

THE WORLD'S
FINEST AUDIO
CONSOLES AND
COMPONENTS



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TECHNOLOGY, INC.

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CONSOLE USERS

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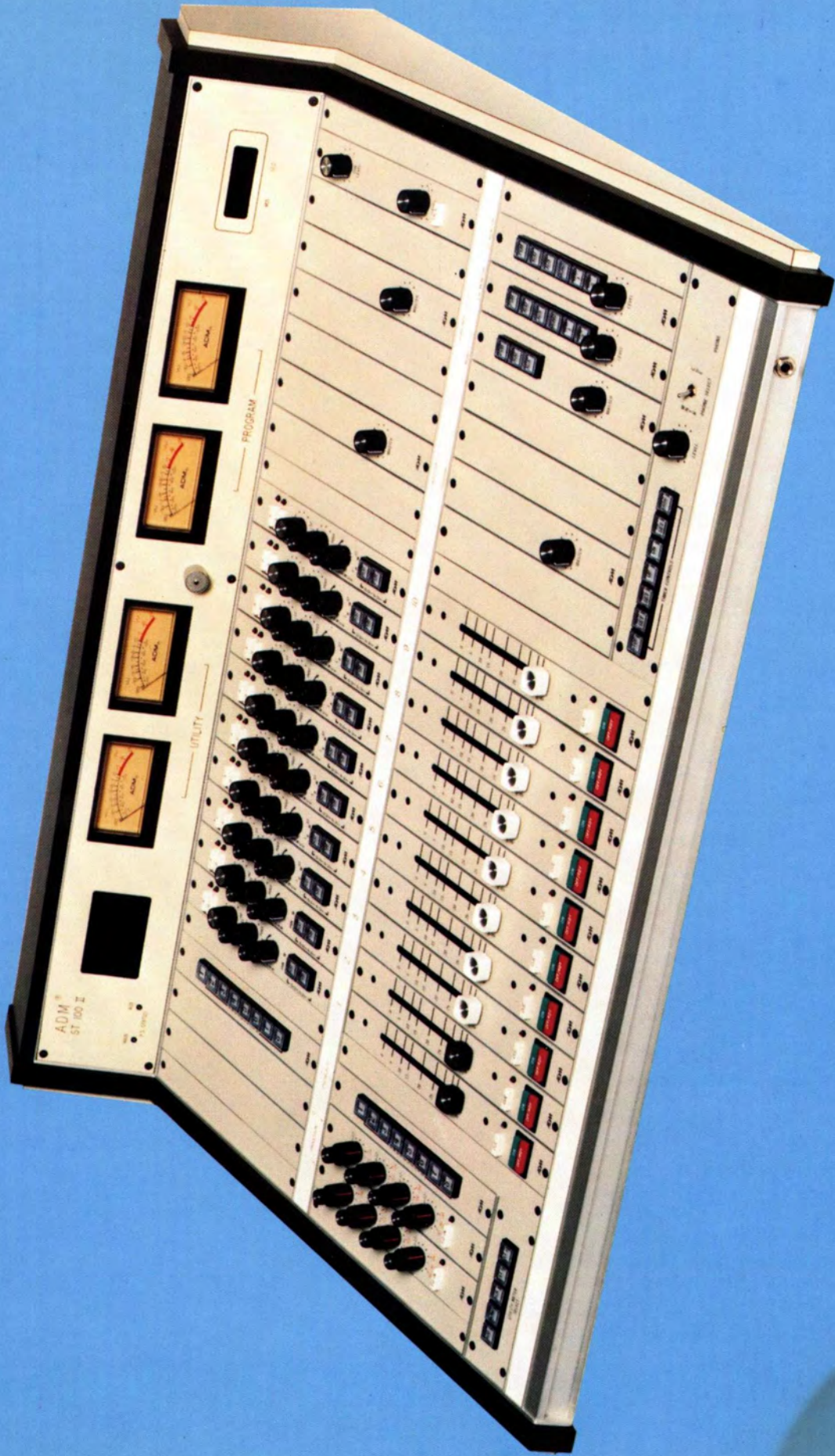
	Number		Number
A. F. ASSOCIATES		F & F PRODUCTIONS	
Northvale, NJ	1	Tampa, FL	1
ASHEVILLE CIVIC CENTER		FIRST CHURCH	
Asheville, NC	1	OF THE NAZARENE	
AURA RECORDING		Lubbock, TX	1
New York, NY	5	4VRD	
BETHLEHEM STEEL		Port-au-Prince, Haiti	2
Bethlehem, PA	1	FRESNO CITY COLLEGE	
BRANSBY PRODUCTION		Fresno, CA	1
Huntsville, AL	1	FUTURE GOLD RECORDING	
BRIGHAM YOUNG		Philadelphia, PA	1
UNIVERSITY		GENERATION SOUND	
Provo, UT	4	New York, NY	2
BRIGHTON SOUND		GLEN GLENN SOUND	
Rochester, NY	1	Hollywood, CA	1
CBS, INCORPORATED		GRABARCO LTDA	
New York, NY	1	Cali, Columbia	1
CALIFORNIA STATE		INDIANA UNIVERSITY	
UNIVERSITY		Indianapolis, IN	1
Hayward, CA	1	INSTITUICAD SINODAL	
CAMPBELL-EWALD		Porto Alegre, Brazil	2
ADVERTISING		INTERVISION	
Detroit, MI	1	Bogota, Columbia	1
CENTRAL MICHIGAN		KARD-TV	
UNIVERSITY		Wichita, KS	1
East Lansing, MI	1	KARK-TV	
CHURCH OF J.C./L.D.S.		Little Rock, AR	1
Salt Lake City, UT	1	KATU	
C.I. RECORDING		Portland, OR	2
New York, NY	2	KAUT-TV	
CINE MIX		Oklahoma City, OK	1
New York, NY	2	KBHK-TV	
COLLEGE OF SAN MATEO		San Francisco, CA	1
San Mateo, CA	1	KCOP	
COLORADO STATE		Hollywood, CA	2
UNIVERSITY		KCPQ-TV	
Ft. Collins, CO	1	Tacoma, WA	1
CORAL RIDGE		KCSC RADIO	
PRESBYTERIAN CHURCH		Edmond, OK	1
Ft. Lauderdale, FL	1	KDAL-TV	
CORPUS CHRISTI		Duluth, MN	1
COMMUNITY AUDITORIUM		KDFW-TV	
Corpus Christi, TX	1	Dallas, TX	1
CUE RECORDING		KDKA-TV	
New York, NY	1	Pittsburgh, PA	1
DB STUDIOS		KENJO AUDIO	
Chicago, IL	3	Fresno, CA	1
D.J.M. FILMS		KENS-TV	
New York, NY	2	San Antonio, TX	1
DIMENSION SOUND		KETC	
Boston, MA	1	St. Louis, MO	1
DISCOS BRISA		KFAB RADIO	
Mexico City, Mexico	1	Omaha, NB	1
EDITEL		KFMB-TV	
Hollywood, CA	1	San Diego, CA	1
EDMONTON COLISEUM		KFVS-TV	
Edmonton, Canada	1	Cape Girardeau, MO	1
ESTUDIOS EL DORADO		KGBT-TV	
Sao Paulo, Brazil	2	Harlingen, TX	1
EUE/SCREEN GEMS		KGUN-TV	
New York, NY	8	Tucson, AZ	1
		KHOU-TV	
		Houston, TX	1
		KIRO-TV	
		Seattle, WA	2
		KJCT-TV	
		Grand Junction, CO	1
		KLAS-TV	
		Las Vegas, NV	1
		KMEX-TV	
		Hollywood, CA	1
		KMNS RADIO	
		Sioux City, IA	1
		KMOD	
		Oklahoma City, OK	1
		KMSP-TV	
		Minneapolis, MN	1
		KNOE RADIO	
		Monroe, LA	1
		KOB-TV	
		Albuquerque, NM	1
		KOCO-TV	
		Oklahoma City, OK	1
		KOKH-TV	
		Oklahoma City, OK	1
		KOLD-TV	
		Tucson, AZ	1
		KOLR-TV	
		Springfield, MO	1
		KOMO-TV	
		Seattle, WA	1
		KPLC-TV	
		Lake Charles, LA	1
		KPTV	
		Portland, OR	1
		KRDO-TV	
		Colorado Springs, CO	2
		KRLD RADIO	
		Dallas, TX	1
		KSJS RADIO	
		San Jose, CA	1
		KSL-TV	
		Salt Lake City, UT	1
		KSTW	
		Tacoma, WA	1
		KTEW	
		Tulsa, OK	2
		KTRK-TV	
		Houston, TX	1
		KTVT	
		Fort Worth, TX	1
		KTVY	
		Oklahoma City, OK	2
		KTWS-TV	
		Dallas, TX	1
		KTXA-TV	
		Arlington, TX	1
		KUNI (UNIV. of N. IOWA)	
		Cedar Falls, IA	1
		KUTV	
		Salt Lake City, UT	2
		KVBC-TV	
		Las Vegas, NV	1
		KWGN-TV	
		Denver, CO	2
		LATIN SOUND RECORDING	
		New York, NY	1
		LORIO RECORDING	
		Warren, MI	1
		LUBBOCK	
		MEMORIAL CENTER	
		Lubbock, TX	1
		MAYFAIR RECORDING	
		New York, NY	1

	Number
McNICHOLS SPORTS ARENA Denver, CO	1
METRO AUDIO Detroit, MI	1
MEXICANA DE RADIO Y TV Mexico City, Mexico	2
MIAMI BEACH THEATRE OF PERFORMING ARTS Miami Beach, FL	1
MIAMI DADE COMMUNITY COLLEGE Miami, FL	1
MICHIGAN STATE UNIVERSITY Lansing, MI	1
MISSISSIPPI AUTHORITY FOR ETV Jackson, MS	1
MISSISSIPPI STATE UNIVERSITY Starkville, MS	1
THE MIX PLACE New York, NY	4
MONTE CARLO TV Montevideo, Uruguay	1
MONTGOMERY CIVIC CENTER Montgomery, AL	1
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION Washington, DC	2
NATIONAL BROADCASTING COMPANY New York, NY	3
NATIONAL CHRISTIAN NETWORK Coco Beach, FL	1
NATIONAL GEOGRAPHIC SOCIETY Washington, DC	1
NATIONAL THEATRE OF GUATEMALA Guatemala City, Guatemala	1
NET Ann Arbor, MI	1
NFL FILMS Philadelphia, PA	1
NICOLAS BO S.A. Asucion, Paraguay	1
NORTHWESTERN BELL TELEPHONE Omaha, NB	1
OBERLIN COLLEGE Oberlin, OH	1
OHIO BELL TELEPHONE Cincinnati, OH	1
OHIO STATE UNIVERSITY Columbus, OH	2
OPRYLAND HOTEL Nashville, TN	1
OPRYLAND PRODUCTIONS Nashville, TN	1
ORAL ROBERTS UNIVERSITY Tulsa, OK	1
PEOPLES REPUBLIC OF CHINA China	6

	Number
PHOENIX 2000 PRODUCTIONS N. Augusta, SC	1
PHONOGRAM Rio de Janeiro, Brazil	1
POLYDOR RECORDS Toyko, Japan	1
PRECISION VIDEO New York, NY	1
PRODUCERS COLOR SERVICE Detroit, MI	4
PUEBLO COMMUNICATIONS San Juan, PR	2
RADIO CAETES Recife, Brazil	2
RADIO CARACAS TV Caracas, Venezuela	5
RADIO-TV MALAYSIA Singapore, Malaysia	1
RIO DE LA PLATA TV Buenos Aires, Argentina	4
SANTA BARBARA CITY COLLEGE Santa Barbara, CA	1
SECRETARIA DE EDUCACION PUBLICA Mexico City, Mexico	1
SMITHSONIAN INSTITUTION Washington, DC	2
SOUTHERN UNIVERSITY Baton Rouge, LA	1
STONE MOUNTAIN MEMORIAL ASSOCIATION Stone Mountain, GA	1
TAPEMASTERS Indianapolis, IN	2
TEICHIKU RECORDING Tokyo, Japan	2
TEL-RAY Mexico City, Mexico	1
TELEVISA Mexico City, Mexico	10
TELEVISA DE MEXICALI Calexico, CA	1
TELEVISION LA PLATA La Plata, Argentina	4
TELEVISORA NACIONAL Quito, Ecuador	1
TEXAS INSTRUMENTS Dallas, TX	1
TV BOLIVIANA La Paz, Bolivia	2
TV GLOBO Rio de Janeiro, Brazil	5
TWR SYSTEMS Spokane, WA	1
U. S. AIR FORCE Arlington, VA	1
U. S. ARMY Biggs Field, TX	1
U. S. ARMY Ft. Eustis, VA	1
U. S. ARMY Ft. Leavenworth, KS	1
THE U.S. ARMY BAND Arlington, VA	3
U. S. DEPARTMENT OF STATE Arlington, VA	1

	Number
U. S. HOUSE OF REPRESENTATIVES Washington, DC	3
U. S. INFORMATION AGENCY (VOA) New York, NY	2
U. S. INFORMATION AGENCY (VOA) Washington, DC	3
UNIVERSAL RECORDING Chicago, IL	3
UNIVERSITY OF CALIFORNIA-DAVIS Davis, CA	1
UNIVERSITY OF DETROIT Detroit, MI	1
UNIVERSITY OF HOUSTON Houston, TX	1
UNIVERSITY OF KANSAS Lawrence, KS	1
UNIVERSITY OF LOUISVILLE Louisville, KY	1
UNIVERSITY OF MICHIGAN Ann Arbor, MI	1
UNIVERSITY OF MISSOURI Kansas City, MO	1
UNIVERSITY OF N. DAKOTA Grand Forks, ND	1
UNIVERSITY OF TEXAS-AUSTIN Austin, TX	4
UNIVERSITY OF TEXAS-EL PASO El Paso, TX	1
UNIVERSITY OF UTAH Salt Lake City, UT	1
UNIVERSITY OF WISCONSIN Madison, WI	1
UNIVERSITY OF WISCONSIN Green Bay, WI	1
VU RECORDING San Juan, PR	1
VARIETY SOUND New York, NY	1
VENEVISION TV Caracas, Venezuela	6
VENEZOLANA DE TV Caracas, Venezuela	1
VINCENNES UNIVERSITY Vincennes, IN	1
WAGA-TV Atlanta, GA	1
WALTER REED ARMY HOSPITAL Washington, DC	1
WAPA-TV San Juan, PR	1
WATE-TV Knoxville, TN	1
WAYNE STATE UNIVERSITY Detroit, MI	1
WBGU Bowling Green, OH	1
WBZ-TV Boston, MA	2
WCIA-TV Champaign, IL	1





ST 100 II Stereo Console

ADM[®] CONSOLE SPECIFICATIONS

1. Frequency Response:

No equalization. Measured at any output level up to clipping. ± 1 dB, 20Hz-20KHz Ref. 1KHz.

2. Distortion:

The total harmonic distortion at +24 dBm or lower at 1KHz will be less than .07% and will not exceed .15% THD over the band 100Hz-20KHz at +24 dBm or lower.

3. Maximum Output Level:

The clipping level at any output when terminated in 600 ohms shall be +27 dBm 30 Hz to 20KHz.

4. Noise:

The equivalent input noise of any microphone shall be lower than -125.5 dBu referred to a 250 ohm impedance measured on an average response meter. Any line level input (+8 dBm ref) to any output channel (+8 dBm ref) will exhibit a maximum noise of -72 dBm (S/N 80 dB). All noise measurements based on a bandwidth 20Hz to 20KHz.

5. Crosstalk:

Better than 72 dB measured between adjacent channels at normal operating levels over the band 100Hz to 10KHz.

6. Temperature:

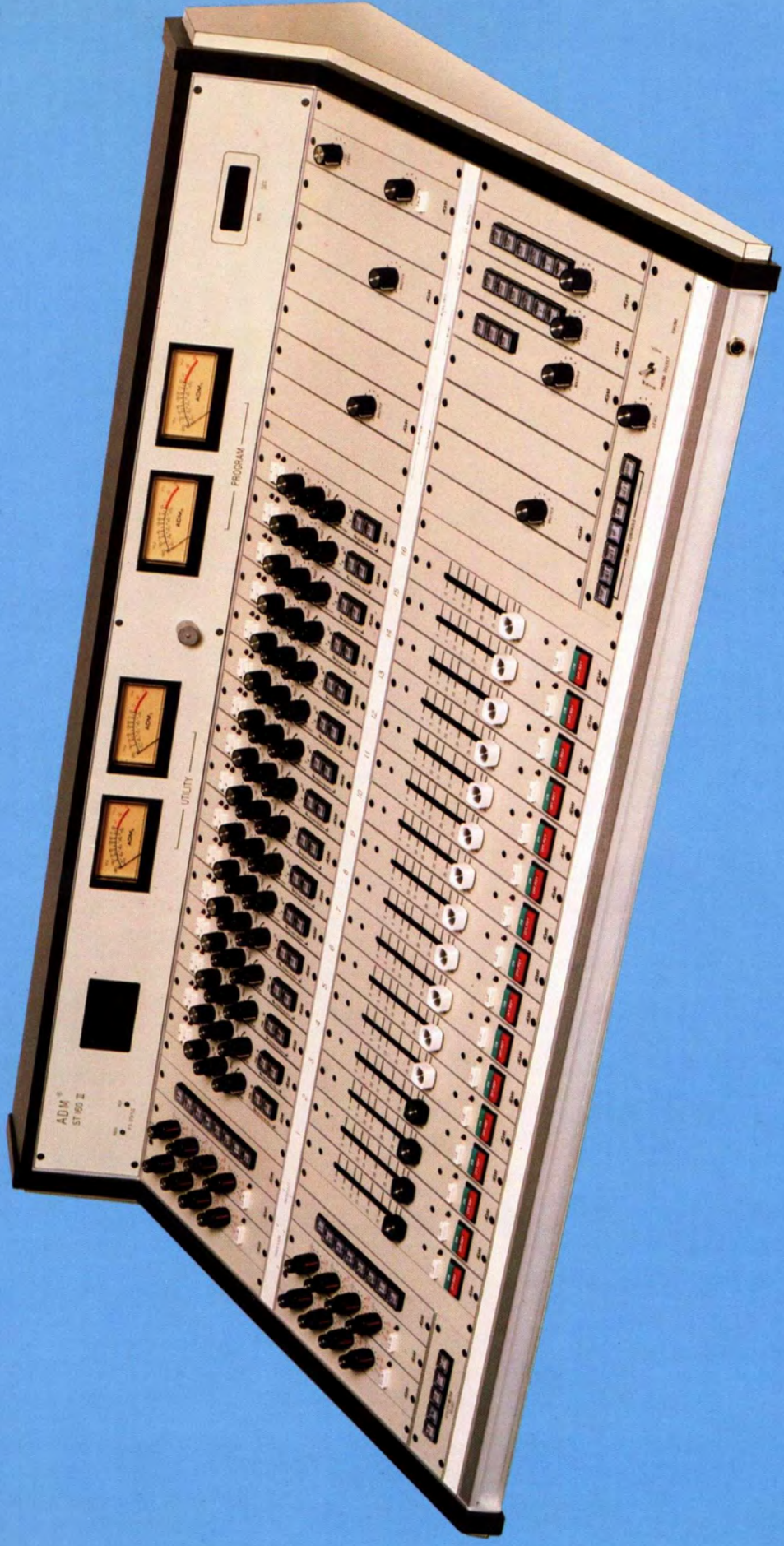
Over the temperature range 0 to 55 degrees C. no apparent changes in operational characteristics are discernible.

7. RF Susceptibility:

Based on the tailored roll off characteristics and proper manufacturing techniques, ADM consoles will operate in high RF environments.

WARRANTY

ADM Technology, Inc. warrants our consoles or components to be free from defective material and workmanship for a period of five years from the date of delivery. All defective parts will be replaced and repair work required by normal use will be performed, without charge, within this five year period. This warranty shall be exclusive and in lieu of all other warranties expressed or implied.



ADM
ST 160 II

ADM[®] CONSOLE SPECIFICATIONS

1. Frequency Response:

No equalization. Measured at any output level up to clipping. ± 1 dB, 20Hz-20KHz Ref. 1KHz.

2. Distortion:

The total harmonic distortion at +24 dBm or lower at 1KHz will be less than .07% and will not exceed .15% THD over the band 100Hz-20KHz at +24 dBm or lower.

3. Maximum Output Level:

The clipping level at any output when terminated in 600 ohms shall be +27 dBm 30 Hz to 20KHz.

4. Noise:

The equivalent input noise of any microphone shall be lower than -125.5 dBu referred to a 250 ohm impedance measured on an average response meter. Any line level input (+8 dBm ref) to any output channel (+8 dBm ref) will exhibit a maximum noise of -72 dBm (S/N 80 dB). All noise measurements based on a bandwidth 20Hz to 20KHz.

5. Crosstalk:

Better than 72 dB measured between adjacent channels at normal operating levels over the band 100Hz to 10KHz.

6. Temperature:

Over the temperature range 0 to 55 degrees C. no apparent changes in operational characteristics are discernible.

7. RF Susceptibility:

Based on the tailored roll off characteristics and proper manufacturing techniques, ADM consoles will operate in high RF environments.

WARRANTY

ADM Technology, Inc. warrants our consoles or components to be free from defective material and workmanship for a period of five years from the date of delivery. All defective parts will be replaced and repair work required by normal use will be performed, without charge, within this five year period. This warranty shall be exclusive and in lieu of all other warranties expressed or implied.

ADM TECHNOLOGY, INC.

**ST SERIES II
STEREO BROADCAST
CONSOLES**

**technical
information**

ADM[®]
The Audio Company

ADM Technology, Inc.
16005 Sturgeon, Roseville, Michigan 48066
Phone: (313) 778-8400 • TLX-23-1114

ST SERIES II CONSOLES

The ST Series II Stereo Radio Consoles are desk mount, modular Consoles designed specifically for Radio On-Air and Production applications. The ST Series II Consoles consist of 3 basic units, each identical with the exception of the number of Input modules available. These are:

ST 100 II — a 10 input, 4 output Console

ST 160 II — a 16 input, 4 output Console

ST 200 II — a 20 input, 4 output Console

The ST Series II Broadcast Consoles meet the most demanding requirements of the Professional user. Precise engineering and construction, using quality components throughout, provide an ultra-reliable Console which will handle the most complex Program material with ease. As with all ADM Consoles, the ST Series II are aesthetically finished to complement the decor of the User's facility. Advanced design parameters and human-engineering of front panel controls assure logical, optimum convenience of use.

FEATURES:

- 5 Year Unconditional Warranty.
- Totally Modular Design, utilizing plug-in components throughout.
- 2 inputs per module with LED indicators.
- Simultaneous program and audition output busses.
- Totally independent auxiliary output bus.
- Monaural output bus.
- Stereo Pan-Pot on each microphone module.
- Stereo balance control on each line module.
- Machine control via module ON/OFF switch.
- Timer reset and start via module ON/OFF switch.
- Built-in Cue amplifier and speaker.
- 8 position stereo pre-selectors.
- Illuminated VU meters.
- Signal processing devices.
- Patented, smooth Slidex® Attenuators.
- Talkback microphone.
- 2 monitor busses.
- Headphone Jack.
- 100% Redundant Power Supply.
- Transformer inputs and outputs.
- CMOS Logic throughout.
- Plug-in Op-amps and IC's.
- Gold plated contacts throughout.

All ADM ST Series II Consoles are designed and manufactured to conform to proven ADM technology and stringent ADM quality control. Each Console is backed by the most comprehensive warranty in the industry. The exceptional FIVE YEAR Unconditional Warranty assures the discriminating Broadcaster many years of reliable, trouble-free service. Engineering consultation is available to ADM customers at all times upon request.

DESCRIPTION: The ST Series II Consoles are full Stereo, 10, 16, and 20 input, with 4 outputs including monaural capability. They utilize standard ADM Monaural Microphone and Stereo Line input modules. The Monaural and Stereo output modules are totally independent of each other. Each Console has a maximum capability of 2 inputs per channel plus 2 — 8 position Stereo pre-selectors of which some combination may be used simultaneously. The ST Series II Consoles are totally wired for maximum capability, but may be ordered with any lesser number of modules with future expansion capability. In addition, various combinations of Signal Processing devices (Equalizers, Hi/Lo Pass Filters, Noise Suppressors and Limiters) may be supplied with the Console or added later, as usage dictates. This is quickly accomplished on a plug-in basis. The ST Series II Consoles utilize the patented ADM Slidex for noise-free attenuation throughout. Our unique 202 Discrete Operational Amplifier exemplifies ADM's innovative ingenuity. These ADM design philosophies are employed throughout the Consoles.

Combine all of the above with attractive advanced styling and comprehensive human engineering and you have the most versatile Consoles available today.

INPUTS: The ST Series II Stereo Broadcast Consoles are wired and tested to accept up to 10, 16 or 20 ADM 2716 or 2726 Microphone or Line input modules, each with their associated 4710 or 4720 Slidex attenuator modules. Any number of these modules may be utilized within the ST Series II Consoles in any combination and format within the input section.

Each 2716/2726 input module is capable of operating from one of two switch selectable sources, designated A and B. Each switch has an associated LED indicator for maximum operator visual information.

The 2716 Microphone input module may be selected to either Mic A or Mic B via this switch function. Logic control for the 2716 module will follow this source selection. The input attenuator will accept a normal microphone level within the range of -60 dBu to -30 dBu and is continuously variable. Should the user so desire, this attenuator control knob and shaft may be removed and a screwdriver adjustment through the front panel may be utilized.

The 2716 Microphone module features a full Stereo pan Left-to-Right control with an associated switch to select either the Pan mode or the Mono mode of operation. This switch is dual concentric with the panner control. In addition to the above, provision has been made for Phantom Powering of Condenser type microphones.

Associated with the 2716 Microphone input module is a 4710 Slidex attenuator module. All logic functions for the 2716 input module are contained within the 4710 Slidex module.

These functions are:

- a) Control Room monitor muting.
- b) Studio or Announce Booth monitor muting.
- c) Local ON/OFF control of the module.
- d) Remote control of the module ON/OFF function.

These functions are user-programmable via a PC mounted DIP switch to suit the user's particular requirements. All logic functions are CMOS. ON AIR reed relay contact closures are provided from the Control Room and Studio mute logic busses for Station usage.

Each 2726 Line input module may be selected to either Line A or Line B via its A, B switch function. Again, logic control for the 2726 module will follow this source selection with an

associated LED indicator. The input attenuator will accept a normal line level within the range of -12 dBu to +8 dBu and is continuously variable. This control may also be removed as in the 2716 Microphone module.

The 2726 Line module features a full stereo Balance control to permit trimming inequities in the program source material. Located concentric with the Balance control is a switch to select Left (L), Right (R), Monaural (M) or Stereo (ST) mode of operation for the module. Maximum flexibility and utilization of the module is achieved with this function.

Also associated with the Stereo Line inputs are two 8 x 1 Stereo preselect matrices. These may be assigned to any of the 2726 Line modules via a plug-in connector.

Associated with the 2726 Line input module is the 4720 Stereo Slidex attenuator module. All logic functions for the 2726 module are contained within this 4720 Slidex module.

These logic functions are:

- a) Module ON/OFF control.
- b) Remote machine START contact closure when the module is turned ON.
- c) Remote machine STOP contact closure when the module is turned OFF.
(These contact closures are either a constant closure or a 1/10 second pulse — programmable).
- d) Timer reset/start function when the module is turned ON. (programmable)
- e) Optional jumper arrangement which permits the START/STOP pulsing to occur on the same contacts for machines, which require this facility.

All programmable functions may be selected via the module PC mounted DIP switch. All logic functions are CMOS.

Each 2716/2726 input module has facility for a totally independent Auxiliary output which is selectable from either the Pre-amplifier output (PRE) or module output (POST). The Auxiliary output has its own isolated level control, located concentric with the switch function. In the PRE position it will be totally independent, while in the POST position it will follow the module Slidex attenuator and Signal Processor.

Output bus assignment from each 2716/2726 input module is available to both Audition and Program master busses simultaneously via the illuminated push-on/push-off AUD and PGM switches located on each input module. These output busses may be fed individually or simultaneously as required. The 4710 and 4720 modules employ the exclusive, patented, Slidex linear attenuator utilized in all ADM Consoles. The Slidex, with its unique spiral-linear construction and sealed resistive element, is impervious to dust, dirt and spilled liquids. It requires no cleaning thus giving unheard of reliability to critical Broadcast applications. In the extreme bottom position, the Slidex enters the Cue position via the "hard-in, easy-out" detent to permit a cueing function for the selected audio source.

Each 4710/4720 Slidex attenuator/logic module also has a Cue switch, with an associated LED indicator. This switch performs a parallel function to the Slidex Cue detent position. Logic has been incorporated into the module to prevent the Cue signal from ever being accidentally heard ON-AIR. The 4710/4720 module ON/OFF switches are bi-color, illuminated, momentary switches. This color coding will signal the operator when a machine is loaded and ready to run, as well as indicating when a module is ON or OFF. All logic functions, with the exception of Cue described earlier in this section, are activated from this ON/OFF switch.

MASTERS: The ST Series II Broadcast Consoles are wired and tested for up to 4 Master Output modules. These modules are the three ADM 3826 Stereo Master modules designated Audition (AUD), Program (PGM), Auxiliary (AUX) and the 3816 Monaural Master module. Each module includes a continuously variable Master level control with removable knob and shaft for preset, screwdriver only, adjustment when desired.

The 3816 Monaural Master module is selectable, via the illuminated switch matrix, to the Audition, Program or Auxiliary busses. This module derives and sums the signal directly from these stereo busses prior to the 3826 Master modules and thus permits totally independent operation with no relationship to the Stereo Masters.

SIGNAL PROCESSING: The ST Series II Stereo Broadcast Consoles are wired and tested for up to 11 Signal Processing Modules. These modules may consist of Equalizer, High/Low Pass Filter, Noise Suppressor or Limiter Amplifier module.

The ST Series II Consoles have provisions for insertion of the Equalizer module or Filter module in any of the 4 input signal processing positions pre-wired in the Console. These modules may be then assigned to any of the input modules via a simple internal plug-in connector.

The Program, Audition and Auxiliary outputs have Right and Left channel signal processing positions adjacent to each output module. The Mono Output module has a single signal processing position. Each of the above positions will accept any of the 4 ADM Signal Processing Devices. Any Master Output Processing position, which is not initially equipped will be provided with a Jumper Card and Blank module panel to maintain the electrical path and the aesthetic appearance of the Console.

1316 NOISE SUPPRESSOR MODULE: The ADM 1316 Noise Suppressor is a true gain expander with continuously varying gain. The device has no threshold clicks or pops, nor is the ear aware of the threshold. Threshold and decay time are adjustable to suit program content. There is a variable intensity LED to indicate the amount of suppression as well as an LED to indicate when the unit is ON. The 1316 is primarily designed to reduce studio background noise between audio passages.

1326 LIMITER AMPLIFIER MODULE: The 1326 Limiter is a unique instantaneous device designed for maximum user convenience to allow constant output control regardless of input level. There is up to 40 dB of limiting with no sacrifice in performance. The extremely fast attack (1m-sec) and program controlled release time (up to 8 seconds) allow set-and-forget operation. A Gain Reduction meter is front panel mounted on the 1326 to indicate the amount of limiting. In addition, there is an OFF/ON switch as well as an LED to indicate when the unit is ON.

1546 EQUALIZER: Featured in the ST Series II Stereo Consoles is the exclusive ADM 1546, 4 band, 14 frequency reciprocal Equalizer. This Equalizer has been developed through exhaustive listening tests for maximum effect on both Voice and Music Program. Reciprocal EQ functions are provided in 4 frequency bands: Low Frequency (LF), Low Mid Frequency (LMF), High Mid Frequency (HMF) and High Frequency (HF). The unit is activated with a push-off/push-on switch and has an LED status indicator.

1566 FILTER MODULE: The High Pass section comprises selection of 40, 80 or 120 Hz plus an Off position. The Low Pass section comprises selection of 6, 8 or 10 KHz plus an Off position. Both sections may be used simultaneously. The 1566 Filter module has an attenuation rate of 30 dB per octave at the selected frequencies. A push-off/push-on insert switch is provided. An LED will visually indicate when the unit has been activated.

CUE: As previously described in the INPUT Section, each 4710 and 4720 Slidex attenuator module is equipped with a Cue detent as well as a Cue switch. The output of each module Cue function is bussed, feeds a 2 Watt power amplifier and level control (located on the Cue/Talkback module) and a cue speaker mounted in the meter turret housing. In addition, this Cue output appears at an output connector for use with an external Cue speaker. The Cue signal is also available at the headset jack and is accessed via the Monitor/Cue switch. Muting logic for the Cue speaker, via a DIP switch function, is provided when a Control Room microphone is live. However, the Headset output is never muted.

CUE-TALKBACK MODULE: As standard equipment, each ST Series II Console is equipped with a Cue/Talkback module.

The Talkback portion of this module provides a level control for the talkback output. Associated with the module is a turret-mounted Microphone as well as a push-to-talk control.

The Talkback signal is normally fed over the Studio Monitor Buss, overriding any signal being fed to the Studio Monitors. An extra Talkback output is also available at the Console output connector.

MONITOR BUSSES: The ST Series II Stereo Broadcast Consoles are wired for 2 comprehensive Monitor selector matrices, each totally independent of the other. These modules are designated Control Room and Studio. Each matrix is

identical in the selection available. These are Program, Audition, Auxiliary, Monaural, Spare 1 and Spare 2. Each module contains its own program amplifiers as well as individual rotary level controls.

HEADPHONES: The Control Room headphone jack is located on the right front section of the Console directly below the Monitor matrices. This jack is selectable, via the MNTR/Cue switch to hear either the Program, as selected on the Control Room Monitor matrix, or the Cue bus.

METERING: Each ST Series II Console is capable of four 3½ inch VU meters. Two of these Meters, designated PROGRAM, are dedicated to the Console Program outputs. The other two meters are designated UTILITY and are switch selectable to monitor the Audition bus, the Monaural bus, the Auxiliary bus and two spare inputs designated External 1 and 2. This illuminated selector matrix is located on the lower left of the Console beneath the Input Signal processor area. 0 VU is equivalent to a nominal +8 dBu line output level.

TIMER: Each Console may be equipped with an ADM 5060 Timer assembly. This is a 60 minute Timer with its associated Timer controls. It may be operated in conjunction with the ON/OFF logic in the 2726 Line Input modules or independently when the Disconnect (DISC) switch has been actuated. The Timer is designed to count up or down as desired and preset times may be entered into the display via the Second and Minute Advance functions.

POWER SUPPLY: Each ST Series II Console is provided with 1 PS 2020-7.5, ±7.5 Ampere Power Supply for all Console functions. This unit is capable of supplying all necessary power for the Consoles with a more than adequate safety factor. Provision has been made for the inclusion of one additional optional Power Supply to provide 100% redundancy with automatic changeover in the unlikely event of failure. LED status indicators for the Supplies are located in the meter turret housing.

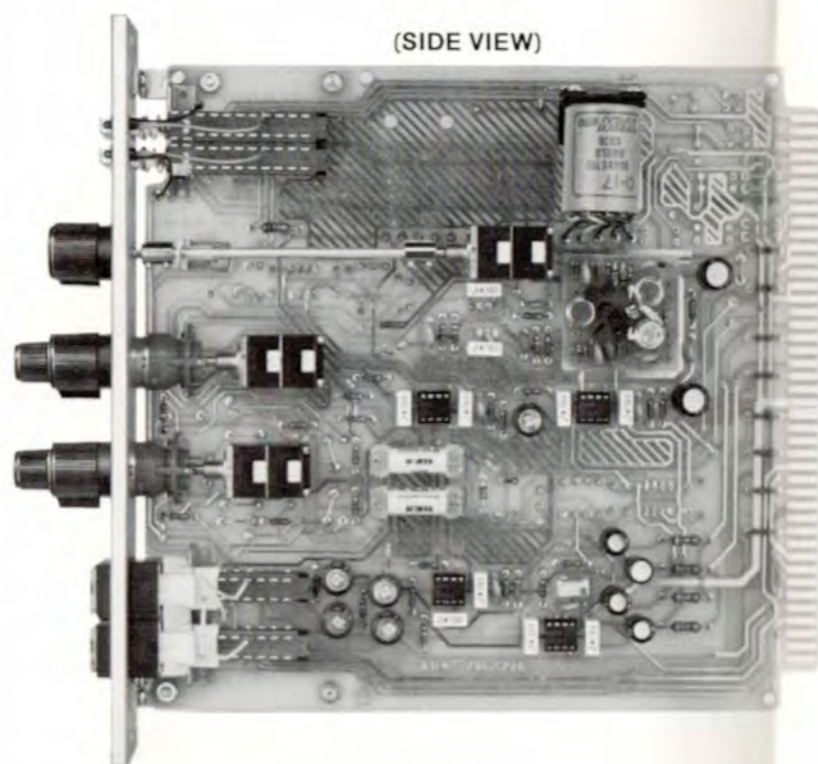
ADM

The Audio Company

ADM[®] ST SERIES II—OPTIONAL INPUT MODULES

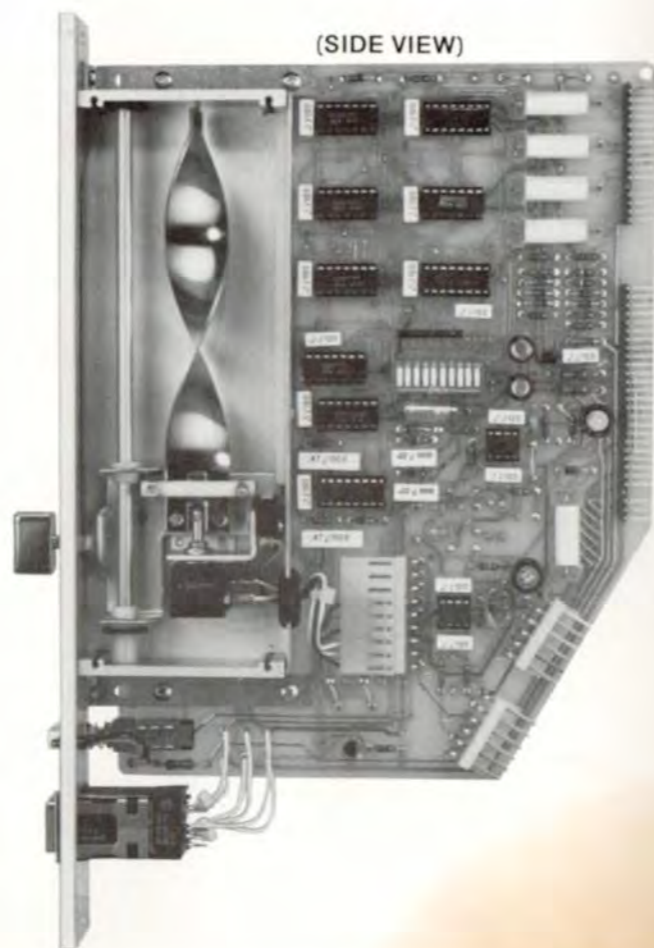
ADM MODEL 2716 MONO MICROPHONE INPUT MODULE

- 2 POSITION MICROPHONE INPUT SELECTOR SWITCHER WITH LED STATUS INDICATOR
- CONTINUOUSLY VARIABLE INPUT GAIN CONTROL WITH 30dB OF RANGE FOR INPUTS OF -60 TO -30dBv (REF. 775) WITH REMOVABLE KNOB AND SHAFT
- AUXILIARY MODULE OUTPUT WITH PRE/POST FADER SELECTION AND LEVEL CONTROL
- STEREO PAN POT WITH MONO/PAN ENGAGE SWITCH
- PROGRAM/AUDITION OUTPUT ASSIGNMENT SWITCHER (ILLUMINATED)



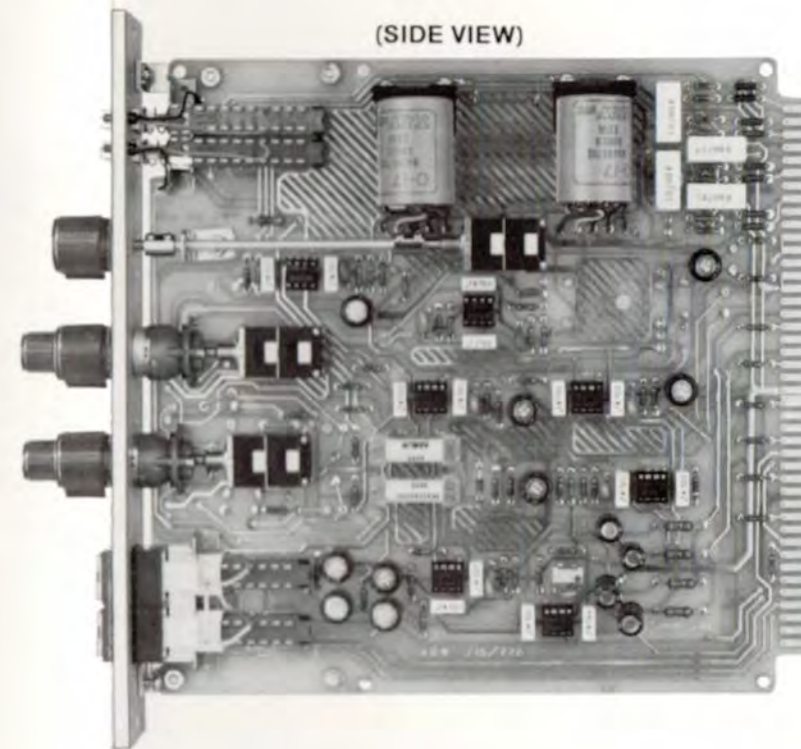
ADM MODEL 4710 MONO SLIDEX[®] ATTENUATOR MODULE WITH LOGIC CONTROL FUNCTIONS

- ADM MONO SLIDEX[®] WITH SEALED ATTENUATOR (CUE DETENT)
- CUE SWITCH WITH LED INDICATOR ENABLED ONLY WHEN MODULE IS OFF
- 2 COLOR ILLUMINATED MODULE OFF/ON INDICATOR. LOGIC PROVIDED FOR REMOTE MICROPHONE ON/OFF FUNCTIONS WITH SELECTABLE STUDIO AND/OR CONTROL MONITOR MUTING



ADM MODEL 2726 STEREO LINE INPUT MODULE

- 2 POSITION LINE INPUT SELECTOR SWITCHER WITH LED STATUS INDICATOR
- CONTINUOUSLY VARIABLE STEREO INPUT GAIN CONTROL WITH 20dB OF RANGE FOR INPUTS OF -12 TO +8dBv (REF. 775) WITH REMOVABLE KNOB AND SHAFT
- AUXILIARY MODULE OUTPUT WITH PRE/POST FADER SELECTION AND LEVEL CONTROL
- STEREO BALANCE CONTROL WITH LEFT (L), RIGHT (R), MONO (M), STEREO (ST) INPUT SELECT
- PROGRAM/AUDITION OUTPUT ASSIGNMENT SWITCHER (ILLUMINATED)



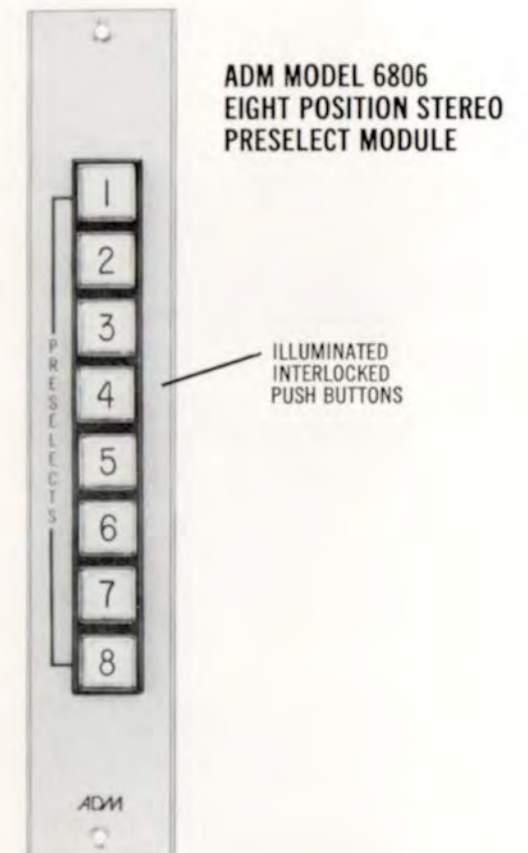
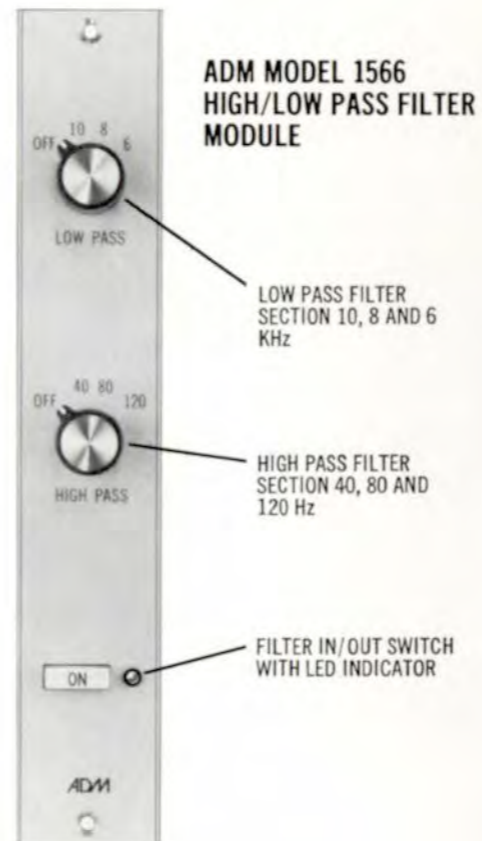
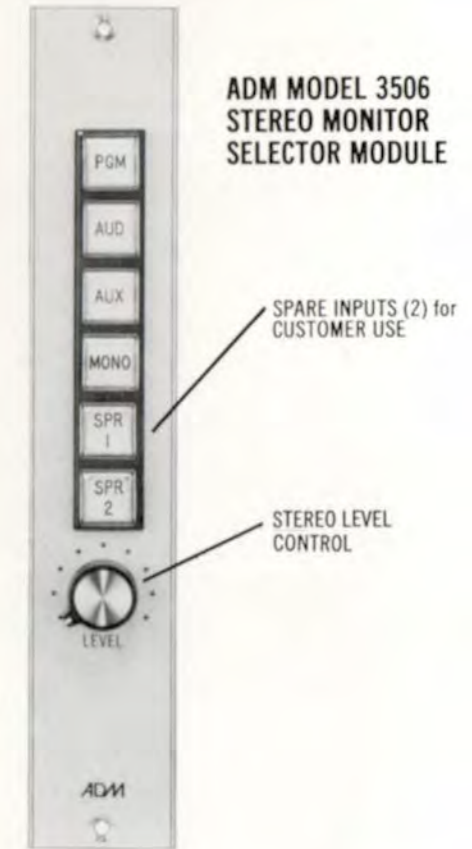
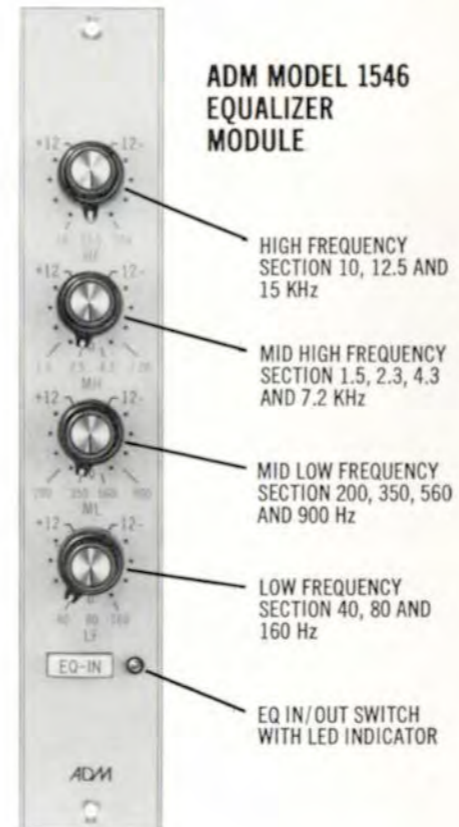
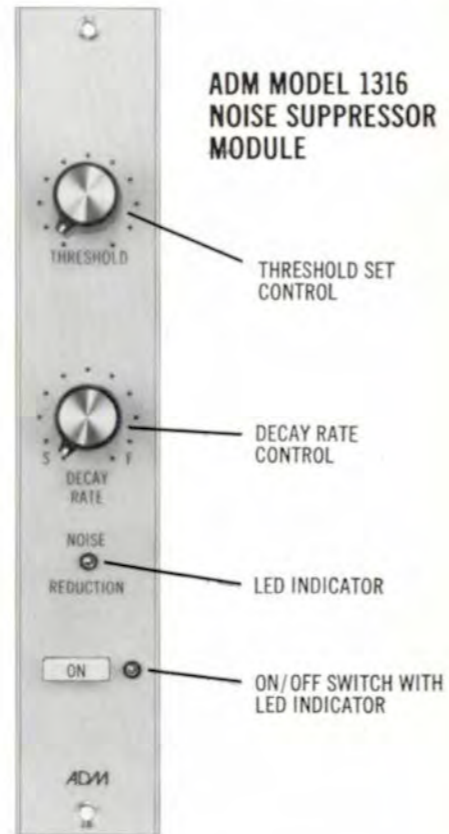
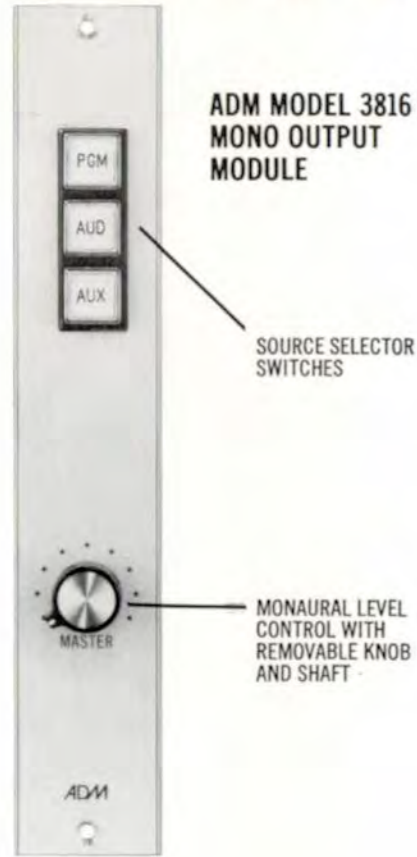
ADM MODEL 4720 STEREO SLIDEX[®] ATTENUATOR MODULE WITH LOGIC CONTROL FUNCTIONS

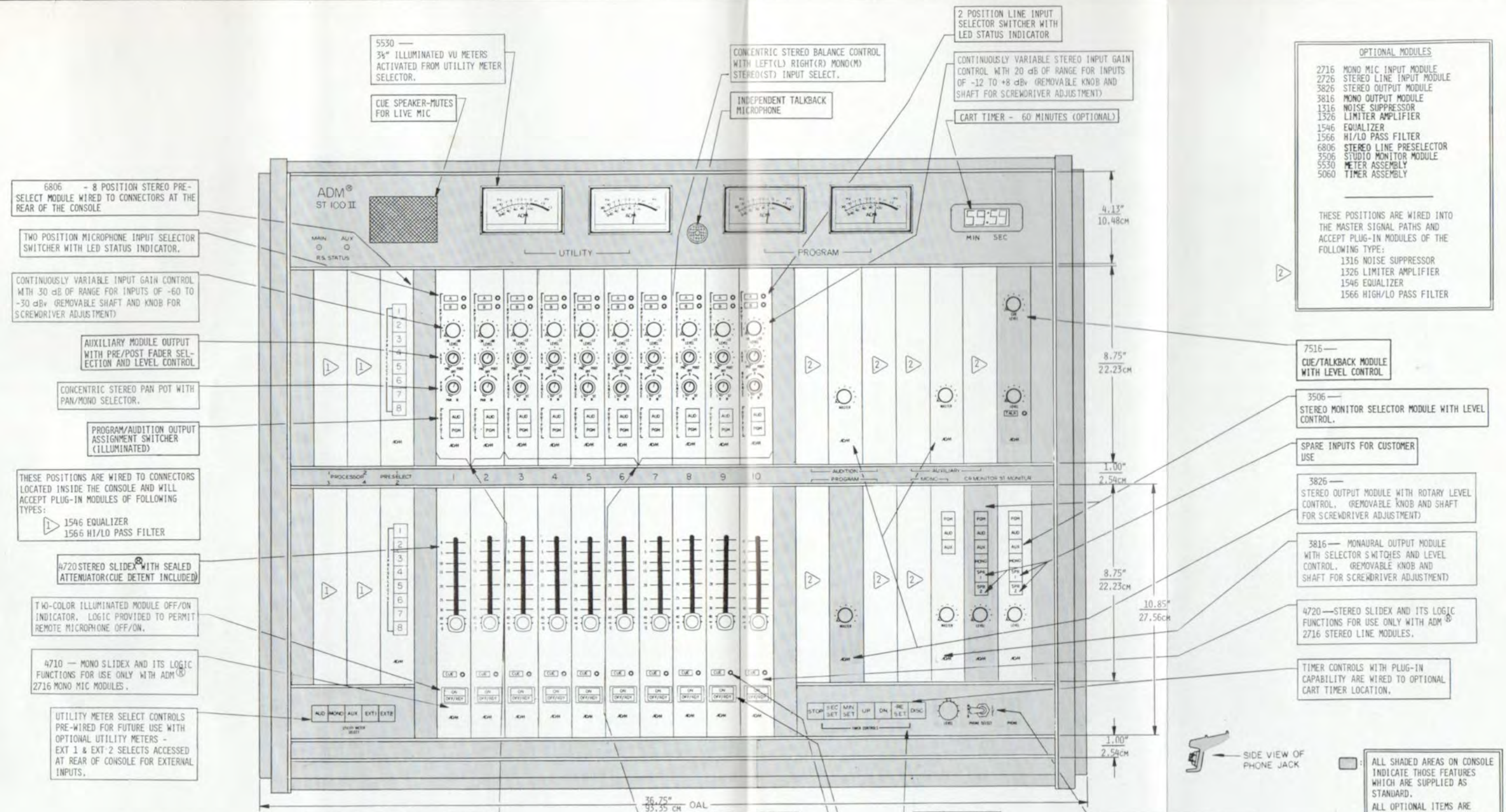
- ADM STEREO SLIDEX[®] WITH SEALED ATTENUATOR (CUE DETENT)
- CUE SWITCH WITH LED INDICATOR ENABLED ONLY WHEN MODULE IS OFF
- 2 COLOR ILLUMINATED MODULE ON/OFF INDICATOR. LOGIC PROVIDED TO PERMIT OFF INDICATOR TO BE USED FOR MACHINE TALLY (READY), WILL ALSO RESET AND START TIMER



ADM TECHNOLOGY, INC.

ADM[®] ST SERIES II—OPTIONAL OUTPUT AND PROCESSING MODULES





5530 — 3 1/2" ILLUMINATED VU METERS ACTIVATED FROM UTILITY METER SELECTOR.

CUE SPEAKER-MUTES FOR LIVE MIC

CONCENTRIC STEREO BALANCE CONTROL WITH LEFT(L) RIGHT(R) MONO(M) STEREO(ST) INPUT SELECT.

INDEPENDENT TALKBACK MICROPHONE

2 POSITION LINE INPUT SELECTOR SWITCHER WITH LED STATUS INDICATOR

CONTINUOUSLY VARIABLE STEREO INPUT GAIN CONTROL WITH 20 dB OF RANGE FOR INPUTS OF -12 TO +8 dBv (REMOVABLE KNOB AND SHAFT FOR SCREWDRIVER ADJUSTMENT)

CART TIMER - 60 MINUTES (OPTIONAL)

- OPTIONAL MODULES**
- 2716 MONO MIC INPUT MODULE
 - 2726 STEREO LINE INPUT MODULE
 - 3826 STEREO OUTPUT MODULE
 - 3816 MONO OUTPUT MODULE
 - 1316 NOISE SUPPRESSOR
 - 1326 LIMITER AMPLIFIER
 - 1546 EQUALIZER
 - 1566 HI/LO PASS FILTER
 - 6806 STEREO LINE PRESELECTOR
 - 3506 STUDIO MONITOR MODULE
 - 5530 METER ASSEMBLY
 - 5060 TIMER ASSEMBLY
- THESE POSITIONS ARE WIRED INTO THE MASTER SIGNAL PATHS AND ACCEPT PLUG-IN MODULES OF THE FOLLOWING TYPE:
- 1316 NOISE SUPPRESSOR
 - 1326 LIMITER AMPLIFIER
 - 1546 EQUALIZER
 - 1566 HIGH/LO PASS FILTER

6806 - 8 POSITION STEREO PRE-SELECT MODULE WIRED TO CONNECTORS AT THE REAR OF THE CONSOLE

TWO POSITION MICROPHONE INPUT SELECTOR SWITCHER WITH LED STATUS INDICATOR.

CONTINUOUSLY VARIABLE INPUT GAIN CONTROL WITH 30 dB OF RANGE FOR INPUTS OF -60 TO -30 dBv (REMOVABLE SHAFT AND KNOB FOR SCREWDRIVER ADJUSTMENT)

AUXILIARY MODULE OUTPUT WITH PRE/POST FADER SELECTION AND LEVEL CONTROL

CONCENTRIC STEREO PAN POT WITH PAN/MONO SELECTOR.

PROGRAM/AUDITION OUTPUT ASSIGNMENT SWITCHER (ILLUMINATED)

THESE POSITIONS ARE WIRED TO CONNECTORS LOCATED INSIDE THE CONSOLE AND WILL ACCEPT PLUG-IN MODULES OF FOLLOWING TYPES:

- 1546 EQUALIZER
- 1566 HI/LO PASS FILTER

4720 STEREO SLIDEX WITH SEALED ATTENUATOR (CUE DETENT INCLUDED)

TWO-COLOR ILLUMINATED MODULE OFF/ON INDICATOR. LOGIC PROVIDED TO PERMIT REMOTE MICROPHONE OFF/ON.

4710 - MONO SLIDEX AND ITS LOGIC FUNCTIONS FOR USE ONLY WITH ADM 2716 MONO MIC MODULES.

UTILITY METER SELECT CONTROLS PRE-WIRED FOR FUTURE USE WITH OPTIONAL UTILITY METERS - EXT 1 & EXT-2 SELECTS ACCESSED AT REAR OF CONSOLE FOR EXTERNAL INPUTS.

7516 - CUE/TALKBACK MODULE WITH LEVEL CONTROL

3506 - STEREO MONITOR SELECTOR MODULE WITH LEVEL CONTROL.

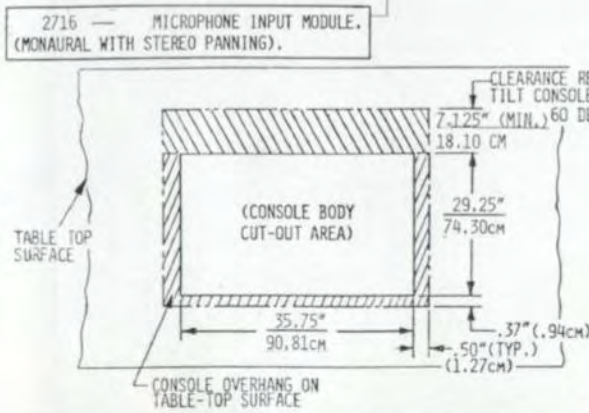
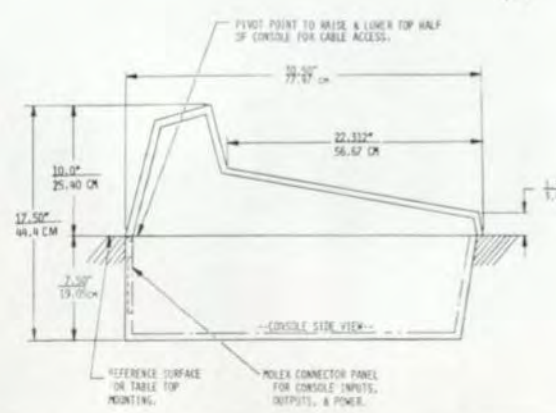
SPARE INPUTS FOR CUSTOMER USE

3826 - STEREO OUTPUT MODULE WITH ROTARY LEVEL CONTROL. (REMOVABLE KNOB AND SHAFT FOR SCREWDRIVER ADJUSTMENT)

3816 - MONAURAL OUTPUT MODULE WITH SELECTOR SWITCHES AND LEVEL CONTROL. (REMOVABLE KNOB AND SHAFT FOR SCREWDRIVER ADJUSTMENT)

4720 - STEREO SLIDEX AND ITS LOGIC FUNCTIONS FOR USE ONLY WITH ADM 2716 STEREO LINE MODULES.

TIMER CONTROLS WITH PLUG-IN CAPABILITY ARE WIRED TO OPTIONAL CART TIMER LOCATION.

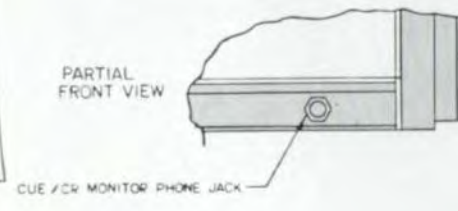


2716 - MICROPHONE INPUT MODULE. (MONAURAL WITH STEREO PANNING).

2726 - STEREO LINE INPUT MODULE.

CUE SWITCH WITH LED INDICATOR ENABLED ONLY WHEN MODULE IS OFF.

TWO-COLOR ILLUMINATED MODULE OFF/ON INDICATOR. LOGIC PROVIDED TO PERMIT OFF INDICATOR TO BE USED FOR MACHINE TALLY (READY) AND REMOTE MACHINE START FUNCTIONS.



ALL SHADED AREAS ON CONSOLE INDICATE THOSE FEATURES WHICH ARE SUPPLIED AS STANDARD. ALL OPTIONAL ITEMS ARE SHOWN IN UN-SHADED AREAS ON THE CONSOLE.

DATE	SYMBOL	DR	CK	DCN	OR	REVISION

ADM TECHNOLOGY INC.

TITLE: **PANEL LAYOUT**

ST100 II 104187

DATE: 3-6-81

6806 — 8 POSITION STEREO PRE-SELECT MODULE WIRED TO CONNECTORS AT THE REAR OF THE CONSOLE.

TWO POSITION MICROPHONE INPUT SELECTOR SWITCHER WITH LED STATUS INDICATOR.

CONTINUOUSLY VARIABLE INPUT GAIN CONTROL WITH 30 dB OF RANGE FOR INPUTS OF -60 TO -30 dBV (REMOVABLE SHAFT AND KNOB FOR SCREWDRIVER ADJUSTMENT)

AUXILIARY MODULE OUTPUT WITH PRE/POST FADER SELECTION AND LEVEL CONTROL.

CONCENTRIC STEREO PAN POT WITH PAN/MONO SELECTOR.

PROGRAM/AUDITION OUTPUT ASSIGNMENT SWITCHER (ILLUMINATED)

THESE POSITIONS ARE WIRED TO CONNECTORS LOCATED INSIDE THE CONSOLE AND WILL ACCEPT PLUG-IN MODULES OF FOLLOWING TYPES:
 1546 EQUALIZER
 1566 HI/LO PASS FILTER

4720 STEREO SLIDEX WITH SEALED ATTENUATOR (CUE DETENT INCLUDED)

TWO-COLOR ILLUMINATED MODULE OFF/ON INDICATOR. LOGIC PROVIDED TO PERMIT REMOTE MICROPHONE OFF/ON

4710 MONO SLIDEX AND ITS LOGIC FUNCTIONS FOR USE ONLY WITH ADM 2716 MONO MIC MODULES.

UTILITY METER SELECT CONTROLS PRE-WIRED FOR FUTURE USE WITH OPTIONAL UTILITY METERS - EXT 1 & EXT 2 SELECTS ACCESSED AT REAR OF CONSOLE FOR EXTERNAL INPUTS.

5530 — 3 1/2" ILLUMINATED VU METERS ACTIVATED FROM UTILITY METER SELECTOR.

CUE SPEAKER-MUTES FOR LIVE MIC

CONCENTRIC STEREO BALANCE CONTROL WITH LEFT(L) RIGHT(R) MONO(M) STEREO(ST) INPUT SELECT.

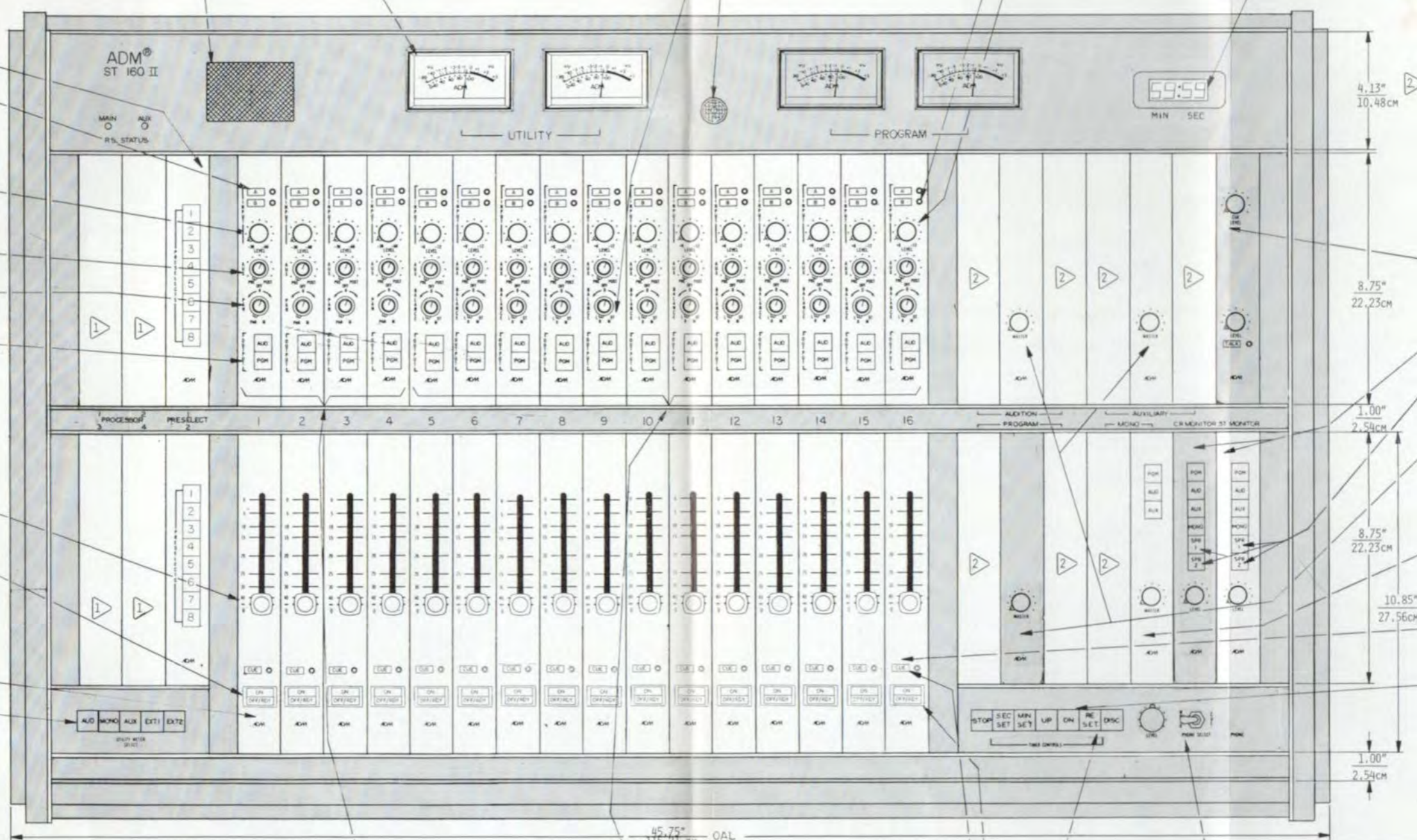
INDEPENDENT TALKBACK MICROPHONE

2 POSITION LINE INPUT SELECTOR SWITCHER WITH LED STATUS INDICATOR

CONTINUOUSLY VARIABLE STEREO INPUT GAIN CONTROL WITH 20 dB OF RANGE FOR INPUTS OF -12 TO +8 dBV (REMOVABLE KNOB AND SHAFT FOR SCREWDRIVER ADJUSTMENT)

CART TIMER - 60 MINUTES (OPTIONAL)

- OPTIONAL MODULES**
- 2716 MONO MIC INPUT MODULE
 - 2726 STEREO LINE INPUT MODULE
 - 3826 STEREO OUTPUT MODULE
 - 3816 MONO OUTPUT MODULE
 - 1316 NOISE SUPPRESSOR
 - 1326 LIMITER AMPLIFIER
 - 1546 EQUALIZER
 - 1566 HI/LO PASS FILTER
 - 6806 STEREO LINE PRESELECTOR
 - 3506 STUDIO MONITOR MODULE
 - 5530 METER ASSEMBLY
 - 5060 TIMER ASSEMBLY
- THESE POSITIONS ARE WIRED INTO THE MASTER SIGNAL PATHS AND ACCEPT PLUG-IN MODULES OF THE FOLLOWING TYPE:
- 1316 NOISE SUPPRESSOR
 - 1326 LIMITER AMPLIFIER
 - 1546 EQUALIZER
 - 1566 HIGH/LO PASS FILTER



7516 — CUE/TALKBACK MODULE WITH LEVEL CONTROL.

3506 — STEREO MONITOR SELECTOR MODULE WITH LEVEL CONTROL.

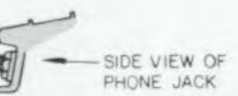
SPARE INPUTS FOR CUSTOMER USE

3826 — STEREO OUTPUT MODULE WITH ROTARY LEVEL CONTROL. (REMOVABLE KNOB AND SHAFT FOR SCREWDRIVER ADJUSTMENT)

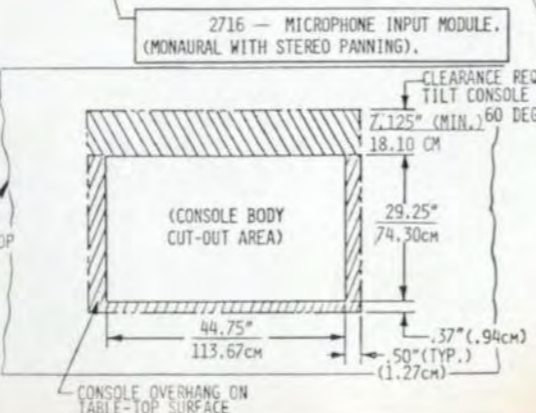
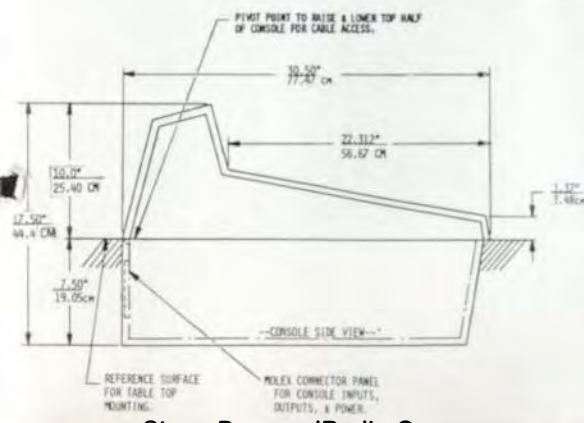
3816 — MONAURAL OUTPUT MODULE WITH SELECTOR SWITCHES AND LEVEL CONTROL. (REMOVABLE KNOB AND SHAFT FOR SCREWDRIVER ADJUSTMENT)

4720 — STEREO SLIDEX AND ITS LOGIC FUNCTIONS FOR USE ONLY WITH ADM 2716 STEREO LINE MODULES.

TIMER CONTROLS WITH PLUG-IN CAPABILITY ARE WIRED TO OPTIONAL CART TIMER LOCATION.



ALL SHADED AREAS ON CONSOLE INDICATE THOSE FEATURES WHICH ARE SUPPLIED AS STANDARD. ALL OPTIONAL ITEMS ARE SHOWN IN UN-SHADED AREAS ON THE CONSOLE.



2716 — MICROPHONE INPUT MODULE. (MONAURAL WITH STEREO PANNING).

MODEL 2726 — STEREO LINE INPUT MODULE.

CLEARANCE REQUIRED TO TILT CONSOLE BODY UP 60 DEGREES.

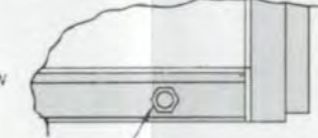
CUE SWITCH WITH LED INDICATOR ENABLED ONLY WHEN MODULE IS OFF.

TWO-COLOR ILLUMINATED MODULE OFF/ON INDICATOR. LOGIC PROVIDED TO PERMIT OFF INDICATOR TO BE USED FOR MACHINE TALLY (READY) AND REMOTE MACHINE START FUNCTIONS.

TIMER RESET/START DISCONNECT SWITCH

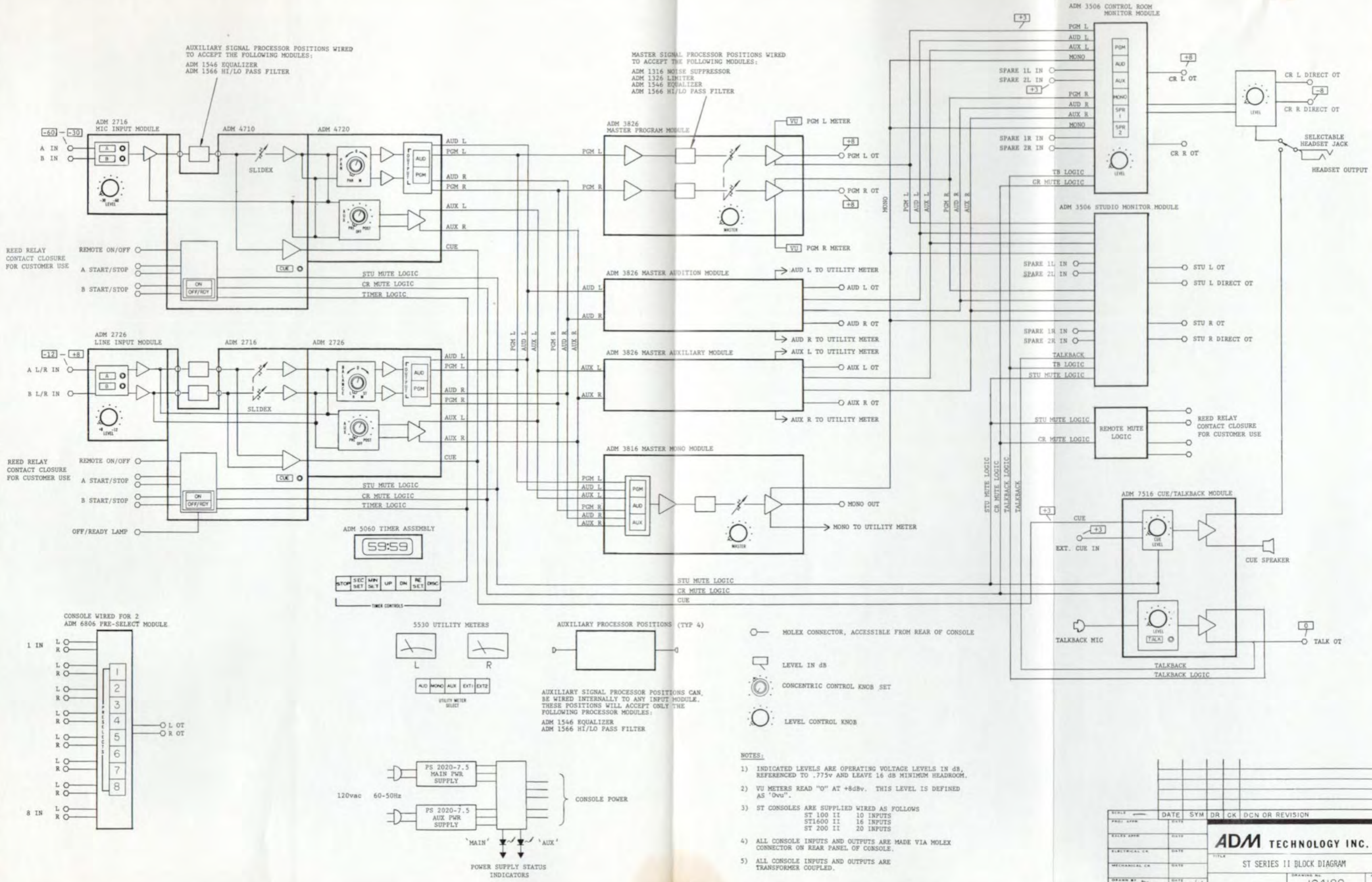
PHONE SELECT SWITCH ACTIVATES EITHER CONTROL ROOM MONITOR OR CUE TO HEADSET JACK.

PARTIAL FRONT VIEW



CUE /CR MONITOR PHONE JACK

DATE	SYM	DR	CK	DCN OR REVISION
5-8-81	A	DR	CK	REVISED LOGO.
<p>SALES: <i>M.A. Shields</i> DATE: 5/8/81</p> <p>MECHANICAL: <i>DR</i> DATE: 3-14-81</p> <p>DRAWN BY: <i>DR</i> DATE: 3-14-81</p>				
<p>ADM TECHNOLOGY INC.</p>				
<p>PANEL LAYOUT</p>				
ST 160 II		DRAWING NO.		104188
		REV.		A

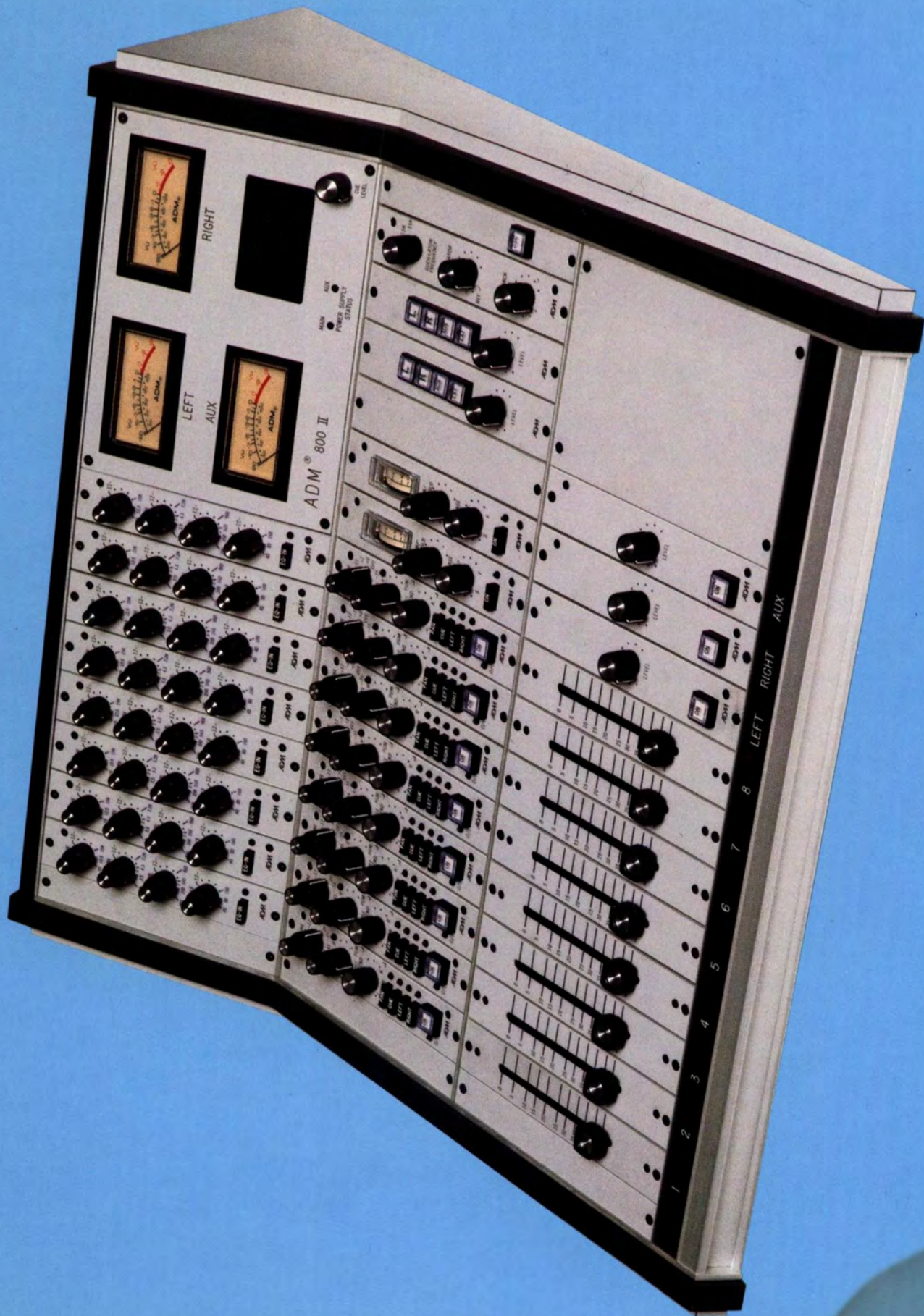


DATE	SYM	DR	GK	DCN	OR REVISION

ADM TECHNOLOGY INC.
 ST SERIES II BLOCK DIAGRAM
 DRAWING NO. 104189



800
CONSOLES



ADM® CONSOLE SPECIFICATIONS

1. Frequency Response:

No equalization. Measured at any output level up to clipping. ± 1 dB, 20Hz-20KHz Ref. 1KHz.

2. Distortion:

The total harmonic distortion at +24 dBm or lower at 1KHz will be less than .07% and will not exceed .15% THD over the band 100Hz-20KHz at +24 dBm or lower.

3. Maximum Output Level:

The clipping level at any output when terminated in 600 ohms shall be +27 dBm 30 Hz to 20KHz.

4. Noise:

The equivalent input noise of any microphone shall be lower than -125.5 dBu referred to a 250 ohm impedance measured on an average response meter. Any line level input (+8 dBm ref) to any output channel (+8 dBm ref) will exhibit a maximum noise of -72 dBm (S/N 80 dB). All noise measurements based on a bandwidth 20Hz to 20KHz.

5. Crosstalk:

Better than 72 dB measured between adjacent channels at normal operating levels over the band 100Hz to 10KHz.

6. Temperature:

Over the temperature range 0 to 55 degrees C. no apparent changes in operational characteristics are discernible.

7. RF Susceptibility:

Based on the tailored roll off characteristics and proper manufacturing techniques, ADM consoles will operate in high RF environments.

WARRANTY

ADM Technology, Inc. warrants our consoles or components to be free from defective material and workmanship for a period of five years from the date of delivery. All defective parts will be replaced and repair work required by normal use will be performed, without charge, within this five year period. This warranty shall be exclusive and in lieu of all other warranties expressed or implied.

THESE POSITIONS ARE WIRED TO ACCEPT PLUG-IN SIGNAL PROCESSORS OF THE FOLLOWING TYPES FOR MODULE POSITIONS 1-8 : 1540-EQUALIZER () 1560-HI-PASS/LO-PASS FILTER ()

MIC/LINE INPUT MODULE ATTENUATOR SELECTOR.

AUX SEND SOURCE SELECTOR WITH COMPANION LEVEL CONTROL.

PANNING WITH COMPANION OFF/ON SWITCH AND RED LED INDICATOR.

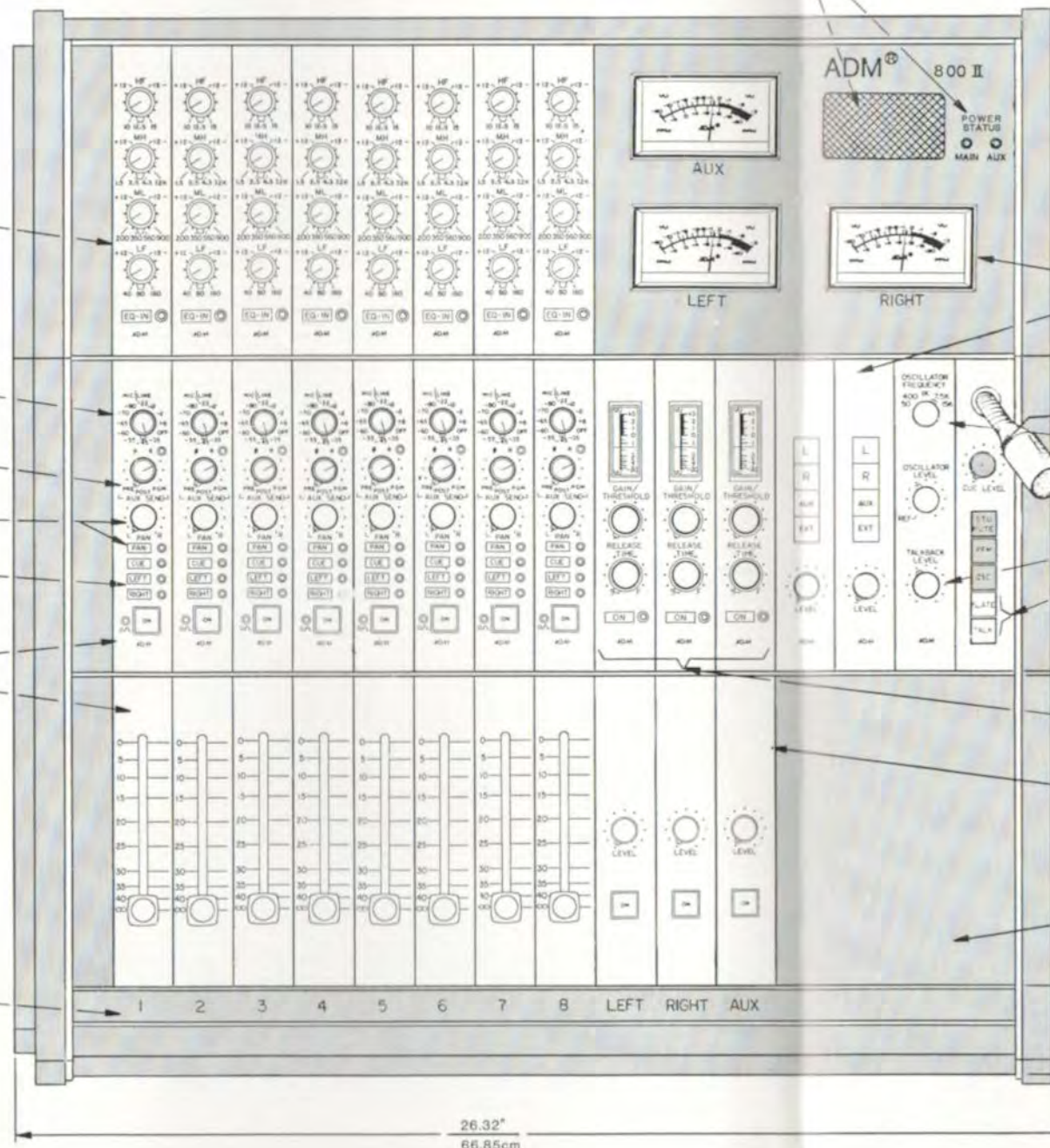
LEFT-RIGHT OFF/ON MASTER BUSS SELECTS WITH COMPANION LED INDICATORS.

2781 - MONO MIC INPUT MODULE WITH DIRECT OUTPUT (), 4053 - COMPANION SLIDEX (), 4781 - OPTIONAL PLUG-IN VCA ATTENUATOR FOR USE WITH 2781 INPUT MODULE & COMPANION SLIDEX (),

LOWER DESIGNATION STRIP

POWER SUPPLY STATUS INDICATORS - GREEN LEDS.

CUE SPEAKER.



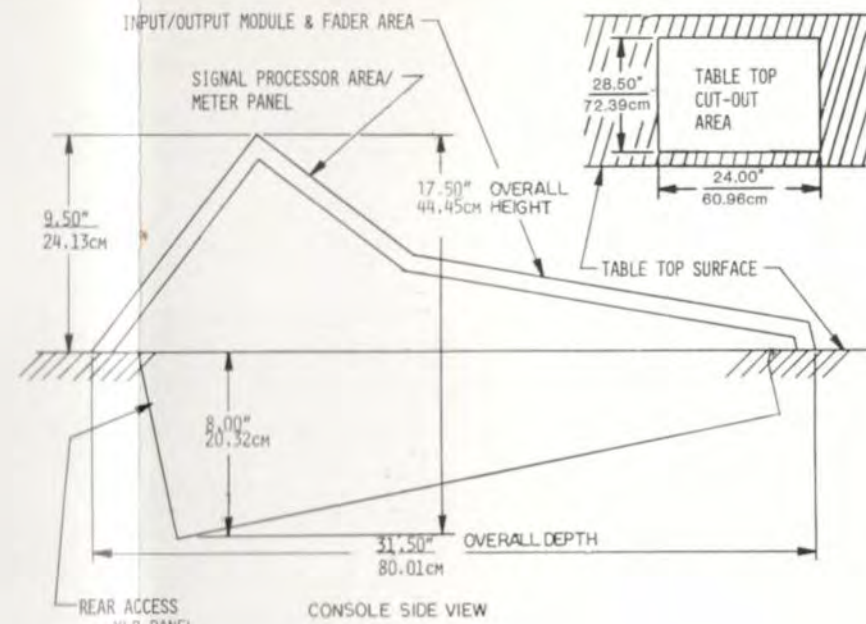
7.75" 19.69cm

7.75" 19.69cm

7.75" 19.69cm

2.00" 5.08cm

26.32" 66.85cm



3503---4-POSITION MONO MONITOR ()

5530 - 3 1/2" ILLUMINATED VU METER IS STANDARD, PPM/VU METERS OPTIONAL. ()

CUE MASTER LEVEL CONTROL.

7511---OSCILLATOR MODULE. ()

TALKBACK MIC ON GOOSENECK, SLATE & OSCILLATOR SWITCHES, TALKBACK CIRCUIT & TALKBACK LEVEL CONTROL ARE OPTIONAL AS A PACKAGE (),

THESE POSITIONS ARE WIRED TO ACCEPT PLUG-IN MODULES OF THE FOLLOWING TYPES: 1310-NOISE SUPPRESSOR () 1320-LIMITER () 1540-EQUALIZER () 1560-HIGH PASS LOW PASS FILTER ()

3981---MASTER OUTPUT MODULE. ()

BLANK UTILITY PANEL SUPPLIED FOR CUSTOMER USE.

- 1) KNOB IDENTIFICATION CONVENTION:
- SINGLE CONTROL KNOB
 - CONCENTRIC CONTROL KNOB
- 2) CABINET FINISH TO BE BLACK FORMICA WITH GREY MODULE PANELS & EXTRUDED ALUMINUM TRIM.

CONSOLE EQUIPPED WITH XLR INPUTS/OUTPUTS STANDARD.

OPTIONAL FEATURES: TALKBACK OPTION, PPM/VU METERS, PHANTOM MICROPHONE POWER SUPPLY, INPUT MODULES WITH VCA ATTENUATORS, EXTENDER BOARD SET.

ALL SHADED AREAS ON CONSOLE INDICATE THOSE FEATURES WHICH ARE SUPPLIED AS STANDARD.

ALL OTHER ITEMS ARE DEPICTED OR DESCRIBED AS OPTIONAL.

12/22/84	A	DC	HL	UPDATE	
SCALE	DATE	SYM	DR	CK	DCN OR REVISION
PROJ: 2494	DATE				
DRAWN BY: M.H. Shields	DATE: 10/30/81				
CHECKED BY: J.C. [Signature]	DATE: 10-30-81				
TOLERANCES (UNLESS OTHERWISE SPECIFIED)		DRAWING NO.		REV.	
.XX .010	.XX .010	ADM TECHNOLOGY INC.			
.XXX .005	.XXX .005	800 II PANEL LAYOUT			
ANGLE 1/2"	ANGLE 1/2"	B-0803-000 SALES	104258	A	

THESE POSITIONS ARE WIRED TO ACCEPT PLUG-IN SIGNAL PROCESSORS OF THE FOLLOWING TYPES FOR MODULE POSITIONS 1-12: 1540-EQUALIZER () 1560-HI-PASS/LO-PASS FILTER ()

MIC/LINE INPUT MODULE ATTENUATOR SELECTOR.

AUX SEND SOURCE SELECTOR WITH COMPANION LEVEL CONTROL.

PANNING WITH COMPANION OFF/ON SWITCH AND RED LED INDICATOR.

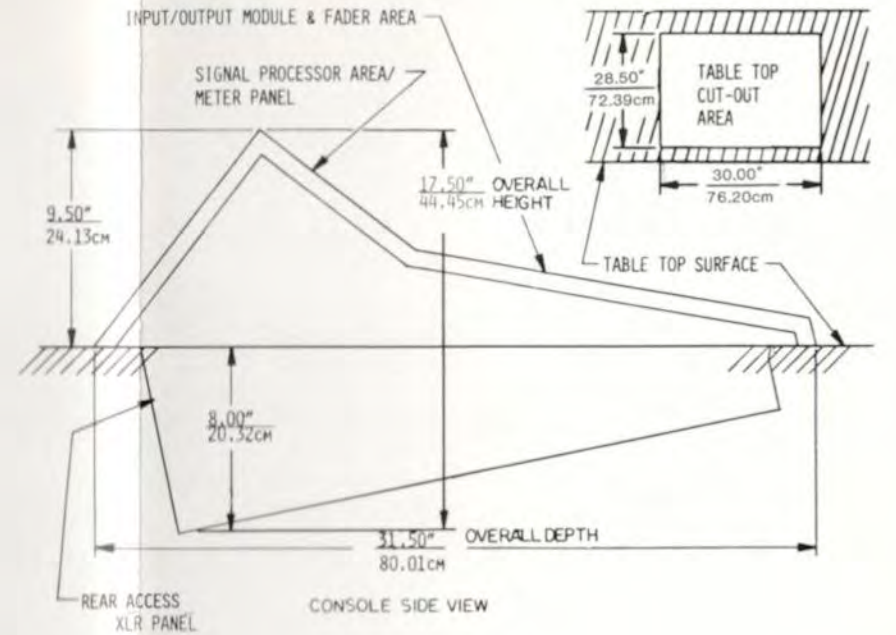
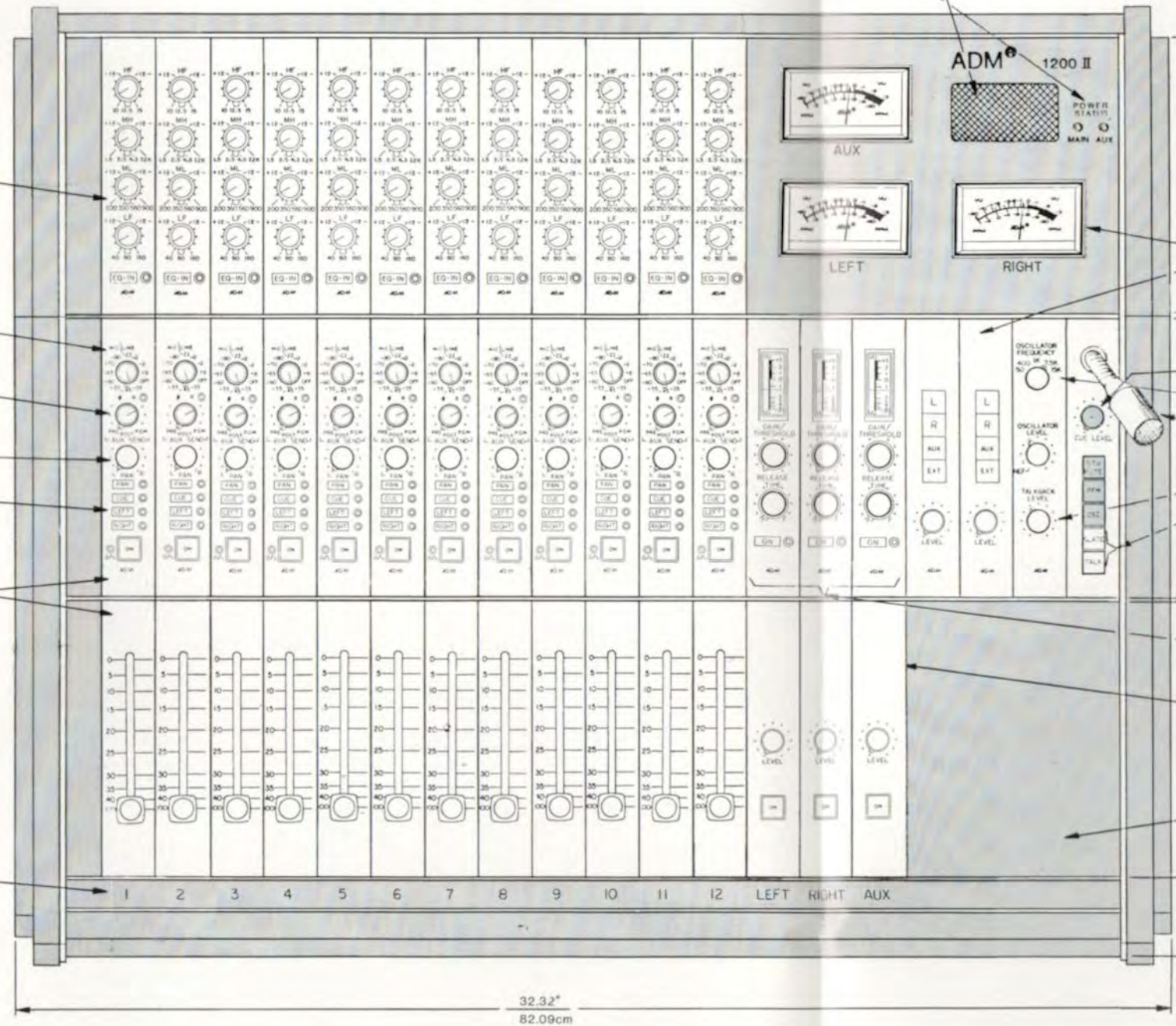
LEFT-RIGHT OFF/ON MASTER BUSS SELECTS WITH COMPANION LED INDICATORS.

2781 - MONO MIC INPUT MODULE WITH DIRECT OUTPUT ().
4053 - COMPANION SLIDEX ().
4781 - OPTIONAL PLUG-IN VCA ATTENUATOR FOR USE WITH 2781 INPUT MODULE & COMPANION SLIDEX ().

LOWER DESIGNATION STRIP

POWER SUPPLY STATUS INDICATORS - GREEN LEDES.

CUE SPEAKER.



3503---4-POSITION MONO MONITOR ()

5530 - 3 1/2" ILLUMINATED VU METER IS STANDARD, PPM/VU METERS OPTIONAL. ()

CUE MASTER LEVEL CONTROL.

7511---OSCILLATOR MODULE. ()

TALKBACK MIC ON GOOSENECK, SLATE & OSCILLATOR SWITCHES, TALKBACK CIRCUIT & TALKBACK LEVEL CONTROL ARE OPTIONAL AS A PACKAGE ().

THESE POSITIONS ARE WIRED TO ACCEPT PLUG-IN MODULES OF THE FOLLOWING TYPES: 1310-NOISE SUPPRESSOR () 1320-LIMITER () 1540-EQUALIZER () 1560-HIGH PASS LOW PASS FILTER ()

3981---MASTER OUTPUT MODULE. ()

BLANK UTILITY PANEL SUPPLIED FOR CUSTOMER USE.

- 1) KNOB IDENTIFICATION CONVENTION:
- SINGLE CONTROL KNOB
 - CONCENTRIC CONTROL KNOB
- 2) CABINET FINISH TO BE BLACK FORMICA WITH GREY MODULE PANELS & EXTRUDED ALUMINUM TRIM.

CONSOLE EQUIPPED WITH XLR INPUTS/OUTPUTS STANDARD.

OPTIONAL FEATURES:
TALKBACK OPTION,
PPM/VU METERS,
PHANTOM MICROPHONE POWER SUPPLY,
INPUT MODULES WITH VCA ATTENUATORS,
EXTENDER BOARD SET.

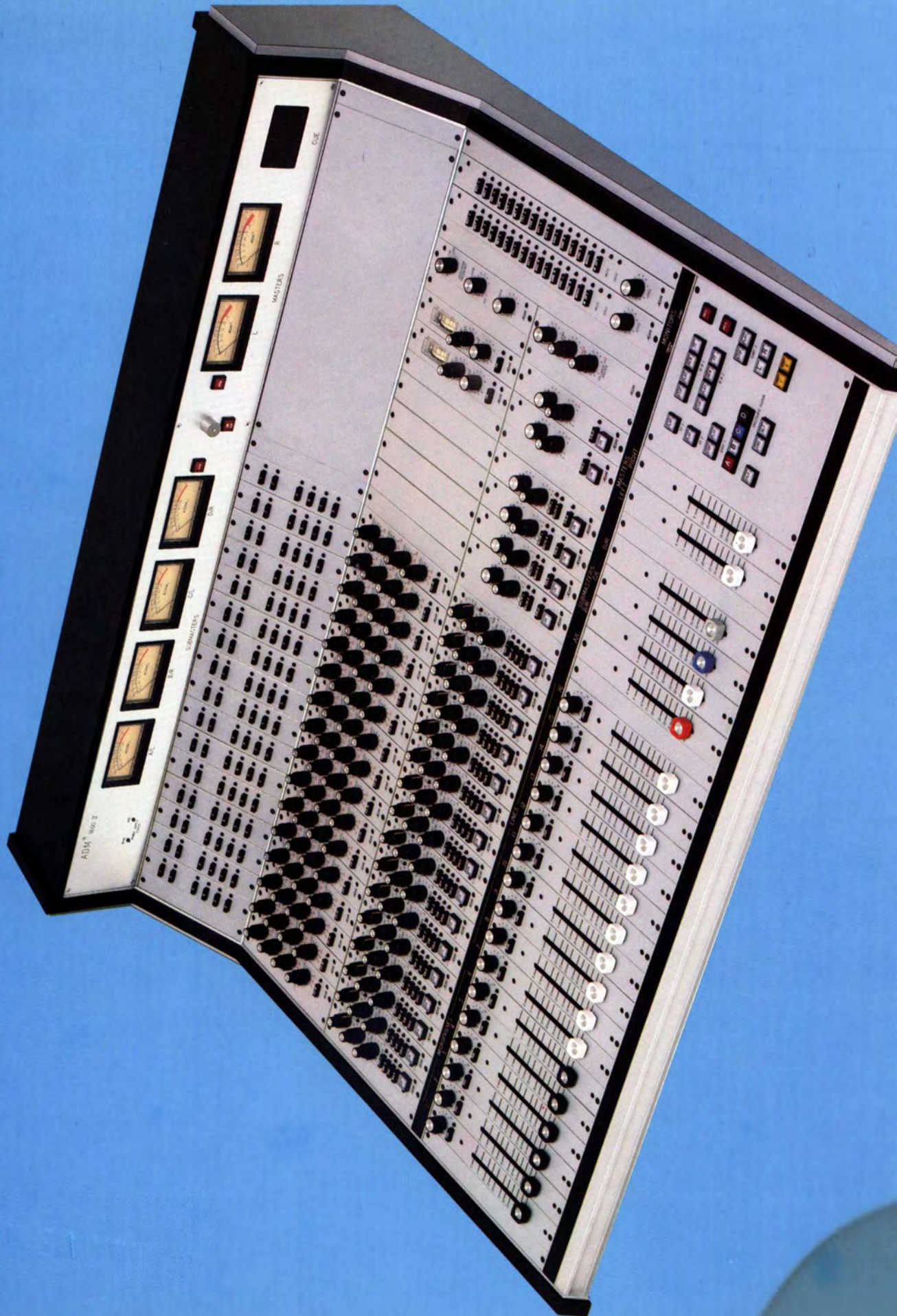
ALL SHADED AREAS ON CONSOLE INDICATE THOSE FEATURES WHICH ARE SUPPLIED AS STANDARD.

ALL OTHER ITEMS ARE DEPICTED OR DESCRIBED AS OPTIONAL.

SCALE	DATE	SYM	DR	CK	DCN OR REVISION
PROJ APPR	DATE				
TABLET APPR	DATE				
ELECTRICAL CH	DATE				
METROLOGICAL CH	DATE				
DRAWN BY	DATE				
CHECKED BY	DATE				
ADM TECHNOLOGY INC.					
1200 II PANEL LAYOUT					
B-1203-000				SALES	104493

**1600
CONSOLES**

**1600
CONSOLES**



ADM[®] CONSOLE SPECIFICATIONS

1. Frequency Response:

No equalization. Measured at any output level up to clipping. ± 1 dB, 20Hz-20KHz Ref. 1KHz.

2. Distortion:

The total harmonic distortion at +24 dBm or lower at 1KHz will be less than .07% and will not exceed .15% THD over the band 100Hz-20KHz at +24 dBm or lower.

3. Maximum Output Level:

The clipping level at any output when terminated in 600 ohms shall be +27 dBm 30 Hz to 20KHz.

4. Noise:

The equivalent input noise of any microphone shall be lower than -125.5 dBu referred to a 250 ohm impedance measured on an average response meter. Any line level input (+8 dBm ref) to any output channel (+8 dBm ref) will exhibit a maximum noise of -72 dBm (S/N 80 dB). All noise measurements based on a bandwidth 20Hz to 20KHz.

5. Crosstalk:

Better than 72 dB measured between adjacent channels at normal operating levels over the band 100Hz to 10KHz.

6. Temperature:

Over the temperature range 0 to 55 degrees C. no apparent changes in operational characteristics are discernible.

7. RF Susceptibility:

Based on the tailored roll off characteristics and proper manufacturing techniques, ADM consoles will operate in high RF environments.

WARRANTY

ADM Technology, Inc. warrants our consoles or components to be free from defective material and workmanship for a period of five years from the date of delivery. All defective parts will be replaced and repair work required by normal use will be performed, without charge, within this five year period. This warranty shall be exclusive and in lieu of all other warranties expressed or implied.

ADM TECHNOLOGY, INC.
1600 SERIES II
BROADCAST PRODUCTION
CONSOLES

technical
information

ADM[®]
The Audio Company

ADM TECHNOLOGY, INC.
16005 Sturgeon, Roseville, Michigan 48066
Phone: (313) 778-8400 • TLX-23-1114

ADM's 1600 Series II Broadcast Production Consoles are desk top, modular, Broadcast Studio and Production center units. The 1600 II, as all ADM consoles, meets the most demanding requirements for Broadcast Audio production. Precise engineering and construction, together with usage of quality components, result in an ultra-reliable, professional console which will handle the most demanding program material. ADM console modules and housings are metal-reinforced for maximum structural strength and are finished to aesthetically match the customer's control room decor. Advanced design parameters and human engineering of front panel controls assure logical, optimum convenience of use.

FEATURES:

- 5 Year Unconditional Warranty
- Wired for stereo production capability
- Totally modular design, utilizing plug-in components
- Phase reversal
- 16 Microphone/Line inputs with 2 position preselection for each
- 4 Submaster busses
- 2 Master output busses
- Individual Echo Send from inputs and Return to Submasters and Masters
- Solo
- Built-in Cue amplifier and Speaker
- Dual foldback busses
- 4 band, 14 frequency reciprocal Equalizers
- ADM Filters, Limiters and Noise Suppressors available
- 6 Illuminated VU meters
- Gold plated card edge connections throughout
- Patented, ultra-smooth, sealed Slidex® faders with Cue detent on inputs
- 5 frequency Oscillator individually assignable to Submasters and Masters
- Talkback and Slate Facilities
- Group module muting capabilities
- 6 Sets of machine remote controls
- Illuminated ON-AIR and Power Supply status indicators

DESCRIPTION:

This Technical Brochure provides a detailed description of the ADM 1600 Series II Broadcast Production Console. The 1600 II is a desk top console which incorporates the latest audio production features into a mid-size, advanced, state-of-the-art broadcast console. Extensive research by ADM has resulted in a medium size console providing most features typical of a larger, more elaborate console. Because of its size and facilities, it also makes an ideal Mobile console.

The 1600 Series II Console is a full 16 input, 4 submaster, 2 output console which utilizes standard ADM 2780 Input, 3880 Submaster and 3980 Master Output modules.

The 1600 II is fully wired for the total module complement, but may be ordered with a lesser number of modules initially to have availability for future expansion. Various combina-

tions of Signal Processing devices may be supplied with the console, (e.g. 1540 Equalizers, 1560 Hi/Lo Pass Filters, 1310 Noise Suppressors and 1320 Limiter modules) or these may be added later as usage requires. This will be done by simply plugging-in the required modules as circumstances dictate.

The 1600 Series II Console utilizes the patented ADM Slidex for noise-free attenuation throughout. Our unique 202 Discrete Operational Amplifier exemplifies ADM's innovative ingenuity. These ADM design philosophies are employed throughout the Console to achieve the finest specifications available today.

This technology is continued in the 1600 II with such features as Stereo capability, Foldback busses, Echo Send and Return bus, parallel Cue functions, Solo, 2 module Group Functions, LED status indicators, illuminated OFF/ON switches, 5 frequency Oscillator, Talkback, Slating, dual Monitor busses, machine remote controls and so on.

Combine all of the above with attractive advanced styling, comprehensive human engineering and you have the most versatile console in its class available today.

The 1600 II, as with all ADM consoles, is backed with an exceptional 5 Year Unconditional Warranty, assuring the discriminating Broadcaster many years of reliable, trouble-free service.

INPUT PRESELECTION: Above and in-line with each of the 2780 Input modules is an LED illuminated 2 position preselect matrix engraved 1 and 2. In the 1600 Series II Console these may be used as a 2 position Microphone preselect matrix or 2 position Line level preselect matrix. Preselects 1 thru 6 are Microphone with the output feeding the Microphone side of the 2780 Input attenuator. Preselects 7 thru 16 are Line with the output feeding the Line side of the input attenuator. This configuration permits 22 Microphone and 26 Line inputs to the Console of which some combination, up to 16, may be mixed at the same time.

INPUTS: The 1600 Series II Audio Production Console is wired and tested to accept up to 16 ADM 2780 Input modules. The input is selectable between a Microphone or a Line source. The associated input attenuator will accept nominal Microphone levels from -80 dBv to -35 dBv or Line levels from -22 VU to +8 VU. Both attenuator sections are stepped in increments for maximum control over the incoming signal.

Located concentric with each input attenuator is a phase reversal switch to permit placing a signal 180° out-of-phase from the remaining Console inputs. When this switch is activated to the Reverse (R) position, an LED is illuminated to inform the operator of this status.

The heart of the Input module is the ADM 202 discrete component operational amplifier. The 202 is specifically designed for Audio applications and offers low noise, low distortion and fast, clean transient response.

The 2780 module also contains 2 independent Foldback outputs with individual Foldback amplifiers and separate level controls. An Echo Send function is provided and is selectable between Preamp Output (PRE), Post-signal pro-

cessor module (POST), and Post-fader with the channel signal processing module added (PGM).

Also included on each module are 2 independent module OFF/ON grouping functions (GRP 1 and GRP 2). Actuation of either of these switches transfers the OFF/ON functions of the selected input modules to the Master Group switch. Use of this function permits the simultaneous turning OFF or ON of several input modules at the same time. LED status indicators on each module will illuminate when this function is activated.

There are 2 additional switches on the 2780 module engraved Cue and Solo, both with LED status indicators. The Cue switch performs a parallel function to the Cue detent in the module chain Slidex attenuator when the module is turned OFF. The Solo switch permits the Operator to feature the output of the selected input module, or modules, on the Control Room Monitor, defeating the selected input to the Monitor but not interfering with the Program output.

Each Input module is also provided with an illuminated OFF/ON switch and a red LED overload indicator. The input pre-amplifier and output amplifier are monitored and if either should approach saturation the LED will illuminate.

Associated with each input module, and located on the Slidex module, may be a Stereo Pan Pot with its ON/OFF switch and LED indicator. This Pan Pot, when energized, will permit the module signal to be acoustically positioned from left to right or anywhere in between via the positioning of the Pan control. When this control is inserted in the input module circuit, the output of the module is fed to the odd/even (A/B, C/D) Submaster busses. Submasters A & C are fed the Left signal and Submasters B & D are fed the Right signal. If the Pan Pot is positioned in the center then an equal signal is fed to both odd/even Submaster busses.

In addition to the above features, each 2780 operates in conjunction with a patented ADM Slidex® linear attenuator. The Slidex, with its exclusive spirallinear construction and sealed resistance element, is impervious to dust, dirt and spilled liquids. When in the extreme bottom position, the fader goes into a cue detent to permit a cueing function for the selected audio source.

SUBMASTER BUS SELECTION: Electrically following each Input module is a 1 x 4 illuminated Submaster bus select matrix located above and in-line with its associated 2780. This switch matrix engraved A, B, C, and D, permits assignment of the Input module output to any one of, or combination of, the 3880 Submaster modules. In the stereo mode of operation, assignment is to the odd/even busses (A/C and B/D) as described above.

SUBMASTERS: The 1600 Series II Production Console is wired and tested for up to 4 ADM 3880 series Submaster modules. Each Submaster module contains facility for Echo Return with level control, two Foldback send outputs with level controls, a Solo output with LED indicator and an illuminated program-on switch.

In addition, each 3880 Submaster module has facility to assign its output to the Master One or Master Two Output modules, or to both. Also associated with each 3880 Submaster module is the patented ADM Slidex linear attenuator.

MASTERS: The 1600 II Console is wired and tested for up to two ADM 3980 Master Output modules. Each includes an Echo Return with level control, two Foldback send outputs with level controls, a Solo output with LED indicator and an illuminated program-on switch. Also associated with each 3980 Master module is the patented ADM Slidex linear attenuator. The output of the 3980 Master module is available at the console terminal at nominal Line level output.

SIGNAL PROCESSING DEVICES: The 1600 Series II Broadcast Production Console is wired and tested for 22 Signal Processing Modules. These modules may consist of 1540 Equalizer, 1560 High Pass/Lo Pass Filter, 1310 Noise suppressor or 1320 Limiter Amplifier modules. Each module is activated with an in/out switch with LED Tally.

Any position which is not initially equipped will be provided with a Blank module panel to maintain the aesthetic appearance of the Console.

1540 EQUALIZER: Featured in the 1600 Series II Broadcast Production Console is the exclusive ADM 1540, 4 band, 14 frequency reciprocal Equalizer. This Equalizer has been developed through exhaustive listening tests for maximum effect on both Voice and Music Program.

Reciprocal EQ functions are provided in 4 frequency bands: Low Frequency (LF), Low Mid Frequency (LMF), High Mid Frequency (HMF) and High Frequency (HF).

1560 FILTER MODULE:

The ADM 1560 is a High Pass/Low Pass Filter module. The High Pass section comprises selection of 40, 80 or 120 Hz plus an Off position. The Low Pass section comprises selection of 6, 8 or 10 KHz plus an Off position. Both sections may be used simultaneously. The 1560 Filter module has an attenuator rate of 30 dB per octave at the selected frequencies.

1310 NOISE SUPPRESSOR MODULE:

The ADM 1310 Noise Suppressor is a true gain expander with continuously varying gain. The device has no threshold clicks or pops nor is the ear aware of the threshold. Threshold and decay time are adjustable to suit Program content. There is a variable intensity LED to indicate the amount of suppression.

1320 LIMITER AMPLIFIER MODULE:

The 1320 Limiter is a unique, instantaneous device designed for maximum user convenience to allow constant output regardless of input level. There is up to 30 dB of limiting with no sacrifice in performance. The extremely fast attack time and program controlled release time allow set-and-forget operation. A Gain Reduction meter is front panel mounted on the 1320 to indicate the amount of limiting.

CUE FUNCTION: Each Slidex attenuator associated with a 2780 Input module is equipped with a Cue detent which is activated when in the extreme lower position of the attenuator. When the Slidex is in the Cue position or when the Cue switch on the 2780 module is depressed and the module turned off, the module pre-amplifier output is fed to a master

Cue bus, a master level control, a two-watt power amplifier and a Cue speaker located in the 1600 II meter turret housing. Whenever a 2780 Series module has been placed in the Cue mode, the associated Cue LED illuminates. Additionally, the Cue output is available at the Console terminal blocks at nominal Line level.

FOLDBACK FUNCTIONS: Two Foldback systems are provided from the 2780 Input, 3880 Submaster and 3980 Master modules in the 1600 Series II Console for studio speaker Foldback. Each module is equipped with a concentric Foldback level control with independent outputs. The Foldback outputs are bussed, and fed to a dual master attenuator and 2 line amplifiers. The output connectors of each Foldback bus appear at the terminal block at a nominal Line level.

ECHO BUSSES: The 1600 Series II Console provides one Echo Send bus which is derived from each 2780 Input module within the Console. The Echo Send feeds a master rotary attenuator and a program amplifier.

Echo Return is provided to allow return of the echo signal into a Submaster, Master or any combination thereof.

SOLO: On each ADM 2780 Input, 3880 Submaster and 3980 Master module is a pushbutton engraved Solo. A module mounted LED indicates when a solo is operative. The outputs from each Solo are bussed together, feed a rotary master level control and are inserted directly into the Control Room Monitor module. Logic is simultaneously supplied to interrupt the normal audio monitor feed so that the selected module may be heard with no interference to the Program signal. In addition, a tally indicator on the Control Room Monitor module will indicate that the selected Monitor function has been defeated and the Monitor module is operating in the Solo mode.

MONITOR BUSES: The 1600 Series II Broadcast Production Console may be equipped with 2 comprehensive Monitor modules, either monaural or stereo, which are totally independent of each other. These modules are designated Control Room and Studio but are identical in all respects and may be physically interchanged with each other.

A comprehensive selection of Submaster, Master and external inputs is pushbutton selectable on each module. Each selection will be indicated via an LED tally light. When in the Stereo mode, any left and right selection may be made. When the Mono button has been depressed only one selection may be accomplished, which will appear on the left speaker output.

Each module also contains a Solo LED tally indicator and a Mute Defeat (MDFT) switch which, when depressed, will override any mute logic in the module and permit an output. The nominal output level of the Monitor matrices is line level. Each module contains the necessary program amplifiers with a Monitor level control.

STUDIO SPEAKER MUTING: Muting of the Studio Monitor speaker is accomplished when the following conditions are met:

- 1) Microphone preselect activated (inputs 1 thru 6)
- 2) Input module attenuator in the Microphone position

3) Input module turned ON

4) Slidex out of Cue

5) Input module assigned to a Submaster bus

6) Input module not turned off by a Group function

When all of the above conditions are met, the Studio speaker will mute automatically. Provision has also been made for manual override of the Mute logic on the Studio Monitor Module.

OSCILLATOR TALKBACK MODULE: Each 1600 Series II Console may be equipped with a Model 7510 Oscillator/Talkback module. This module contains a selectable 5 frequency Oscillator (50, 400, 1,000, 7,500 and 15,000 Hz) and a level control for precise adjustment of the Oscillator output. The Oscillator output is selectable for insertion into any one of, or combination of, Submaster and Master busses. A separate pushbutton labeled OSC activates the Oscillator output to its preselected location. In addition, the Oscillator output also appears at the Console christmas tree blocks at a Microphone level of -60 dBv as well as at a Line level of $+8$ dBv.

The Talkback portion of the 7510 module provides a level control for the Talkback output. Associated with this portion of the module is a turret-mounted Microphone as well as a push-to-talk Talkback control. This Talkback system also provides Slating facility directly into the Submasters and Masters via the Slate switch. When the Slate function is energized a 50 Hz tone is superimposed on the audio signal at -20 dB.

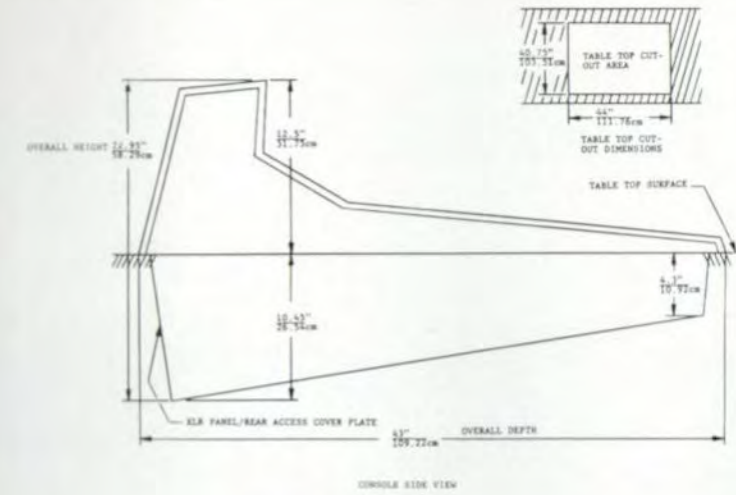
METERING: The 1600 Series II Console is equipped with six $3\frac{1}{2}$ " VU meters mounted in the Meter Turret housing. There is one VU meter for each Submaster and Master bus and they are identified accordingly. 0 VU is equivalent to $+8$ dBv Line level. Also available are optional PPM/VU meters, should the user desire to monitor in the PPM mode.

ADDITIONAL OPERATING FUNCTIONS: Each 1600 II Console is equipped with Remote Machine controls for 2 Reel-to-Reel audio tape, 2 audio cartridge and 2 turntable machines. The illuminated pushbutton controls provide a contact closure and a return logic signal from the associated machine which may be used to illuminate the lamp in the switch.

The meter turret also houses an ON-AIR indicator lamp. Logic for this lamp may be externally supplied or taken from the Studio Mute Logic bus.

POWER SUPPLY: The 1600 II is provided with 1 PS 20-7.5 ± 20 VDC, 7.5 Ampere Power Supply for all Console functions. This unit is capable of supplying all necessary power for the Console with a more than adequate safety factor.

Provision has been made for the inclusion of one additional optional Supply to provide 100% redundancy with automatic changeover in the unlikely event of failure. Status indicators for the Supplies are located in the meter turret housing.



STANDARD STUDIO MONITOR MUTING IN THE 1600 - II

STUDIO MONITOR MUTES UNDER THE FOLLOWING CONDITIONS:

POSITIONS 1-6 (MIC PRESELECT):

1. INPUT MODULE IS ON
2. MODULE INPUT ATTENUATOR IS IN A "MIC" POSITION
3. SLIDER IS NOT IN CUE DETENT
4. THE MODULE IS NOT MUTED BY THE GRP 1 OR GRP 2 FUNCTION
5. A SUBMASTER BUSS IS SELECTED
6. A MIC INPUT IS PRESELECTED

POSITIONS 7-16 (LINE PRESELECT):

SAME AS POSITIONS 1-6 EXCEPT FOR CONDITION #6.

MONITOR MUTING IS USER PROGRAMMABLE VIA PC MOUNTED DIP SWITCH ON PRE/BUSS SELECT MODULE.

1) KNOB IDENTIFICATION CONVENTION:

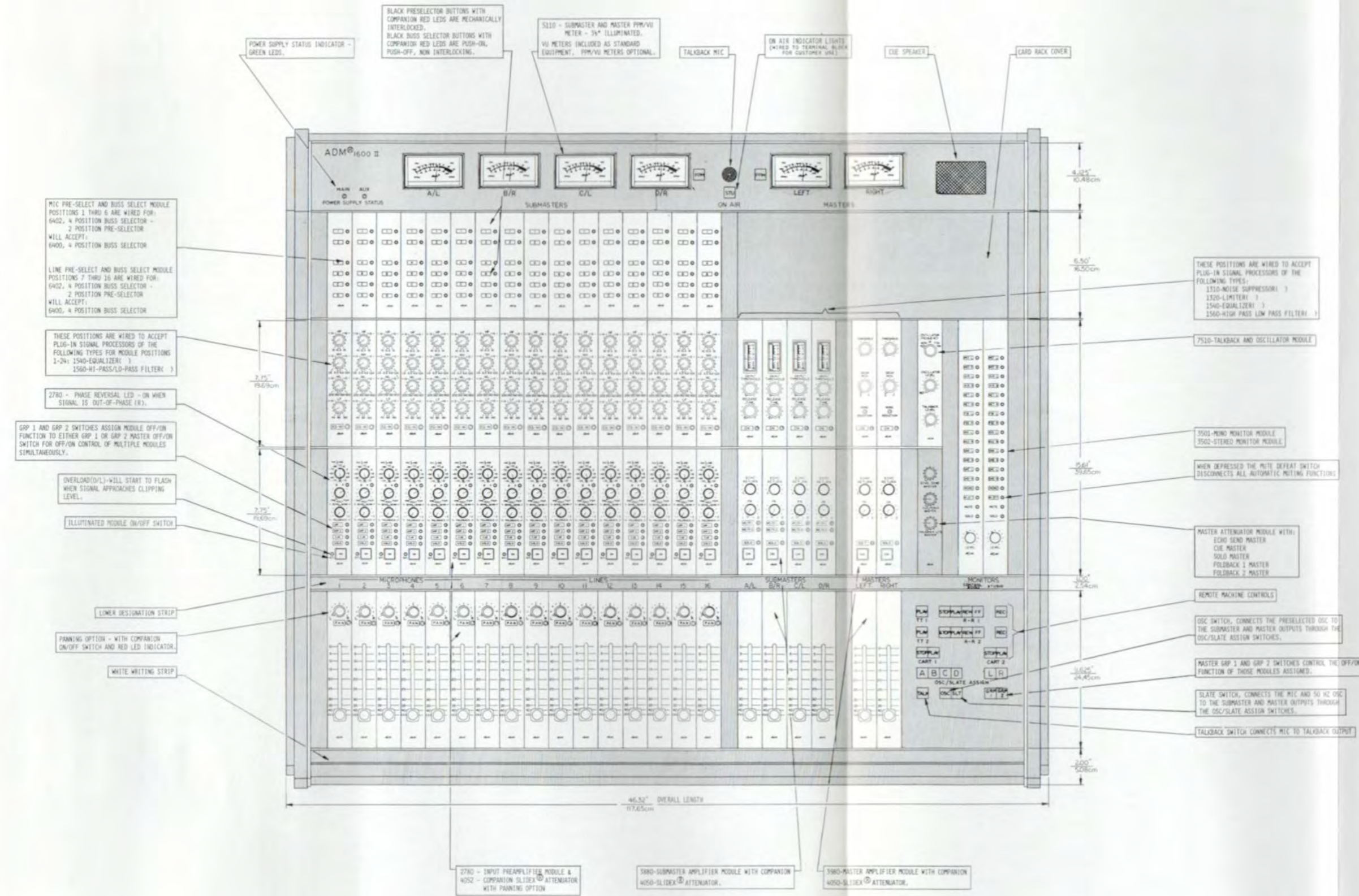
- SINGLE CONTROL KNOB
- CONCENTRIC CONTROL KNOB

2) CABINET FINISH TO BE BLACK FORMICA WITH GREY MODULE PANELS & EXTRUDED ALUMINUM TRIM.

ALL SHADED AREAS ON CONSOLE INDICATE THOSE FEATURES WHICH ARE SUPPLIED AS STANDARD.

ALL OTHER ITEMS DEPICTED OR DESCRIBED ARE OPTIONAL.

3) CONSOLE WIRED FOR MAXIMUM CAPABILITY, AS SHOWN. BLANK MODULE PANELS ARE SUPPLIED FOR THOSE OPTIONS NOT SELECTED.



POWER SUPPLY STATUS INDICATOR - GREEN LED.

BLACK PRESELECTOR BUTTONS WITH COMPANION RED LEDS ARE MECHANICALLY INTERLOCKED.

BLACK BUSS SELECTOR BUTTONS WITH COMPANION RED LEDS ARE PUSH-ON, PUSH-OFF, NON INTERLOCKING.

S310 - SUBMASTER AND MASTER PPM/VU METER - 3" ILLUMINATED.

VU METERS INCLUDED AS STANDARD EQUIPMENT. PPM/VU METERS OPTIONAL.

TALKBACK MIC

ON AIR INDICATOR LIGHTS (WIRED TO TERMINAL BLOCK FOR CUSTOMER USE)

CUE SPEAKER

CARD BACK COVER

MIC PRE-SELECT AND BUSS SELECT MODULE POSITIONS 1 THRU 6 ARE WIRED FOR: 6402, 4 POSITION BUSS SELECTOR - 2 POSITION PRE-SELECTOR WILL ACCEPT; 6400, 4 POSITION BUSS SELECTOR

LINE PRE-SELECT AND BUSS SELECT MODULE POSITIONS 7 THRU 16 ARE WIRED FOR: 6402, 4 POSITION BUSS SELECTOR - 2 POSITION PRE-SELECTOR WILL ACCEPT; 6400, 4 POSITION BUSS SELECTOR

THESE POSITIONS ARE WIRED TO ACCEPT PLUG-IN SIGNAL PROCESSORS OF THE FOLLOWING TYPES FOR MODULE POSITIONS 1-24: 1540-EQUALIZER; 1540-HI-PASS/LD-PASS FILTER; 1540-LOW-PASS/LD-PASS FILTER

2780 - PHASE REVERSAL LED - ON WHEN SIGNAL IS OUT-OF-PHASE (X).

GRP 1 AND GRP 2 SWITCHES ASSIGN MODULE OFF/ON FUNCTION TO EITHER GRP 1 OR GRP 2 MASTER OFF/ON SWITCH FOR OFF/ON CONTROL OF MULTIPLE MODULES SIMULTANEOUSLY.

OVERLOAD(OVL)-WILL START TO FLASH WHEN SIGNAL APPROACHES CLIPPING LEVEL.

ILLUMINATED MODULE ON/OFF SWITCH

LOWER DESIGNATION STRIP

PANNING OPTION - WITH COMPANION ON/OFF SWITCH AND RED LED INDICATOR.

WHITE WRITING STRIP

2780 - INPUT PREAMPLIFIER MODULE & 4052 - COMPANION SLIDER ATTENUATOR WITH PANNING OPTION

S380-SUBMASTER AMPLIFIER MODULE WITH COMPANION 4050-SLIDER ATTENUATOR.

S380-MASTER AMPLIFIER MODULE WITH COMPANION 4050-SLIDER ATTENUATOR.

THESE POSITIONS ARE WIRED TO ACCEPT PLUG-IN SIGNAL PROCESSORS OF THE FOLLOWING TYPES:

- 1510-NOISE SUPPRESSOR
- 1520-LIMITER
- 1540-EQUALIZER
- 1540-HIGH PASS LOW PASS FILTER

7510-TALKBACK AND OSCILLATOR MODULE

3500-MONO MONITOR MODULE

3502-STEREO MONITOR MODULE

WHEN DEPRESSED THE MUTE DEFEAT SWITCH DISCONNECTS ALL AUTOMATIC MUTING FUNCTIONS.

MASTER ATTENUATOR MODULE WITH: 1000 SEND MASTER; CUE MASTER; SOLO MASTER; FOLDBACK 1 MASTER; FOLDBACK 2 MASTER

REMOTE MACHINE CONTROLS

OSC SWITCH, CONNECTS THE PRESELECTED OSC TO THE SUBMASTER AND MASTER OUTPUTS THROUGH THE OSC/SLATE ASSIGN SWITCHES.

MASTER GRP 1 AND GRP 2 SWITCHES CONTROL THE OFF/ON FUNCTION OF THOSE MODULES ASSIGNED.

SLATE SWITCH, CONNECTS THE MIC AND 50 KC OSC TO THE SUBMASTER AND MASTER OUTPUTS THROUGH THE OSC/SLATE ASSIGN SWITCHES.

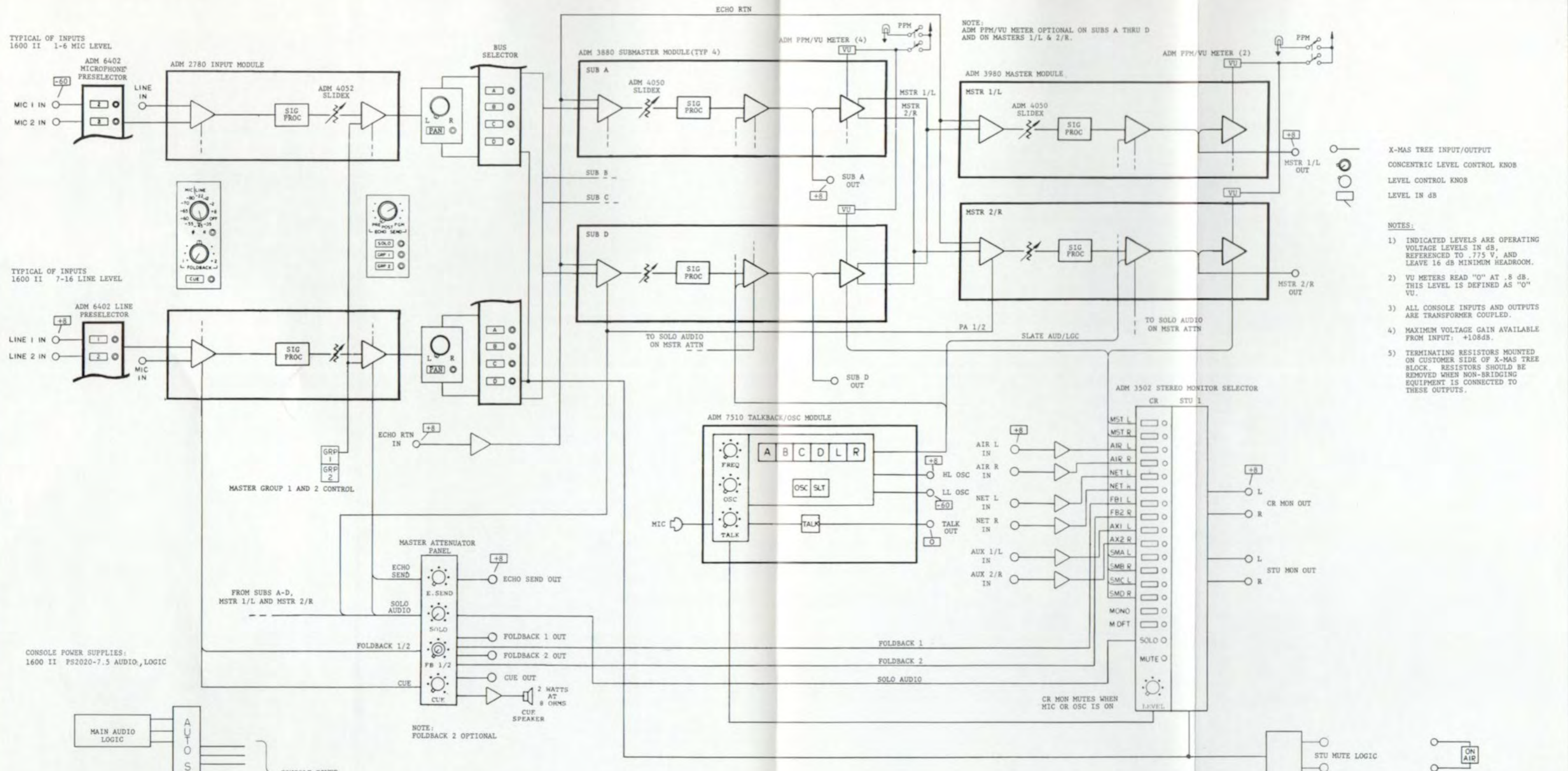
TALKBACK SWITCH CONNECTS MIC TO TALKBACK OUTPUT

DATE	SYM	DR	CK	CHK	OR	REVISION
1987-01-21	STW					1
1987-02-11	STW					2
1987-03-11	STW					3
1987-04-11	STW					4
1987-05-11	STW					5
1987-06-11	STW					6
1987-07-11	STW					7
1987-08-11	STW					8
1987-09-11	STW					9
1987-10-11	STW					10

ADM TECHNOLOGY INC.
1600 SERIES II PANEL LAYOUT
SALES 104186

TYPICAL OF INPUTS
1600 II 1-6 MIC LEVEL

TYPICAL OF INPUTS
1600 II 7-16 LINE LEVEL



NOTE:
ADM PPM/VU METER OPTIONAL ON SUBS A THRU D
AND ON MASTERS 1/L & 2/R.

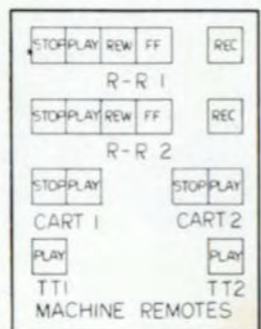
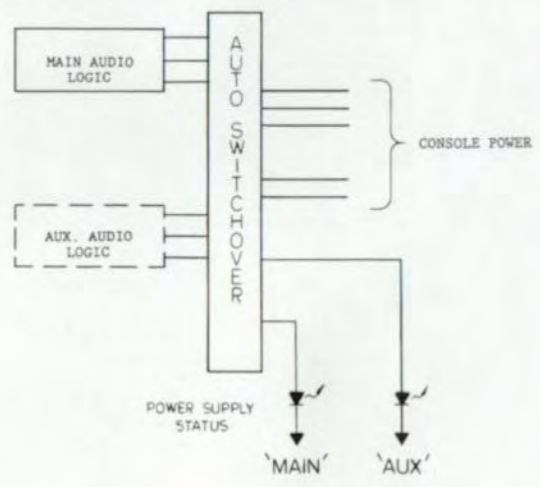
X-MAS TREE INPUT/OUTPUT
CONCENTRIC LEVEL CONTROL KNOB
LEVEL IN dB

- NOTES:
- 1) INDICATED LEVELS ARE OPERATING VOLTAGE LEVELS IN dB, REFERENCED TO .775 V, AND LEAVE 16 dB MINIMUM HEADROOM.
 - 2) VU METERS READ "0" AT .8 dB. THIS LEVEL IS DEFINED AS "0" VU.
 - 3) ALL CONSOLE INPUTS AND OUTPUTS ARE TRANSFORMER COUPLED.
 - 4) MAXIMUM VOLTAGE GAIN AVAILABLE FROM INPUT: +108dB.
 - 5) TERMINATING RESISTORS MOUNTED ON CUSTOMER SIDE OF X-MAS TREE BLOCK. RESISTORS SHOULD BE REMOVED WHEN NON-BRIDGING EQUIPMENT IS CONNECTED TO THESE OUTPUTS.

CONSOLE POWER SUPPLIES:
1600 II FS2020-7.5 AUDIO, LOGIC

NOTE:
FOLDBACK 2 OPTIONAL

CR MON MUTES WHEN
MIC OR OSC IS ON



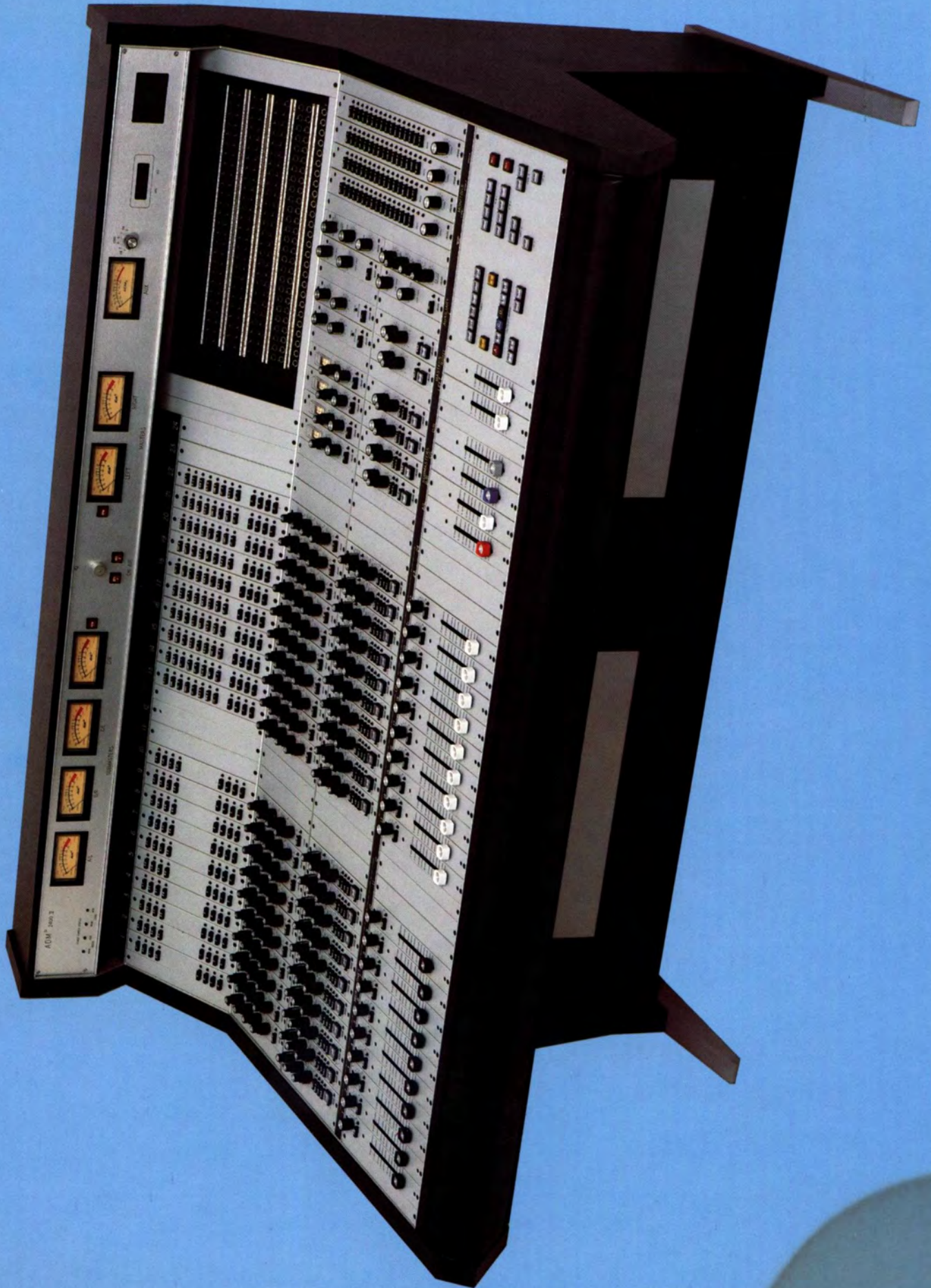
REV	DATE	SYM	DR	CK	DCN	OR	REVISION

ADM TECHNOLOGY INC.
1600 II BLOCK DIAGRAM
104191



**2400/3200
CONSOLES**

**2400/3200
CONSOLES**



2400 Series II

ADM[®] CONSOLE SPECIFICATIONS

1. Frequency Response:

No equalization. Measured at any output level up to clipping. ± 1 dB, 20Hz-20KHz Ref. 1KHz.

2. Distortion:

The total harmonic distortion at +24 dBm or lower at 1KHz will be less than .07% and will not exceed .15% THD over the band 100Hz-20KHz at +24 dBm or lower.

3. Maximum Output Level:

The clipping level at any output when terminated in 600 ohms shall be +27 dBm 30 Hz to 20KHz.

4. Noise:

The equivalent input noise of any microphone shall be lower than -125.5 dBu referred to a 250 ohm impedance measured on an average response meter. Any line level input (+8 dBm ref) to any output channel (+8 dBm ref) will exhibit a maximum noise of -72 dBm (S/N 80 dB). All noise measurements based on a bandwidth 20Hz to 20KHz.

5. Crosstalk:

Better than 72 dB measured between adjacent channels at normal operating levels over the band 100Hz to 10KHz.

6. Temperature:

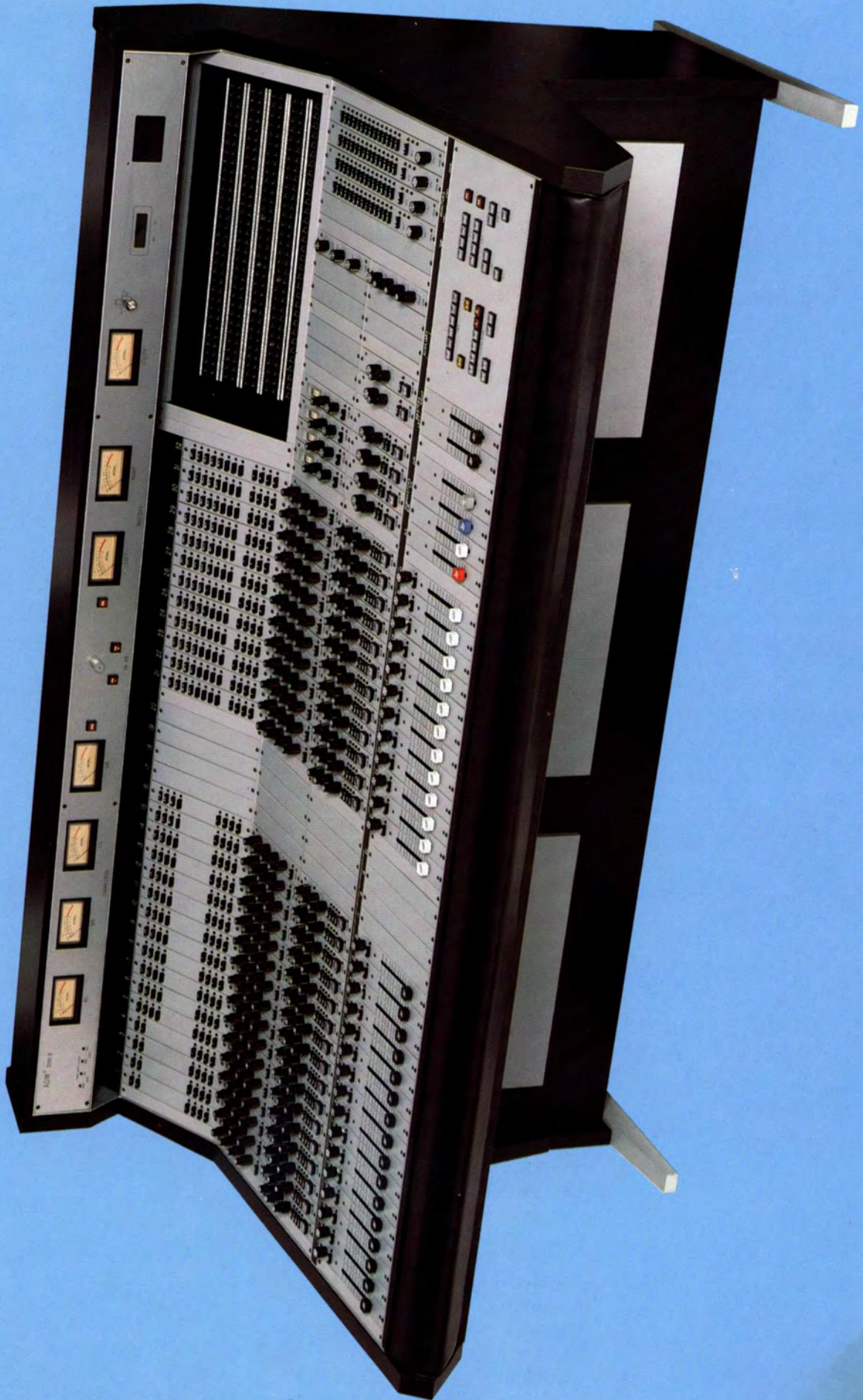
Over the temperature range 0 to 55 degrees C. no apparent changes in operational characteristics are discernible.

7. RF Susceptibility:

Based on the tailored roll off characteristics and proper manufacturing techniques, ADM consoles will operate in high RF environments.

WARRANTY

ADM Technology, Inc. warrants our consoles or components to be free from defective material and workmanship for a period of five years from the date of delivery. All defective parts will be replaced and repair work required by normal use will be performed, without charge, within this five year period. This warranty shall be exclusive and in lieu of all other warranties expressed or implied.



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ADM TECHNOLOGY, INC.

2400/3200 SERIES II BROADCAST PRODUCTION CONSOLES

technical information

ADM[®]

The Audio Company

ADM TECHNOLOGY, INC.
16005 Sturgeon, Roseville, Michigan 48066
Phone: (313) 778-8400 • TLX-23-1114

ADM's 2400/3200* Series II Broadcast Production Consoles are modular, multi-input Studio and Production Center units. All ADM Consoles meet the most exacting requirements of Broadcast production. They have been developed by Audio Engineers working in close cooperation with Broadcast Engineers and are designed to be electrically and aesthetically compatible with today's video state-of-the-art. Skilled workmanship and usage of the highest quality components and parts throughout assure the discriminating user that each Console will professionally handle all audio needs. Advanced design parameters and human engineering of front panel controls assure logical, optimum convenience of use.

FEATURES:

- Totally Modular Design for 2 Studio Operation
- Wired for stereo production capability
- Comprehensive Microphone and Line level Preselection with up to 92 microphone and 116 line level sources
- Phase reversal
- Illuminated Submaster bus selection to 4 submaster modules
- 2 Master Output busses
- Patented smooth action Slidex® sealed linear attenuators with Cue detent and muting logic
- 2 Foldback busses and 2 P.A. feeds with individual level controls
- Individual Echo Send from Inputs and Return to Submasters and Masters
- Full 4 band — 14 frequency reciprocal equalizers
- 2 Selectable, ganged OFF/ON Group functions for simultaneous control of several inputs
- 4 Independent monitor busses selectable from any of 12 sources with level controls
- 5 frequency Oscillator individually assignable to Submasters and Masters
- 6 position Slating and 2 Studio Talkback
- Built-in Cue amplifier and speaker
- Large individual illuminated VU meters for all Submasters and Masters
- 60 minute timer with remote controls
- 6 sets of machine remote controls
- Illuminated ON-AIR indicators as well as Power Supply status indicators
- 320 position, full size, tip-ring-sleeve Patchbay
- 100% redundant Power Supplies with automatic changeover
- Rugged, metal re-inforced construction, LED function indicators and advanced styling
- Gold-plated card edge connections throughout
- 5 Year unconditional warranty

This Technical Brochure provides a detailed description of the ADM 3200 Series II Broadcast Production Consoles. The 3200 II is a full-featured, floor-standing Console which incorporates the latest audio production philosophies into professional Broadcast parameters. Comprehensive engineering of the 3200 II provides the Broadcaster with the features most demanded by discriminating users throughout the world.

The Console, as described in this Technical Brochure, is a full 32 input, 4 submaster, 2 output Console utilizing the ADM 2780 Series Input module, 3880 Series Submaster module and 3980 Series Master Output module. When the 3200 II is used to its full

complement, up to 92 Microphone sources and 116 Line-Level sources are available. The 3200 II Series Console will be wired for the full complement of 32 inputs, 4 submaster and 2 master modules and may be supplied with any lesser number of modules. In addition, various combinations of 1540 Equalizer modules, 1560 Hi-pass/Lo-pass Filter modules, 1310 Noise Suppressor modules and/or 1320 Limiter Amplifier modules may also be supplied.

The 3200 Series II console is designed and manufactured with proven ADM technology backed by painstaking quality control and the industry's most comprehensive warranty — **5 Years** — parts and labor.

INPUT PRESELECTION: There are 2 types of Input Preselection available with the 3200 Series II Console — Microphone and Line.

Above and in-line with 2780 Input modules 1 thru 20, is an LED illuminated-pushbutton 4 position Microphone preselect matrix. This permits selection of any 1 of 4 microphone sources to the associated Input module. Since the 3200 II is set-up for 2 studio operation, the proper muting signals for the proper studio are derived from this preselection when a microphone source is chosen.

Also above and in-line with 2780 Input modules 21 thru 32, is an LED illuminated-pushbutton, 8 position Line Preselect matrix. This will permit Preselection of any 1 of 8 incoming Line level feeds into the Line input of the Module. Cross-bussing of these Line feeds is done at the Factory to the customer's requirements so that each Line may appear at 2 or more locations on the preselect matrices. With each Line cross-bussed, the Console operator should never be placed in the position of having to make a "hard" switch while ON-AIR.

The above Preselect matrices will permit a maximum of 80 Microphone inputs plus 12 additional Microphone inputs to the Line level modules for a total of 92 Microphone inputs. On the Line side there could be a maximum of 96 Line inputs to the matrices plus 20 additional Line inputs to the Microphone modules for a total of 116 Line inputs.

These comprehensive Microphone and Line Preselect matrices will permit the operator to preset several sequences in advance. The preselect pushbuttons are engraved to suit user's nomenclature.

INPUTS: The 3200 Series II Broadcast Production Console is wired and tested for up to 32 ADM 2780 Input modules. The 2780 is designed around the ADM 202. The 202 is a 10 transistor, discrete component Operational Amplifier designed specifically for Audio applications. Its extremely high slew rate, high output voltage swing, and low equivalent input noise brings to the module an input stage of unexcelled performance.

The 2780 Input module's unique input circuitry provides for two discrete inputs. A combination input selector/attenuator permits the 2780 to accept input signals from -80 dBv to +10 VU. Gain changes are made in stepped increments.

Located concentric with each input attenuator is a phase reversal switch to permit placing a signal 180° out-of-phase from the remaining Console inputs. When this switch is activated to the Reverse (R) position, an LED is illuminated to inform the operator of this status.

There are 2 independent Foldback outputs available from the 2780 each with a separate amplifier and level control. The Echo Send function provided is switch selectable between Preamp output (PRE), Processor output (POS) and Program output with Signal Processing module as sent to the bus selector (PGM). A separate amplifier and level control is provided.

*NOTE: All descriptions contained in this brochure apply to the 2400 and 3200 consoles. Differences are in the maximum number of input modules, preselect capability and Patchbay size.

Each 2780 Input module has facility for 2 independent module OFF/ON grouping functions designated GRP 1 and GRP 2. These switches assign the OFF/ON function of the module, or modules, to remote Group 1 or Group 2 Master Group switches. Use of either of these functions will permit the Operator to simultaneously turn OFF or ON several Input modules at the same time. With 2 such logic functions the Operator can instantaneously switch between 2 separate "sets." The LED status indicators associated with each switch will illuminate when this function is activated.

In addition to the above mentioned features, both Cue and Solo functions are provided, each equipped with LED status indicators. The Cue switch performs a parallel function to the Cue detent in the module chain Slidex attenuator when the module is turned OFF. Solo permits the Operator to feature the module output on the Control Room Monitor bus, defeating the input selected on the Monitor matrix but not interfering with the Console Program output. If desired, more than one Input module may be placed in the Solo mode at the same time.

An integral part of each 2780 module is the LED Overload indicator (O/L). The module pre-amplifier and program amplifier output is continuously monitored and should either approach saturation the red O/L LED will illuminate.

A push-off/push-on illuminated pushbutton functions as the module OFF/ON switch.

Associated with each input module, and located on the Slidex module, may be a Stereo Pan Pot with its ON/OFF switch and LED indicator. This Pan Pot, when energized, will permit the module signal to be acoustically positioned from left to right, or anywhere in between, via the positioning of the Pan control. When this control is inserted in the input module circuit, the output of the module is fed to the odd/even (A/B, C/D) Submaster busses. Submasters A and C are fed the Left signal and Submasters B and D are fed the Right signal. If the Pan Pot is positioned in the center, then an equal signal is fed to both odd/even Submaster busses.

Each ADM 2780 Input module operates in conjunction with an ADM patented Slidex linear attenuator. The Slidex is impervious to dust, dirt and spilled liquids due to its exclusive spiralinear construction and sealed resistive element. The extreme bottom position includes a "hard-in/easy-out" Cue detent.

SUBMASTER BUS SELECTION: This matrix permits assignment of any Input module, or combination of Input modules, to any Submaster or combination of Submaster modules in a monaural or stereo mode.

SUBMASTERS: Each 3200 Series II Broadcast Production Console is wired and tested to accept up to 4 ADM 3880 Submaster modules. This Submaster module has the facility for Echo Return to be mixed into the Program signal path with its own Echo Return level control for precise adjustment. There are 2 P.A. Feed outputs which operate in an identical manner to the Foldback outputs described in the Input module section. A Solo output is also provided with an LED status indicator.

In addition to providing Line Level Submaster outputs, the 3880 has the capability of being assigned to any one, or both, of the Master busses. LED status lamps provide visual indication when assigned. An illuminated module OFF/ON switch is included. The use of this switch permits the Operator to control the OFF/ON function of the entire Submaster chain.

Associated with each 3880 Submaster module is a patented ADM Slidex attenuator for level control of the Submaster bus. The output of each 3880 is available at the Console terminal blocks, or Patchbay when supplied.

MASTERS: Each 3200 Series II Console is wired and tested to accept 2 ADM 3980 Master Output modules. Each of these modules contain facilities for Echo Return — with level control, 2 P.A. Feed outputs, with LED indicator and illuminated OFF/ON switch. An ADM Slidex attenuator is associated with each Master Output module.

The output of the 3980 is available at the Console output as a line level signal.

SIGNAL PROCESSING DEVICES: Each 3200 Series II Production Console is wired and tested for 42 Signal Processing devices. One Signal Processing position is provided in the signal flow path of each of the Input, Submaster and Master modules. In addition, four auxiliary positions are provided with input and output wired to the output terminal block, or Patchbay, when supplied.

These Signal Processing devices may be comprised of 1540 Equalizers, 1560 Filter modules, 1310 Noise Suppressor modules or 1320 Limiter Amplifier modules.

Should the Customer elect to initially equip the Console with a lesser number of these units, a Jumper card and a Blank module panel will be provided.

1540 EQUALIZER: Featured in the 3200 Series II Broadcast Production Console is the exclusive ADM 1540, 4 band, 14 frequency reciprocal Equalizer. This Equalizer has been developed through exhaustive listening tests for maximum effect on both Voice and Music Programs.

Reciprocal EQ functions are provided in 4 frequency bands: Low Frequency (LF), Low Mid Frequency (LMF), High Mid Frequency (HMF) and High Frequency (HF).

1560 HIGH PASS/LOW PASS FILTER MODULES: Available with the Console is the ADM 1560 Hi/Lo Pass Filter module. The High Pass section of this module is comprised of an OFF position or selection of 40, 80 or 120 Hz. The Low Pass section is comprised of an OFF position or selection to 10, 8 or 6 KHz. The 1560 has an attenuation rate of 30 dB per octave at the selected frequencies.

1310 NOISE SUPPRESSOR MODULE: The 1310 Noise Suppressor is a true gain expander with continuously varying gain. The device has no threshold clicks or pops nor is the ear aware of the threshold. Threshold and decay time are adjustable to suit Program content. There is a variable intensity LED to indicate the amount of suppression.

1320 LIMITER AMPLIFIER MODULE: The 1320 Limiter is a unique, instantaneous device designed for maximum user convenience to allow constant output regardless of input levels. There is up to 30 dB of limiting with no sacrifice in performance. The extremely fast attack time and program controlled release time allow set and forget operation. An edgewise Gain Reduction Meter is front panel mounted on the 1320 Limiter.

CUE FUNCTION: The 3200 II Console is equipped with a Cue bus. Each Slidex attenuator associated with a 2780 Input module is equipped with a Cue detent which is activated when in the extreme lower position of the attenuator. When the Slidex is in the Cue position or when the Cue switch on the module is depressed and the module turned off, the module pre-amplifier output is fed to a master Cue bus, a master level control, a two-watt power amplifier and a Cue speaker located in the 3200 II meter turret housing. Whenever a module has been placed in the Cue mode, the associated Cue LED illuminates. Additionally, the Cue output is available at the Console terminal blocks at nominal Line level.

FOLDBACK FUNCTIONS: Two Foldback systems are provided from the Input modules in the 3200 Series II Console for studio speaker Foldback. Each module is equipped with a concentric Foldback level control and two independent Foldback outputs. The Foldback outputs are bussed and fed to a dual master attenuator and 2 line amplifiers. The output connections of each Foldback bus appear at the terminal block at a nominal line level. They also appear at the 4 Monitor selectors.

P.A. FEEDS: There are 2 P.A. Feeds in the 3200 Series II Console. These are derived from the Submaster and Master modules. These are bussed, fed to Master level controls and line amplifiers. The output connections appear at the console terminal blocks at nominal line level.

ECHO BUSSES: The 3200 II Console provides one Echo Send bus which is derived from each Input module and is switch selectable to pre-fader, post-processor as well as post-fader with the module Signal Processing included. The Echo Send bus feeds a master level control and a line amplifier providing a nominal line level. One Echo Return bus is provided and allows return of the echo signal into a Submaster, Master or combination of Submaster and Master output busses. The Echo Return input to the Console is line-level bridging.

SOLO: A Solo button is provided on each Input, Submaster and Master module. A module-mounted LED indicates when a Solo is operative. The outputs from each Solo are bussed together, feed a master level control and are inserted directly into the Control Room Monitor bus. Logic is simultaneously supplied to interrupt the normal audio Monitor feed so that the selected module may be heard with no interference to the Program signal. In addition, a tally indicator on the Control Room Monitor module will indicate when the selected Monitor function has been defeated and the Monitor is operating in the Solo mode.

MONITOR BUSSES: Each 3200 Series II Console is capable of 4 independent Monitor modules. These modules are designated Control Room, Studio A, Studio B and Director. Each of the 4 Monitor modules, either monaural or stereo, are totally independent of each other but are identical in all respects and may be physically interchanged with each other.

A comprehensive selection of Submaster, Master and external inputs is pushbutton selectable on each module. Each selection will be indicated via an LED tally light. When in the Stereo mode, any left and right selection may be made. When the Mono button had been depressed, only one selection may be accomplished, which will appear on the left speaker output.

Each module also contains a Solo LED tally indicator and a Mute Defeat (M DFT) switch which, when depressed, will override any mute logic in the module and permit an output. The nominal output level of the Monitor matrices is line level. Each module contains the necessary program amplifiers with a Monitor level control.

STUDIO SPEAKER MUTING: Muting of the Monitor Speaker in the designated Studio is accomplished when the following conditions are met:

- 1) Microphone preselect activated (modules 1 to 20)
- 2) Input module attenuator in the Microphone position
- 3) Input module turned ON
- 4) Slidex or module out of Cue
- 5) Input module assigned to a Submaster bus
- 6) Input module not turned off by the Group functions

When all 6 of the above conditions are met, the Studio speaker, in the designated Studio, will Mute automatically.

OSCILLATOR/TALKBACK MODULE: Each 3200 Series II Console may be equipped with a Model 7510 Oscillator/Talkback module. This module contains a selectable 5 frequency oscillator (50, 400, 1,000, 7,500 and 15,000 Hz) and a level control for precise adjustment of the Oscillator output. The Oscillator output is selectable, via a pushbutton matrix located in the lower right hand side of the console front panel, for insertion into any one of, or combination of, Submaster and Master busses. A separate pushbutton labelled OSC activates the Oscillator output to its preselected location. In addition the Oscillator output also appears at the Console terminal blocks (or Patchbay, if included) at a Microphone level of -70 dBv as well as at a Line level of +8 dBv.

The Talkback portion of the 7510 module provides a level control for the Talkback output. Associated with this portion of the module is a turret mounted Microphone as well as 2 push-to-talk controls which are located in the lower right console panel. This Talkback system also provides Slating facility which is selectable to the Submasters and Masters via the Slate assign switches and the Oscillator preselect pushbuttons. When the Slate function is energized a 50 Hz tone is superimposed on the audio at -20 dBv for quick aural reference when a tape machine is in a high speed mode.

PATCHBAY: Each 3200 Series II Console may be provided with a full size tip-ring-sleeve Patchbay as an option. This Patchbay will contain 320 patch-points. This will permit patching at each 2780 module input, each Submaster and Master output and all +8 dBv points in the Console. The Patchbay will be recessed in the Console housing to eliminate patchcords laying out over the operational controls.

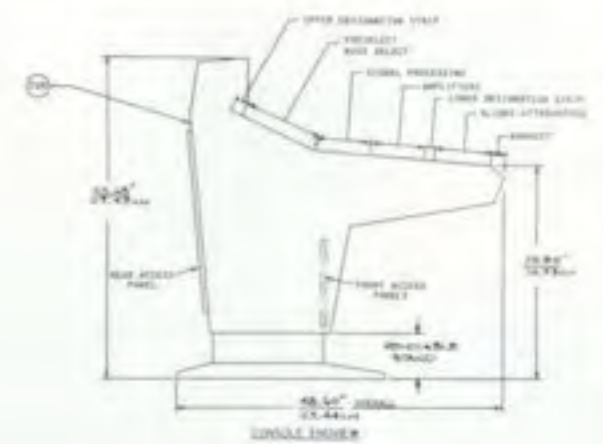
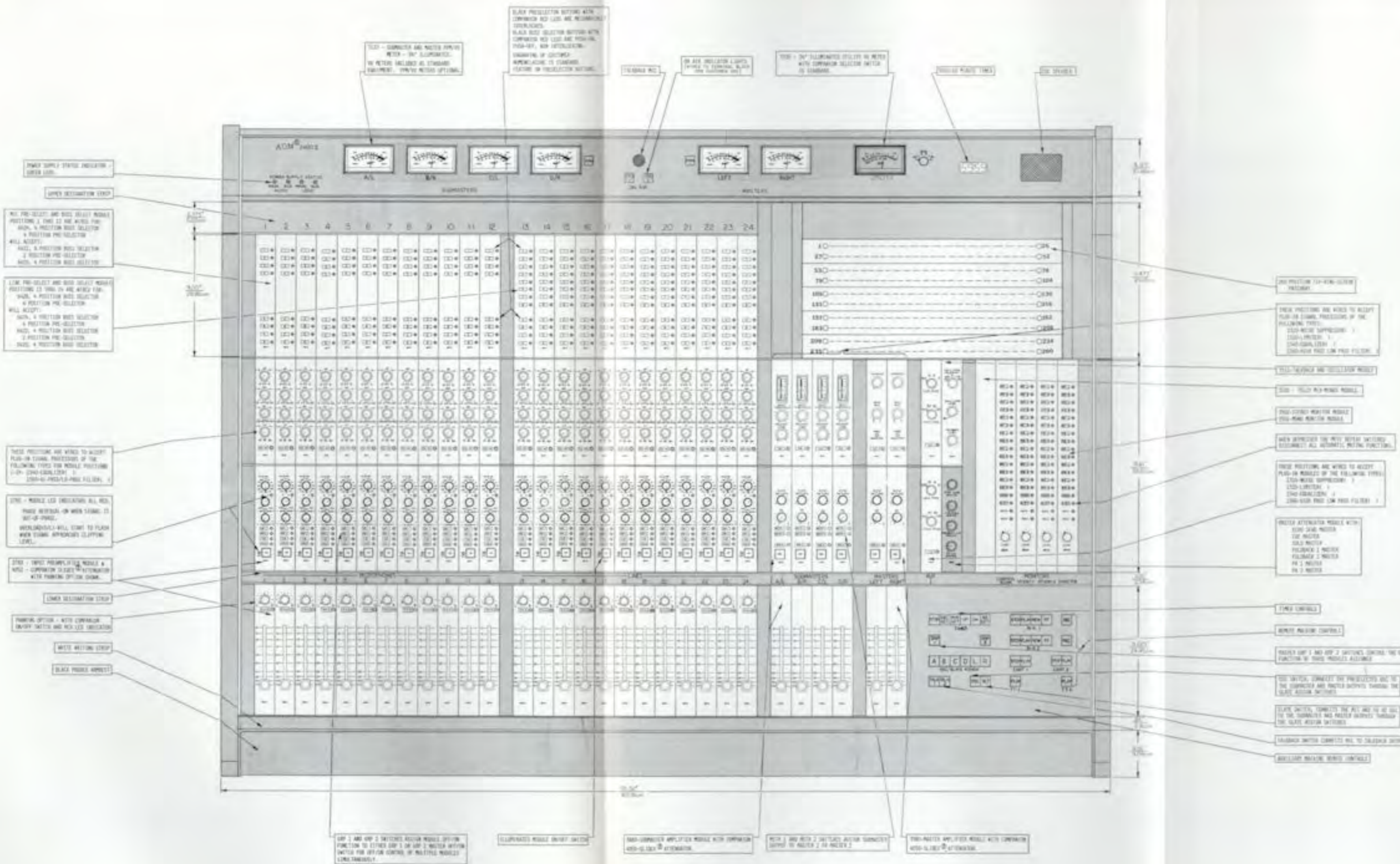
METER TURRET: The 3200 Series II Console comes equipped with a Meter Turret containing 7 3/2" illuminated ADM VU meters. There is 1 VU meter for each Submaster and Master bus as well as a utility position. As an optional feature these may be replaced, at the User's option, with ADM 5110 PPM/VU Meters in the Submaster and Master positions. An illuminated switch is provided to permit the operator to watch either the PPM or the VU metering position. 0 VU is equivalent to +8 dBv line level.

Located in the meter turret housing is a 60 minute digital timer, 2 ON-AIR indicator lamps, a Cue Speaker, and the Power Supply status indicator tallies. The talkback microphone is centrally positioned here also.

ADDITIONAL OPERATING FUNCTIONS: Each 3200 Series II Console comes equipped with 2 Reel-to-Reel audio tape, 2 audio cartridge and 2 turntable Remote machine Controls as standard equipment. These controls provide contact closure to the associated machine and function. A return logic signal from the machine may be used to illuminate the lamp in the switch to provide closed-loop status indication.

POWER SUPPLIES: The 3200 Series II Console is provided, as standard equipment, with 1 ADM PS 2020-10, ±20 VDC, 10 Ampere, bipolar Power Supply for all console audio functions. There is also 1 ADM PS 20-10, +20 VDC, 10 Ampere Power Supply for all Console lighting and logic functions. The PS 2020-10 and PS 20-10 are capable of supplying all necessary power for the Console with a more than adequate safety factor.

Provision has been made for the inclusion of two additional optional Supplies, one of each, to provide 100% redundancy with automatic changeover in the unlikely event of failure. Status indicators for the Supplies are located in the left corner of the Meter Turret housing.



STANDARD STATUS METER NOTING IN THE DIAL

SECTION 1 METER NOTING UNDER THE FOLLOWING CIRCUMSTANCES:

SECTION 1 THROUGH 24:

- INPUT METER IS ON
- METER INPUT ATTENUATOR IS IN A "100" POSITION
- SLATE IS NOT IN USE SELECT
- THE METER IS NOT NOTED BY A SWP 1 OR SWP 2 POSITION
- A CORRUPT KEY IS SELECTED
- "REL" IS IN "REL" POSITION IS PRESELECTED

SECTION 23 THROUGH 24:

RELAY OPERATOR IS ACTIVE

SECTION 2 METER NOTING UNDER THE FOLLOWING CIRCUMSTANCES:

SECTION 2 THROUGH 24:

- INPUT METER IS ON
- METER INPUT ATTENUATOR IS IN A "100" POSITION
- SLATE IS NOT IN USE SELECT
- THE METER IS NOT NOTED BY A SWP 1 OR SWP 2 POSITION
- A CORRUPT KEY IS SELECTED
- "REL" IS IN "REL" POSITION IS PRESELECTED

METER NOTING IS ONLY PRESELECTABLE VIA KEY NOTED BY SWITCH IN PRESELECT SELECT METER.

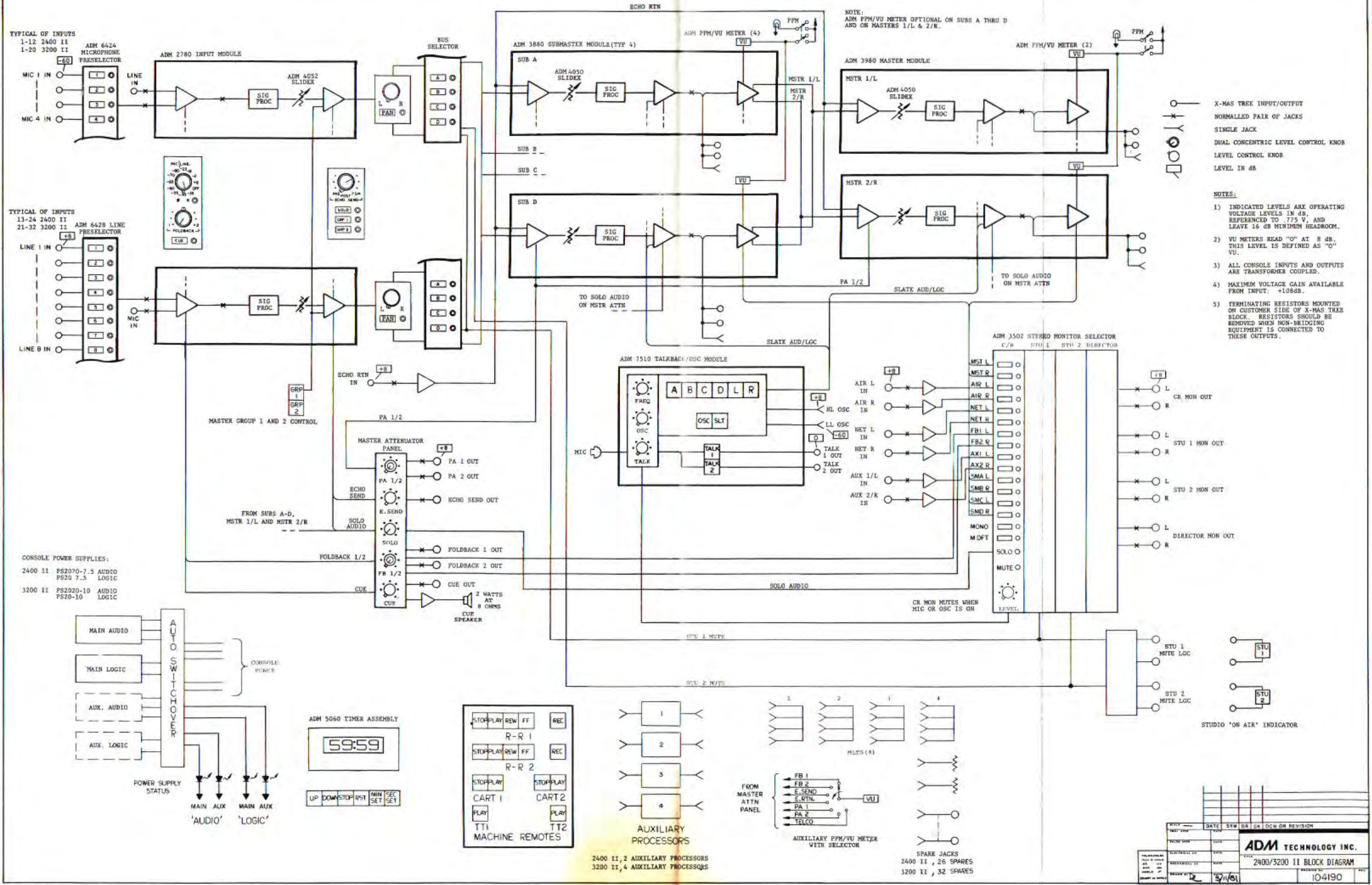
1) METER IDENTIFICATION CONVENTION:

- CHANNEL CONTROL METER
- CONTROL CONTROL METER

2) CORRUPT POSITION TO BE BLACK PAPER WITH SWP METER PANEL & EXTENDED ALTERNATE TONE.

3) ALL SWP METER ON CHANNEL INDICATE THESE FEATURES WHICH ARE SUPPLIED AS STANDARD. ALL OTHER TONES DISPLAYED IN BACKGROUND ARE OPTIONAL.

4) CHANNEL KEYS FOR MAIN CHANNELS, AS SHOWN, SLATE METER PANEL ARE SUPPLIED FOR THESE OPTIONS NOT SELECTED.



TYPICAL OF INPUTS
1-12 2400 II
1-20 3200 II

TYPICAL OF INPUTS
13-24 2400 II
21-32 3200 II

CONSOLE POWER SUPPLIES:
2400 II FS2070-7.5 AUDIO
PS20 7.5 LOGIC
3200 II FS2020-10 AUDIO
PS20-10 LOGIC

NOTE:
ADM PPM/VU METER OPTIONAL ON SUBS A THRU D
AND ON MASTERS 1/L & 2/R.

X-MAS TREE INPUT/OUTPUT
NORMALIZED PAIR OF JACKS
SINGLE JACK
DUAL CONCENTRIC LEVEL CONTROL KNOB
LEVEL IN dB

- NOTES:
- 1) INDICATED LEVELS ARE OPERATING VOLTAGE LEVELS IN dB, REFERENCED TO .775 V, AND LEAVE 16 dB MINIMUM HEADROOM.
 - 2) VU METERS READ "0" AT 8 dB. THIS LEVEL IS DEFINED AS "0" VU.
 - 3) ALL CONSOLE INPUTS AND OUTPUTS ARE TRANSFORMER COUPLED.
 - 4) MAXIMUM VOLTAGE GAIN AVAILABLE FROM INPUT: +108dB.
 - 5) TERMINATING RESISTORS MOUNTED ON CUSTOMER SIDE OF X-MAS TREE BLOCK. RESISTORS SHOULD BE REMOVED WHEN NON-BRIDGING EQUIPMENT IS CONNECTED TO THESE OUTPUTS.

STUDIO 'ON AIR' INDICATOR

DATE	REV	DR	CK	DCN	OR	REVISION
ADM TECHNOLOGY INC.						
2400/3200 II BLOCK DIAGRAM						
104190						

2400 II, 2 AUXILIARY PROCESSORS
3200 II, 4 AUXILIARY PROCESSORS

SPARE JACKS
2400 II, 26 SPARES
3200 II, 32 SPARES

**CUSTOM
SYSTEMS**

CUSTOM SYSTEMS



**CUSTOM
SYSTEMS
DESIGN
CAPABILITIES**

Total in-house design, engineering and manufacturing facilities give ADM® the capability to produce consoles to your exact specifications.

For more than 12 years we have been meeting customer demand for consoles and components of professional quality and reliability. Because of our reputation for advanced performance and engineering, we have become one of America's leading suppliers, serving customers around the world.

Our marketing and engineering departments stand ready to work closely with you to develop custom consoles to your most exacting individual needs.

Even on these custom units, exacting test and quality assurance procedures enable ADM to provide a 5-year warranty—the finest protection in the industry.

Our long list of users attests that ADM has successfully met the stringent requirements of many outstanding companies. On the following pages are photographs of some of the custom systems that have been engineered and manufactured by ADM.

ADM[®] CONSOLE SPECIFICATIONS

1. Frequency Response:

No equalization. Measured at any output level up to clipping. ± 1 dB, 20Hz-20kHz Ref. 1kHz.

2. Distortion:

The total harmonic distortion at +24 dBm or lower at 1kHz will be less than .07% and will not exceed .15% THD over the band 100Hz-20kHz at +24 dBm or lower.

3. Maximum Output Level:

The clipping level at any output when terminated in 600 ohms shall be +27 dBm 30 Hz to 20kHz.

4. Noise:

The equivalent input noise of any microphone shall be lower than -125.5 dBu referred to a 250 ohm impedance measured on an average response meter. Any line level input (+8 dBm ref) to any output channel (+8 dBm ref) will exhibit a maximum noise of -72 dBm (S/N 80 dB). All noise measurements based on a bandwidth 20Hz to 20kHz.

5. Crosstalk:

Better than 72 dB measured between adjacent channels at normal operating levels over the band 100Hz to 10kHz.

6. Temperature:

Over the temperature range 0 to 55 degrees C. no apparent changes in operational characteristics are discernible.

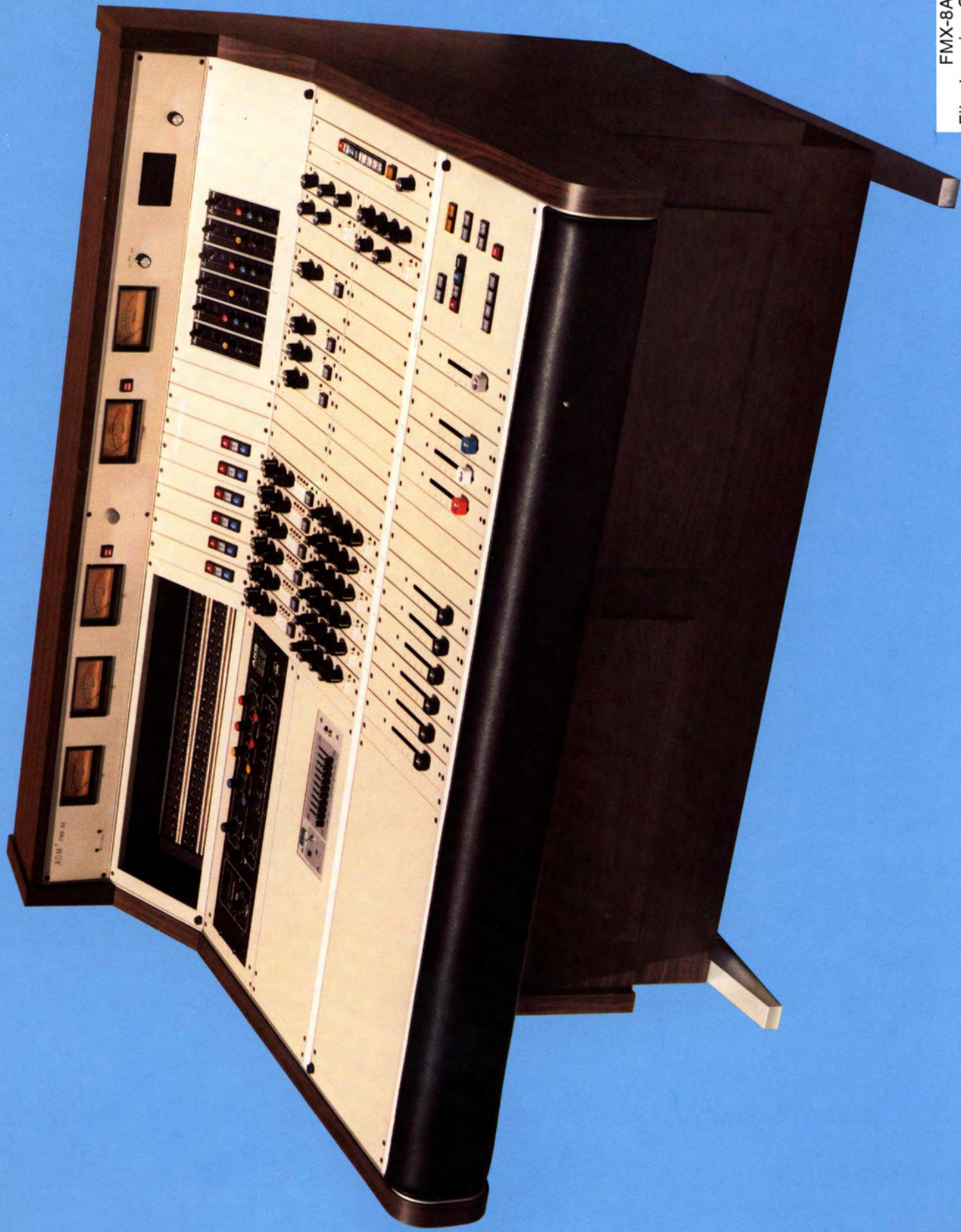
7. RF Susceptibility:

Based on the tailored roll off characteristics and proper manufacturing techniques, ADM consoles will operate in high RF environments.

WARRANTY

ADM Technology, Inc. warrants our consoles or components to be free from defective material and workmanship for a period of five years from the date of delivery. All defective parts will be replaced and repair work required by normal use will be performed, without charge, within this five year period. This warranty shall be exclusive and in lieu of all other warranties expressed or implied.

FMX-8A
Film Looping Console



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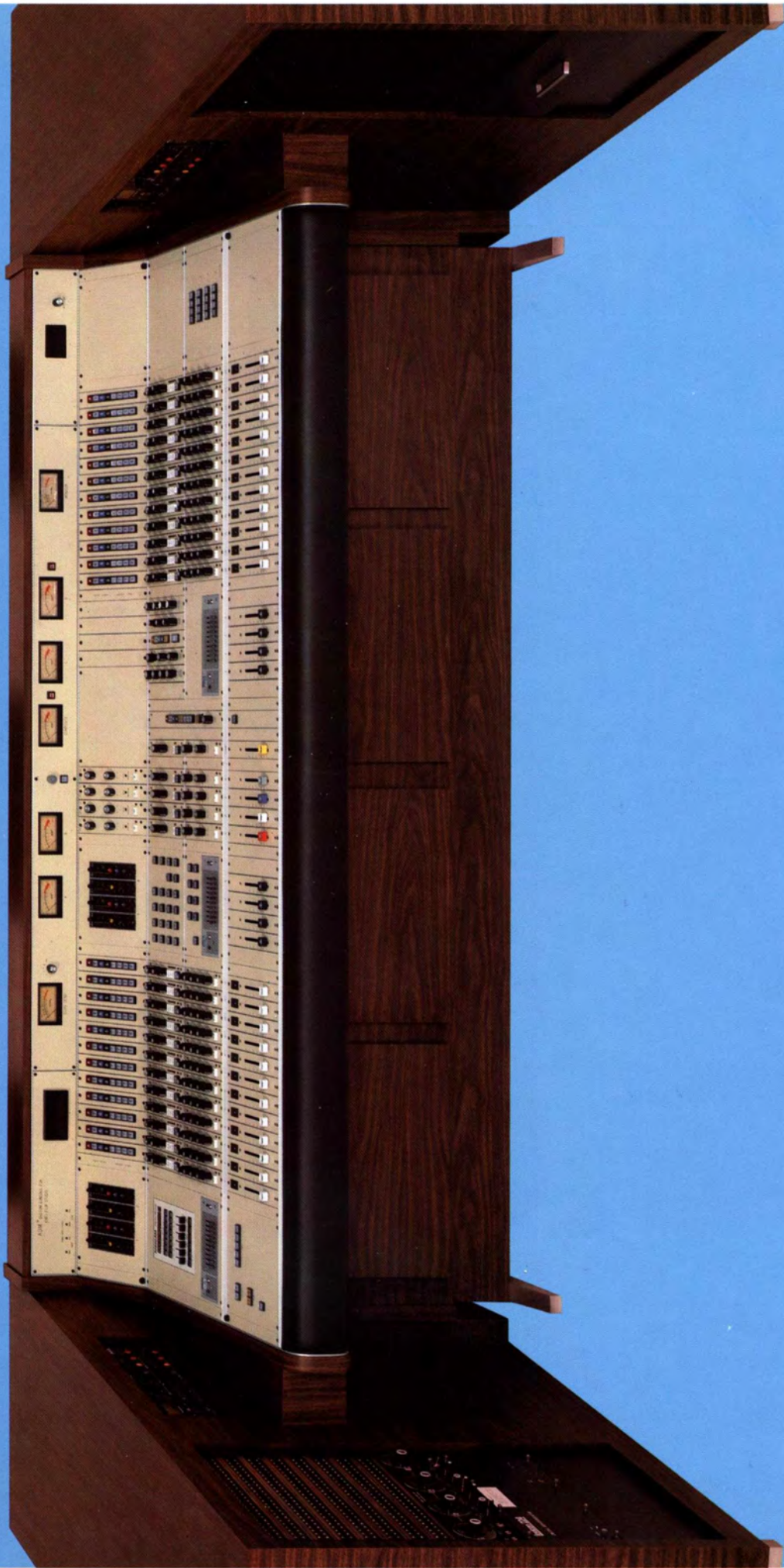
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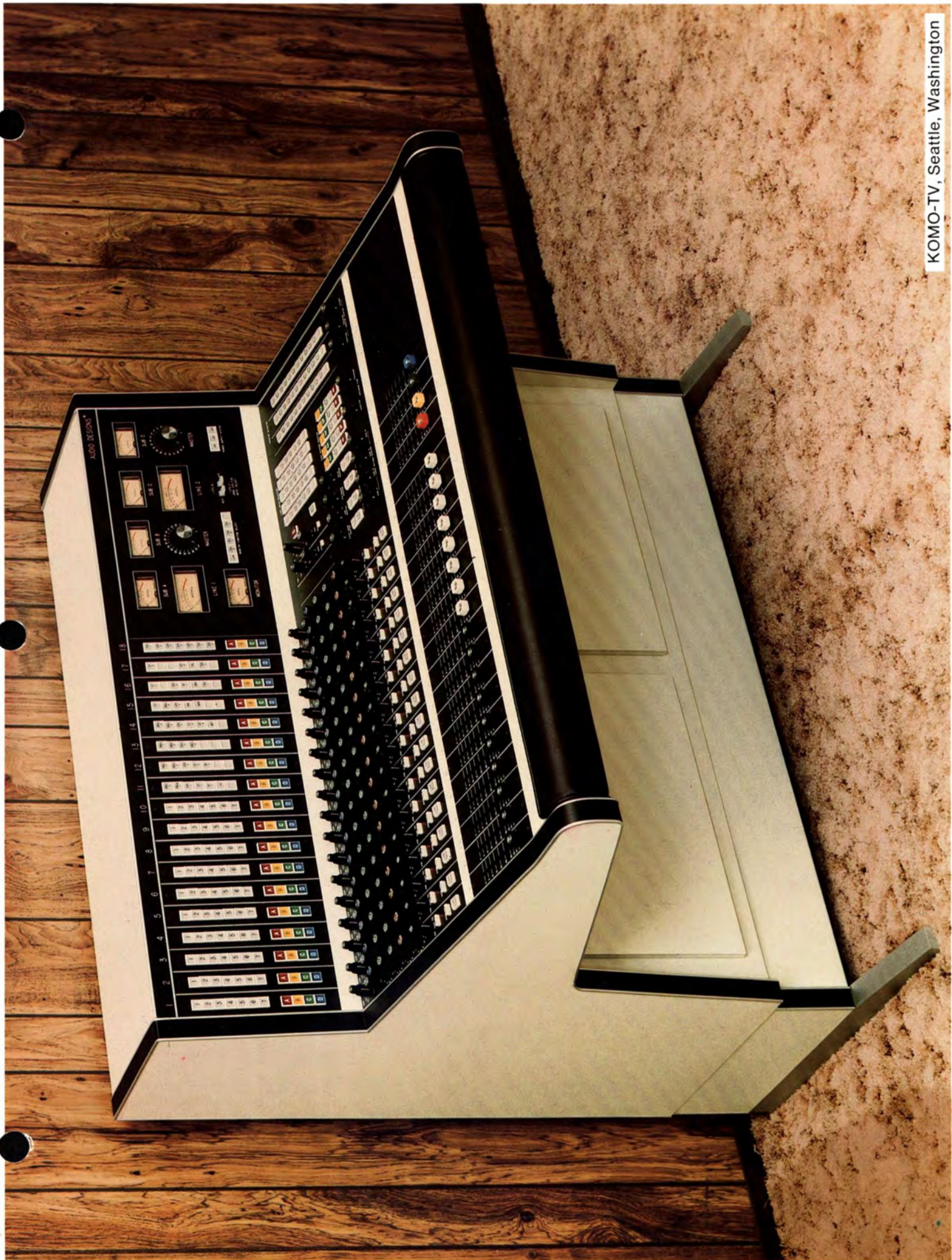
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KOMO-TV, Seattle, Washington

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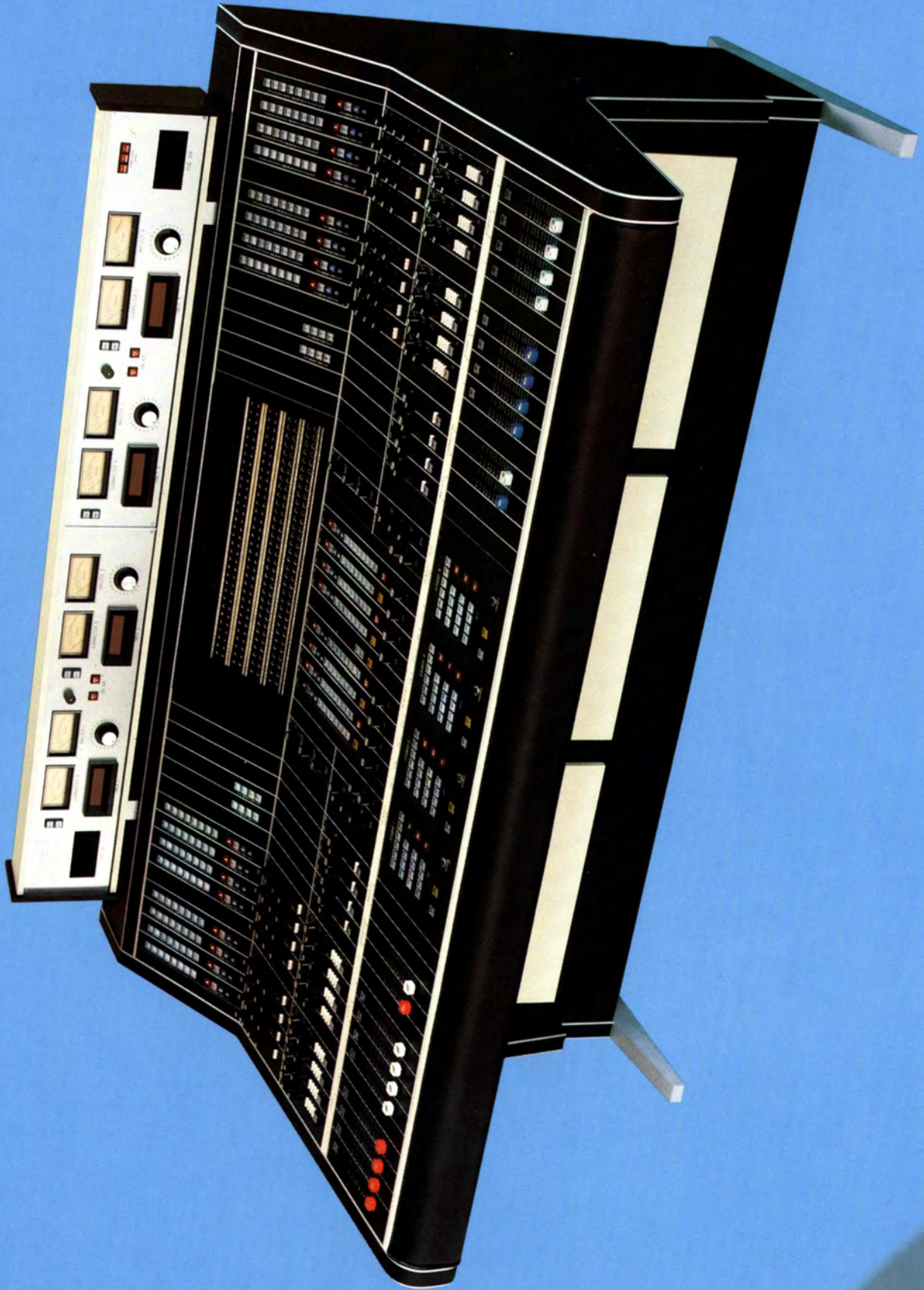
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U. S. House of Representatives
Custom Console

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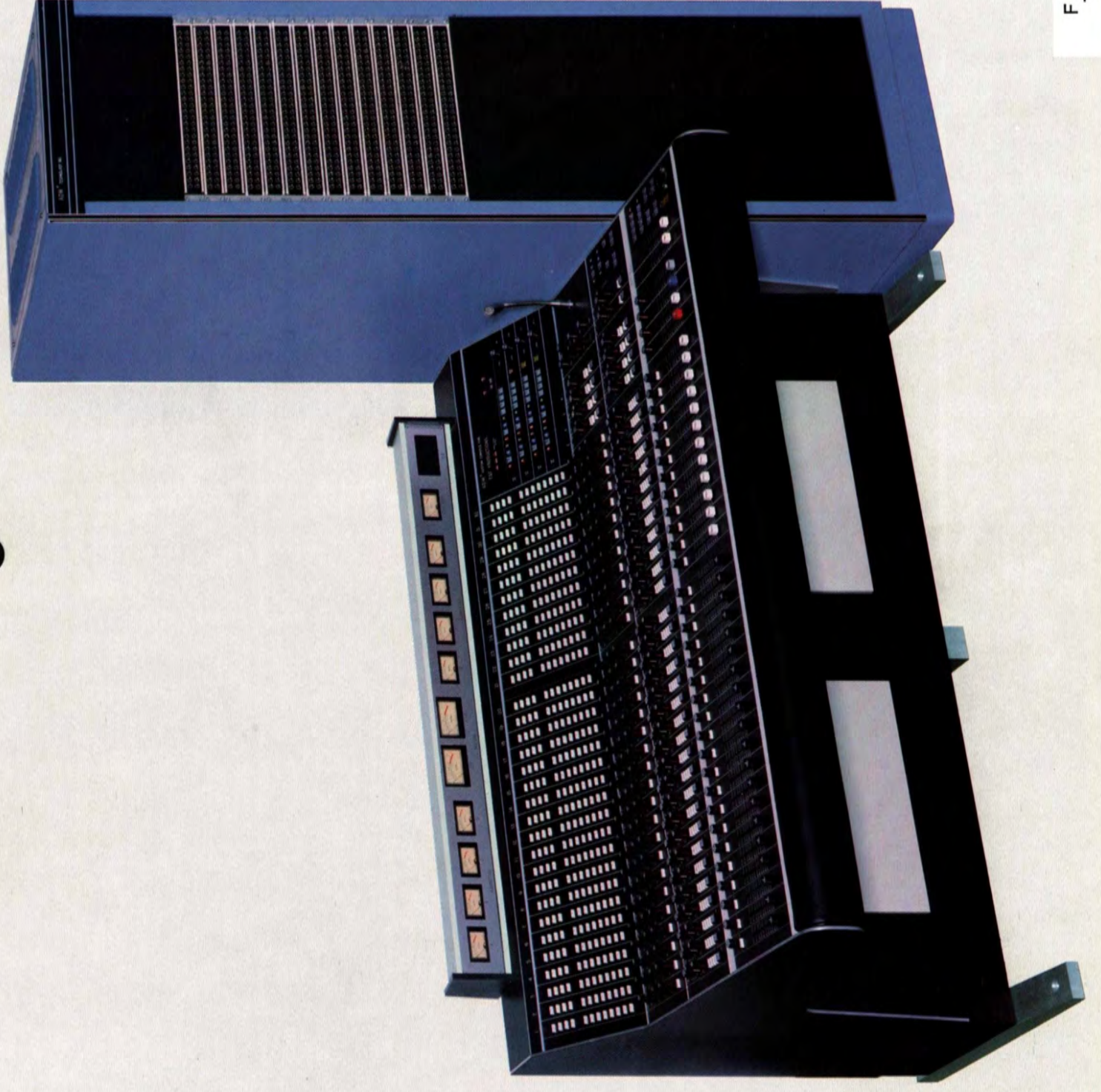
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F & F Productions
Tampa, Florida

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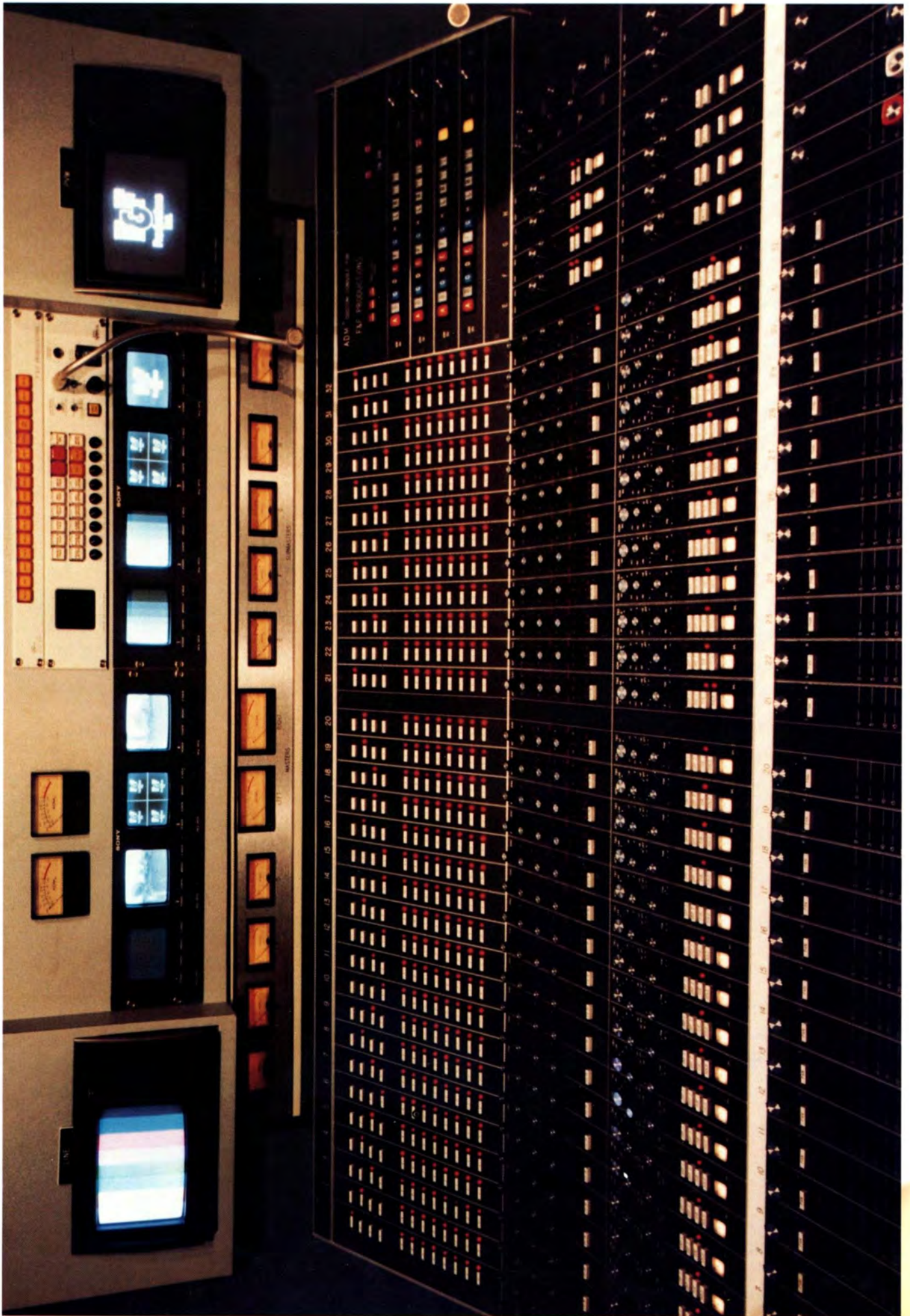
Over the temperature range 0 to 55 degrees C. no apparent changes in operational characteristics are discernible.

7. RF Susceptibility:

Based on the tailored roll off characteristics and proper manufacturing techniques, ADM consoles will operate in high RF environments.

WARRANTY

ADM Technology, Inc. warrants our consoles or components to be free from defective material and workmanship for a period of five years from the date of delivery. All defective parts will be replaced and repair work required by normal use will be performed, without charge, within this five year period. This warranty shall be exclusive and in lieu of all other warranties expressed or implied.



F & F Productions
TV Production Van

ADM[®] CONSOLE SPECIFICATIONS

1. Frequency Response:

No equalization. Measured at any output level up to clipping. ± 1 dB, 20Hz-20KHz Ref. 1KHz.

2. Distortion:

The total harmonic distortion at +24 dBm or lower at 1KHz will be less than .07% and will not exceed .15% THD over the band 100Hz-20KHz at +24 dBm or lower.

3. Maximum Output Level:

The clipping level at any output when terminated in 600 ohms shall be +27 dBm 30 Hz to 20KHz.

4. Noise:

The equivalent input noise of any microphone shall be lower than -125.5 dBu referred to a 250 ohm impedance measured on an average response meter. Any line level input (+8 dBm ref) to any output channel (+8 dBm ref) will exhibit a maximum noise of -72 dBm (S/N 80 dB). All noise measurements based on a bandwidth 20Hz to 20KHz.

5. Crosstalk:

Better than 72 dB measured between adjacent channels at normal operating levels over the band 100Hz to 10KHz.

6. Temperature:

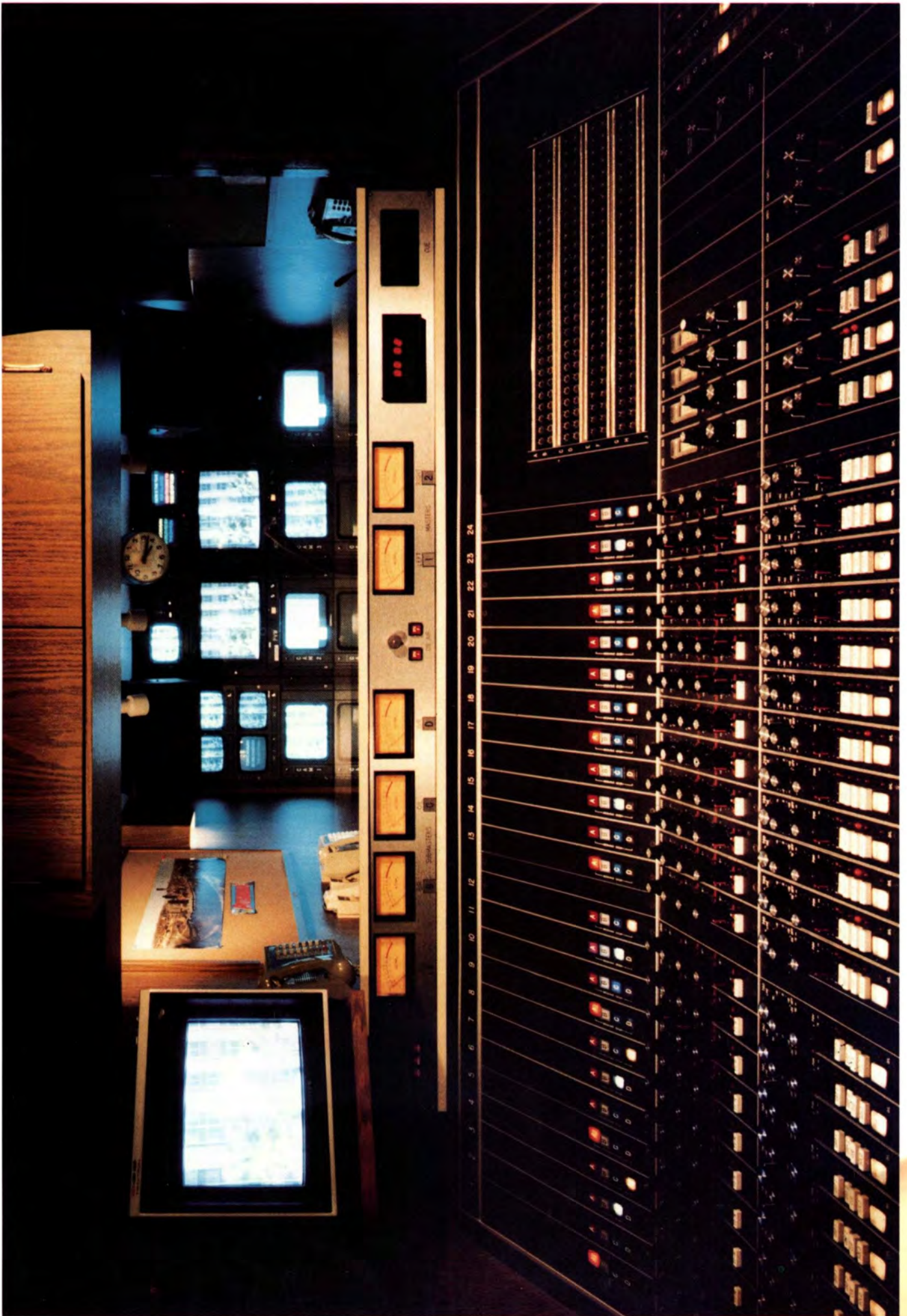
Over the temperature range 0 to 55 degrees C. no apparent changes in operational characteristics are discernible.

7. RF Susceptibility:

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Total Communications Systems
TV Production Van

ADM[®] CONSOLE SPECIFICATIONS

1. Frequency Response:

No equalization. Measured at any output level up to clipping. ± 1 dB, 20Hz-20KHz Ref. 1KHz.

2. Distortion:

The total harmonic distortion at +24 dBm or lower at 1KHz will be less than .07% and will not exceed .15% THD over the band 100Hz-20KHz at +24 dBm or lower.

3. Maximum Output Level:

The clipping level at any output when terminated in 600 ohms shall be +27 dBm 30 Hz to 20KHz.

4. Noise:

The equivalent input noise of any microphone shall be lower than -125.5 dBu referred to a 250 ohm impedance measured on an average response meter. Any line level input (+8 dBm ref) to any output channel (+8 dBm ref) will exhibit a maximum noise of -72 dBm (S/N 80 dB). All noise measurements based on a bandwidth 20Hz to 20KHz.

5. Crosstalk:

Better than 72 dB measured between adjacent channels at normal operating levels over the band 100Hz to 10KHz.

6. Temperature:

Over the temperature range 0 to 55 degrees C, no apparent changes in operational characteristics are discernible.

7. RF Susceptibility:

Based on the tailored roll off characteristics and proper manufacturing techniques, ADM consoles will operate in high RF environments.

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VOICE OF AMERICA



WJZ-TV, Baltimore, Maryland

ADM[®] CONSOLE SPECIFICATIONS

1. Frequency Response:

No equalization. Measured at any output level up to clipping. ± 1 dB, 20Hz-20kHz Ref. 1kHz.

2. Distortion:

The total harmonic distortion at +24 dBm or lower at 1kHz will be less than .07% and will not exceed .15% THD over the band 100Hz-20kHz at +24 dBm or lower.

3. Maximum Output Level:

The clipping level at any output when terminated in 600 ohms shall be +27 dBm 30 Hz to 20kHz.

4. Noise:

The equivalent input noise of any microphone shall be lower than -125.5 dBu referred to a 250 ohm impedance measured on an average response meter. Any line level input (+8 dBm ref) to any output channel (+8 dBm ref) will exhibit a maximum noise of -72 dBm (S/N 80 dB). All noise measurements based on a bandwidth 20Hz to 20kHz.

5. Crosstalk:

Better than 72 dB measured between adjacent channels at normal operating levels over the band 100Hz to 10kHz.

6. Temperature:

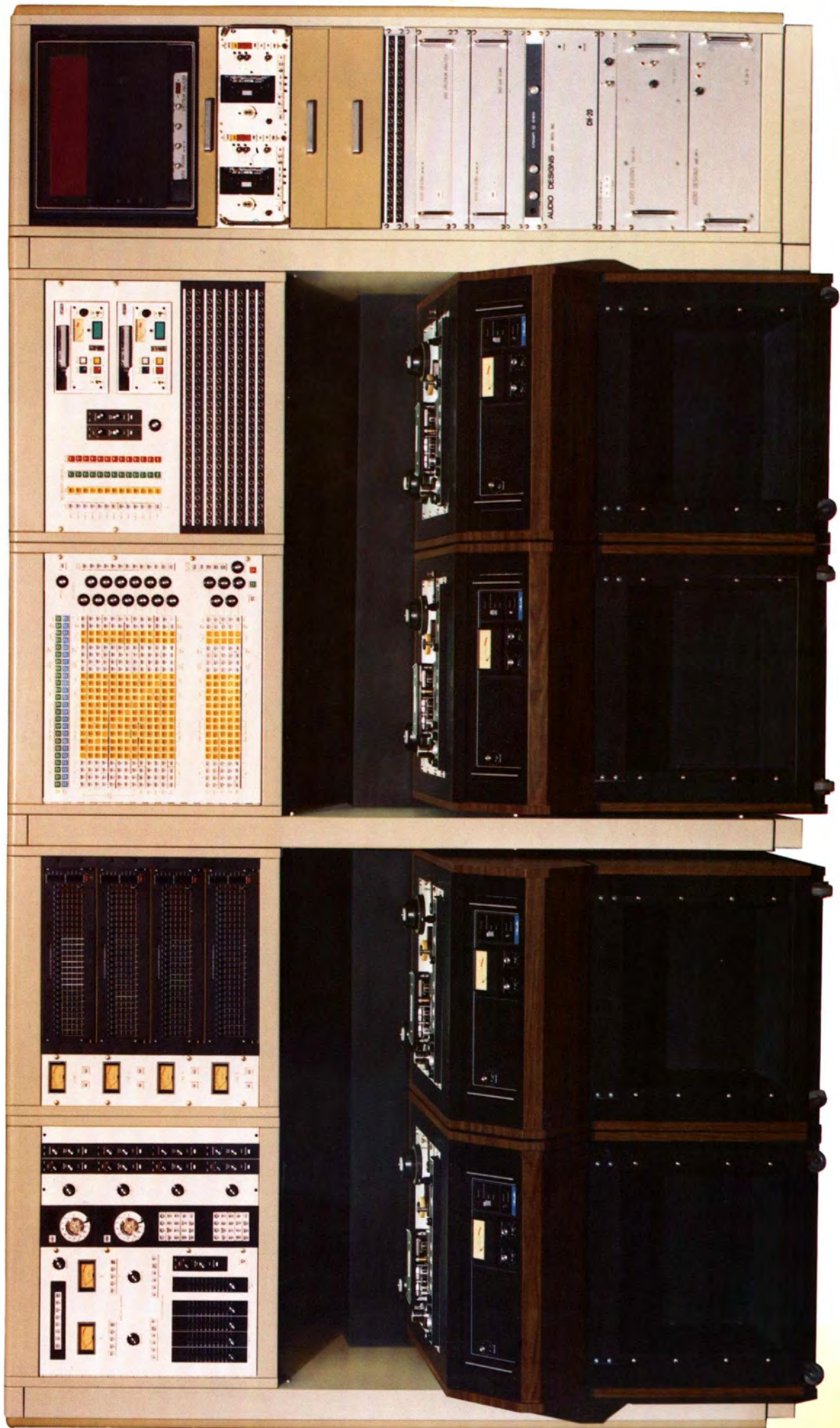
Over the temperature range 0 to 55 degrees C. no apparent changes in operational characteristics are discernible.

7. RF Susceptibility:

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ADM[®] CONSOLE SPECIFICATIONS

1. Frequency Response:

No equalization. Measured at any output level up to clipping. ± 1 dB, 20Hz-20kHz Ref. 1kHz.

2. Distortion:

The total harmonic distortion at +24 dBm or lower at 1kHz will be less than .07% and will not exceed .15% THD over the band 100Hz-20kHz at +24 dBm or lower.

3. Maximum Output Level:

The clipping level at any output when terminated in 600 ohms shall be +27 dBm 30 Hz to 20kHz.

4. Noise:

The equivalent input noise of any microphone shall be lower than -125.5 dBu referred to a 250 ohm impedance measured on an average response meter. Any line level input (+8 dBm ref) to any output channel (+8 dBm ref) will exhibit a maximum noise of -72 dBm (S/N 80 dB). All noise measurements based on a bandwidth 20Hz to 20kHz.

5. Crosstalk:

Better than 72 dB measured between adjacent channels at normal operating levels over the band 100Hz to 10kHz.

6. Temperature:

Over the temperature range 0 to 55 degrees C. no apparent changes in operational characteristics are discernible.

7. RF Susceptibility:

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ADM[®]
COMPONENTS

COMPONENTS

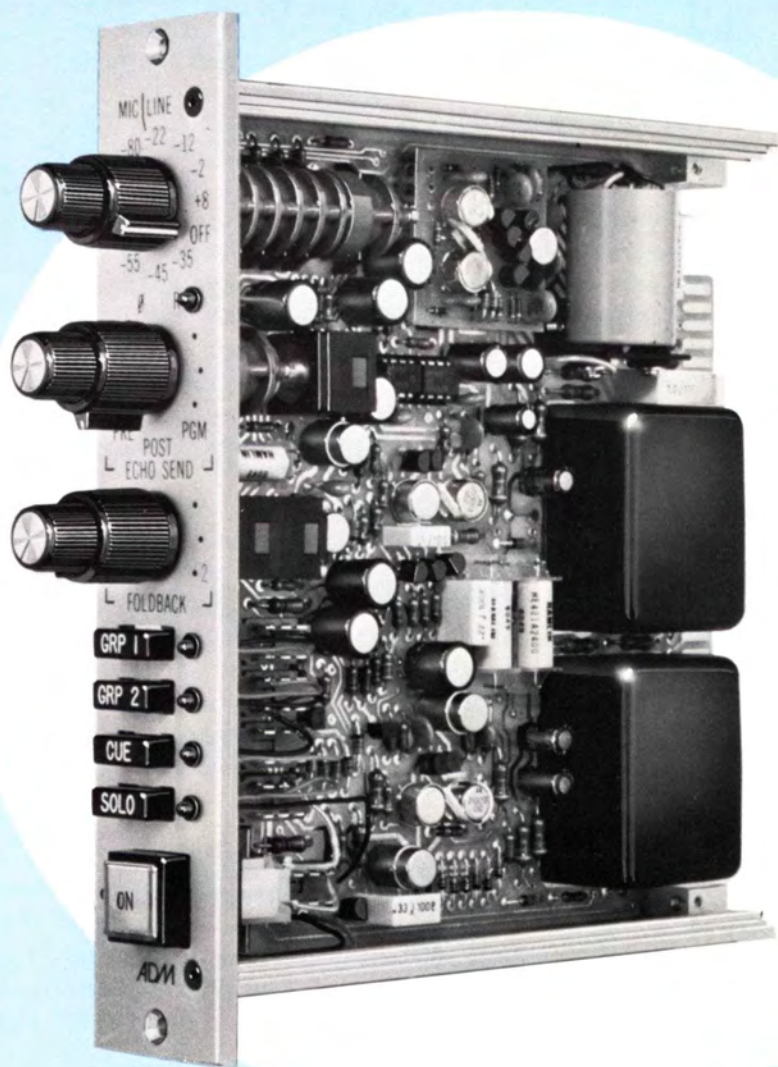
Another great advance from ADM[®]

THE 2780 INPUT MODULE

**a new standard
in broadcast modules**

FEATURES

- Both Microphone and Line level inputs
- Input attenuator from -80 dBu to +8 dBu
- Phase Reversal
- Echo Send selectable Pre-, Post- and PGM with level control
- 2 Independent Foldback outputs, each with level controls
- Cue output
- Solo output
- 2 Group OFF/ON logic controls
- LED status indicators
- Rugged aluminum chassis construction with dust covers
- All integrated circuits are plug-in
- Gold plated edge connector
- Illuminated OFF/ON switch
- LED overload indicator



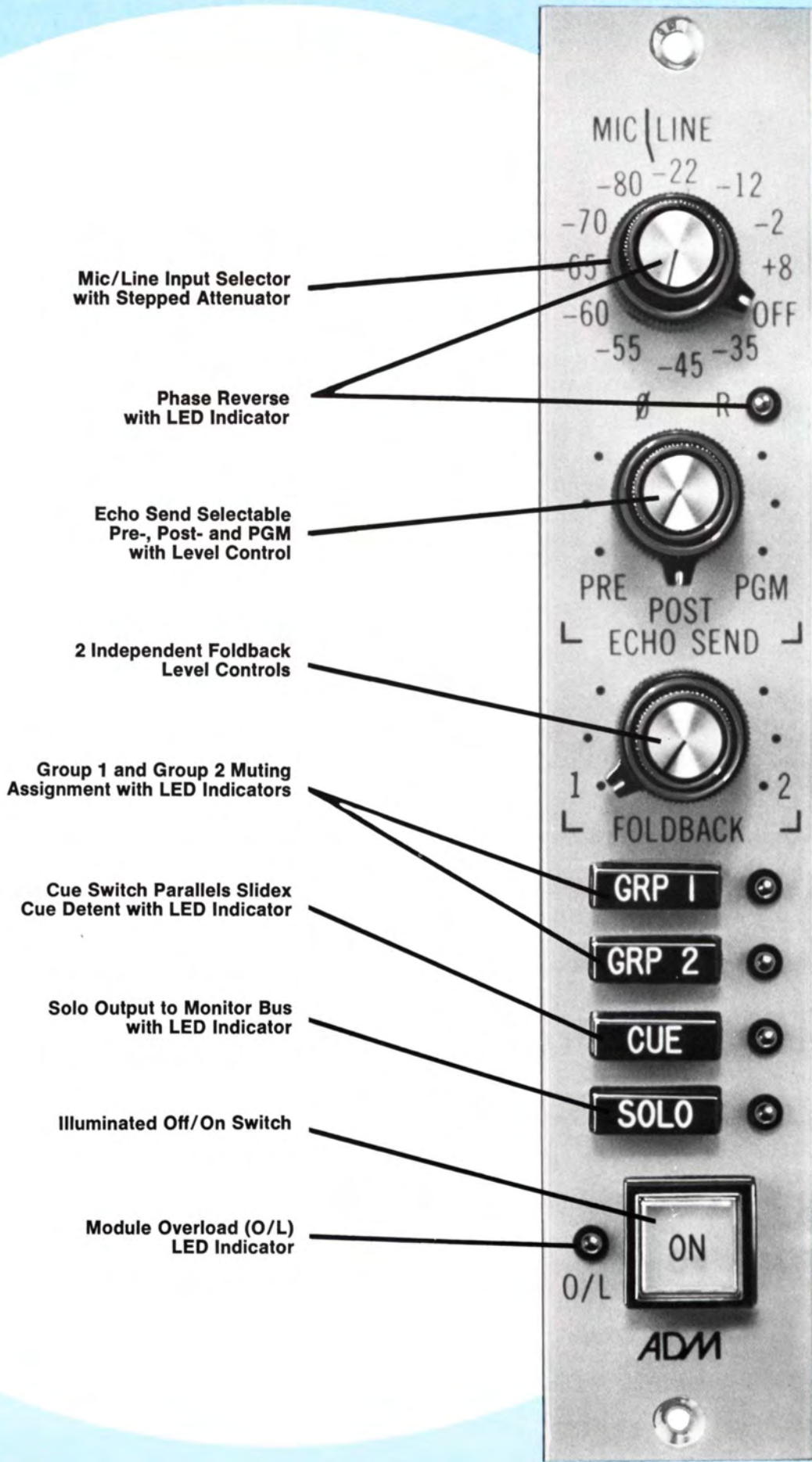
ADM[®]

The Audio Company

ADM Technology, Inc.

16005 Sturgeon, Roseville, Michigan 48066

Phone: (313) 778-8400



Mic/Line Input Selector with Stepped Attenuator

Phase Reverse with LED Indicator

Echo Send Selectable Pre-, Post- and PGM with Level Control

2 Independent Foldback Level Controls

Group 1 and Group 2 Muting Assignment with LED Indicators

Cue Switch Parallels Slidex Cue Detent with LED Indicator

Solo Output to Monitor Bus with LED Indicator

Illuminated Off/On Switch

Module Overload (O/L) LED Indicator

THE 2780 INPUT MODULE

ADM brings to the professional Broadcaster a new dimension in input pre-amplifiers. The 2780 module has been designed to give the Broadcaster the ultimate in both operational features and electrical specifications. The 2780 module is divided into four basic components — the input amplifier, the output amplifier, the auxiliary amplifiers and the logic functions.

Paramount in the design of a pre-amplifier is the optimization of signal-to-noise ratio and headroom.

Since signal-to-noise ratio and headroom are opposing parameters, a rather unique solution to this problem was required. As an input amplifier, ADM designed a discrete component operational amplifier allowing us to achieve better equivalent input noise than can be realized with monolithic devices. A current amplifier with gain was used as the output amplifier building block. Having these two building blocks available, a careful use of switchable feedback between them permits the optimization of signal-to-noise ratio and headroom thru the entire microphone input range.

Using 7 positions of the 12 position input gain control, the gain of the amplifiers are varied in precise increments permitting the 2780 module to accommodate microphone input levels from -80 dBu to -35 dBu while always preserving the near theoretical equivalent input noise and headroom. The remaining 5 positions of the input gain control include an Off position and 4 positions dedicated to the line level input of the 2780 input module. As in the microphone position, the gain of the pre-amplifier and output amplifier are varied in precise increments to optimize signal-to-noise ratio and headroom. The 2780 will accommodate nominal input levels of -22 dBu to $+8$ dBu with a maximum input of $+27$ dBu before clipping.

The 2780 module has three auxiliary outputs — two are foldback and the third is echo send. The foldback outputs derive their source from the pre-amplifier output. The position of the Slidex® at-

tenuator will have no effect on the foldback level. Both foldback one and two have individual gain controls permitting two totally independent fold-back mixes to be accomplished. Echo send is a separate feed on the 2780 input module. It derives its source from three points within the input module chain. These points are: 1) the pre-amplifier output, 2) the equalizer output associated with the 2780 module and 3) the 2780 module output. Selection of the echo source is a three position switch that is concentric with the echo send level control.

Included in the logic section of the 2780 input module are the following functions: OFF/ON, Cue, Solo and two Group muting functions.

The illuminated OFF/ON push button turns the entire chain Off or On. The Cue push button directs the output of the pre-amplifier to the Cue bus within the console and operates only when the module is Off. This permits the operator to cue a source without having to place the Slidex into the Cue detent. The Solo push button directs the output of the pre-amplifier to the control room monitor bus. This permits the operator to preview an On-Air signal, while On-Air, without any interruption of the program feed.

A unique innovation in the 2780 is the Group Mute functions. Two push buttons are provided in the 2780 designated Group 1 and Group 2. Any combination of the 2780's may be assigned to either the Group 1 or Group 2 mute busses. Then by use of the master mute switches (1 or 2), a group of inputs may be selectively muted. LED status indicators are located adjacent to the Cue, Solo and the Group push buttons for visual status indication.

Transformer coupling is used in both the microphone and line level input of the 2780 input module. In addition, a pre-amplifier output transformer is included when the 2780 is used in a console that includes extra built-in or accessory Patchbays.

SPECIFICATIONS

Pre-Amplifier Gain:

Low Level -78 to -33 dB adjustable in steps (-80, -70, -65, -60, -55, -45, -35)
High Level -10 to +20 dB adjustable in steps (-10, 0, +10, +20)

Program Amplifier Gain: 10 dB

Total Gain: 88 dB

Frequency Response: ± 0.5 dB from 20 Hz - 20 kHz

Noise:

Low Level Equivalent to an input noise of -127 dBu over the band 20 Hz to 20 kHz
High Level Absolute noise of -85 dBu S/N Ratio of 93 dB based on +8 dBu input and output level over the band 20 Hz - 20 kHz

Distortion: < .15% from 100 Hz - 20 kHz
< .5% from 30 Hz - 100 Hz
Measured at any level up to +24 dBm into 600 ohms
30 Hz < .15% Capacitor Version
30 Hz < .5% Transformer Version

Pre-Amplifier Clipping Level: +27 dBm into 600 ohms (Transformer Version)

Input: Transformer

Input Impedance:

Low Level > 2500 ohms
High Level > 6000 ohms

Output:

Pre-Amplifier Transformer or Capacitor (Unbalanced)
Program Amplifier Transformer or Capacitor (Unbalanced)
Foldback Amplifiers Unbalanced
Echo Amplifier Unbalanced

Load Impedance:

Pre-Amplifier Terminated In Module
Program Amplifier Terminated In Module

Power Requirements: Audio ± 20 V 100 mA
Lamps and Logic +20V 75 mA

Height: 7 $\frac{3}{4}$ " (196.85mm)

Width: 1 $\frac{1}{2}$ " (38.1mm)

Depth: 7" (177.8mm)

WARRANTY

ADM Technology, Inc. warrants our consoles or components to be free from defective material and workmanship for a period of five years from the date of delivery. All defective parts will be replaced and repair work required by normal use will be performed, without charge, within this five year period. This warranty shall be exclusive and in lieu of all other warranties expressed or implied.

Another Great Advance—from ADM[®]...

ADM MODEL 1310 NOISE SUPPRESSOR

The ADM Model 1310 Noise Suppressor is a new fast gain expander that puts silence where previously there was noise. Mixing a staccato piece with drums and cymbals? The 1310 will turn on from dead silence with a cymbal crash and not miss a single cycle of sound. Changing from staccato to legato, the decay time is adjustable to prevent the device from stepping on the tails of notes or words. Because the device is a true gain expander with a continuously varying gain, there are no threshold clicks nor is the ear aware of the threshold. The heart of the 1310 is the ADM Model 210 Voltage Controlled Attenuator which makes possible the extremely fast (fifty microsecond max.) attack time, and smooth operational characteristics.

The 1310 is available on the 800, 1600, 2400 and 3200 Series II Consoles as well as on Custom Consoles.

A companion ADM Model 1316 is available for the ST Series II Consoles.

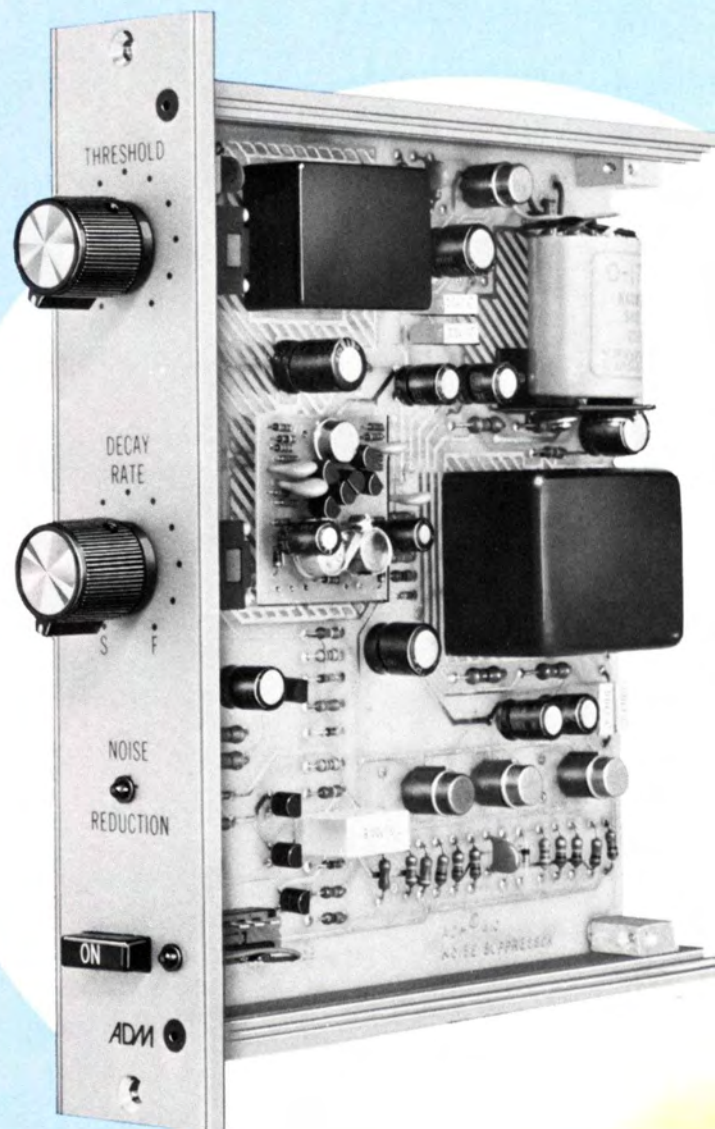
ADM MODEL 1310

DIMENSIONS:

Height: 7.75"
(197mm)

Width: 1.5"
(38.1mm)

Depth: 6.5"
(165mm)

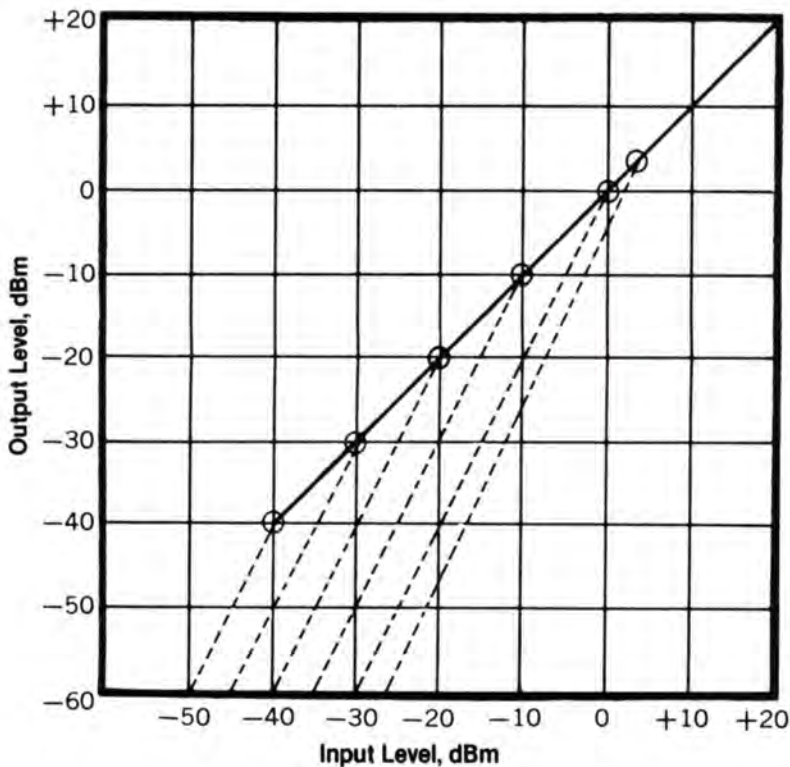


ADM

The Audio Company

ADM Technology, Inc.

ADM MODEL 1310 NOISE SUPPRESSOR



Operational characteristics of ADM Model 1310 Noise Suppressor

— = Gain Above Threshold
 - - - = Gain Below Threshold
 0 Threshold

ADM
The Audio Company

ADM Technology, Inc.

16005 Sturgeon, Roseville, Michigan 48066
Phone (313) 778-8400
TLX-23-1114

FEATURES

- Fast Attack
- Undetectable Threshold
- LED Reduction Indicator
- Op-Amp Circuitry
- VCA Noise Controller

TECHNICAL DATA

Input Impedance (Transformer Coupled):	1.8k ohm at midband frequency
Input Impedance (Capacitor Coupled):	11 kohm at midband frequency
Input Level:	+ 24 dBu maximum
Output Impedance (Transformer Coupled):	< 150 ohms across internal 620 ohms
Output Impedance (Capacitor Coupled):	< 10 ohms at midband frequency
Output Load:	600 ohms, unbalanced
Output Level (Transformer Coupled):	+ 24 dBm maximum
Output Level (Capacitor Coupled):	+ 19 dBm maximum
Frequency Response:	±.5 dB 20 Hz – 20 kHz
Distortion:	.25% typical 200 Hz – 20 kHz .5% maximum 200 Hz – 20 kHz 1% maximum @ 30 Hz
Noise Output (Transformer Coupled above threshold):	- 72 dBu absolute
Noise Output (Capacitor Coupled):	- 77 dBu absolute
Noise Output (no input):	- 90 dBu maximum
Gain (above threshold):	±.5 dB
Threshold:	Front Panel Adjustable from - 40 dBm
Attack Time:	30 Microseconds maximum
Decay Time:	10 Milliseconds to 500 Milliseconds per dB
Available Gain Reduction:	85 dB minimum
Power Supply:	±20 VDC at 100 mA audio + 20 VDC at 30 mA logic

Another innovation from ADM[®]

THE 1540 FOUR BAND EQUALIZER

The ADM 1540 Equalizer module is a unique 4 band, 14 frequency, reciprocal equalizer. ADM has placed special emphasis on the all-important "presence" frequencies in the mid-audio spectrum. The mid-audio is divided into two bands: the mid-low (200, 350, 560 and 900 Hz) and the mid-high (1.5, 2.5, 4.3 and 7.2 kHz). These frequencies, together with the bandwidth, were selected by exhaustive listening tests to assure maximum control and effect over both voice and music in the mid-band presence range. The low frequency (40, 80 and 160 Hz) and high frequency (10, 12.5 and 15

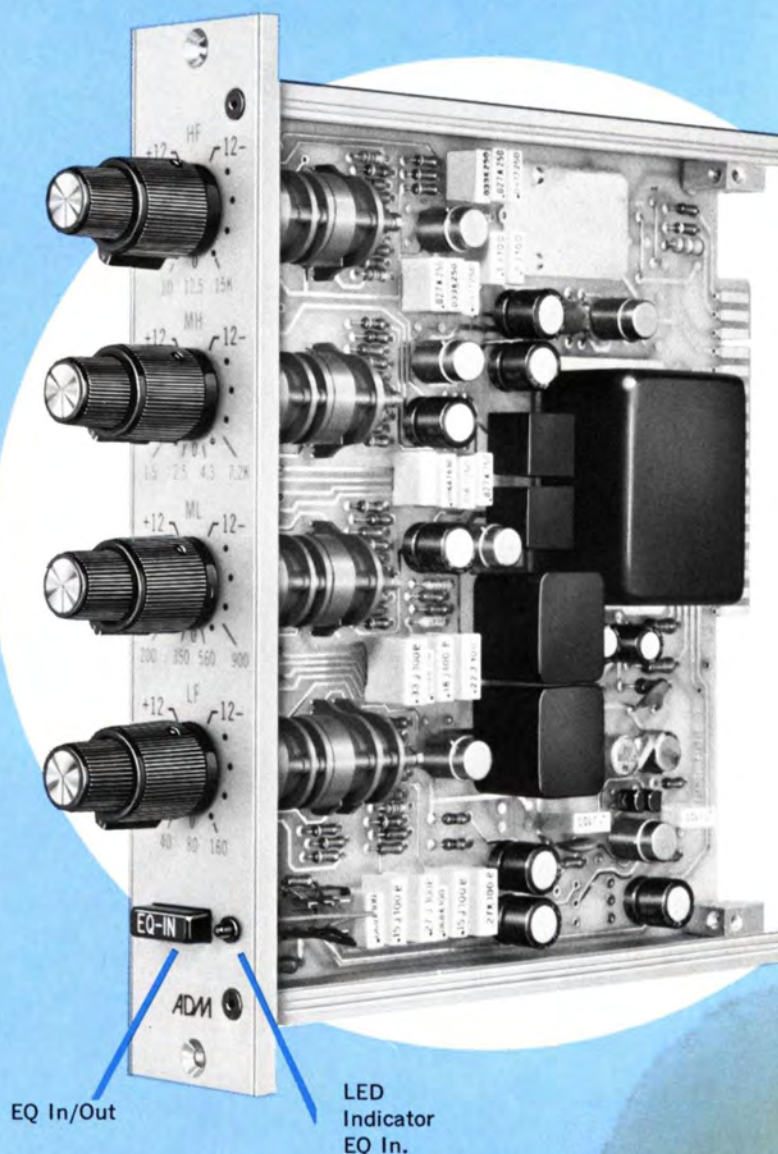
kHz) sections of the 1540 are shelving and exhibit the necessary smoothness required at the upper and lower ends of the audio spectrum. All 4 bands have 12 dB of symmetrical boost or cut in steps of 2, 4, 6, 9 and 12 dB. The Equalizer IN/OUT function is activated with a pushbutton. The associated LED indicator gives a visual display of the IN/OUT status of the module. All switching functions are noiseless. The input and output of the 1540 Equalizer module are transformer coupled (floating) and will accept levels up to +27 dB. A capacitor unbalanced output version also available.

TECHNICAL DATA

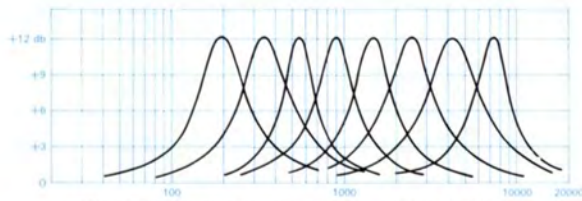
Input Impedance: 10k ohms floating
Maximum Input Level: . +24 dBu
Gain: Unity \pm .5 dB
Load Impedance: 600 ohm floating output
Maximum Output Level: +27 dBm XFMR out
Distortion @ +24 dBm: < .1% at 1 kHz
< .15% from 100 Hz - 20 kHz
< .3% from 30 Hz - 100 Hz
Frequency Response: . . Flat \pm .5 dB controls set flat
Noise: < -83 dBu absolute
(XFMR out version):
20 Hz - 20 kHz bandwidth
Power Requirements: . . Audio \pm 20V DC 100 mA
Logic +20V DC 30 mA

DIMENSIONS

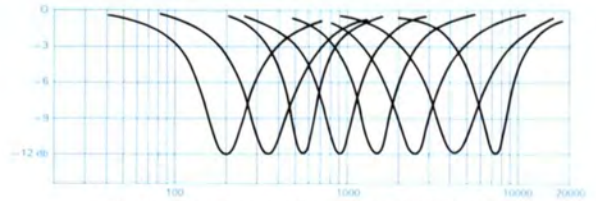
Height: 7.75 inches (196.9mm)
Width: 1.50 inches (38.1mm)
Depth: 6.50 inches (165.1mm)



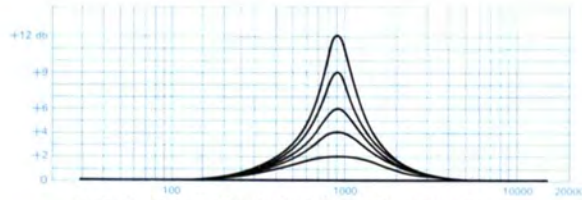
ADM MODEL 1540 EQUALIZER CHARACTERISTICS



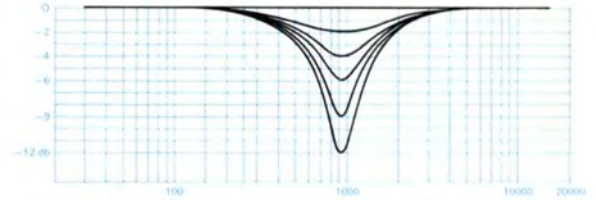
Mid-Frequency Equalizers—Maximum Boost



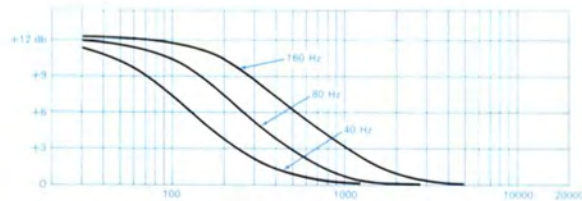
Mid-Frequency Equalizers—Maximum Cut



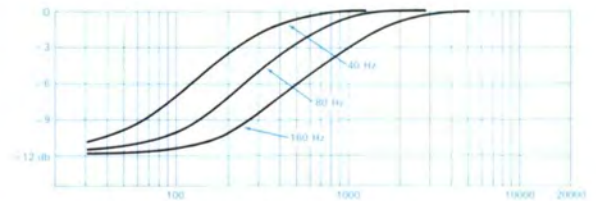
900 Hz Boost—Typical of Other Frequencies



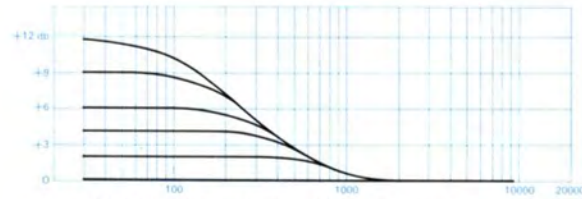
900 Hz Cut—Typical of Other Frequencies



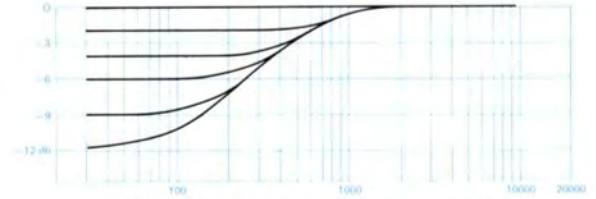
Low-Frequency Equalizers—Maximum Boost



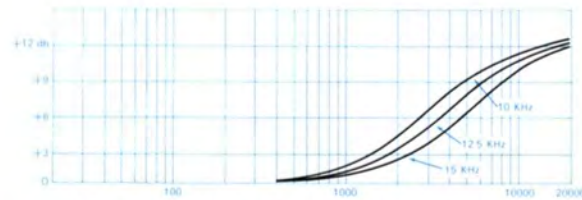
Low-Frequency Equalizers—Maximum Cut



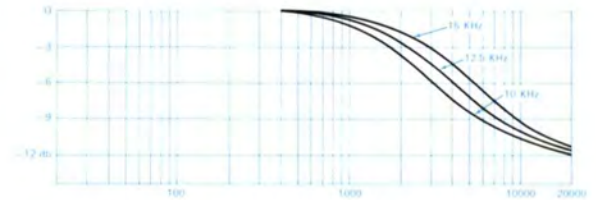
80Hz Boost—Typical of Other Frequencies



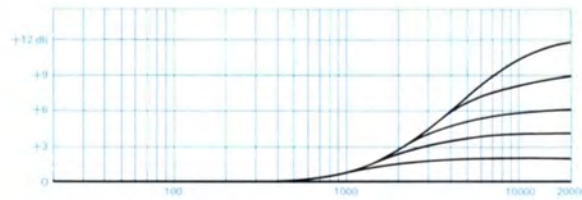
80Hz Cut—Typical of Other Frequencies



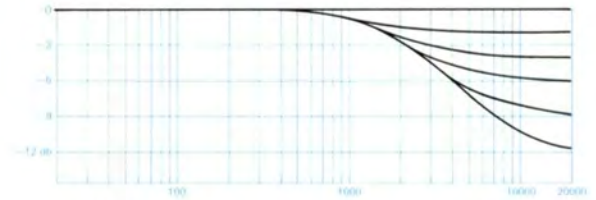
High Frequency Equalizers—Maximum Boost



High Frequency Equalizers—Maximum Cut



12.5 KHz Boost—Typical of Other Frequencies



12.5 KHz Cut—Typical of Other Frequencies

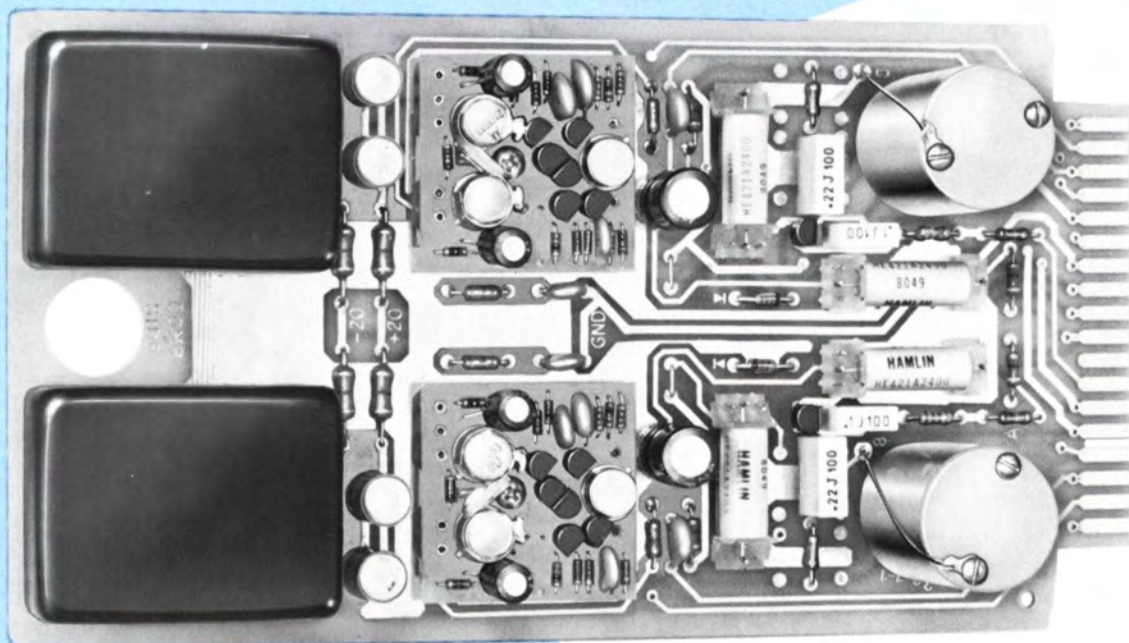
H.F. EQUALIZER FREQUENCIES: 10, 12.5, 15 kHz $\pm 2, 4, 6, 9, 12$ dB
 H.M.F. EQUALIZER FREQUENCIES: 1.5, 2.5, 4.3, 7.2 kHz $\pm 2, 4, 6, 9, 12$ dB
 L.M.F. EQUALIZER FREQUENCIES: 200, 350, 560, 900 Hz $\pm 2, 4, 6, 9, 12$ dB
 L.F. EQUALIZER FREQUENCIES: 40, 80, 160Hz $\pm 2, 4, 6, 9, 12$ dB

ADM[®]
 The Audio Company

ADM TECHNOLOGY, INC.
 16005 Sturgeon, Roseville, Michigan 48066
 Phone: (313) 778-8400 • TLX-23-1114

From ADM[®]... NEW

ADM MODEL 2668-1, -2 DUAL CARD AMPLIFIER



May be utilized as a microphone pre-amplifier, booster amplifier, or line amplifier

The ADM Model 2668 employs the Model 202-1 high technology operational amplifier module to achieve exceptionally low noise generation (less than -128 dBu) and distortion. Input and output transformers provide isolation. All transistors are silicon and all components are of the highest quality and are operated well within their electrical ratings. The amplifier cannot be damaged by overload.

The gain of each section of the Model 2668-1 is adjustable from 26 dB to 56 dB by the use of an external strapping resistor located on the mating connector. This provides the flexibility to change amplifiers within the system. A slating input is provided with electronic selection of line or slating input.

When used in the CH-16 card cabinet, eight ADM Model 2668 amplifiers occupy only 5-1/4" of panel space.

The ADM Model 2668 is also available as a single amplifier (may be ordered as 2668-2).

ADM MODEL 2668

DIMENSIONS:

Height: 4"
(101.6mm)
Width: 1-9/16"
(39.6mm)
Length: 7-1/2"
(190.5mm)

CH16 CARD CABINET

will house eight ADM Model 2668 amplifiers

DIMENSIONS

Height: 5-1/4"
(133.4mm)
Width: 19"
(482.6mm)
Depth behind panel: 7-3/4"
(197mm)

ADM

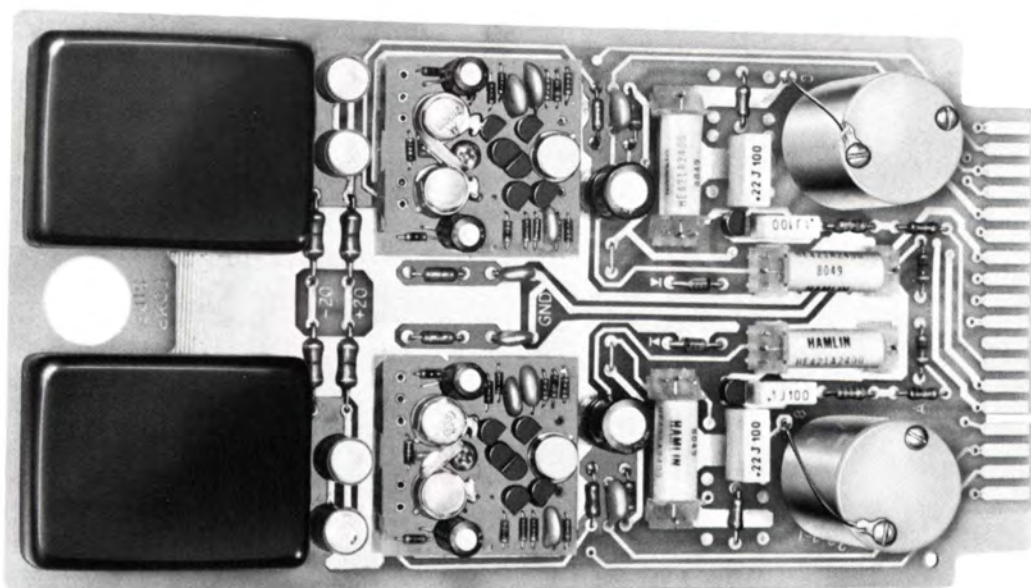
The Audio Company

ADM Technology, Inc.

ADM MODEL 2668-1, -2 DUAL CARD AMPLIFIER

TECHNICAL DATA—EACH SECTION

Gain:	56 dB strappable to 26 dB	Frequency Response:	± 5 dB 20 Hz to 20 kHz
Input Impedance:	1.8k ohms @ midband	Harmonic Distortion:	< .5% maximum @ 30 Hz < .07% maximum @ 1 kHz < .15% maximum @ 20 kHz @ 24 dBm out into 600 ohms
Input Source Impedance:	250-600 ohms, floating or unbalanced	Clipping Level:	+27 dBm into 600 ohms
Output Impedance:	Less than 150 ohms	Noise:	Equivalent to an input of -128 dBu from 250 ohm source, bandwidth 20 Hz to 20 kHz
Output Load Impedance:	600 ohms floating or unbalanced	Supply Requirements:	± 20 Volts DC (Bi-Polar), 55 milliamperes
Slating Input Impedance:	1 k @ 26 dB gain to 130 k @ 56 dB gain		
Slating Switch Input:	20V @ 2 mA to select slate input		



ADM

The Audio Company

ADM Technology, Inc.

16005 Sturgeon, Roseville, Michigan 48066

Phone (313) 778-8400

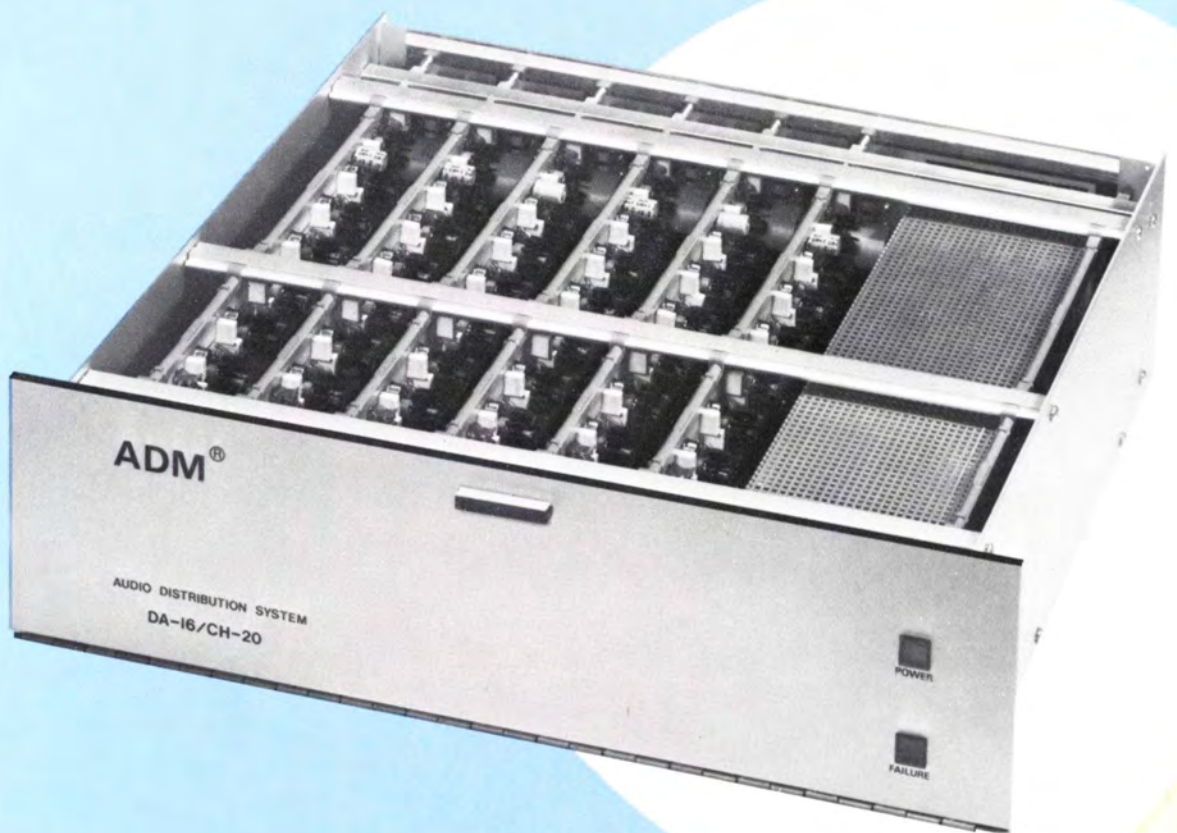
TLX-23-1114

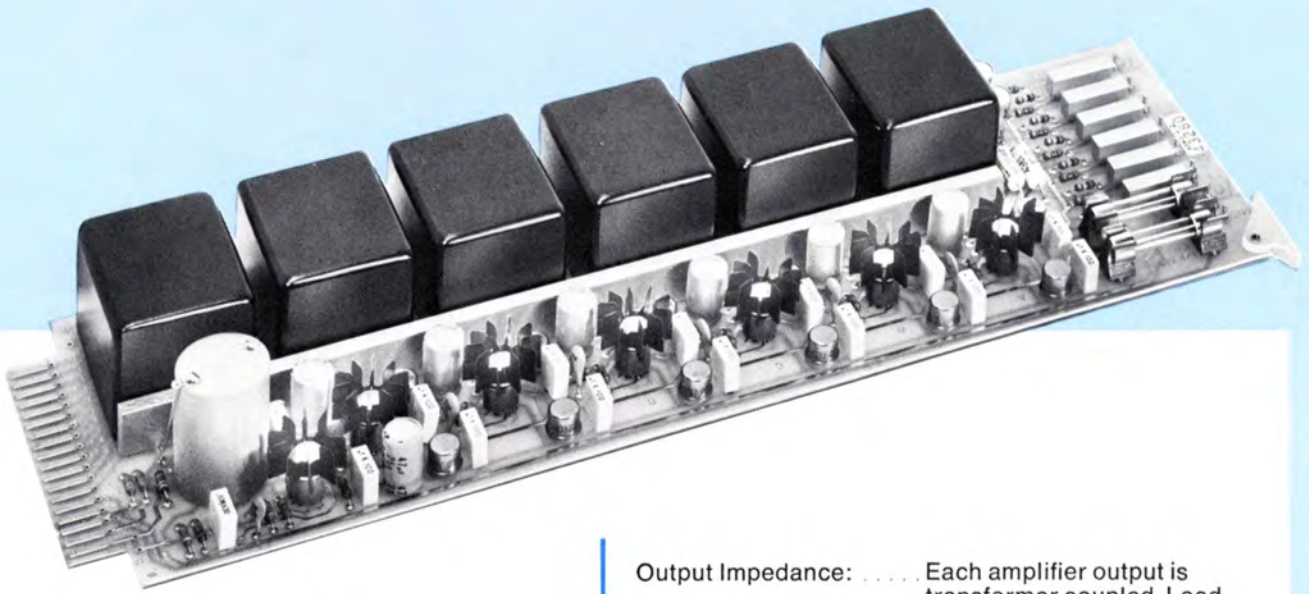
From ADM[®]

THE DA16B/CH20B DISTRIBUTION AMPLIFIER SYSTEM

The DA16B offers a unique approach to audio distribution amplifiers. Each amplifier is a one input, six output plug-in card. The input is transformer coupled (floating) and will accept levels up to +24 dBv. Each of the six output stages is individually transformer coupled (floating) and will drive up to +24 dBm into a 600 ohm load. To eliminate cumbersome fixed pads, each output amplifier has an individual, front accessed gain adjustment, as well as a test point. The gain of each amplifier may be adjusted over the range of -5 to +20 dB. Individual fusing on each DA16B card prevents loss of the total system in the event one DA16B card becomes shorted.

In keeping with the advanced technology of the DA16B, ADM is proud to offer the CH20B self-contained rack frame. Each CH20B will house up to six DA16B cards. Each CH20B contains all necessary power supplies to operate the full complement of DA16B's. In addition, a redundant power supply with automatic changeover is contained in each CH20B. Each power supply is protected against overcurrent and overvoltage. In the event of a power supply failure, a LED indicator on the front panel will illuminate. The CH20B uses mother board construction and includes screw-type barrier strips for input/output connections. The front panel hinges down for easy access.





FEATURES

- Bridging Input Transformer
- 6 Outputs Individually Transformer Isolated
- 6 Individual Gain Adjustments
- Ultra Low Noise
- Input levels up to +27 dBv
- Output levels up to +27 dBm before clipping
- Operational Amplifier Construction
- Individually Fused
- Automatic Power Supply Changeover
- High Reliability

TECHNICAL DATA

Frequency Response: $\pm .5$ dB from 20Hz to 20KHz at +24 dBm or lower

Input Levels: Up to +24 dBv

Gain: Each output stage individually adjustable from -5 to +20 dB

Input Impedance: > 10,000 ohms transformer coupled

Output Impedance: Each amplifier output is transformer coupled. Load impedance 600 ohms.

Distortion: Total harmonic distortion at +24 dBm at 1KHz less than .1%. From 30Hz to 20KHz less than .3%.

Noise: Unity Gain 107 dB below +24 dBm.
Absolute -83 dBm.
+20 dB gain 96 dB below +24 dBv.
Absolute -72 dBm.
All noise measured over the band 20Hz to 20KHz.

Temperature: No significant change in the above specifications from 0 to 55 degrees C.

Power Requirements:
DA16B: ± 20 VDC, 150 Ma with all outputs supplying +24dBm.
CH20B: 90/130 VAC, 60 Hertz

Dimensions:
DA16B: 4.0" x 1.75" x 13.062"
(101.6mm x 44.45mm x 331.77mm)
CH20B: 5.25" x 19.0" x 15.0"
(133.35mm x 482.6mm x 381.0mm)

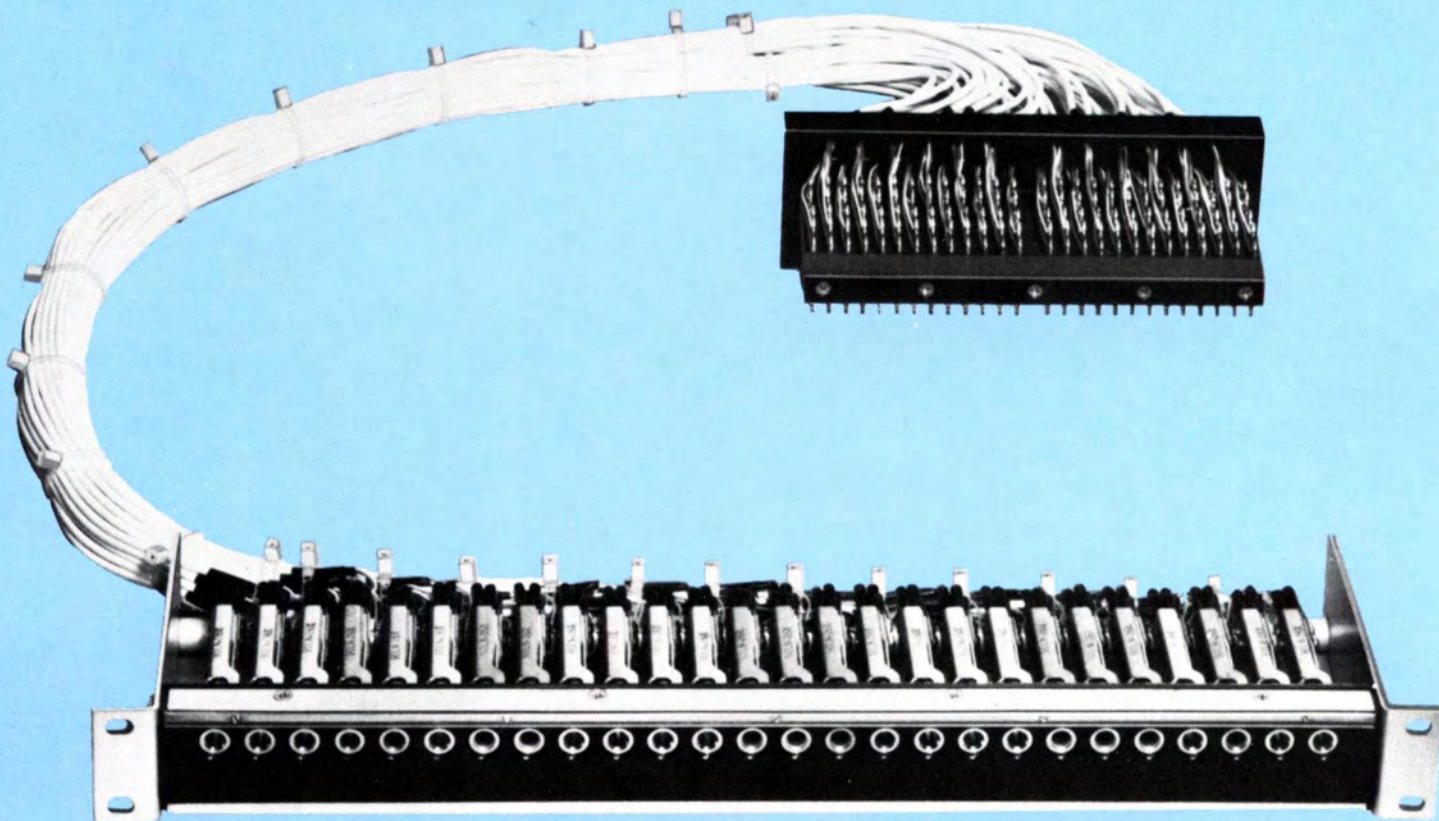
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The Audio Company

ADM Technology, Inc.

16005 Sturgeon, Roseville, Michigan 48066
Phone (313) 778-8400
TLX-23-1114

ADM[®] MODEL PB-26 PREWIRED PATCHBAY



The PB Series of prewired Patchbays consists of a standard 1 $\frac{3}{4}$ " x 19" Patchbay. The PB-26 (PB-52 optional) provides 26 tip, ring and sleeve jacks wired to a 26-row terminal block. Each row represents one of 26 jacks, and has five connections

—two for tip, two for normal and one for shield. Since all connections of the jacks are brought to the terminal block, cross connection and circuit changes are easily accomplished without soldering at the Patchbay. Multi-cable layouts are available.

ORDERING INFORMATION

PB-26	26 position	Patchbay
PB-52	52 position	Patchbay
PB-0012	12 inch	Patch Cord
PB-0024	24 inch	Patch Cord
PB-0036	36 inch	Patch Cord
PB-0072	72 inch	Patch Cord

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**PRICE
LIST**

PRICE LIST

ADM TECHNOLOGY, INC.

**PRICE
LIST**

- **CONSOLES**
- **COMPONENTS**

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CONSOLES PRICE LIST

800 SERIES II PRODUCTION CONSOLES

STANDARD CONSOLE

Model No.	Description	Price
800-II	Console housing with standard wiring harness, amplifiers, VU meters, power supply and standard components wired for stereo panning.	\$4,500.00

OPTIONAL MODULES

2781	Input Module	400.00
3981	Master Output Module	265.00
4053	Slidex [®] Attenuator Module	120.00
1540	4 Band, 14 Frequency Equalizer Module	400.00
1560	Hi/Lo Bandpass Filter Module	375.00
1310	Noise Suppressor Module	425.00
1320	Limiter Amplifier Module	475.00
4075	100% Redundant Power Supply	550.00
3503	Monitor Module	250.00
7511	Oscillator Module	400.00
3048	Phantom Power Supply	750.00
2008	XLR Connector Package	300.00
1030	PPM/VU Meter Set (3)	825.00
2200	Extender Board/Cable Kit	195.00
3200	Spare Parts Kit	345.00

1600 SERIES II PRODUCTION CONSOLES

STANDARD CONSOLE

Model No.	Description	Price
1600-II	Console housing with standard wiring harness, amplifiers, VU meters, power supply and standard components wired for stereo panning.	\$9,200.00

OPTIONAL MODULES

2780	Input Module	565.00
4051	Slidex Attenuator Module with Cue	120.00
4052	Slidex Attenuator Module with Cue Detent and Stereo Panner	195.00
3880	Submaster Output Module	340.00
3980	Master Output Module	315.00
4050	Slidex Attenuator Module	110.00
1540	4 Band, 14 Frequency Equalizer Module	400.00
1560	Hi/Lo Bandpass Filter Module	375.00
1310	Noise Suppressor Module	425.00
1320	Limiter Amplifier Module	475.00
6400	4 Position Bus Selector Module	100.00
6402	4 Position Bus Selector & 2 Position Pre-selector Module	120.00
1668	Amplifier Card (Foldback #2)	200.00
4075	100% Redundant Power Supply	550.00
3501	CR/Studio Monitor Module (Mono)	375.00
3502	CR/Studio Monitor Module (Stereo)	450.00
7510	Oscillator/Talkback Module	500.00
2016	XLR Connector Package	1,000.00
3048	Phantom Power Supply	750.00
1040	PPM/VU (4) Submaster Meter Set	1,100.00
1002	PPM/VU (2) Master Meter Set	550.00
1042	PPM/VU (6) Submaster/Master Meter Set	1,650.00
2300	Extender Board Set	195.00
3300	Spare Parts Kit	645.00

ST SERIES II STEREO BROADCAST CONSOLES

STANDARD CONSOLE DESCRIPTION:

All console housings include the wiring harness for maximum mainframe module complement, 1 power supply, 1 stereo master module with 2 meters, 1 cue/talkback module with turret-mounted cue speaker and talkback microphone, and 1 control room monitor module.

Model No.	Description	Price
ST-100-II	Console Mainframe as above wired for 10 Input positions.	\$5,950.00
ST-160-II	Console Mainframe as above wired for 16 Input positions.	6,950.00
ST-200-II	Console Mainframe as above wired for 20 Input positions.	7,750.00

OPTIONAL MODULES

Model No.	Description	Price
2716	Mono Microphone Input Module	\$345.00
4710	Slidex® Mono Attenuator Module	300.00
2726	Stereo Line Input Module	370.00
4720	Slidex Stereo Attenuator Module	375.00
3816	Mono Output Module	265.00
3826	Stereo Output Module	345.00
6806	8 Position Stereo Input Pre-selector module	175.00
1546	4 Band, 14 Frequency Equalizer Module	400.00
1566	Hi/Lo Bandpass Filter	375.00

OPTIONAL MODULES

Model No.	Description	Price
1316	Noise Suppressor Module	425.00
1326	Limiter Amplifier Module	475.00
4075	Redundant Power Supply	550.00
3506	Studio Monitor Module	400.00
5060	Timer Assembly	375.00
5530	VU Meter Assembly	65.00
3100	Spare Parts Kit	375.00
2100	Extender Board Set	100.00
1100	Molex Tool Kit	175.00
3048	Phantom Power Supply	750.00

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COMPONENTS PRICE LIST

Input Modules

770S	14" Input Module with companion Slidex	\$1,495.00
772S	14" Input Module with companion Slidex	1,345.00
774S	14" Input Module with companion Slidex	1,440.00
776S	14" Input Module with companion Slidex	1,275.00
770	14" Input Module	1,325.00
772	14" Input Module	1,180.00
774	14" Input Module	1,245.00
776	14" Input Module	1,105.00
780S	7¾" Input Module with companion Slidex	675.00
780SP	9⅝" Input Module with companion Slidex and Stereo Panpot	750.00
780	7¾" Input Module	600.00
2780	Series II Input Module	565.00
2781	Series II Input Module	400.00
715	ST Mono Mic Input Module	645.00
2716	ST Series II Mono Mic Input Module	345.00
725	ST Series Stereo Line Input Module	745.00
2726	ST Series II Stereo Line Input Module	370.00

Output Modules

870S	14" Output Module with companion Slidex	\$1,190.00
873S	14" Output Module with companion Slidex	1,035.00
870	14" Output Module	995.00
873	14" Output Module	870.00
880S	7¾" Submaster Module with companion Slidex	450.00
880	7¾" Submaster Module	375.00
970	Output Module	450.00
980S	7¾" Output Module with companion Slidex	425.00
980	7¾" Output Module	350.00
3880	Series II Submaster Module	340.00
3980	Series II Master Module	315.00
815	ST Mono Master Module	265.00
3816	ST Series II Mono Master Module	265.00
825	ST Stereo Master Module	345.00
3826	ST Series II Stereo Master Module	345.00
501	Studio Monitor Module	500.00
505	ST Monitor Module	400.00
3501	Series II Monitor Module (Mono)	375.00

Output Modules (cont'd)

3502	Series II Monitor Module (Stereo)	450.00
3503	Series II Monitor Module	250.00
3506	ST-Series II Studio Monitor Module	400.00
510	Oscillator/Talkback Module	500.00
7510	Oscillator/Talkback Module	500.00
7511	Oscillator Module	400.00

Signal Processing Components

310-1	Noise Suppressor Module Transformer Input/Output	\$ 465.00
310-2	Noise Suppressor Module Direct Input/Output	425.00
1310-1	Series II Noise Suppressor Module — Transformer Input/Output	465.00
1310-2	Series II Noise Suppressor Module — Direct Input/Output	425.00
315	ST Noise Suppressor Module	425.00
1316	ST Series II Noise Suppressor Module	425.00
320-1	Limiter Module — Transformer Input/Output	515.00
320-2	Limiter Module Direct Input/Output	475.00
1320-1	Series II Limiter Module — Transformer Input/Output	515.00
1320-2	Series II Limiter Module — Direct Input/Output	475.00
325	ST Limiter Module	475.00
1326	ST Series II Limiter Module	475.00
1540-1	Equalizer Module — 4 Band Transformer Input/Output	460.00
1540-2	Equalizer Module — 4 Band Direct Input/Output	400.00
1545	ST Equalizer Module — 4 Band	400.00
1546	ST Series II Equalizer Module — 4 Band	400.00
1560-1	Hi/Lo Bandpass Filter Module — Transformer Input/Output	415.00
1560-2	Hi/Lo Bandpass Filter Module — Direct Input/Output	375.00
1565	ST Hi/Lo Bandpass Filter Module	375.00
1566	ST Series II Hi/Lo Bandpass Filter Module	375.00

Voltage Amplifiers

201	Discrete Operational Amplifier	\$ 50.00
202	Discrete Operational Amplifier	75.00
2668-2	Pre-Amplifier/Booster Amplifier	200.00
2668-1	Dual Pre-Amplifier/Booster Amplifier	300.00
1901	Isolation Amplifier (5 section)	90.00
1910	Differential Buffer Amplifier (4 section)	150.00
1678	Meter Amplifier	75.00
DA16B	Distribution Amplifier	350.00
1905	Cue Amplifier (2 Watt)	75.00
1922-1	Bridging Buffer (2 section) with Transformer Output	265.00
1922-2	Bridging Buffer (2 section) with Direct Output	225.00

Amplifier Cabinets Rack Mount

CH 16	5¼" Mounts 8 2668 Amplifiers	\$125.00
CH 17	5¼" Mounts 8 1922 Amplifiers	150.00
CH 20B	5¼" Mounts 6 DA 16B Distribution Amplifiers Includes power supplies with changeover	675.00

Metering

520	2½" VU Meter	\$ 50.00
530	3½" VU Meter	60.00
5530	Series II 3½" VU Meter	60.00
5110	3½" PPM/VU Meter	350.00

Slidex[®] Attenuators

483	Slidex 600/600	\$110.00
484-2.5	Slidex 2,500 ohm	110.00
484-5	Slidex 5,000 ohms	110.00
485-5	Slidex — Stereo Element 5,000 ohms	195.00
4050	Slidex 5,000 ohms	110.00
4051	Slidex 5,000 ohms with Cue Detent	120.00
4052	Slidex 5,000 ohms with Cue Detent and Stereo Pan Pot	195.00
4710	ST Series II Slidex Mono Attenuator Module with Logic Card	300.00
4720	ST Series II Slidex Stereo Attenuator Module with Logic Card	375.00

Extender Boards

18 E-156	1668, 1901, 1905, 1922 and 2668 Cards	\$ 50.00
18 ME-156	770 and 870 Modules (Board and Cable)	100.00
118 ME-156	310, 320, 510, 1540 and 1560 Modules	75.00
128 ME-156	501 Modules and 780 Modules	75.00
136 ME-156	880 and 980 Modules	75.00
143 BE-156	BSP 400, BSP 402, BSP 404 and BSP 408 Modules	85.00
143 E-156	BSP 800 Module	50.00
136 PDE-156	Predex Modules	100.00
18 DAE-156	DA 16, DA 16A and DA 16B Cards	75.00
136 ST-156	315, 325, 505, 515, 815, 825, 1545, 1565 and SPS 801 Modules	50.00
143 ST-156	715 and 725 Modules	50.00
12 E-156	480 B and 901 Cards	50.00
28 E-156	Audex® IV, Audex V, Lockout Switcher and 970 Modules	50.00
41 E-100	RS-501, TTD-3, TTD-4 and RDD-2 Cards	285.00
221 BE-156	IB-5 Card	175.00
300 BE-100	OB-4A Card	260.00
2100	ST Series II Extender Board Set	100.00
2200	800 II Extender Board	195.00
2300	Series II Extender Board	275.00

Patchbays

PB 26	Full size tip-ring-sleeve patchbay with 26 patchpoints wired to a xmas tree terminal block. 19" x 1 3/4" rack size.	\$425.00
PB 52	Full size tip-ring-sleeve patchbay with 52 patchpoints wired to a xmas tree terminal block. 19" x 1 3/4" rack size	850.00
PB 0012	12" Shielded Patchcord	19.00
PB 0024	24" Shielded Patchcord	27.00
PB 0036	36" Shielded Patchcord	35.00

Bus Selectors and Pre-selectors

Pushbutton		
BP 200A	2 Position Bus Selector	\$ 90.00
BP 202A	2 Position Bus Selector and 2 Position Pre-selector	120.00
BSP 400A	4 Position Bus Selector	100.00
BSP 402A	4 Position Bus Selector and 2 Position Pre-selector	120.00
BSP 400	4 Position Bus Selector	110.00
BSP 402	4 Position Bus Selector and 2 Position Pre-selector	130.00
BSP 404	4 Position Bus Selector and 4 Position Pre-selector	150.00
BSP 408	4 Position Bus Selector and 8 Position Pre-selector	190.00
SPS-801	ST 8 Position Pre-selector	175.00
6400	4 Position Bus Selector	100.00
6402	4 Position Bus Selector and 2 Position Pre-selector	120.00
6420	4 Position Bus Selector	150.00
6422	4 Position Bus Selector and 2 Position Pre-selector	170.00
6424	4 Position Bus Selector and 4 Position Pre-selector	190.00
6428	4 Position Bus Selector and 8 Position Pre-selector	230.00
6806	ST Series II 8 Position Pre-selector	175.00

Power Supplies

PS 2020-7.5	±20 VDC, 7.5 Ampere Bipolar Power Supply	550.00
PS 2020-10	±20 VDC, 10 Ampere Bipolar Power Supply	735.00
PS 20-7.5	+20 VDC, 7.5 Ampere Power Supply	400.00
PS 20-10	+20 VDC, 10 Ampere Power Supply	415.00
4075	Redundant Power Supply consisting of 1 PS 2020-7.5	550.00
9175	Redundant Power Supply Set consisting of 1 PS 2020-7.5 and 1 PS 20-7.5	925.00
9210	Redundant Power Supply Set consisting of 1 PS 2020-10 and 1 PS 20-10	1150.00
PS-CH20	Distribution Amplifier Power Supply with 100% Redundancy	525.00

Timers and Accessories

ETM-5	ST Timer Assembly	375.00
5060	ST Series II Timer Assembly	375.00
1100	ST Molex Tool Kit	175.00

Touch Tone Accessed Audio Routing Components

<p>TTE-1 A standard telephone type 12 button keyboard mounted in a desk top enclosure. \$160.00</p>	<p>switch card including logic to drive the three 7 segment readouts located in the TTE-2. \$370.00</p>	<p>RS-501 A CMOS 50 x 1 switch card. Logic input is derived from the TTD-1 decoder. Audio switching is accomplished by an encapsulated dry reed switch. \$385.00</p>
<p>TTE-2 A standard telephone type 12 button keyboard mounted in a desk top enclosure including three 7 segment digital readouts which accept BCD information for display 385.00</p>	<p>TTD-3 A touch tone decoder board using PLL's and CMOS latching logic. It is designed to work along with the OB-4A in two wire systems and to directly drive the RS-501 switch card. 410.00</p>	<p>OB-4 Output buffer amplifier card has 4 transformer output amplifiers on one card. Each amplifier has an output capability of +24 dBm and is designed to be used on the output of the RS-501 switch card. 325.00</p>
<p>TTE-3 An encoder board assembly designed to convert a station to two wire touch tone use. 255.00</p>	<p>TTD-4 A thumbwheel switch decoder board which accepts BCD encoder inputs and can drive either the RS-501 switch card or the RS-101-6 auxiliary switcher relay board. 295.00</p>	<p>OB-4A Similar to the OB-4 except designed for use in two wire systems. 325.00</p>
<p>RDD-1 A rotary dial decoder board which is designed to directly drive the RS-501 switch card. 215.00</p>	<p>IB-5 Input buffer amplifier card has 5 bridging amplifiers on one card. Each amplifier has a gain range of 35 dB. The low output impedance of the IB-5 permits use as an audio distribution amplifier in conjunction with the RS-501 switch card. 345.00</p>	<p>CH-150 Rack frame will house 12 RS-501 switch cards, 4 TTD-1 decoder cards, and 1 OB-4 output buffer amplifier. This gives the capability of a 150 x 4 touch tone accessed matrix in 7" of panel space. Price includes all wiring within this rack. 1,105.00</p>
<p>RDD-2 A rotary dial decoder board which is designed to directly drive the RS-501 switch card with the addition of an L.E.D. status indicator which lights when the board is in use. 230.00</p>	<p>RS-101-6 An auxiliary switcher card holding 10 six pole relays and is driven by the TTD-4 decoder board. 305.00</p>	<p>CH-160 Rack frame will house up to 10 IB-5 input buffer amplifiers. The CH-160 occupies 5 1/4" of panel space. 195.00</p>
<p>TTD-1 A touch tone decoder board using PLL's and CMOS latching logic. Designed to directly drive the RS-501 switch card. 305.00</p>	<p>TTD-2 A touch tone decoder board using PLL's and CMOS latching logic. Designed to directly drive the RS-501</p>	<p>CH-170 Rack frame will house 6 RS-101-6 auxiliary switcher cards and 2 TTD-4 decoder cards and uses 7" of panel space. 650.00</p>

RECORDER INTERFACE LOGIC BOARDS

<p>Regulator Boards: Derives +12V and +6V Logic voltages from the +24V system Logic supply. \$215.00</p>	<p>Tape Interface #3: Provides 'ARM' status indication and lockout logic signals to interface two (2) cassette modules and one (1) reel-to-reel tape machine with the system. \$455.00</p>
<p>Tape Interface #1: Provides 'ARM' status indication and lockout logic signals to interface five (5) reel-to-reel tape machines with the system. 455.00</p>	<p>Line Lockout Driver: Accepts logic signals from tape remote indicators and matrix electronics to generate a lockout logic signal. This signal can lockout a Strowger dial or (in conjunction with a 4 x 5 lockout) a 4 x 5 selector. 455.00</p>
<p>Tape Interface #2: Provides 'ARM' status indication and lockout logic signals to interface three (3) reel-to-reel and two (2) cartridge tape machines with the system. 455.00</p>	<p>4 x 5 Lockout: Accepts lockout logic signal from Line Lockout driver to lockout a 4 x 5 selector. 750.00</p>

ADM *the Audio Company*

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Descriptions and prices herein may be subject
to change without notice.

Price Schedule: April 1, 1981