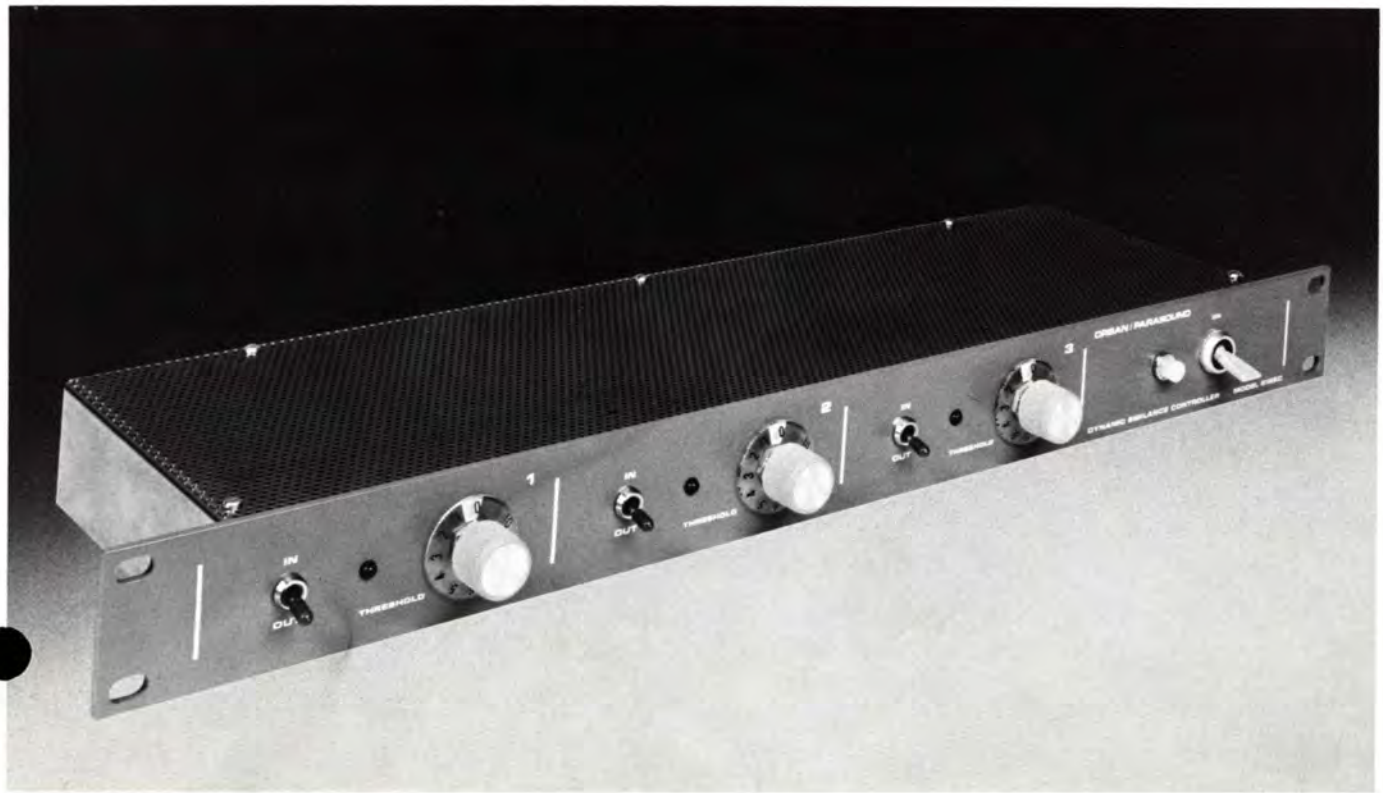
Input Impedance: 10,000 ohms, unbalanced.
Input Level: will accept input levels between -30 and +4 dBm. Audio taper input level attenuator available on the front panel.
Output Level: nominally 0 dBm
Output Impedance: 600 ohms; transformer-coupled, balanced and floating.
Frequency Response: 80-5500 Hz ±3 dB (averaged over third octaves)
Delay Time: Approximately 30 milliseconds
Delay: Approximately 2 seconds to -40 dB.
Noise: better than 76 dB
Reverberation Element: four springs per channel
Power Requirements: 115/230 volt AC ±10%. 50-60 Hz, approx. 10 watts
Dimensions: 19" wide x 3½" high x 12" deep.
Shipping Weight: 10 lbs.

Dynamic Sibilance Controller, Model 516EC

The O/P model 516EC is the industry's first truly satisfactory de-esser. Unlike older designs, the 516EC has noise and distortion characteristics comparable to state-of-the-art amplifiers. Attack and release times have been optimized to totally eliminate pumping and audio "holes." The 24 dB/octave filter selectivity eliminates possibility of false triggering by low-frequency information. Sibilants are controlled by reducing the gain of the whole channel—not filtering—so sibilants are not colored by the action. There is only one control, which controls the balance between energy in the sibilance range and low-frequency energy. De-essing is constant whether the input is loud or soft. Control action can be switched in or out without clicks, pops, or gain changes. An LED lights whenever control action occurs.

The economical 516EC is supplied for 1¾" rack mount, and contains three independent channels. It is ideal not only for cinema dubbing, but also for recording studios where it eliminates the need to compromise between presence and excessive sibilance when equalizing vocals.

SPECIFICATIONS
Input: 5,000 ohm unbalanced bridging. +4 dBm nominal level, field-modifiable to −6 dBm.
Output: Unbalanced. Will drive 500 ohms or greater to +20 dBm, 20-20,000 Hz.
Noise: −85 dBm typ., 30-18,000 Hz.
Distortion: typically 0.03% THD @ 1 kHz; 0.2% THD @ 20 kHz, @ +18 dBm out.
Attack Time: 1 millisecond.
Release Time: 15 milliseconds.
Power Requirements: 115/230 volts AC 50-60 Hz, 7 watts.



Parametric Equalizer, Model 621A/BR

By combining careful engineering with a proprietary circuit (not the usual "state variable"), Orban/Parasound has created a device which we believe to be the most cost-effective equalizer available today. The 621 Parametric Equalizer offers four sections of peak boost and dip in a non-interacting series configuration. All of the parameters of equalization—center frequency, bandwidth, and amount of equalization—are continuously adjustable so that the sound can be tuned until it's *exactly* right. Each section tunes over a 20:1 frequency range, with wide overlaps in coverage. "Q" is adjustable from a wide, gentle 0.29 to a sharp 3.2, and the peak gain is held constant as the bandwidth is varied. Maximum boost is 16 dB; maximum dip is minus infinity, permitting the 621 to replace tunable notch filters to get rid of hum and such. A sophisticated overload monitor flashes an LED to warn of clipping anywhere in the equalizer. A front panel gain control permits immediate correction of overload and use in line or medium-level circuits. Human engineering has been emphasized, with controls that feel right and respond in a non-touchy way.

The 621 is ideal as a recording studio channel equalizer, for use in cinema dubdown, and for use in sound reinforcement systems, both for wideband equalization and to tune out narrowband ring modes. The 621A is a single channel on a 3½" x 19" panel; the more economical 621B offers two equalizers in the same space.

SPECIFICATIONS
Input: 10,000 ohms unbalanced bridging. 12 dB of gain is available and adjustable.
Output: will drive +20 dBm into 500 ohms or greater, 20-20,000 Hz.
Distortion: under 0.03% THD @ 1 kHz; +20 dBm out.
Noise: −86 dBm, 30-18,000 Hz typ.
Tuning range: 30-15,000 Hz in four overlapping sections.

Stereo Synthesizer, Model 245E

The 245E Stereo Synthesizer represents a substantial price breakthrough and brings the patented O/P stereo synthesis process within reach of small FM stereo broadcasters and recording studios. Yet performance and reliability have been in no way sacrificed.

The O/P Stereo Synthesizer creates pseudo-stereo from mono originals which preserves the spectral balance of the mono original and which adds not the slightest audible noise or distortion. Compatibility is assured by the fact that the sum of the left and right output channels is equal to the mono original. This sum represents the lateral modulation of a stereo disc or the main channel in FM stereo.

Recording studios can use the 245E to reprocess old mono masters into pseudo-stereo, spread strings or horns in mixdown from multitrack masters, stereoize mono echo chambers, and much more. Broadcasters can use it to reduce phase distortion in stereo carts or reel-to-reel tape, replace stereo tape cartridges with higher-performing mono units, and create a "total stereo" format.

The 245E has only three controls affecting the stereo field—two dimension controls (frequency-band pan-pots), and a separation control. Any control can be adjusted without compromising compatibility. Typical adjustment takes only a few seconds for a given piece of program material.

SPECIFICATIONS
Input: 25,000 ohms unbalanced bridging.
Outputs: will drive +20 dBm into 500 ohms or higher, 20-20,000 Hz.
Distortion: typically under 0.1% @ +18 dBm out, 20-20,000 Hz.
Noise: better than −70 dBm, 30-18,000 Hz.
Power requirements: 115/230 volts 50/60 Hz, 3 watts.
Mounting: 1¾" x 19" rack mount.

Stereo Limiter/Compressor, Model 418A

The 418A is a complete limiting system consisting of a pair of ganged broadband compressor/limiters with exceptionally smooth and subtle characteristics, followed by a high frequency limiter with four different time constants, user selectable by means of a front-panel switch. This variable time constant feature is unique in the industry, and permits the characteristics of the high-frequency limiter to be tailored to the recording medium following the limiter, such as disc, cassette, or 7.5 ips tape.

The 418A is incredibly clean, subtle, and natural, which makes it an ideal signal-processing device for any application where the user wants to preserve the essential character of the input sound, while effectively controlling broadband levels and excessive high-frequency energy.

The most obvious recording application of the 418A is as a "mix-down machine," saving time by gain riding and controlling high-frequency energy.

In the broadcast studio use of the 418A with 50 or 37.5 microsecond high-frequency limiting can eliminate distortion on tape cartridge with minimal audible effect upon brightness.

SPECIFICATIONS (applicable to each stereo channel)

Frequency Response: ±0.5 dB, 20-20,000 Hz below high-frequency limiter threshold.

High-frequency Limiter: Controls high-frequency peaks attempting to exceed a threshold defined by a single-time-constant rolloff of 75, 50, 37.5, or 25 microseconds, ±3%. Rolloffs are switch selectable from front panel, and high-frequency limiter is defeated in "flat" position.

Attack Time: approximately 3 milliseconds.

Release Time: varies around 15 milliseconds according to program history.

Broadband Limiter:

Attack Time: 1 to 2 milliseconds.

Release time: Program-controlled by means of quadruple time-constant release time analog processor. Release time may be scaled fast or slow by means of continuously variable Release Time control available to user.

Range of Gain Reduction: greater than 15 dB.

Compression Ratio: in excess of 200:1

Interchannel Tracking: ±1.5 dB max.; ±1 dB typ.

Noise: (dB below limiting threshold at 100 Hz; 20-20,000 Hz bandwidth): -80 dB typ.; -75 dB max.

Total Harmonic Distortion: less than ~~0.5%~~ .05% at 1 kHz with any amount of gain reduction

Power Requirement: 115/230 VAC ±10%; 50-60 Hz, approximately 6 watts. U-ground power cord attached.

Dimensions: 19" (48.3 cm) wide x 3.5" (8.9 cm) high x 10" (25.4 cm) deep.

Announcing the Reverb Industry's New Price/Performance Leader:
The Orban/Parasound 111B Dual Spring Reverb

THE REVERB WITH BREEDING

The new 111B Dual Reverb has a distinguished pedigree. Over the last six years, hundreds of its ancestors have found their way into recording studios, schools and colleges, electronic music studios, radio stations, traveling shows, and sound reinforcement systems. When we introduced the first Orban/Parasound Reverb in 1970, it immediately caught on, and is still widely regarded as the industry's price/performance leader. Since then, user feedback and manufacturing experience have enabled us to continuously refine the product, resulting in reverbs with excellent sound quality, easy installation, and an outstanding reliability record.

Now Orban/Parasound puts that experience to work and introduces the latest purebred generation: the Model 111B. Responding to the need for an affordable dual-channel reverb with Orban/Parasound quality and reliability, we now offer a dual-channel reverb that costs no more than its popular single-channel predecessor. Economical packaging plus increased manufacturing efficiency was the key to this feat: the 111B contains both electronics and spring delay lines in the same package, and is far easier to make.

FEATURES

We have retained all of the desirable electronic features of our earlier models and added useful new equalization facilities.

- LOW FLUTTER is assured by the use of four springs per channel. Compared to the low-priced, consumer-grade competition, the sound is much smoother and better integrated.
- SIGNAL-TO-NOISE ratio is optimized by the use of a special low-noise IC preamp, by added mu-metal hum shielding around the spring pickup coils, and by a specially designed limiter circuit which allows the user to utilize the full headroom available in the system without concern for potential overload and distortion.
- "TWANG" AND "BOING" NOISES are greatly reduced by means of this exclusive limiter when operated in the "floating threshold" mode. This circuit serves to eliminate sharp, sudden changes of level regardless of the average level. For the first time, it is practical to reverberate instruments like drums and guitar with a low-cost spring system—the floating threshold limiter makes sure that "twangs" are ducked out and masked by the direct sound mixed with the echo return.
- FREQUENCY RESPONSE is optimized by means of elaborate fixed equalization in the reverb circuitry. In addition, a bass control and a quasi-parametric midrange equalizer permit the user to tailor the sound to his exact requirements. The versatile midrange equalizer permits continuously variable adjustment of the **frequency** of maximum equalization (1.5 to 5.5 kHz), the **amount** of equalization (up to ±12 db), and the **bandwidth** (Q's from 0.5 to 5.0). We call it "quasi"-parametric because operating the **tuning** control causes the bandwidth to change (unlike our full-parametric equalizer, in which the controls are totally non-interacting).

INSTALLATION AND APPLICATIONS

The versatility of the quasi-parametric midrange equalizer complements the simple, inflexible equalization found on many low-cost mixers, and permits the owners of such systems to get the exact reverb sound they want. In addition, the 111B has very high basic input sensitivity (-30 dBm), and a front-panel input gain control makes it usable with all mixers—even those with unusually low-level echo sends.

This versatility is complemented by a fully-professional 0 dBm balanced, floating output. This arrangement vastly improves immunity to RF interference, and assures easy integration into any system without introducing ground loops and hum.

Because the spring delay lines are located in the same chassis as the electronics it may be inconvenient to install the reverb away from hum fields. Therefore, considerable attention has been given to hum-shielding the 111B. The spring pickup coils are protected with added mu-metal shields and the steel case of the 111B provides increased protection.

The 111B includes its own AC power supply, and features a 115/230 volt 50-60 Hz power transformer, making it at home anywhere in the world.

If the Model 111B is used with a recording studio-type mixing console, it is connected to the echo send and echo return busses in the customary manner. For users who do not have such a console available,

the simple addition of two external resistors as described in the manual will enable the mixing to take place. The amount of echo is then adjusted by the front panel Output Atten control.

WARRANTY AND SERVICE

Orban/Parasound's use of top-quality parts, industrial-quality construction, and special test and burn-in procedures make it highly unlikely that a user will ever experience any trouble with a 111B reverb. However, it's nice to know that the 111B is protected by a one-year parts and labor warranty, and that Orban/Parasound is well-known for its fast, reasonable-cost service. Installation and "in-house" troubleshooting are made easy by an outstanding instruction manual which includes detailed installation instructions, performance verification tests, circuit description, troubleshooting hints, alignment instructions, and schematic diagram, as well as the usual operator's instructions.

When shopping for a reverb, always consider parts quality, workmanship, reliability, warranty, service, and manual in addition to the obvious features. While the Orban/Parasound 111B's features are outstanding, its true value lies in assuring **all** aspects of owner satisfaction. Compare before you buy!

SPECIFICATIONS

Number of Channels: two, entirely independent except for power supply.

Reverberation Element: four-spring array (per channel).

Frequency Response: See Fig. 1.

Decay Time: See Fig. 1.

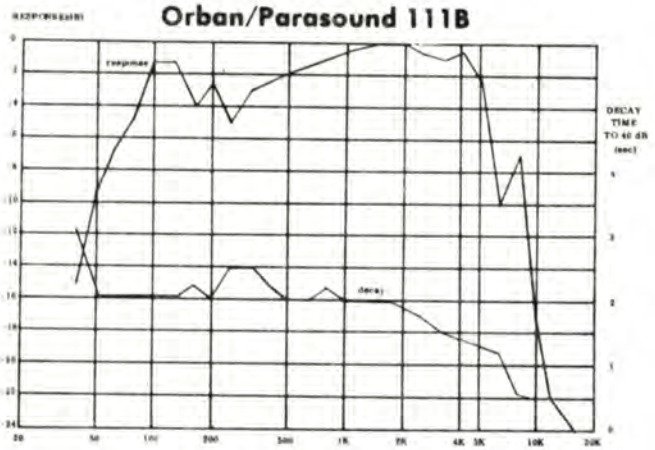


FIG. 1

Delay Time: Approximately 30 milliseconds between direct sound and first reflection.

Input Level: will accept input levels between -30 and +4 dBm. Audio-taper **input level** attenuator available on the front panel. Limiter will control overloads up to 25 dB above limiting threshold before clipping and distortion occur.

Input Impedance: 10,000 ohms, unbalanced. Source impedance non-critical.

Output Level: nominally 0 dBm, adjustable by front panel control, +20 dBm clipping level allows adequate headroom for equalization and spring resonances.

Output Impedance: 600 ohms; transformer-coupled; balanced and floating.

Limiter Attack Time: less than 100 microseconds.

Limiter Release Time: Dual time-constant circuit adjusts release time as a function of the program.

Compression Ratio (**FIXED** Mode): greater than 10:1.

Limiter-Induced Harmonic Distortion (@5 kHz): less than 0.2%.

Limiter Element: Junction Field-Effect Transistor.

Bass Equalizer:
- Type: Shelving
- Turnover Frequency: 500 Hz.
- Equalization Range: ±12 db, reciprocal.

Midrange Equalizer:
- Type: quasi-parametric peaking.
- Peaking Frequency: continuously variable, 1.5 to 5.5 kHz.
- Equalization Range: continuously variable ±12 dB, reciprocal.
- Bandwidth Range: can adjust "Q" from 0.5 to 5.0 with any setting of TUNING control.
- Control Interaction: TUNING and EQUALIZATION controls also vary "Q." Otherwise, all controls are independent and non-interacting.

Weighted System Signal/Noise Ratio: better than 76 dB.

Indicators:
- POWER ON pilot lamp.
- LED automatically lights whenever limiter is in **FIXED** mode (one per channel).

Audio Connector: Jones 140-Y barrier strip (#5 screw).

Power Connector: "U-Ground" power cord to United States standards.

Power Requirements: 115/230 volt AC ±10%, 50-60 Hz, approximately 10 watts.

Dimensions: 19" (48.3 cm) wide x 3½" (8.9 cm) high x 12" (30.5 cm) deep.

Shipping Weight: 10 pounds (4.54 kg).

Contact:

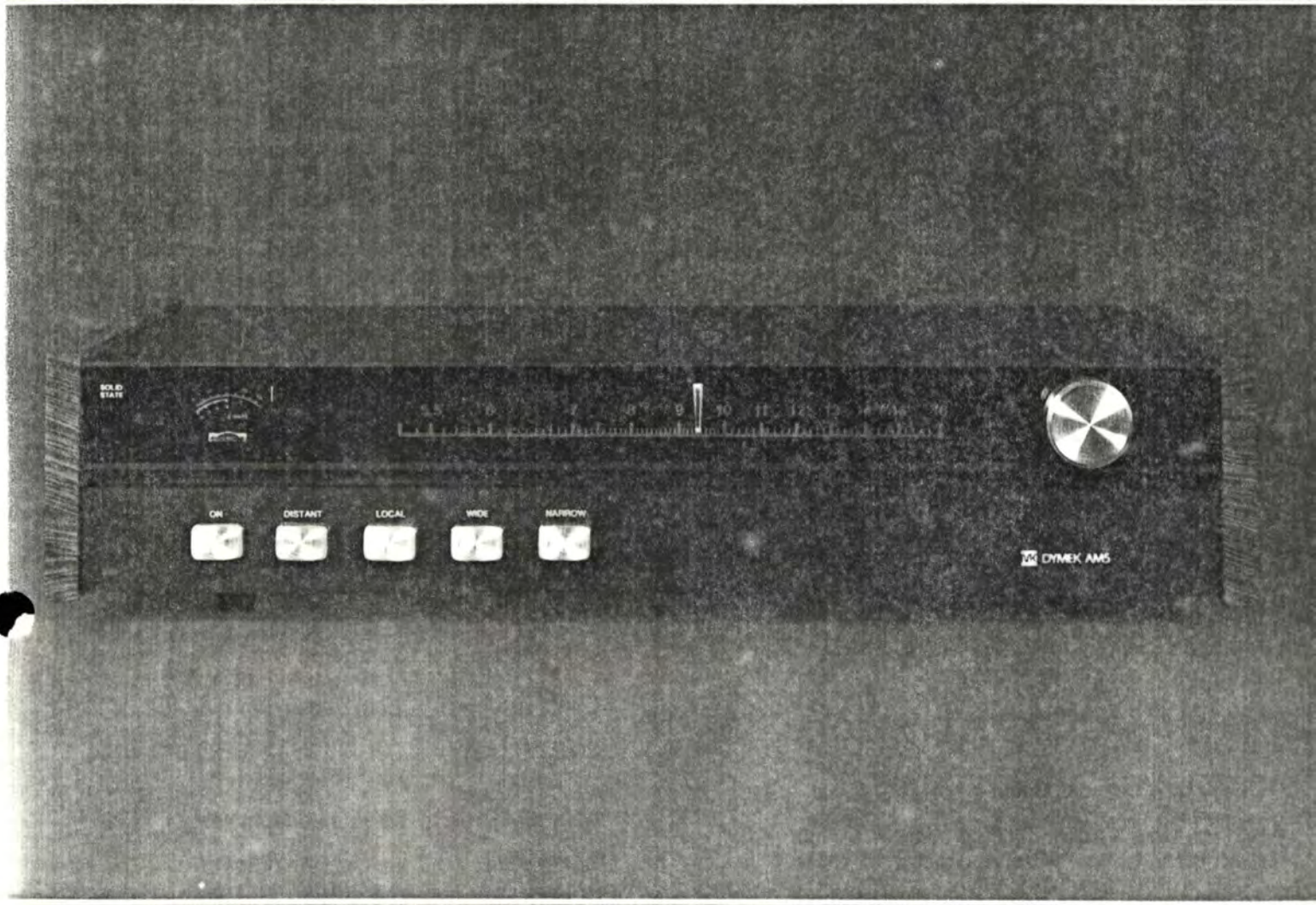
orban/parasound

680 Beach Street
San Francisco, CA. 94109
(415) 673-4544

PRELIMINARY SALES INFORMATION

McKay Dymek® AM5 Tuner

he most advanced *professional quality* solid state AM tuner with xtremely low distortion, excellent sensitivity and a wide audio range.



he AM5 is a high fidelity AM tuner designed or the professional studio as well as any igh fidelity home sound system. The crisp ow profile cabinet in teak and black makes ne AM5 an attractive addition to any system. . rack mounted AM5 makes a superb nexpensive AM station monitor.

emarkable selectivity is achieved with two leven element ceramic filters. A 10 kHz histle filter eliminates most bothersome ise common to AM listening. Frequency Response is 15 to 10,000 Hz. Distortion is low less than 1%. 3μV of sensitivity helps pull in those distant stations; lets you take advantage of AM's natural long range capabilities - hear stations which were previously unlistenable. Wide and narrow bandwidth selectors assure optimum local and distant reception. Illuminated tuning meter. One year guarantee

A Dymek AM5 tuner in conjunction with a Dymek DA5 AM antenna represents the very best in AM listening. Try it!

McKay Dymek® Your AM Headquarters

McKay Dymek®

AM 5 Tuner

Features

The McKay Dymek AM 5 TUNER is an all solid state high fidelity AM tuner combining extremely low distortion (less than 1%) with excellent sensitivity, selectivity, and a wide audio range. The AM 5 is compatible with professional studio equipment as well as high fidelity "home" sound systems. The low profile black and teak cabinetry makes the AM 5 an attractive addition to any system or decor.

Several options make the AM 5 an excellent AM station monitor. 150 or 600 Ohm audio output and 19" rack construction are available. Details of other options on request. Broadcasters all over the country report excellent results using Dymek Equipment as low cost monitors. As one station executive wrote, after using the Dymek as the standard, "our signal was as close to 'FM on the AM band' as we could get".

Ultimate selectivity is achieved by the use of two eleven-element ceramic filters. A factory adjusted 10 kHz whistle filter eliminates bothersome heterodynes. This filter adjustment may be modified at the factory for use in certain European countries. Optimum reception from local or distant stations is assured by a choice of narrow or wide bandwidth selections at the front panel. To prevent an overload of the "frontend" that may be caused by strong local stations, an attenuator in the antenna circuit has been included. An illuminated, easy-to-read tuning meter aids in ease of tuning and is standard equipment on all Dymek tuners.

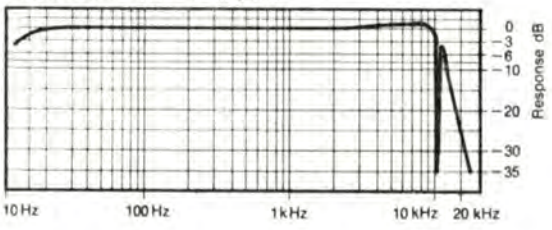
McKay Dymek Company guarantees your satisfaction, or you receive your money back. The AM 5 carries a one year parts and labor warranty as does all Dymek equipment. Mastercharge, BankAmericard, money order, or your check are all acceptable. Or you may wish to inquire about our exclusive DYMEK RENTAL PLAN. For more information, placing orders, other equipment, or more technical details, **Call Our Toll Free Number** between 8:30 AM and 5 PM Pacific time, Monday thru Friday:

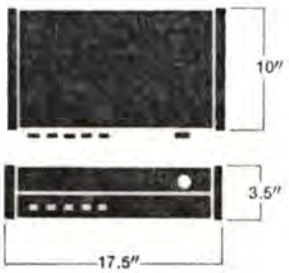
NATIONWIDE: 800/854-7769
CALIFORNIA: 800/472-1783

Specifications

Tuning Range:	530-1605 kHz
Sensitivity:	3 μV for more than 10 dB signal to noise ratio.
AGC Characteristic:	Less than 6 dB output variation for an input level change of 10 μV to 10 mV.
Bandwidth: −3 dB RF	Narrow: 6 kHz Wide: 20 kHz
I.F. Rejection:	45 dB
Audio Frequency Response:	−3 dB @ 15 Hz & 10 kHz in wide mode operation.
Audio Whistle Filter:	10 kHz rejection, 30 dB fixed output filter.
Distortion:	1 kHz @ 30% modulation: 0.5% 1 kHz @ 50% modulation: 1.0% 1 kHz @ 80% modulation: 1.5% (1 mv @ 1 MHz input, wide & distant mode selected)
Audio Output:	Standard: 1V RMS −5K output Optional: +2 dBm, 600 or 150 Ohm balanced.
Line Voltage:	110-120 VAC or 220-240 VAC 50-60 Hz.
Weight:	12 pounds (5.50 kg)
Dimensions:	width 17.5" (43cm) depth 10.0" (25cm) height 3.5" (9cm)

AM 5 Total Tuner Modulation Response





AM 5 with rack mount hardware installed.

Note: Price, specifications and design subject to possible modification without notice.

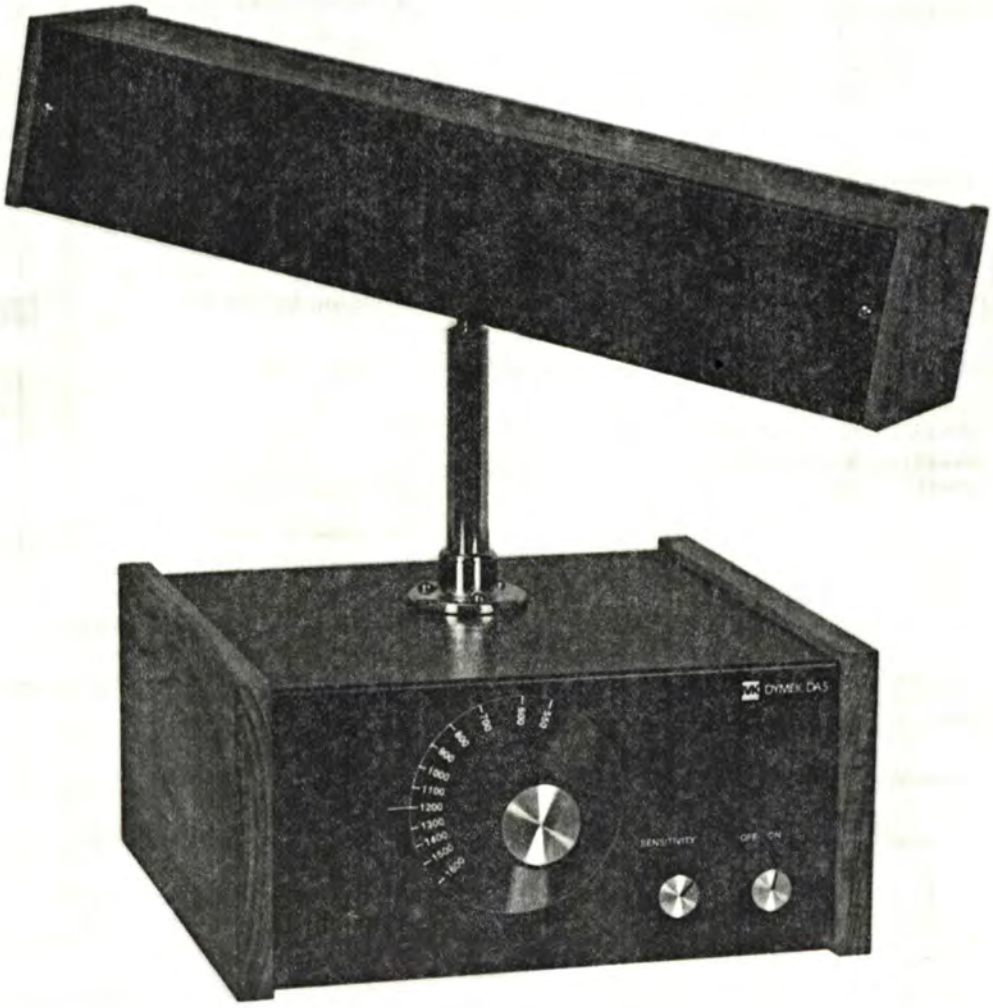
Toll free telephone:

If you have questions, don't hesitate to call.
We have toll free telephone lines, so there's no cost to you.

Nationwide 800/854-7769
California 800/472-1783

McKay Dymek Company
675 North Park Avenue,
P.O. Box 2100
Pomona, California 91766

A shielded ferrite rod directional AM antenna with frequency and sensitivity controls



The DA 5 is a shielded ferrite rod directional antenna containing a FET two stage amplifier with frequency and sensitivity controls. The shielded ferrite rod can be rotated and tilted to null out undesirable signals. A frequency control permits precise selection of incoming signals while a sensitivity control provides optimum reception of distant stations.

This state of the art antenna is designed to eliminate interference and background noise commonly prevalent in AM reception, plus it will greatly enhance reception in areas where AM signals are marginal.

The McKay Dymek DA 5 antenna is compact, weighs less than seven pounds, and is finished in real teak wood and textured black enamel making it an attractive addition to any audio system.

To truly appreciate high fidelity AM we recommend our AM 5 tuner for use with the DA 5 antenna. "You will hear AM as you've never heard it before."

McKay Dymek®

DA5 Antenna

Features

The DA 5 antenna makes a startling, and sometimes unexpected, difference in the enjoyment of AM radio. It increases audio quality by reducing electrical interference (such as that from TV, lights, and appliances) well below audible levels. It seeks out and strengthens weak signals for clean, even reception.

The DA 5 is manufactured in the United States by the leading manufacturer of high fidelity AM receiving equipment. Extraordinary care is taken in design and construction to provide the listener with the finest AM receiving instrument available.

Dymek antennas are warranted, including parts and labor, for one full year from date of purchase.

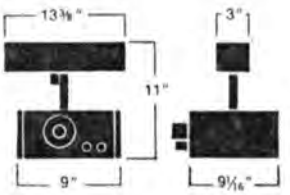
Providing the dedicated AM listener his greatest opportunity to hear everything he tunes for on the AM band, is the single dedication of the Dymek Company.

McKay Dymek, being a consumer oriented company, offers many alternate plans to enable you to easily own any of our fine products.

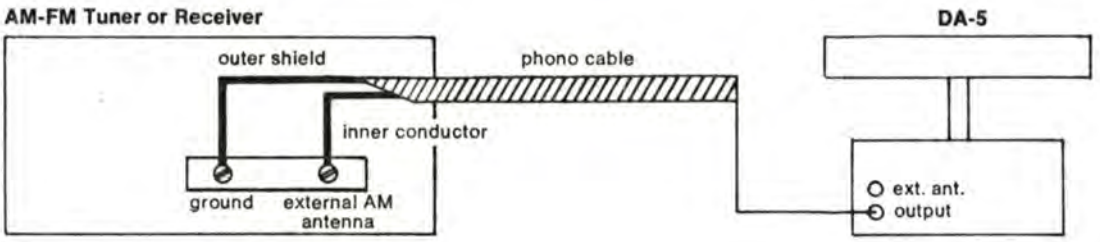
Complete information of these various buying plans, technical information, and placement of orders can be obtained by calling our toll free numbers, 8:30 a.m. to 5:30 p.m. Pacific time, Monday through Friday.

Specifications

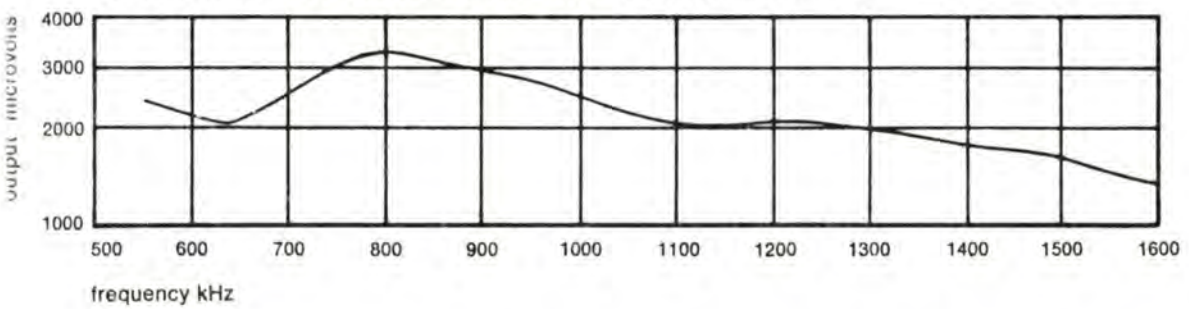
Frequency Range:	540 to 1600kHz. Standard AM broadcast band.
Output Impedance:	50 ohms
Required Power:	110-120 VAC or 220-240 VAC 50 to 60Hz Switch selectable on rear panel 2 watts
Sensitivity Adjustment Range:	40dB
Type:	Tuned preamplifier with shielded ferrite loop.
Shipping Weight:	8 lbs. (3.6Kg)
Net Weight:	6¾ lbs. (3.0Kg)
Dimensions:	13⅜" (35cm) Wide 9 1/16" (23cm) Deep 11" (28cm) High
Ferrite Rod:	Length 12" (30.5cm) Diameter ¾" (1.9cm) Weight 14.3 oz. (400grams)



Basic Installation



Output delivered to a 50 Ohm load while in a 1000 Microvolt per meter field



Toll free telephone:

If you have questions, don't hesitate to call.
We have toll free telephone lines, so there's no cost to you.

Nationwide 800/854-7769
California 800/472-1783

McKay Dymek Company
675 North Park Avenue,
P.O. Box 2100
Pomona, California 91766

PRICE LISTS

McCurdy

price list
effective
january 1977

SUPERSEDES PRICE LIST OF JANUARY 1976

model	description	unit price
	TURNTABLES AND DISC REPRODUCERS	
SP10 MKII	Technics Direct Drive Turntable with servo speed control system; 33-1/3, 45, ARPM	$ 700.00
CH12A	12" Transcription Turntable; 3-speed (Rim drive)	435.00
SS3157	Monaural Disc Reproducer, with cabinet, electronics and CH12A Turntable (less End Bells)	1,865.00
SS3159A	Stereo Disc Reproducer with cabinet, electronics and SP10MKII Turntable (less End Bells)	2,585.00
	TURNTABLE ACCESSORIES	
IW-CH12	Idler Wheel for CH12A	16.00
DB-CH14	Drive Belt for CH14	16.00
AT235	Equalized Phono Preamplifier –20 dBm to +8 dBm nominal output	193.00
SA236-P1	Consists of Housing with Power Supply and one AT235 Equalized Phono Preamplifier; output level –20 dBm to +8 dBm nominal (selectable)	352.00
SA236-P2	Consists of Housing with Power Supply and two AT235 Equalized Phono Preamplifiers; output level –20 dBm to +8 dBm nominal (selectable)	544.00
AM275	3 Watt Cue Amplifier for SS3157 and SS3159A Turntable Assembly	150.00
TM40-12FR	12" Felt/Rubber mat for CH12A and SP10 MKII Turntables	17.00
SA10048	End Bell (2 req'd) for Disc Reproducers	30.00
SA10545	45 RPM Adapter for CH12A and SP10 MKII Turntables	1.00
303	12" Tone Arm	85.00
75932	Head Shell for 303 Tone Arm	14.50
75961	Weight Kit for 303 Tone Arm	3.48
500AL	Stanton Cartridge	15.00
D5107AL	Stylus for 500AL	8.00
681EEE	Stanton Cartridge	50.00
D6800EEE	Stylus for 681EEE	25.00
	AMPLIFIERS	
AT249	Distribution Amplifier (six outputs)	193.00
AT265	3-Watt Mini-Cue Amplifier/Speaker; rack mounted	204.00
AT284	Console Mic Preamplifier input module (–60 dBm, 150 ohms)	100.00
AT284A	Console Mic Preamplifier input module (–70 dBm, 150 ohms)	105.00
AT285	Console Matching input module (–20 dBm, 600 ohms)	100.00
AT286	Console Bridging input module (0 dBm, 20K ohms)	100.00
CP287	Console Mic Preamplifier input module with AGC	165.00
AT288	Console Bridging input module (+8 dBm, 40K ohms)	122.00
AT291	Console program module	165.00
AT297	Console program module	195.00
AT299	Console program module	215.00
AT310	Distribution Amplifier (twenty-two outputs, max.)	204.00
RG311	Distribution Amplifier (AT310) with Remote Gain	303.00

model	description	unit price
	MONITOR AMPLIFIERS	
D60	Dual Channel Monitor Amplifier (30 watts per channel)	299.00
D150A	Dual Channel Monitor Amplifier (75 watts per channel)	499.00
DC-300A	Dual Channel Monitor Amplifier (150 watts per channel)	849.00
AM415	10 watt self powered Amplifier	149.00
AM481	15 watt Power Amplifier	193.00
RG482	15 watt Power Amplifier with Remote Gain	303.00
AM483	60 watt self powered Amplifier	523.00
MT483-1	Matching input Transformer for the AM483	50.00
BT483-1A	Bridging input Transformer for the AM483	50.00
RG483-2A	Remote Gain card for the AM483	110.00
	POWER SUPPLIES	
PS814	Bipolar 15 Volt, 150 mA (FR904) frame)	193.00
PS824R	Linear 24 Volt, 500 mA regulated (FR904 frame)	138.00
PS848B	Linear 48 Volt, 1 Amp. regulated, linear 24 Volt, 250 mA, regulated (FR904 frame)	303.00
PS849	Linear 48 Volt, 1 Amp. unregulated (FR904 frame)	193.00
PS851	Linear 5 Volt, 6 Amp. regulated (906 frame)	P.O.R.
PS852	Bipolar 15 Volt, 6 Amp. (FR906 frame)	303.00
PS853	Bipolar 15 Volt, 3 Amp. (FR905 frame)	358.00
PS854	Bipolar 25 Volt, 3 Amp. (FR905 frame)	435.00
PS855	Bipolar 25 Volt, 2 Amp. (FR906 frame)	385.00
PS856	Linear 24 Volt, 4 Amp. (FR906 frame)	385.00
PS857	Linear 24 Volt, 6 Amp. (FR905 frame)	495.00
PS858	Linear 24 Volt, 1 Amp. (FR906 frame)	P.O.R.
PS859	Linear 48 Volt, 2 Amp. regulated, 24 Volt, 1 Amp. regulated (FR905 frame)	435.00
PS876A/48	Linear 48 Volt, 1 Amp. regulated; linear 24 Volt, 250 mA. regulated (FR903 frame)	292.00
	INTERCOM SYSTEMS	
CS9100	10 x 10 Balanced Intercom System c/w all input amplifiers, output amplifiers, crosspoints and power supply. One frame 5¼".	4,950.00
CS9200	20 x 20 Balanced Intercom System c/w all input amplifiers, output amplifiers, crosspoints and power supplies. Three frames (15¾" total)	13,950.00
CS9300	30 x 30 Balanced Intercom System c/w all input amplifiers, output amplifiers, crosspoints and power supplies.	P.O.R

model	description	unit price
	INTERCOM ACCESSORIES	
AP176	Input amplifier with no crosspoints	231.00
AP276	Input amplifier with all crosspoints	253.00
XP177	No preamp, otherwise same as AP176	110.00
XP277	No preamp, otherwise same as AP276	132.00
AM278	Two output amps., +18 dBm only	110.00
AM478T	Two output amps., +18 dBm and 3 watts/8 ohms	215.00
PS852	Power supply ± 15 Volts	303.00
CD4016	Dual x-pt chip	4.00
	AUDIO DISTRIBUTION SYSTEMS	
DA503	Audio Distribution Assembly c/w – Six amplifiers with six outputs each – Power supply – Prewired and tested in 3½" frame	1,568.00
DA504	Audio Distribution Assembly c/w – Six amplifier with max. 22 outputs each – Power supply – Prewired and tested in 5¼" frame	1,788.00
	AUDIO CONSOLES	
SS4312	12-mixer Dual Channel Monophonic Console (desk mounting)	8,250.00
SS4386A	6-mixer Single Channel Monophonic Console (desk mounting)	4,500.00
SS4388A	8-mixer Single Channel Monophonic Console (desk mounting)	3,975.00
SS7400	12-mixer Dual Channel Monophonic Console (desk mounting)	9,400.00
SS7500-C8	8-mixer Stereo Console (desk mounting)	10,000.00
SS7500-C10	10-mixer Stereo Console (desk mounting)	10,800.00
SS7800	20-mixer, 4 Submaster, Dual Channel Production Console (free standing)	27,000.00
SS8400	12-mixer Dual Channel Modular Monophonic Console (free standing)	9,600.00
SS8500	10-mixer Modular Stereo Console (free standing)	11,000.00
	ACCESSORIES FOR DESK-MOUNTING CONSOLES	
RC700	Dual Pedestal Console Mounting Desk with Arborite Top and Recessed Control Tray	1,000.00
DC8481	Single Push Button Remote 'START' Switch for Console Desk C/W Panel	40.00
DC8481L	Single Alternate-Action Push Button Remote 'START' Switch for Console Desk C/W Panel	40.00
DC8482	Two Push Button Remote 'START-STOP' Switch for Console Desk C/W Panel	80.00
DC8483	Three Push Button Remote Control Switch for Console Desk C/W Panel	105.00
DC8485	Five Push Button Remote Control Switch for Console Desk C/W Panel	175.00

model	description	unit price
	AMPLIFIER FRAMES AND ACCESSORIES	
FR903	Mounting Frame (less connectors) for PS876A/48 3½" Rack Space	105.00
FR950-1	Frame Receptacle Kit for above	5.00
FR904	Universal Card Frame (less connectors) 3½" Rack Space	105.00
FR904-1	15-pin Receptacle Kit	4.00
FR904-2	30-pin Receptacle Kit	5.00
FR904-3	16-pin Receptacle Kit for PS848B (including connector cover)	17.00
EM14	Extender Module for FR904 Frame	50.00
FR905	Mounting Frame (extrusion modules) 5¼" Rack Space	125.00
FR905-1	Extender Card for FR905	50.00
FR906	Mounting Frame (universal card frame) 5¼" Rack Space	125.00
FR906-1	Extender Card for FR906	50.00
	JACKFIELDS AND PATCH CORDS	
SA10900-S	Prewired Shielded Jackfield (Positions 1,2,3, & 4)	225.00
SA10802	Unwired Jackfield	100.00
SA10131	1 ft. Patch Cord	10.00
SA10132	2 ft. Patch Cord	11.00
SA10133	3 ft. Patch Cord	12.00
SA10134	4 ft. Patch Cord	13.00
SA10136	6 ft. Patch Cord	14.00
	MODULAR ENCLOSURES	
SA10040	Pedestal	165.00
SA10041	Tape Machine Adapter Frame	110.00
SA10045	Turntable Mounting Board	60.00
SA10045-1	Turntable Arm Guard	12.00
SA10046	Blank Top Board	50.00
SA10047	Removable Door	35.00
SA10048	End Bell	30.00
SA10080	Jumbo Pedestal	225.00
SA10086	Blank Top Board	60.00
SA10087	Removable Door	45.00
SA10088	End Bell	40.00
SA10030	R.P. Housing for SA10080 series	200.00
SA10030-1	3D Housing for SA10080 series	150.00
SA10043	Desk Mounting Cartridge-Tape Machine Housing	220.00
SA10044	Floor Mounting Cartridge-Tape Machine Housing c/w rear door	300.00
SA10044-1	Rack Mounting Frame for 2 — 3D series machine	60.00
SA10044-2	Rack Mounting Frame for RP series machine or 2 — SP series machine	50.00
SA10044-3	Blank Panel to cover area when only 1 — 3D machine is housed in the SA10044-1	11.00
SA10044-4	Blank Panel to cover area when only 1 — SP machine is housed in the SA10044-2	11.00
SA10044-8	Blank Panel to cover area above WRA series machine when mounted in SA10044-2 beside the 3D machine	10.00

model	description	unit price
	EQUIPMENT RACKS	
SA10410	22" Deep Equipment Rack c/w AC plugmold — duplex box	300.00
SA10411	Side Panel for 22" Equipment Rack	45.00
SA10412	Door Assembly (front or rear) for 22" and 25½" Racks	80.00
SA10413	Top for 22" Equipment Rack	18.00
SA10414	Plugmold for 22" or 25½" deep Rack (installed)	40.00
SA10420	25½" Deep Equipment Rack c/w AC plugmold — duplex box	325.00
SA10421	Side Panel for 25½" Equipment Rack	50.00
SA10423	Top for 25½" Equipment Rack	20.00
MR1925-4	Mounting Angles for above Racks	45.00
	BLANK PANELS	
SA11021	1¾" Blank Panel	6.00
SA11022	3½" Blank Panel	7.00
SA11023	5¼" Blank Panel	8.00
SA11024	7" Blank Panel	9.00
SA11025	8¾" Blank Panel	10.00
SA11026	10½" Blank Panel	11.00
SA11027	12¼" Blank Panel	12.00
12-107	7" Deep recess brkt. for above panels	Set 10.00
12-108	5¼" Deep recess brkt. for above panels	Set 9.00
12-109	3½" Deep recess brkt. for above panels	Set 8.00
	PROFESSIONAL SPEAKER SYSTEMS	
4311	Control Room Monitor, Studio Gray	324.00
4311WX	Control Room Monitor, Oiled Walnut	333.00
4315	Compact Studio Monitor, Studio Gray, 4-way	771.00
4315WX	Compact Studio Monitor, Oiled Walnut, 4-way	783.00
4331A	Studio Monitor, Studio Gray, 2-way	768.00
4331A-WX	Studio Monitor, Oiled Walnut, 2-way	804.00
LSA609	10-Watt Speaker/Amplifier Assembly	300.00

model	description	unit price
	MISCELLANEOUS	
111B	Orban/Parasound Dual Channel Reverb Chamber	695.00
SA137A	Counter, basic chassis only	500.00
SA137A-01	Display Panel c/w 7 ft. cable (vu size)	300.00
SA137A-02	Display Panel C/W 7 Ft. Cable (Spkr. Size)	300.00
SA137A-07	Counter Control Panel (desk mounting)	200.00
SA137A-06	Counter Control Panel (console mounting)	200.00
SA138A	Clock Main Chassis	500.00
SA138A-2	Display Panel for Clock Main Chassis	300.00
SA138A-01	Display Panel c/w 7 ft. cable (vu size)	300.00
SA138A-02	Display Panel c/w 7 ft. cable (spkr. size)	300.00
SA141	Tape Input Swr. with line output and Cue speaker	545.00
EQ155	Variable Equalizer	400.00
OT157	Variable Oscillator	350.00
CP159	Compressor/Limiter	550.00
4930	Can of MRI-Blue Touch-up Paint	6.00
SA14021	Extended Range Audio Level Meter	575.00
408-2	L.D.R. Tube for AM408	40.00
EM7800-1	Extender Module for 77 & 7800 Consoles	50.00
3002	MRI Matching Transformer 600/600, 150/150	40.00
842	Hammond Bridging Transformer (20K)	40.00
ARISTOCART	Alignment Tape	35.00
MRI-1007	1500 MFD, 75V Capacitor	5.00
5522	Schadow 30 Volt, 40 mA. Lamp	1.50
MRI-502-M	P & G Mono Attendator	175.00
MRI-502-S	P & G Stereo Attendator	250.00
SA139	Voice Operated Relay	100.00
PJ660-5	ADC Xmas Tree Terminal Block	15.00

State and Local Taxes excluded.

Prices shown F.O.B. Plant

Shipping by Surface Freight unless otherwise specified.

Prices Subject to Change without notice.

McCURDY

McCURDY RADIO INDUSTRIES INC.

HEAD OFFICE: 1711 CARMEN DRIVE, ELK GROVE VILLAGE, CHICAGO, ILL. 60007 PHONE: (312) 640-7077

EASTERN OFFICES: 1051 CLINTON ST., BUFFALO, N.Y. 14206 PHONE: (716) 854-6700 TWX: (610) 492-1373

223 W. SADDLE RIVER ROAD, SADDLE RIVER, N.J. 07458 PHONE: (201) 327-0750 TWX: (710) 988-2254

leitch broadcast products ltd

705 Progress Avenue, Scarborough,
Ontario, Canada, M1H 2X1 (416) 438-5060

PRECISION IMPULSE CLOCKS

PRICE LIST

(U.S.)

CLK-1600	Illuminated 16" Impulse Clock	U.S.	$ 375.00
CLK-1200	Illuminated 12" Impulse Clock	"	$ 280.00
CLK-800	Illuminated 8" Impulse Clock	"	$ 275.00
CLK-550	Non-illuminated 5½" Desk Top Impulse Clock	"	$ 230.00
CLK-551	Non-illuminated 5½" Panel Mount Impulse Clock	"	$ 175.00

OPTIONS:

ID-1210	Internal Impulse Driver	U.S.	$ 80.00
ID-1250	Impulse Driver	"	$ 950.00
RM-551	Rack Mount Panel	"	$ 35.00

N.B.: 8", 12" & 16" Clocks available in non-illuminated version :
List less $ 30.00

July 1/77

STANTON MAGNETICS INCORPORATED
Terminal Drive, Plainview, New York 11803
212-445-0554 • 516-681-0200
TWX-510 221 1845 • HI FI INTL PLVW

PROFESSIONAL PRICE LIST
SEPTEMBER 1, 1976

CARTRIDGES

CALIBRATION STANDARD (with "Longhair" Brush*)

Model	Cartridge Color	Stylus Model	Tracking Force	Suggested List	Professional Net
681EEE	Silver	D6800EEE	¾ to 1½ grams	90.00	54.00
681EE	Silver	D6800EE	¾ to 1½ grams	78.00	46.80
681SE	Silver	D6800SE	2 to 4 grams	72.00	43.20
681A	Silver	D6807A	1½ to 3 grams	72.00	43.20
681AMC	Silver	D6872AMC	3 to 7 grams	72.00	43.20

680 SERIES

Model	Cartridge Color	Stylus Model	Tracking Force	Suggested List	Professional Net
680EE	Silver	D680	¾ to 1½ grams	62.50	28.20
680EL**	Silver	D6800EL	2 to 5 grams	90.00	47.00

**Includes Extra Stylus

BROADCAST STANDARD

Model	Cartridge Color	Stylus Model	Tracking Force	Suggested List	Professional Net
500EE	Gold	D5100EE	1 to 2 grams	40.00	20.00
500E	Gold	D5100E	2 to 5 grams	35.00	17.50
500AA	Gold	D5105AA	1 to 2½ grams	35.00	17.50
500A	Gold	D5107A	2 to 5 grams	30.00	15.00
500AL	Gold	D5107AL	3 to 7 grams	30.00	15.00

BROADCAST STANDARD (High Performance)

Model	Cartridge Color	Stylus Model	Tracking Force	Suggested List	Professional Net
600EE	Gold	D6003EE	1 to 2 grams	55.00	25.96
600E	Gold	D6004E	1½ to 3 grams	50.00	23.50
600A	Gold	D6071A	2 to 4 grams	45.00	20.97

FOUR CHANNEL DISCRETE (with "Longhair" Brush*)

Model	Cartridge Color	Stylus Model	Tracking Force	Suggested List	Professional Net
780/4DQ	Silver	4/DQ	2 grams nominal	125.00	75.00
780/Q	Silver	Q	2 grams nominal	75.00	45.00

*The "Longhair" brush is easily removable for Broadcast and Professional applications which require precise cueing.

Replacement Styli

681 SERIES (with "Longhair" Brush)

Model	Stylus Color	Radius	Tracking Force	Suggested List	Professional Net
D6800EEE	BLACK w/Silver 'EEE'	0.2 x 0.7 Mil Elliptical	¾ to 1½ grams	45.00	27.00
D6800EE	BLACK w/Silver Ellipse	0.2 x 0.7 Mil Elliptical	¾ to 1½ grams	39.00	23.40
D6800SE	BLACK w/Red Ellipse	0.4 x 0.7 Mil Elliptical	2 to 4 grams	32.40	19.40
D6807A	BLACK w/Silver Dot	0.7 Mil	1½ to 3 grams	32.40	19.40
D6872AMC	BLACK w/Aqua 'AMC'	0.7 Mil	3 to 7 grams	32.40	19.40
*D6810	BLACK w/Green Dot	1.0 Mil	2 to 5 grams	30.00	18.00
**D6827	BLACK w/Blue Dot	2.7 Mil	2 to 7 grams	30.00	18.00

680 SERIES

D680	BLACK	0.3 x 0.7 Mil Elliptical	¾ to 1½ grams	31.25	18.75
D6800EL	BLACK	0.4 x 0.7 Mil Elliptical	2 to 5 grams	30.00	18.00
***DP6800EL	BLACK	0.4 x 0.7 Mil Elliptical	2 to 5 grams	81.00	48.60

***(Disco Pack—includes 3 styli in each pack)

500 SERIES

D5100EE	BLACK w/Gold Dot	0.3 x 0.7 Mil Elliptical	1 to 2 grams	25.00	15.00
D5100E	BLACK w/Red Dot	0.4 x 0.7 Mil Elliptical	2 to 5 grams	20.00	12.00
D5105AA	BLACK w/Gray Dot	0.5 Mil	1 to 2½ grams	18.00	10.80
D5107A	BLACK w/Yellow Dot	0.7 Mil	2 to 5 grams	12.00	7.20
D5107AL	BLACK w/Aqua Dot	0.7 Mil	3 to 7 grams	12.00	7.20
*D5110	BLACK w/White Dot	1.0 Mil	2 to 5 grams	12.00	7.20
**D5127	BLACK w/Blue Dot	2.7 Mil	3 to 7 grams	12.00	7.20

600 SERIES

D6003EE	BLACK	0.3 x 0.7 Mil Elliptical	1 to 2 grams	27.50	16.50
D6004E	BLACK	0.4 x 0.7 Mil Elliptical	1½ to 3 grams	25.00	15.00
D6071A	BLACK	0.7 Mil	2 to 4 grams	20.25	12.15
*D6010	BLACK	1.0 Mil	2 to 5 grams	18.00	10.80
**D6027	BLACK	2.7 Mil	3 to 7 grams	18.00	10.80

780 SERIES (with "Longhair" Brush)

4/DQ	BLACK w/Silver '4/DQ'	Quadrahedral™	2 ± ½ grams	45.00	26.50
Q	BLACK w/Silver 'Q'	Quadrahedral™	2 ± ½ grams	33.00	19.80

*Optional stylus for use with older mono recordings.
**Optional stylus for use with 78 RPM recordings.

Stanton Headphones

Model	Description	Suggested List	Professional Net
5728	Dynaphase Twenty-Eight	27.95	16.80
5740	Dynaphase Forty	44.95	27.00
5760	Dynaphase Sixty	64.95	39.00
5765	Dynaphase Sixty-Five—Four C—(Four Channel)	69.95	42.00
XXI	Stereo/Wafers	69.95	42.00
XXI-I	Stereo/Wafers with Cushions	75.00	45.00

Stanton Accessory

SWG	Stylus Wear Gauge	15.95	11.20

Turntable Preamp/Equalizer

210	Turntable Preamp/Equalizer	320.00	240.00
—	Rack Panel Adapter	47.50	36.00

STANTON

GENERAL INFORMATION

Personnel:	Sales Manager/Professional Products	Pete Bidwell
	Corporate Sales Administrator	C. Ray Bennett
	Credit Manager	Margaret Cullen
	Service Manager	James Campau
Cash Terms:	Net 30 Days	
F.O.B. Point:	Plant: Terminal Drive, Plainview, New York 11803	
Return Policy:	All returns must be authorized in writing by factory.	
Pricing:	Subject to change without notice.	

• Any questions pertaining to application or product specifications should be directed to Stanton Magnetics Field Engineering Dept.

• Suggested list prices are indicated for identification purposes only, and should not be used to represent the usual retail selling price of the product unless such is the fact in the marketing area where the product is to be sold.

STANTON MAGNETICS INCORPORATED
Terminal Drive, Plainview, New York 11803
212-445-0554 516-681-0200
TWX-510 221 1845 • HI FI INTL PLVW

912-430-701

Price Schedule

Effective September 15, 1975

Items listed below are made in the U.S.A. Prices do not include transportation, applicable taxes or duty.

All prices and specifications subject to change without notice.

Scully Recording Instruments

400L Series Voice Loggers

Dictaphone

400L Series Voice Loggers

Schedule No. 75915-1

Single Logger Systems

Important: Specify Desired Speed and 50 Hz or 60 Hz when ordering.

Series	Model	Description	Direction*	Professional User Price
400L	414L	1 Channel	Auto, 4 Pass	$ 2,199.00
	422L	2 Channel	Auto, 2 Pass	2,299.00
Recorder/Reproducers (Single Speed)	441L	4 Channel	One Pass	2,399.00

Single logger systems are for rack or portable case mounting.

Fail-Safe Dual Logger System: 400L-2

The 400L-2 is a complete dual system logging recorder/reproducer including one 4400-BX time code reader/generator and special factory interconnect to provide unattended AUTOMATIC TRANSFER from one logger to the other in case of tape break, end-of-tape, or time recording malfunction.

Specify 50 Hz or 60 Hz.

Model	Description	Direction*	
414L-2	1 Channel	Auto, 4 Pass	6,198.00
422L-2	2 Channel	Auto, 2 Pass	6,398.00
441L-2	4 Channel	One Pass	6,598.00

*Manual transposition of reels doubles number of passes. See brochure for details.

Above available 5/16 or 15/32 ips speed. – .25" tape width, 117 V, 50 Hz or 60 Hz (specify)

NOTE: For 15/16 ips transport speed, modification, add 29.00

All loggers include built-in monitor amplifier and speaker

Time Code Generator/Reader

Series 4400

4400 Generator/Reader, 117 V with Rack Mount Brackets for 400 series only

4400L w/Line Lock (60 Hz only) 1,525.00

4400BX w/crystal oscillator, battery and charger. Provides one-hour battery stand-by (50/60 Hz) 1,745.00

Options (Factory Installed)

ALC	– Automatic Level Control, per channel, per electronics, add	27.50 each
VOX	– Voice Operated Relay, handles up to 4 channels, per electronics	110.00
201404-01	– Erase feature for 441L series only, per transport	110.00
201399-01	–Auto transfer circuits for coupling two loggers. Without time code	71.00
020202101	– 220/240 V (unregulated autotransformer) per transport	87.50

Accessories

201353-02	– Portable case (black) for single system plus time	325.00
201231	– Timer clock for preset start/record (Specify 50 Hz or 60 Hz and if for single or dual system)	49.00
201455-05	Deluxe cabinet with lockable plexiglass front door (for Dual Systems)	673.00

Scully
Recording Instruments
Audio/Electronics Division
of Dictaphone Corporation
475 Ellis St. Mountain View
California 94043
(415) 968-8389
Telex 345524

Regional Offices

285 County Road
Tenafly, N.J. 07670
(201) 568-4414

548 Kingsley Drive
Los Angeles, Ca. 90020
(213) 380-7980

1005 8th Ave. South
Nashville, Tenn. 37203
(615) 244-1546

3434 W. Peterson Avenue
Chicago, Illinois 60645
(312) 583-7878

Alperton House
Bridgewater Road
Wembley, Middlesex
England. (TLX 923357)
Phone: 01-903-1477

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Scully
Recording Instruments

Audio/Electronics Division of Dictaphone Corporatio
475 Ellis Street, Mountain View, California 94043
Telephone (415) 968-8389 Telex 345524

Effective October 1, 1976

All prices and specifications subject to change without notice.

PRICE SCHEDULE

Specify Model No., Speeds, Equalization, AC or Servo Drive and Line Frequency when ordering.

Recorder/Reproducers (with Motion Direction Sensing)

SERIES	MODEL	DESCRIPTION	TAPE WIDTH	USER PRICE A.C. DRIVE MOTOR (see note A)	USER PRICE SERVO DRIVE MOTOR (see note B)
280B 10.5" Reels for Rack Mounting	280B-FT	Monophonic, full track	.25"	$ 2,995.00	$ 3,395.00
	280B-1	Monophonic, half track	.25"	2,995.00	3,395.00
	280B-2	Stereo 2 track, 2 channel	.25"	3,795.00	4,195.00
	280B-4	Quad 4 track, 4 channel	.50"	5,495.00	5,895.00
	280B-24	Stereo qtr. track, 2 channel	.25"	3,795.00	4,195.00
	280B-44	Quad 4 track, 4 channel	.25"	5,495.00	5,895.00
280B (SP-14) 14" Reels for Rack Mounting	280B-1/SP-14	Monophonic, half track	.25"	3,195.00	
	280B-2/SP-14	Stereo 2 track, 2 channel	.25"	3,895.00	
	280B-24/SP-14	Stereo qtr. track, 2 channel	.25"	3,895.00	
		Above available 3.75–7.5 or 7.5–15 ips (Specify when ordering)			
284B 14" Reels for Rack Mounting	284B-FT	Monophonic, full track	.25"	.....	4,195.00
	284B-1	Monophonic, half track	.25"	.....	4,195.00
	284B-2	Stereo 2 track, 2 channel	.25"	.....	4,995.00
	284B-4	Quad 4 track, 4 channel	.50"	.....	6,695.00
	284B-24	Stereo qtr. track, 2 channel	.25"	.....	4,995.00
	284B-44	Quad 4 track, 4 channel	.25"	.....	6,695.00
284B-8 Console Mounted 14" Reels	284B-8	8 track, 8 channel Complete with D.C. servo and console	1.00"	.....	9,975.00

VARIABLE SPEED ACCESSORY with L.E.D. display – see brochure.

For console mount part no. 201664-01	795.00
For remote mounting part no. 201664-02	795.00

D.C. SERVO CAPSTAN MOTOR KITS – consisting of motor, electronics, crystal, all necessary hardware and instructions.

Kit No. 201466-01 for .25" tape width transports, console mounted	995.00
Kit No. 201446-02 for .50" tape width transports, console mounted	995.00
Kit No. 201466-03 for .25" tape width transports, for rack mounting	995.00
Kit No. 201466-04 for .50" tape width transports, for rack mounting	995.00

Reproducers

270 14" Reels for Rack Mounting	270	Monophonic, full track	.25"	2,495.00	
	270-1	Monophonic, half track, bi-directional	.25"	2,595.00	
	270-2	Stereo 2 track, 2 channel	.25"	2,795.00	
	270-44	Stereo qtr. track, 2 channel bi-directional	.25"	3,095.00	
285B 10.5" Reels for Rack Mounting	285B-FT	Mono full track	.25"	2,395.00	
	285B-2	Stereo 2 track, 2 channel	.25"	2,775.00	
	285B-24	Stereo qtr. track, 2 channel	.25"	2,775.00	

NOTE A: Price includes A.C. hysteresis capstan motor 3.75 - 7.5 or 7.5 - 15 ips 50 or 60 Hertz 117V (3.75 ips not available in .50" A.C. models)

NOTE B: Price includes D.C. servo capstan motor 3.75 - 7.5 or 7.5 - 15, or 15 - 30 in/sec. 50/60 Hertz 117V

Scully
Recording Instruments

Audio/Electronics Division of Dictaphone Corporation
475 Ellis Street, Mountain View, California 94043
Telephone (415) 968-8389 Telex 345524

fective October 1, 1976

PRICE SCHEDULE

prices and specifications subject to change without notice.

			Professional User Price
TERNATIONAL	– 50 Hz operation . . . . . specify when required.		
'TIONS:	– Any of above Recorders or Reproducers, modified for 220/240 V with unregulated autotransformer, Add		87.50

)NSOLE MOUNTS

5B	Mono or Stereo	201931-01	$ 320.00
0B	Mono or Stereo (280B-FT, -1, -2, -24)	200600-03	350.00
0B-4	Quad 4 channel (280B-4, 280B-44)	200600-04	415.00
4B	Mono or Stereo for 14" Reel Recorders	201665–01	515.00
4B	Four Channel 14" Reel Recorders	201665–02	535.00
	(Refer to local sales offices for prices on consoles for discontinued models)		

EMOTE CONTROLS

0B Series	– Standard Remote Control in Box	200925-01	190.00
	– Standard Remote Control – Rack Mount	200925-02	165.00
0B/284B	– Deluxe Remote w/lit Buttons, in box	200925-03 (See note C)	190.00
	– Deluxe Remote w/lit buttons, Panel Mount	200925-04 (See note C)	165.00

)UALIZERS (for Field Conversion, Plug-in type, one per channel)

0B and 4B Series	– NAB 3.75 – 7.5 ips Rec/Rep	200605-01	38.00
	– NAB 7.5 – 15 ips Rec/Rep	200605-02	38.00
	– IEC 7.5 – 15 ips Rec/Rep	200605-03	38.00
	– NAB 15 AES 30 ips Rec/Rep	200605-04	38.00
	– IEC 15 AES 30 ips Rec/Rep	200605-05	38.00

AINTENANCE MANUALS (One supplied with each Recorder/Reproducer)

0B/284B/285B	– Recorder/Reproducer 1-4 Channel	200612-01	18.50
4B-8	– Recorder/Reproducer 8 Channel	201666-01	18.50
0 & 275 Series	– 1 to 4 Channel	00502000	18.50
0 Series	– Reproducer	000501000-01	18.50

)TE C: Remote Controls w/illuminated buttons are only for recorders with "L" or "S" prefix in serial number.

me Office

5 Ellis Street
ountain View, Calif. 94043
5) 968-8389
lex 345524

Regional Offices

NORTHEAST
285 County Road
Tenafly, New Jersey 07670
(201) 568-4414
In Manhattan 354-0623

SOUTHEAST
1005 8th Ave. South
Nashville, Tenn. 37203
(615) 244-1546

MIDWEST
3434 W. Peterson Ave.
Chicago, Illinois 60645
(312) 583-7878

WEST
548 Kingsley Drive
Los Angeles, Calif. 90020
(213) 380-7980

Schedule B

Model	Description	Professional Net
DIVIDING NETWORKS		
3105	7000 Hz, for 2440 and 2405	$ 39.00
3106	8000 Hz, for 2420 and 2405	36.00
3110	800 Hz	84.00
3115	500 Hz	90.00
3120	1200 Hz	57.00
3125	1200 Hz, for 2150	54.00
3152	500 Hz, High Power (Except 2215)	141.00
3182	800 Hz, High Power (Except 2215)	141.00
ELECTRONIC FREQUENCY DIVIDING NETWORKS		
5233	Single Channel, Less Crossover Card	225.00
5234	Dual Channel, Less Crossover Cards	264.00
CROSSOVER CARDS FOR 5233/5234—PLUG-IN		
51-5130	Blank Card, Unloaded 18dB/O	To Be Announced
51-5132	500 Hz 18dB/O	To Be Announced
51-5133	800 Hz 18dB/O	To Be Announced
52-5120	Blank Card, Unloaded 12dB/O	9.00
52-5121	250 Hz 12dB/O	12.00
52-5122	500 Hz 12dB/O	12.00
52-5123	800 Hz 12dB/O	12.00
52-5124	1200 Hz 12dB/O	12.00
52-5125	5000 Hz 12dB/O	12.00
52-5127	7000 Hz 12dB/O	12.00
52-5140	For 4343 Studio Monitor	12.00
MIXERS & PREAMPLIFIERS		
5306	Mixer/Preamplifier, 6-Mic/2-Pgm, Expandable, includes 6 Microphone Input Transformers	882.00
5308	Expander, 8-Mic, includes 8 Microphone Input Transformers	648.00
POWER AMPLIFIERS		
6233	Dual 300 Watt (600 Watts total)	1500.00
SYSTEM ACCESSORIES		
2505	Adjustable Rear Horn Mount	30.00
MA15	Mounting Clamp Kit, for 15" Cone Transducers	9.00
5196	Bridging Transformer, plug-in Module for 5306	45.00
10460	1.5 mfd Paper Mylar Capacitor	1.80
10358	16.5 mfd Paper Mylar Capacitor	9.00
*D8R075	Replacement Diaphragm for 2402 Driver	30.00
*D16R2405	Replacement Diaphragm for 2405 Driver	33.00
*D16R2410	Replacement Diaphragm for 2410 Driver	36.00
*D16R2420	Replacement Diaphragm for 2420 Driver	39.00
*D16R2440	Replacement Diaphragm for 2440 Driver	60.00

*While these diaphragms are made available as replacement parts, it is strongly suggested that installation be left to the JBL Service Department or factory trained and authorized servicing dealers.

CONSUMER WARRANTY
JBL offers a limited warranty to retail purchasers. The warranty statement is packed with the products.

These prices supersede any others previously issued and are subject to change without notice.

PROFESSIONAL STUDIO EQUIPMENT
JBL Professional Division
Price Schedule B

Effective April 1, 1977

Model	Description	Professional Net
ENCLOSED SYSTEMS		
4301WX	Broadcast Monitor	$ 168.00
4301EWX	Broadcast Monitor, Amplified	To Be Announced
4311	Control Monitor, Studio Gray	$ 324.00
4311WX	Control Monitor, Oiled Walnut	333.00
4315	Compact Studio Monitor, Studio Gray, 4-Way	771.00
4315WX	Compact Studio Monitor, Oiled Walnut, 4-Way	783.00
4331A	Studio Monitor, Studio Gray, 2-Way	768.00
4331AWX	Studio Monitor, Oiled Walnut, 2-Way	804.00
4333A	Studio Monitor, Studio Gray, 3-Way	879.00
4333AWX	Studio Monitor, Oiled Walnut, 3-Way	915.00
4343	Studio Monitor, Studio Gray, 4-Way	1179.00
4343WX	Studio Monitor, Oiled Walnut, 4-Way	1257.00
4350	Studio Monitor, Studio Gray, 4-Way, for Bi-Amplification	1560.00
4350WX	Studio Monitor, Oiled Walnut, 4-Way, for Bi-Amplification	1722.00
CONE TRANSDUCERS		
2105	5" Speech Range	45.00
2108	8" Midrange	99.00
2115	8" Full Range, specify 8 or 16 ohms	96.00
2120	10" Extended Range	99.00
2121	10" High Power, Midrange	90.00
2130	12" High Power, Extended Range	120.00
2135	15" High Power, Extended Range	135.00
2145	12" Composite, with Crossover	165.00
2150	15" Composite, less Crossover	177.00
2202	12" High Power, Midrange, 8 or 16 ohms	120.00
2203	12" Medium Efficiency, Extended Bass, 8 ohms	138.00
2213	12" Shallow Frame, Low Frequency, 8 ohms	99.00
2215	15" Extended Bass, specify 8 or 16 ohms	168.00
2231	15" Medium Efficiency, Extended Bass, 8 ohms	147.00
2290	15" Passive Radiator	36.00
HORNS, LENSES & ADAPTORS[1]		
2305	Horn/Perforated Plate Lens, 1" 1200 Hz	51.00
2307	Horn, 1" 1200 Hz, for 2391	27.00
2308	Lens, 10" Slant Plate, for 2391 and 2392	24.00
2309	Horn, Exponential, 2" 800 Hz, for 2390	57.00
2310	Lens, 20" Folded Plate, for 2390	105.00
2311	Horn, 2" 1200 Hz, for 2392	36.00
2312	Horn, 1" 800 Hz	39.00
2327	Adaptor, 1" Driver to 2" Horn	27.00
2328	Horn Throat, 2" Driver to Rectangular Horn	30.00
2329	Adaptor, Dual Entry, two 2" Drivers to Rectangular Horn	39.00
2330	Adaptor, 2" Driver 1.4" Horn	33.00
2390	Order as 2309 and 2310	—
2391	Order as 2307 and 2308	—
2392	Order as 2311 and 2308	—
2397	Horn, Diffraction, Rectangular, 800 Hz	84.00
COMPRESSION DRIVERS		
2402	Ultra-high Frequency Ring Radiator	99.00
2405	Ultra-high Frequency Driver	108.00
2410	30W Driver, 1" Throat, Aluminum Diaphragm	159.00
2420	30W Driver, 1" Throat, Aluminum Diaphragm	189.00
2440	60W Driver, 2" Throat, Aluminum Diaphragm	294.00

[1]Dimensions shown after product description refer to diameter of driver throat or horn entry.

mccurdy radio industries inc.

1711 CARMEN DRIVE, ELK GROVE VILLAGE, ILLINOIS 60007
(312) 640-7077 TWX: 910-222-0436

KEPEX	DESCRIPTION	PROFESSIONAL USER'S PRICE
500	Single channel noise reduction keyable program expander (KEPEX) module. Power required +24vdc @ 75 mA and +100 vdc @ 3mA. Must be mounted in RM 160 or CM001.	$ 283.50
501	One model 500 Kepex module mounted in CM001 case.	$ 313.00
508	Eight model 500 Kepex modules mounted in model RM160 rack mount console case. Includes one BP-8 blanking panel, connectors and connector swaging tool. Will accomodate up to eight additional 500 Kepex or 700 limiter modules.	$ 2,410.00
516	Sixteen model 500 Kepex modules mounted in model RM160 rack mount console case. Includes connectors and connector swaging tool.	$ 4,400.00
GAIN BRAIN		
700	Single channel GAIN BRAIN limiter module. Power required +24vdc @ 75mA. Must be mounted in RM160 or CM001.	$ 283.50
701	One model 700 GAIN BRAIN limiter mounted in CM001 case.	$ 313.00
708	Eight model 700 GAIN BRAIN limiters mounted in RM160 rack mount console case. Includes one BP-8 blanking panel, connectors and connector swaging tool. Will accomodate up to eight additional 500 Kepex or 700 limiter modules.	$ 2,410.00
716	Sixteen model 700 GAIN BRAIN limiters mounted in RM160 rack mount console case. Includes connectors and connector swaging tool.	$ 4,400.00

KEPEX/GAIN BRAIN COMBINATIONS

5744	Eight track unit containing any combination of Kepex and Gain Brains mounted in RM160 rack mount console case. Includes connectors and connector swaging too.	$ 2,410.00
5788	Sixteen track unit containing any combination of Kepex and Gain Brains mounted in RM160 rack mount console case. Includes commectors and connector swaging tool.	$ 4,400.00

ACCESSORIES

LX-100	Power supply 115/230vac in, +24vdc and +100vdc out. Will supply up to eight 500 or 700 series Kepex or Gain Brains.	$ 99.50
CM001	Console mounting case for one 500 Kepex or 700 Gain Brain module. 7" high by 1½" wide by 7" deep. Mounts Allison modules in standard 1½" by 7" console space.	$ 35.00
RM160	Standard 19" rack mount 7" high console case with mother board and built in power supply to mount up to sixteen 500 Kepex or 700 Gain Brain modules. Includes one each BP-4 or BP-8 blanking panels, connectors, and connector swaging tool.	$ 415.00
BP-4	Four space blanking panel for RM160	$ 12.00
BP-8	Eight space blanking panel for RM160	$ 16.00

All front panels are black with white screening. All mounting devices (RM160, CM001) are sky blue.

A complete operations manual is supplied with each unit.

Allison products are guaranteed for one year.

mccurdy radio industries inc.

1711 Carmen Drive
Elk Grove Village, IL 60007
Phone (312) 640-7077
TWX: 910-222-0436

1051 Clinton Street,
Buffalo, NY 14206
Phone (716) 854-6700
TWX: 910-492-1373

223 W. Saddle River Road
Saddle River, NJ 07458
Phone (201) 327-0750
TWX: 710-988-2254