

everything



SPARTA ELECTRONIC CORPORATION
 5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828 (916) 383-5353
 A DIVISION OF COMPUTER EQUIPMENT CORPORATION

MODEL 603A-5 FM TRANSMITTER



UNLIKE ORDINARY TRANSMITTERS



SPARTA ELECTRONIC CORPORATION 5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488

The SPARTA Model 603A-5 5 kw FM Transmitter offers features in transmitter design not to be found anywhere else. The Model 603A-5 is the *only* FM transmitter designed for primary operation at 5,000 watts! The 603A-5 is not a scaled-up or scaled-down version of anything else. It's tube type, cabinet size and circuitry were designed to perform most economically at this power. And it's the smallest self-contained 5 kw FM available!

Reliability of the 603A-5 FM Transmitter is highly emphasized by straight forward engineering design and an

uncluttered layout. Through the swing-out front panel you can reach most all of the components. The back door lets you reach everything, and quickly too!

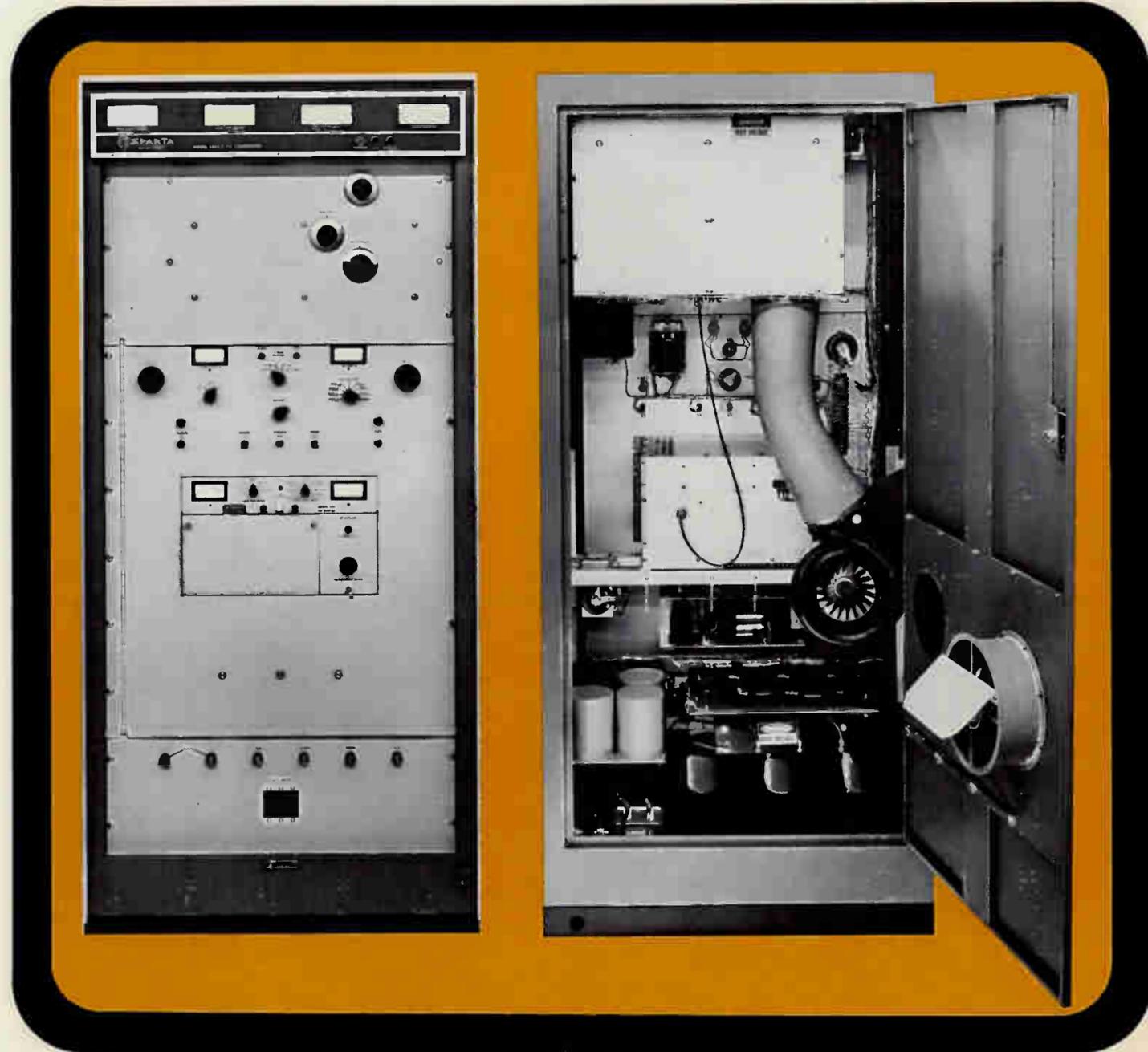
The Model 603A-5 FM Transmitter is shown below. The rear view of the 603A-5 shows the final amplifier in the transmitters upper portion. The front view, below and left, shows the location of the Model 660 FM Exciter.

The Model 603A-5 is composed of a Model 660 FM Exciter, and RF amplifier, and power supply, a self-contained low-pass harmonic filter and a RF directional coupler.

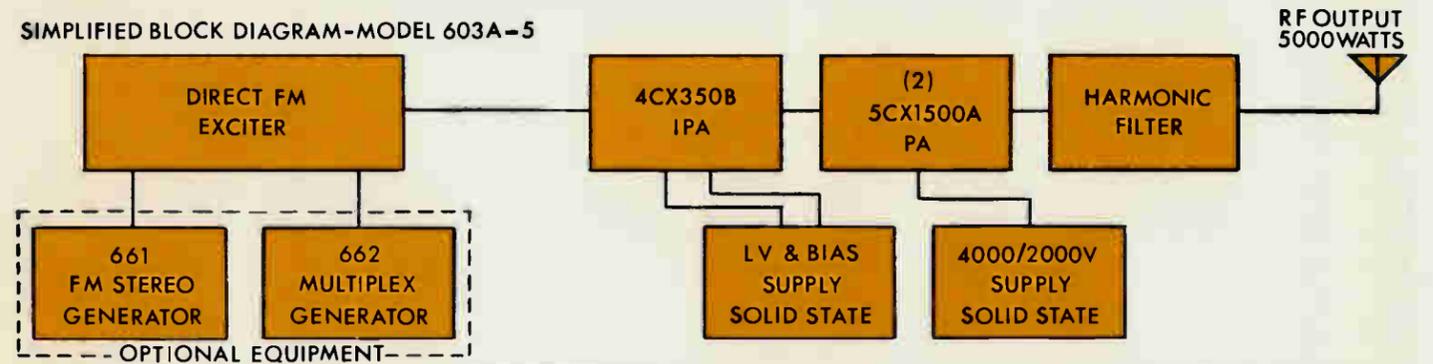


The heart of the Model 603A-5 FM Transmitter is the Model 660 FM Exciter, shown above right. An all solid-state unit providing monaural, stereo and/or SCA modes of operation. The 660 Exciter allows 5 to 15 watts output power into a matched 50 ohm load. The modulation method is "direct carrier FM" with no mixers or multipliers after the modulated oscillator. Maintenance of the

660 Exciter is facilitated by two multimeters on the unit's front panel. In emergencies, the 660 Exciter can be used as a separate 15 watt transmitter directly into the antenna system. Pictured above left is the Model 603A-5 final amplifier further demonstrating the simplicity and uncluttered layout of the transmitter.



SIMPLIFIED BLOCK DIAGRAM-MODEL 603A-5



MODEL 603A-5

This Sparta transmitter is type accepted for Broadcast operation under Part 73 of the FCC rules.

PROVEN FM EXCITER

The Sparta Model 660 FM exciter features all-solid-state construction . . . built-in power supply . . . 15 watt out-put . . . superior flexibility with plug-in modules for mono, stereo, or SCA . . . pushbutton control . . . built-in testing . . . true remote-ability.

TRANSMITTER SPECIFICATIONS

TYPE OF MODULATION	F3, F9 direct frequency modulation of mono, stereo, and SCA Audio inputs
POWER OUTPUT CAPABILITY	3,000 to 5,200 watts
FREQUENCY RANGE	88 to 108 MHz
FREQUENCY STABILITY	±100 Hz after initial warmup
RF OUTPUT IMPEDANCE	50 ohms nominal
MODULATION CAPABILITY	±150 KHz
FM NOISE	Better than 65 db below 100% modulation (Mono, Stereo, and SCA) referred to 400 Hz
AM NOISE	Better than 50 db below equivalent 100% AM
HARMONICS	At least 80 db below fundamental
LINE POWER SUPPLY	205-250 volts AC, three phases, 4-wire, 60/60 Hz
LINE POWER CONSUMPTION	11,000 watts at 0.9 power factor (5,200 watts output)
ALL AUDIO INPUTS	600 ohms balanced, +10 dbm ±2 db for 100% modulation (referred to 400 Hz)
POWER TUBE COMPLEMENT	1 ea. 4CX350 driver, 2 ea. 5CX1500A Power Amplifiers (Exciter and power supplies are completely solid state)
CABINET SIZE	75" high x 34" wide x 25½" deep (191 x 86 x 65 cm)
WEIGHT	1050 pounds (476 kg)
ALTITUDE	To 7,500 feet
AMBIENT TEMPERATURE	To 113°F (45°C)

MONAURAL OPERATION

Frequency response within 1 db 50-15,000 Hz (referred to 75 usec pre-emphasis)
Distortion less than 0.5% 50-15,000 Hz

STEREOPHONIC OPERATION

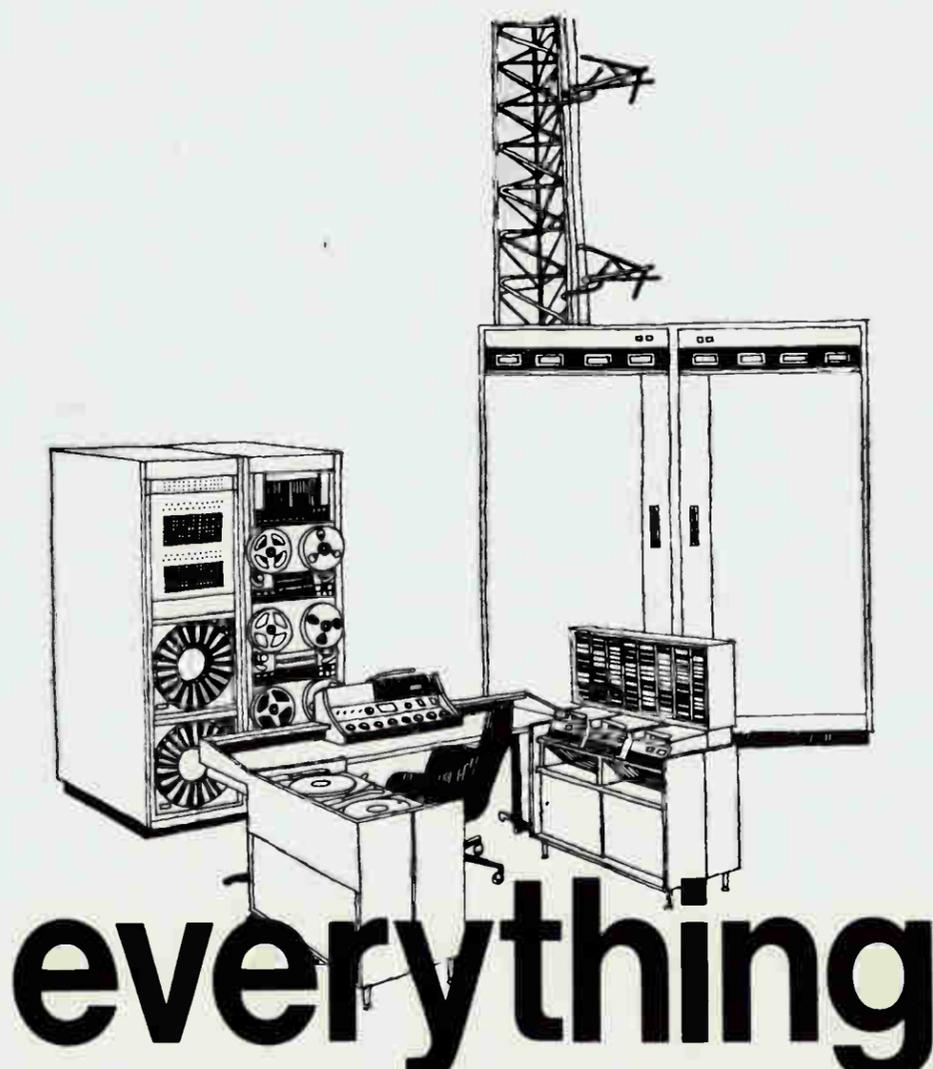
PILOT CARRIER STABILITY	19 kHz — 1 Hz
SUBCARRIER SUPPRESSION	—45 db or better
FREQUENCY RESPONSE,	
50 Hz to 10 kHz	—0.5 db maximum
10 kHz to 15 kHz	—1.0 db maximum
PRE-EMPHASIS	75 usec — convertible to 50 usec
LEFT-RIGHT CHANNEL SEPARATION	35 db or better, 50 Hz to 15 kHz
CROSSTALK-STEREOPHONIC	42 db or better below 100% mod., 50 Hz to 15 kHz (Main channel to subchannel)
CROSSTALK	42 db or better below 100% mod., 50 Hz to 15 kHz (subchannel to main channel)
DISTORTION	0.75% or less distortion of composite wave form (100% modulation by composite stereo)

SCA OPERATION

AMBIENT TEMPERATURE LIMITS	+5°C to +50°C
TYPE OF MODULATION	FM
CENTER FREQUENCY	
RANGE OF SUBCARRIER	Standard 41 or 67 kHz
OUTPUT VOLTAGE	At least 2 volts peak to peak into 10,000 ohms
FREQUENCY DEVIATION	±10% of center frequency (100% subcarrier modulation)
MODULATION CAPABILITY	±15%
CARRIER FREQUENCY STABILITY	±500 Hz over temperature range
AUDIO INPUT IMPEDANCE	600 ohms balanced
AUDIO INPUT LEVEL	+10 dbm at 400 Hz (100% modulation)
AUDIO FREQUENCY RESPONSE	±2 db ref. 75 usec. pre-emphasis (convertible to 50 or 150 usec. pre-emphasis)
HARMONIC DISTORTION	Less than 1.5% (50 Hz to 7.5 kHz)
FM NOISE LEVEL	—65 db maximum (ref. to 15% deviation)

ORDERING INFORMATION

The Model 603A-5 is supplied complete with the Model 660 exciter, crystal and oven, tube and harmonic filter — factory tuned and tested on frequency. For stereo option specify Model 661 stereo generator — for SCA Model 662 SCA generator (specify sub-carrier frequency).



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MODEL 705 and 710 AM TRANSMITTERS



UNLIKE ORDINARY TRANSMITTERS


SPARTA ELECTRONIC CORPORATION 5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488

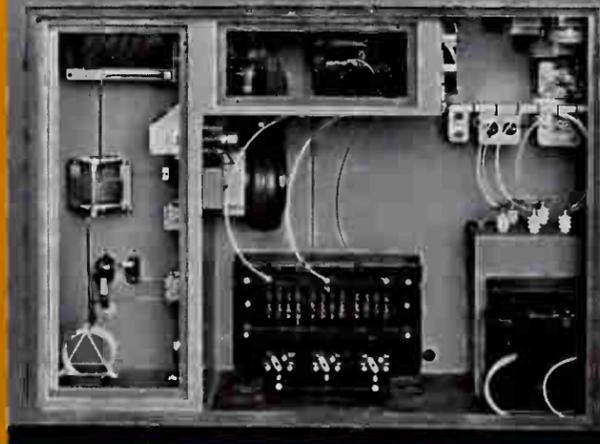
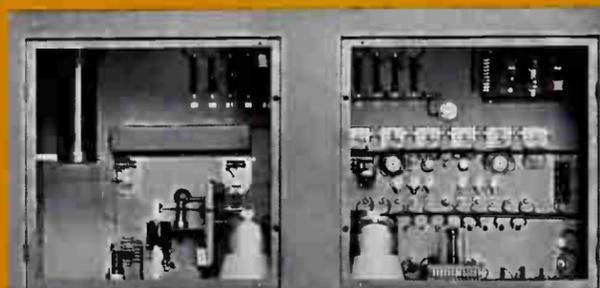


The Model 705 and 710 AM Transmitters incorporate every modern development in transmitter technology that is genuinely useful and does not represent a complicated answer to a simple problem. The straight forward circuitry is easy for station engineers to understand and service. These transmitters offer benefits that must be considered by every broadcaster!

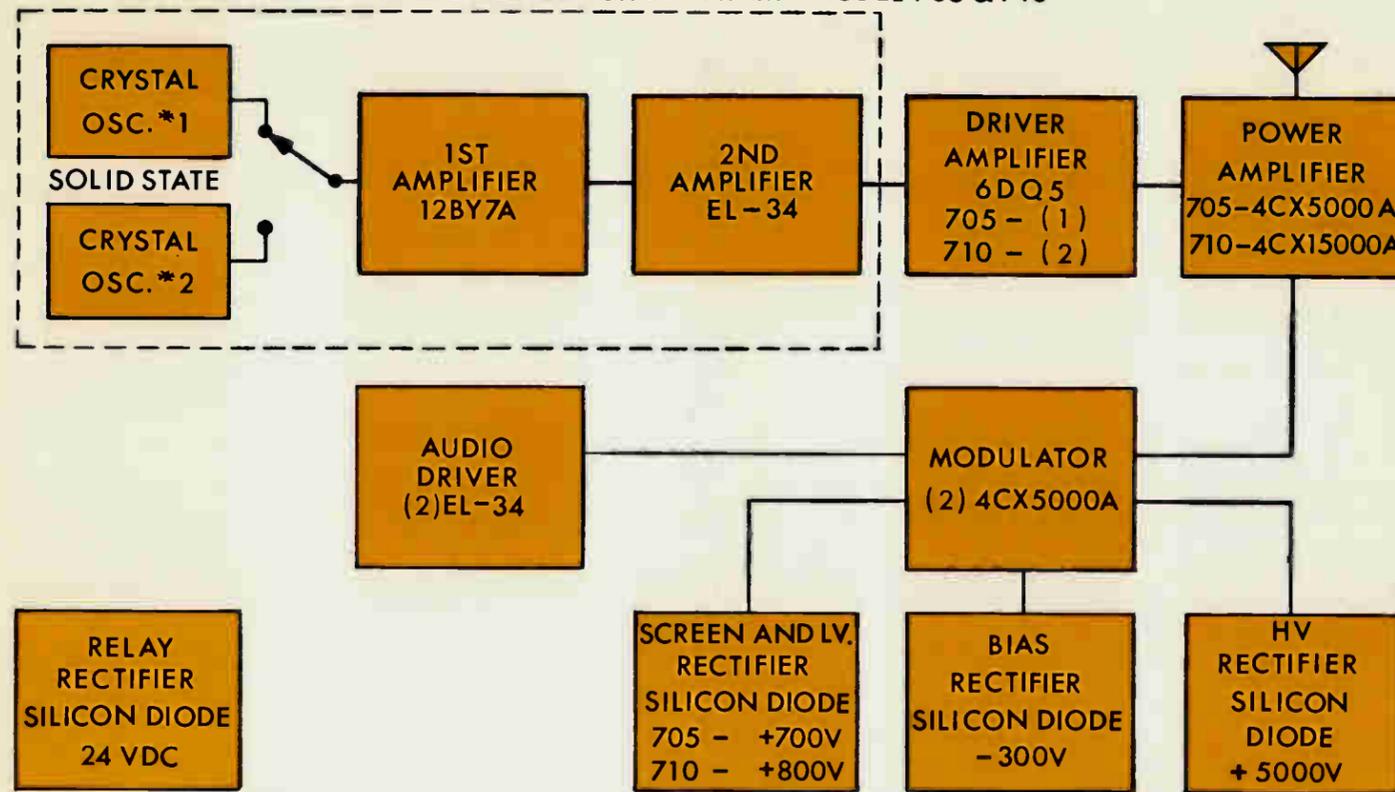
- Compact, space-saving size, 60" wide, 29" deep.
- Full metering in which all functions are displayed simultaneously.
- A tally-light fault locating system. Should there be a momentary overload, the transmitter will automatically recycle and the tally light system will tell you where the overload occurred.
- Oil filled modulation transformers for dependable long term service.
- Top quality modulators — square wave tested, low distortion, outstanding transient response.
- 1% ripple power supply — simple, reliable design uses no filter chokes — improves low frequency modulating characteristics.

The 5000 watt Model 705 has a 6000 watt capability, the 10,000 watt Model 710 can deliver 12,000 watts with ease! This SPARTA extra margin in design means longer tube life, ample reserve for asymmetrical modulation, easier full power operation and less maintenance.

The outward appearance of both the Model 705 and 710 AM Transmitters is very similar. The upper left hand photograph is the front panel of the 705. The metering and control functions in the 710 are identical. The lower left hand photograph is the rear view of the Model 705 Transmitter. The difference between the 705 and the 710 is shown directly below. The power supply, modulation transformer and reactor are larger.



SIMPLIFIED BLOCK DIAGRAM - MODEL 705 & 710



MODEL 705 AND 710 AM TRANSMITTERS

These SPARTA transmitters are type accepted for broadcast operation under Part 73 of the FCC rules.

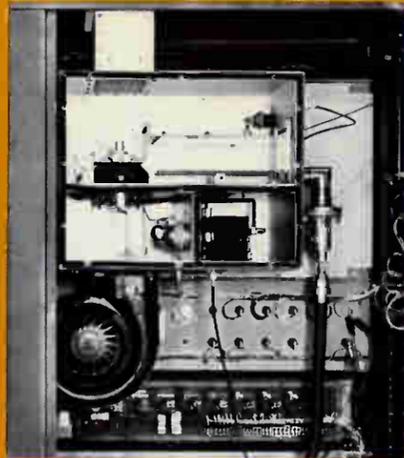
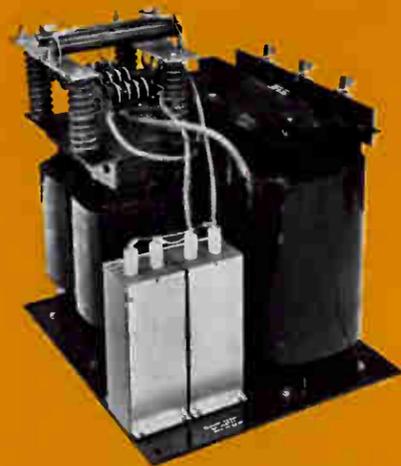
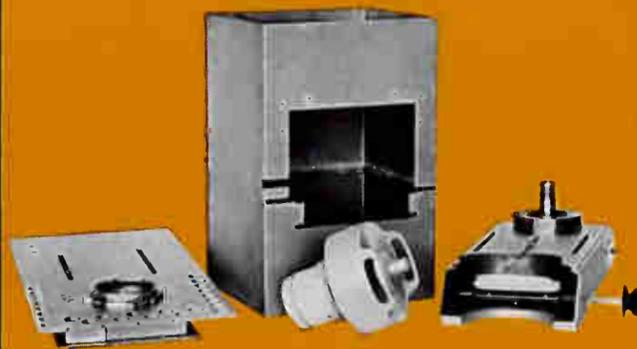
TRANSMITTER SPECIFICATIONS:

POWER OUTPUT NOMINAL	Model 705 — 5,000 watts/1,000 or 500 watts Model 710 — 10,000 watts
POWER OUTPUT CAPABILITY	Model 705 — 6,000 watts Model 710 — 12,500 watts
POWER SUPPLY	208/240 volts, 50/60 Hz 3 phase
POWER CONSUMPTION	Model 705 0% modulation — 10.6 kw Average modulation — 12.0 kw 100% modulation — 15.5 kw Model 710 0% modulation — 19 kw Average modulation — 22 kw 100% modulation — 27 kw
POWER FACTOR	90%
TUBE COMPLIMENT	Model 705 2-12BY7A buffers 1 6DQ5 driver 1 4CX5000A power amplifier 2 EL-34/6C47 audio driver 2 4CX5000A modulator Model 710 2 12BY7A buffers 2 6DQ5 drivers 1 4CX 15,000A power amplifier 2 EL-34/6CA7 audio driver 2 4CX5000A modulator

AF INPUT IMPEDANCE	600 ohms
AF INPUT LEVEL	10 dbm (100% modulation)
AF RESPONSE	Model 705 and 710 ±1 db (30-12KHz)
AF DISTORTION	Less than 3% (95% mod., 50-10 KHz)
NOISE	60 db or better (Below 100% modulation.)
FREQUENCY STABILITY	±2 Hz
RF OUTPUT	50/70 ohms, unbalanced
CARRIER SHIFT	Less than 3% (100% modulation)
HEIGHT, 705 & 710	75 inches
WIDTH, 705 & 710	60 inches
DEPTH, 705 & 710	29 inches
WEIGHT	Model 705, 2,400 lbs. Model 710, 2,900 lbs.
ALTITUDE RANGE	To 8,000 ft.
AMBIENT OPERATING TEMPERATURE	To 113°F.

ORDERING INFORMATION:

MODEL 705
SPARTA Model 705 AM Transmitter, 5000/1000 or 500 watts, complete with tubes, two crystals, tuned and tested on frequency.
MODEL 710
SPARTA Model 710 AM Transmitter, 10,000 watts, complete with tubes, two crystals, tuned and tested on frequency.



Pictured in the upper left is the STRIPLINE high-power RF section showing the three operating parts, the grid line, triode tube and plate line. This advanced design allows the elimination of panel controlled moving contacts.

Directly above is the IPA amplifier — also of the modern STRIPLINE concept and requiring only minimal adjustment.

Bottom left shows the roll-out high voltage power supply which is contained within the main transmitter housing. There are four heavy duty "dolly" type casters upon which the power supply rolls. Maintenance is a simple task in the 620 FM Transmitter because of well planned features such as these and by ease of accessibility through either front or rear doors.

All SPARTA Transmitters have a high reliability factor due to straight forward engineering design and uncluttered layout!

MODEL 620

Transmitter Specifications:

POWER OUTPUT	23 kW
FREQUENCY RANGE	88 to 108 MHz, tuned to specified operating frequency
RF OUTPUT IMPEDANCE	50 ohms
OUTPUT TERMINATION	3/4" EIA flange
FREQUENCY STABILITY	±100 Hz after initial warmup
TYPE OF MODULATION	Direct FM
MODULATION CAPACITY	±150 kHz
AC INPUT POWER	200/250 V, 3-phase 60 Hz, 34 KW (50 Hz available on special order)
RF HARMONICS	Suppression exceeds all FCC requirements
ALTITUDE	to 10,000 feet
AMBIENT TEMPERATURE RANGE	0 to 50° C
MAXIMUM VSWR	1.7 to 1
OVERALL SIZE	68" W x 75" H x 34"
FINISH	Two-tone, beige-brown
WEIGHT & CUBAGE	3000 lbs., 104 cu. ft.

MONAURAL MODE

AUDIO INPUT IMPEDANCE	600 ohms balanced
AUDIO INPUT LEVEL	+ 10 dBm ±2 dB for 100% modulation at 400 Hz
AUDIO FREQUENCY RESPONSE	Standard 75 microsecond, FCC pre-emphasis curve ±1 dB, 50-15,000 Hz
DISTORTION	0.5% or less, 50-15,000 Hz
FM NOISE	65 dB below 100% modulation (ref. 400 Hz)
AM NOISE	50 dB below reference carrier AM modulated 100%
SYNCHRONOUS AM	-50 dB max. (at 400 Hz) (due to 100% FM)

STEREOPHONIC MODE

PILOT STABILITY	19 kHz ± 1 Hz
AUDIO INPUT IMPEDANCE	(left and right) 600 ohms balanced
AUDIO INPUT LEVEL	(left and right) + 10 dBm ± 1 dB for 100% modulation at 400 Hz
AUDIO FREQUENCY RESPONSE	(left and right) Standard 75 micro-second, FCC pre-emphasis curve ±1 dB, 50-15,000 Hz
DISTORTION	(left or right) 0.75% or less, 50-15,000 Hz
FM NOISE	(left or right) 60 dB minimum below 100% modulation, reference 400 Hz
STEREO SEPARATION	35 dB minimum 50-15,000 Hz
SUB-CARRIER SUPPRESSION	45 dB below 90% modulation
CROSSTALK	(main to sub-channel or sub-to main channel) 42 dB below 100% modulation, 50 Hz to 15 kHz

SCA SPECIFICATIONS

FREQUENCY STABILITY	±500 Hz
FREQUENCY	Between 25 and 75 kHz, 41 or 67 kHz standard
MODULATION	Direct FM
MODULATION CAPABILITY	±15%
AUDIO INPUT IMPEDANCE	600 ohms balanced
AUDIO INPUT LEVEL	+ 10 dBm for 100% modulation at 400 Hz
DISTORTION	Less than 1.5%, 50-7500 Hz
FM NOISE	-65 dB maximum (ref. to 15% deviation)
CROSSTALK	(sub-channel to main channel) — 60 dB or better
CROSSTALK	(main channel to sub-channel) 50 dB below 100% modulation (ref. 400 Hz)
AUTOMATIC MUTE LEVEL	-10 dBm at 400 Hz
MUTING DELAY	Variable from 0.6 to 4 seconds

MODEL 620 FM TRANSMITTER



UNLIKE ORDINARY TRANSMITTERS



5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488

The SPARTA Model 620, 20 KW FM Transmitter is a revolution in FM broadcast transmitter design. It uses the advanced "STRIPLINE" concept — a SPARTA "FIRST" in FM Transmitters. High power, wide coverage FM demands reliability and it's now a thing of today in the SPARTA Model 620 FM Transmitter.

The 620 uses a new high power tube — 3CX15000A7 — that is just loafing at 20 KW. With very little extra effort the 620 can easily deliver 23 KW if you need it. The broadband, grounded grid final amplifier assures optimum performance without continual fine adjustments. The SPARTA 620 is tuned once, and stays there!

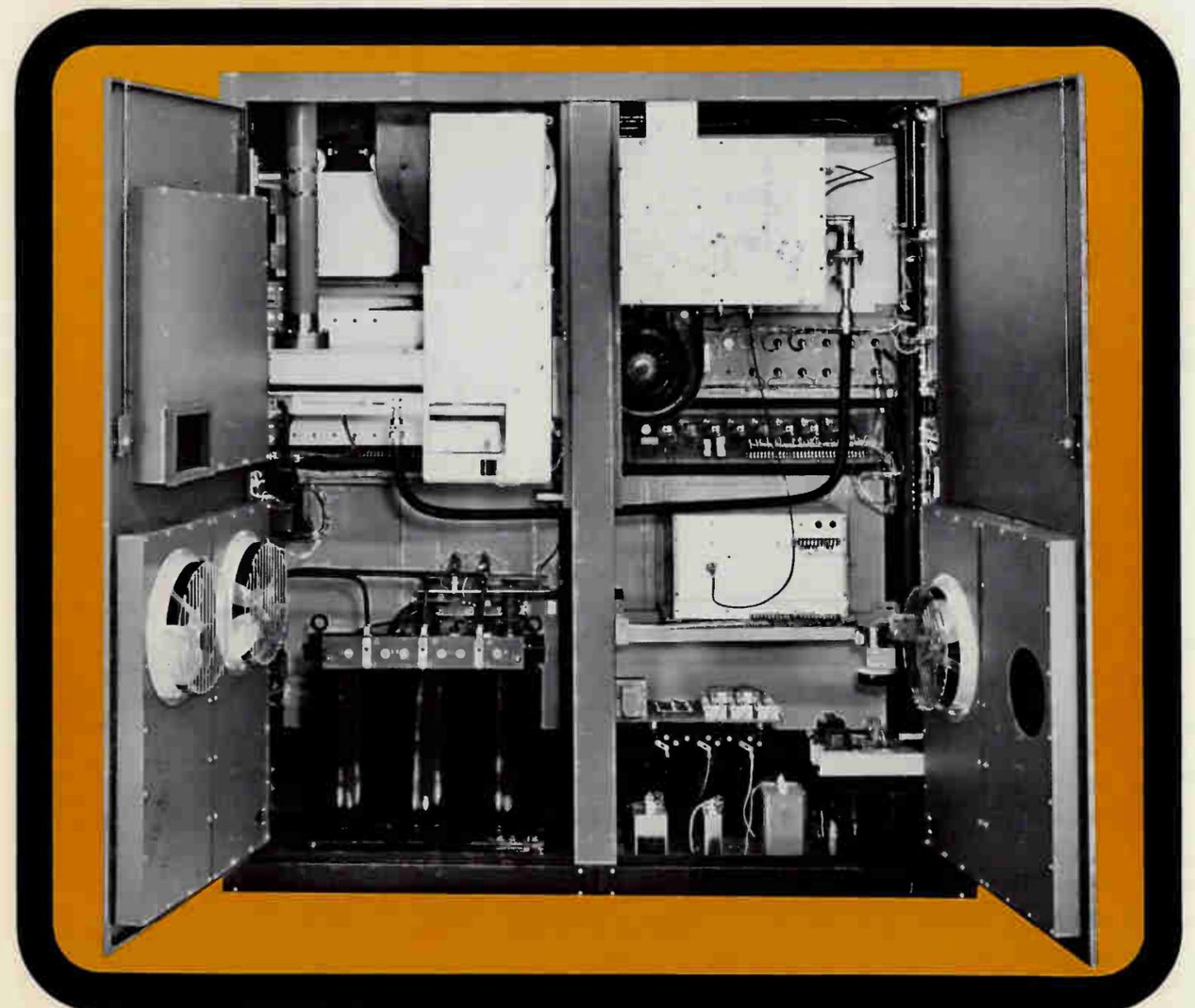
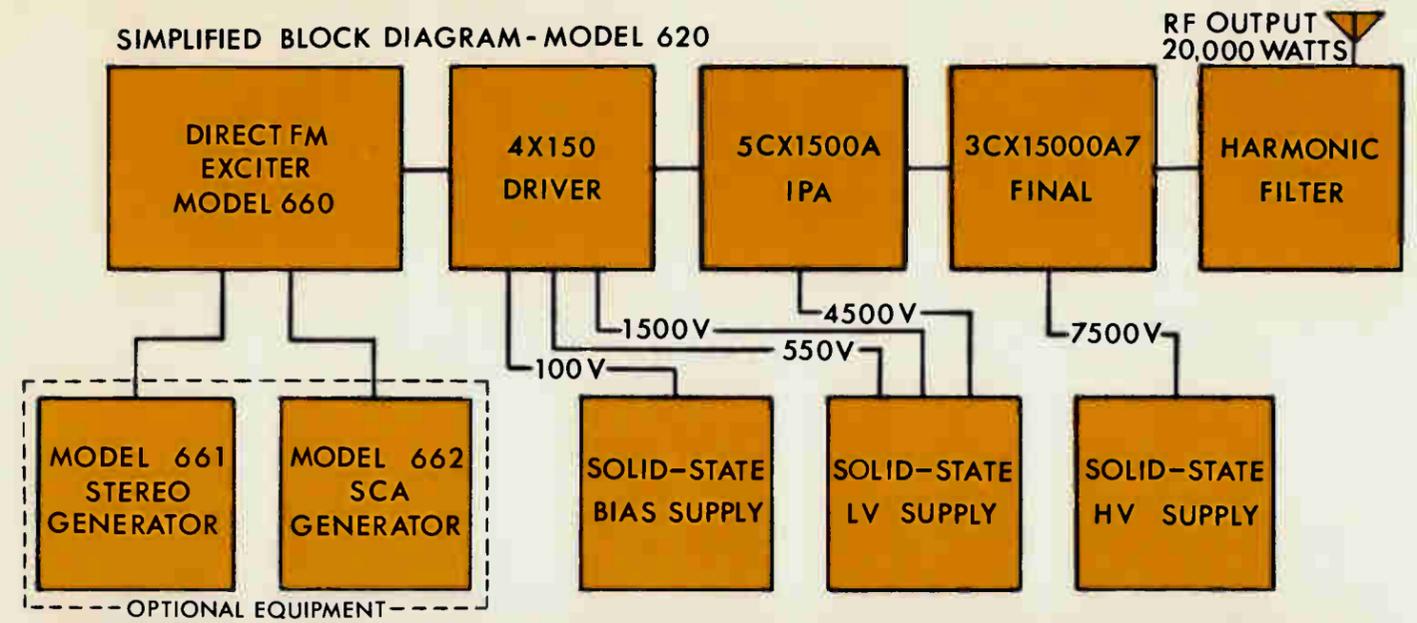
The tally-light fault locator system, that has been a popular feature on SPARTA's AM Transmitters, has been engineered into the 620. Should there be a momentary over-

load, the 620 will re-cycle automatically and the tally-light system will tell you where the overload occurred. The system captures this information for you and keeps it on display until manually reset. Another advanced equipment design from SPARTA is Automatic Power Control guaranteeing operation within FCC tolerances, this, in addition to a high VSWR protection system.

The trouble free SPARTA Model 660 FM Exciter gives you solid-state push-button control for mono, stereo, or SCA operation.

The "STRIPLINE" driver unit is capable of 2500 watt output though only 800 watts are needed for a 20 kw power output. The added power can be used to drive a second 620 final amplifier for a combined 40 kw output and the driver unit is always available for emergency back up operation directly into the antenna system.

SIMPLIFIED BLOCK DIAGRAM - MODEL 620



MODEL 600 FM TRANSMITTER



SPARTA'S Model 600 FM Transmitter for standby or low power operation offers the buyer a choice of tube-type or solid state exciters. The low-profile 250 watt unit ties the chosen exciter to a single 4CX350A tetrode, accomplishing a top quality FM signal with minimum cost in space, maintenance, complexity or dollars. All power supplies are solid state. And keep in mind that the entire self-contained unit is only four feet seven inches high!



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The Model 660 FM Exciter (in accessory cabinet) uses direct carrier modulation: there are no mixers or multipliers after the modulated oscillator. Plug-in stereo and SCA modules add on at any time. Its audio multimeter and metering probe permit servicing without additional test equipment: "set it and forget it" is the working motto of engineers using SPARTA FM transmitters. The 660 is the standard all-solid state "heart" of all our FM transmitters, including the 600, the only departure being the M-10/FM Exciter option described below. The 660 can be used separately as an emergency 15 watt transmitter.

Since the Model 600 Transmitter was designed to be used as either a standby or operational unit, a tube-type exciter is offered as an option. It is the M-10/FM (above right) which compliments the performance of the Model 600 perfectly but reduces the cost significantly below that of the solid state exciter configuration. The dimensions of the two exciters differ only in that the M-10/FM is eight inches deep, compared to the Model 660's 12½ inches. The M-10/FM Exciter cannot be adapted for stereo.

PERFORMANCE SPECIFICATIONS WITH MODEL 660 SOLID STATE EXCITER

TYPE OF MODULATION	F3, F9 direct frequency modulation of mono, stereo and SCA audio inputs
POWER OUTPUT CAPABILITY	250 W.
FREQUENCY RANGE	88 to 108 MHz
FREQUENCY STABILITY	± 750 Hz
RF OUTPUT IMPEDANCE	50 ohms nominal
MODULATION CAPABILITY	± 100 KHz
FM NOISE	Better than 65 db below 100% modulation (Mono, Stereo, and SCA) referred to 400 Hz
AM NOISE	Better than 50 db below equivalent 100% AM
HARMONICS	Exceeds all FCC requirements
LINE POWER SUPPLY	115 volts AC, single phase, 50/60 Hz
LINE POWER CONSUMPTION	950 watts at 0.9 power factor
ALL AUDIO INPUTS	600 ohms ± 10% balanced, + 10 dbm ± 2 db for 100% modulation (referred to 400 Hz)
POWER TUBE COMPLEMENT	1 ea 4CX350A (Exciter and power supplies are completely solid state)
CABINET SIZE	55" high x 24" wide x 26" deep
WEIGHT	350 pounds
ALTITUDE	to 7,500 feet
AMBIENT TEMPERATURE	To 113°F (45°C)

MONAURAL OPERATION

FREQUENCY RESPONSE	within 1 db 50-15,000 Hz (referred to 75 usec pre-emphasis)
DISTORTION	less than 0.5% 50-15,000 Hz
STEREOPHONIC OPERATION	
FREQUENCY RESPONSE	within 1 db 50-15,000 Hz (referred to 75 usec pre-emphasis)
DISTORTION	less than 0.75% of composite waveform
PILOT CARRIER STABILITY	less than 1 Hz at 19 kHz. Left/Right separation better than 35 db 50-15,000 Hz Subcarrier suppression at least 45 db below 100% modulation
CROSSTALK	(main/subchannel) less than 42 db below 100% modulation

SCA OPERATION

CENTER FREQUENCY RANGE OF SUBCARRIER	Standard 41 or 67 kHz
FREQUENCY STABILITY	within 500 Hz
MODULATION	direct FM
MODULATION CAPABILITY	up to 15% SCA frequency (10% is 100% modulation)
FREQUENCY RESPONSE	within 2 db 50-7,500 Hz (referred to 75 usec pre-emphasis)
DISTORTION	less than 1.5% 50-7,500 Hz
MUTING	front panel controlled for on, off, or automatic muting of sub-carrier
AUTOMATIC MUTE SENSITIVITY	less than 20 db below 10% deviation (100% modulation)

WITH M-10/FM TUBE-TYPE EXCITER (MODEL 660T)

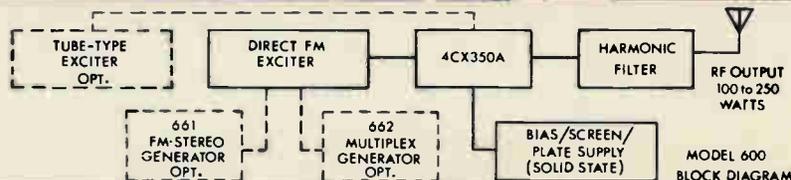
FREQUENCY RESPONSE	40-15000 Hz (± 1 DB)
DISTORTION AT 100% MODULATION	1.25 Max., 40-100 Hz 0.8% Max., 100-7500 Hz 1.25% Max., 7500-15000 Hz
FM NOISE LEVEL	-65 DB or better as measured w/std 75 Microsecond de-emphasis and 15 kHz low-pass filter. Reference 400 Hz signal mod. 100%

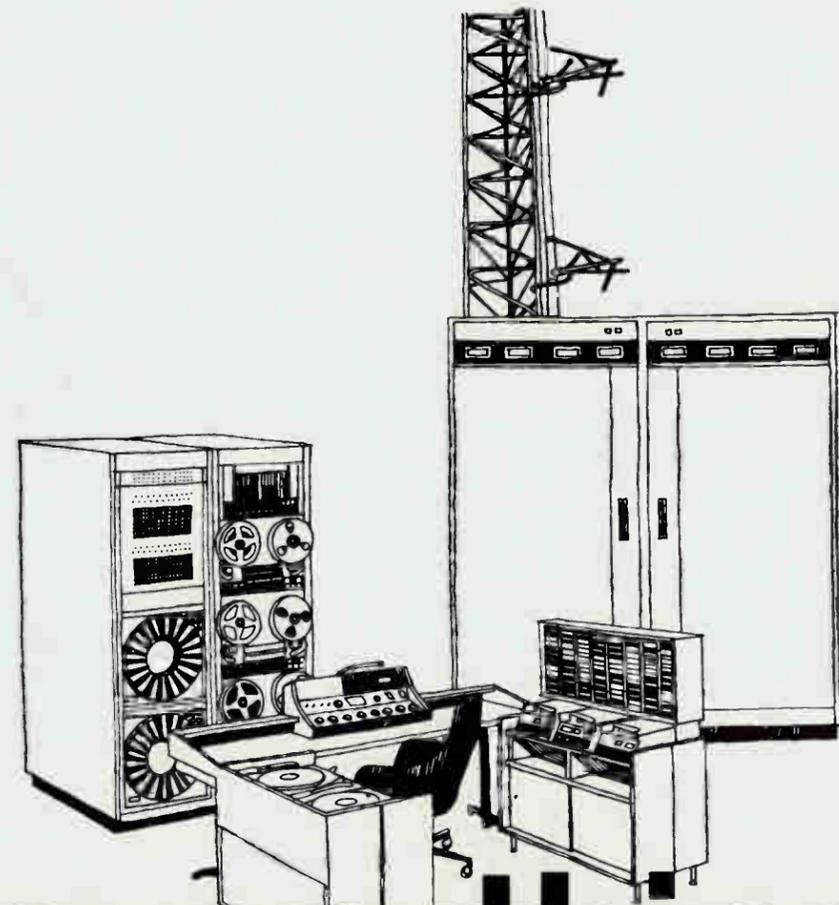
*ORDERING INFORMATION

The Model 600 is supplied complete with harmonic filter and Model 660 Exciter in MONO OR STEREO, tuned and tested on your frequency. For stereo specify Model 661 Stereo Generator. For SCA also order optional Model 662 SCA Generator, and specify sub-carrier frequency.

*ORDERING INFORMATION WITH M-10/FM TUBE-TYPE EXCITER

To order the MONAURAL ONLY transmitter configuration with tube-type exciter, specify MODEL 600T. It will be supplied complete with harmonic filter. Model M-10 FM Exciter, tuned and tested on your frequency.





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SPARTA ELECTRONIC CORPORATION

5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828 (916) 383-5353

A DIVISION OF COMPUTER EQUIPMENT CORPORATION

MODEL 602 FM TRANSMITTER



UNLIKE ORDINARY TRANSMITTERS



SPARTA
ELECTRONIC CORPORATION

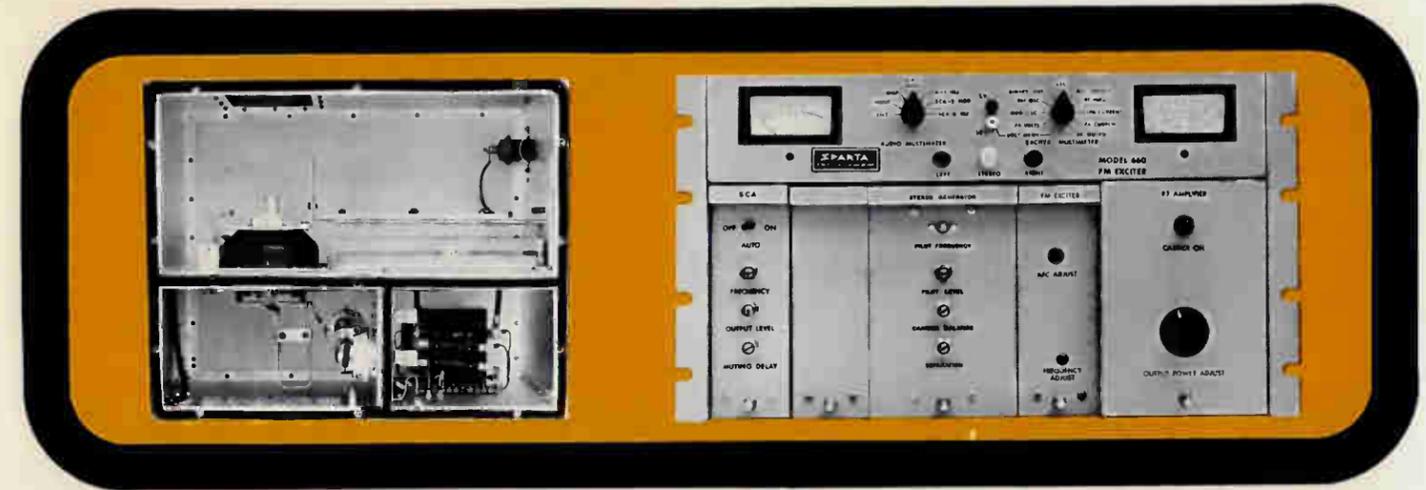
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Reliability and Class A power to spare are things of today with SPARTA's 602, 2500 watt FM Transmitter. The transmitter is composed of a Model 660 FM Exciter, an RF amplifier and power supply, a low-pass harmonic filter, and an RF directional coupler. Ease and economy of installation is facilitated through the use of a single phase power supply.

The SPARTA 602 Transmitter with a three bay circularly polarized antenna makes up the most economical package for full power Class A broadcasting. Its 2500 watts along with the standard 1.5 gain of a 3 bay circularly polarized

antenna easily delivers the maximum 3000 watts ERP. Competitive transmitters require four bays to accomplish the same thing.

Reliability of the 602 FM Transmitter is highly emphasized by straight forward engineering design and an uncluttered layout as illustrated below with front and rear doors removed. The front view, below left, indicates the placement of the model 660 FM Exciter within the transmitter. The front panel surrounding the 660 swings out for easy accessibility. The rear view shows the "STRIPLINE" final amplifier in the transmitter's upper left hand corner.

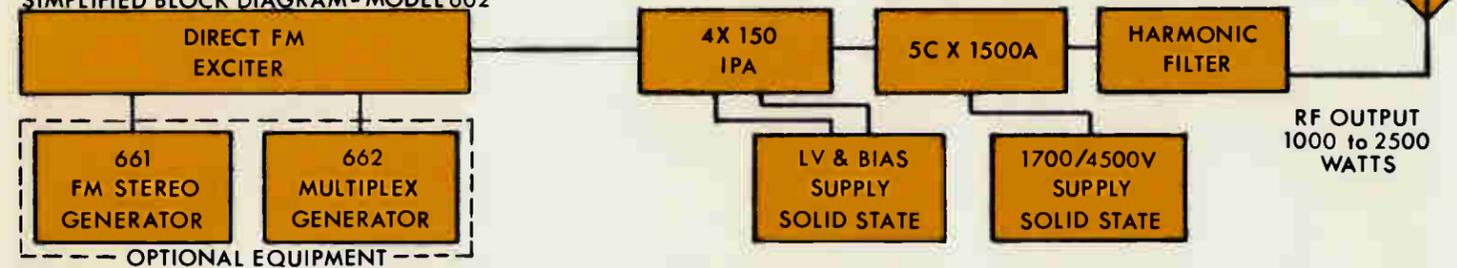


Tune it once, then forget it! With SPARTA's new "STRIPLINE" amplifier output stage you can forget moving contacts and the maintenance problems they present. The 602 is easy to tune, and it stays that way!

Broadcast transmitter reliability is a thing of today with SPARTA's "STRIPLINE" tuning!

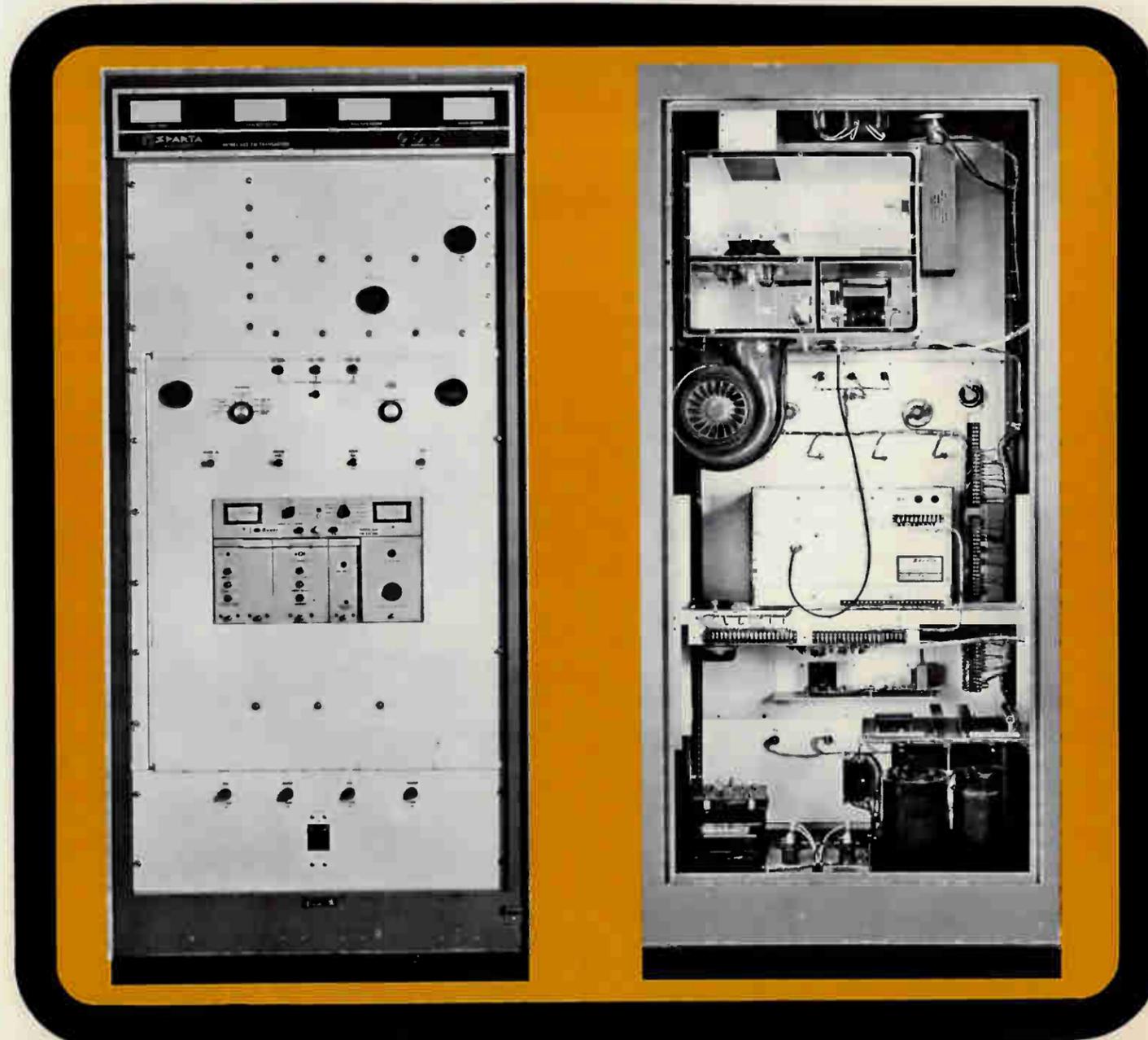
The heart of the Model 602 FM Transmitter is the Model 660 FM Exciter. An all solid state unit providing monaural, stereo and/or SCA modes of operation. The 660 Exciter allows 5 to 15 watts output power into a matched 50 ohm load. The modulation method is "direct carrier FM" with no mixers or multipliers after the modulated oscillator. Maintenance of the 660 Exciter is facilitated by two multimeters on the unit's front panel. In emergencies, the 660 Exciter can be used as a separate 15 watt transmitter.

SIMPLIFIED BLOCK DIAGRAM - MODEL 602

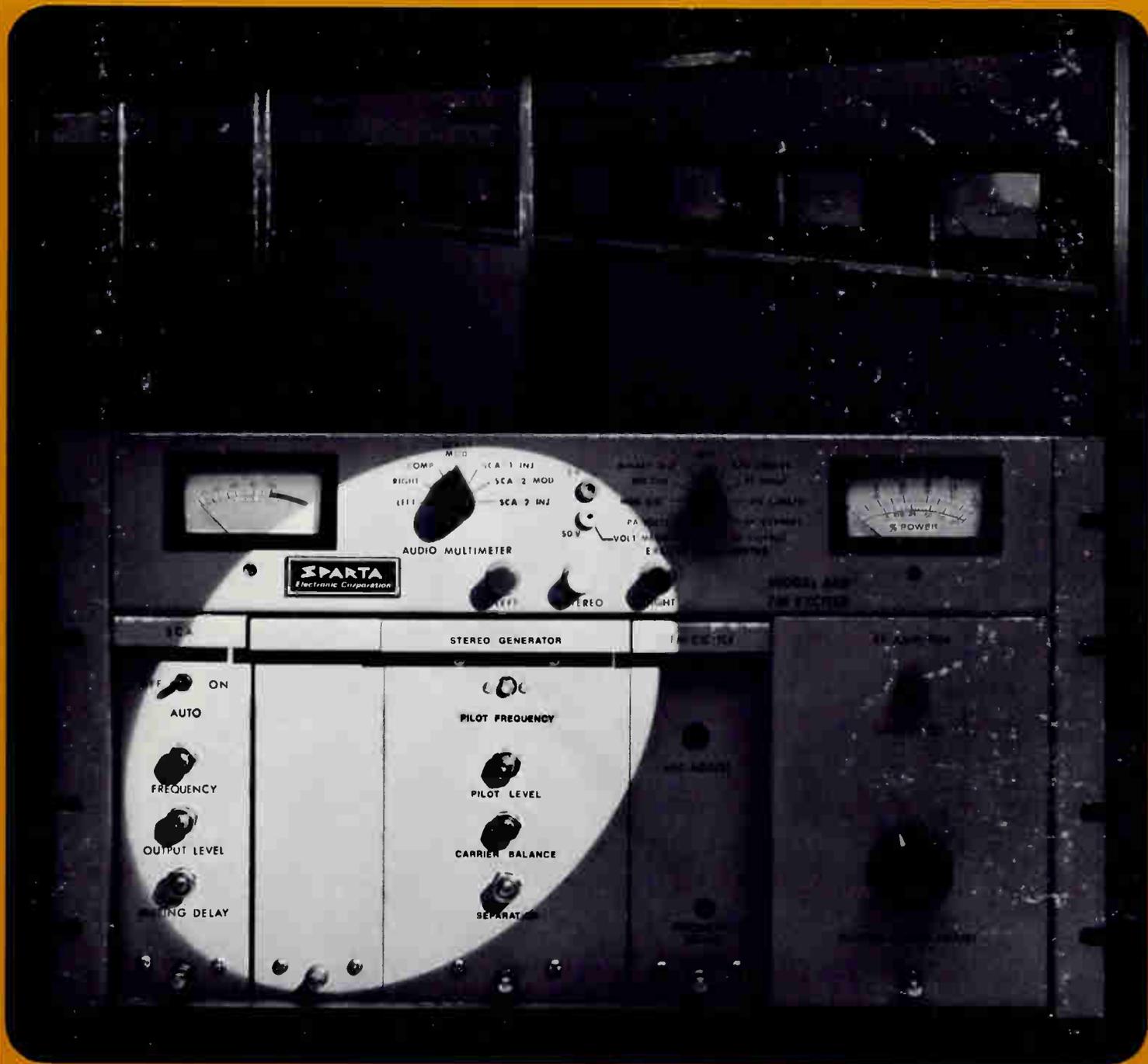


PERFORMANCE SPECIFICATIONS MODEL 602

TYPE OF MODULATION	F3, F9 direct frequency modulation of mono, stereo, and SCA audio inputs.	PRE-EMPHASIS	75 usec - convertible to 50 usec
POWER OUTPUT CAPABILITY	1,000 to 2,500 w.	LEFT-RIGHT CHANNEL SEPARATION	35 db or better, 50 Hz to 15 KHz
FREQUENCY RANGE	88 to 108 MHz.	CROSSTALK-STEREOPHONIC	42 db or better below 100% mod., (main channel to subchannel) 50 Hz to 15 KHz
FREQUENCY STABILITY	± 100 Hz after initial warmup.	CROSSTALK	42 db or better below 100% mod., (subchannel to main channel) 50 Hz to 15 KHz
RF OUTPUT IMPEDANCE	50 ohms nominal.	DISTORTION	0.75% or less distortion of composite wave form (100% modulation by composite stereo)
MODULATION CAPABILITY	± 150 KHz.	SCA OPERATION	
FM NOISE	Better than 65 db below 100% modulation (Mono, Stereo, and SCA) referred to 400Hz.	AMBIENT TEMPERATURE LIMITS	+5° C to +50° C
AM NOISE	Better than 50 db below equivalent 100% AM.	TYPE OF MODULATION	FM
HARMONICS	At least 80 db below fundamental.	CENTER FREQUENCY	
LINE POWER SUPPLY	200-245 volts AC, single phase, 50/60 Hz.	RANGE OF SUBCARRIER	Standard 41 or 67 KHz
LINE POWER CONSUMPTION	6,000 watts at 0.9 power factor (2,500 watts out)	OUTPUT VOLTAGE	At least 2 volts peak to peak into 10,000 ohms
ALL AUDIO INPUTS	600 ohms balanced, +10 dbm ± 2 db for 100% modulation (referred to 400 Hz)	FREQUENCY DEVIATION	± 10% of center frequency (100% subcarrier modulation)
POWER TUBE COMPLEMENT	1 ea 4X150 driver, 1 ea 5CX-1500A Power Amplifier (Exciter and power supplies are completely solid state)	MODULATION CAPABILITY	± 15%
CABINET SIZE	75" high x 34" wide x 25½" deep (101 x 86 x 65 cm) (low pass filter included)	CARRIER FREQUENCY STABILITY	2,500 Hz over temperature range
WEIGHT	1000 pounds (453.6 Kg).	AUDIO INPUT IMPEDANCE	600 ohms balanced
ALTITUDE	to 7,500 feet	AUDIO INPUT LEVEL	+10 dbm at 400 Hz (100% modulation)
AMBIENT TEMPERATURE	to 113° F (45° C)	AUDIO FREQUENCY RESPONSE	± 2 db ref. 75 usec. pre-emphasis (30 Hz to 7.5 KHz)
MONAURAL OPERATION	Frequency response within 1 db 50-15,000 Hz (referred to 75 usec pre-emphasis). Distortion less than 0.5% 50-15,000 Hz.	HARMONIC DISTORTION	Less than 1.5% (50 Hz to 7.5 KHz)
STEREOPHONIC OPERATION		FM NOISE LEVEL	-65 db maximum (ref. to 15% deviation)
PILOT CARRIER STABILITY	19 KHz ± 1 Hz	ORDERING INFORMATION	
SUBCARRIER SUPPRESSION	-45 db or better	The Model 602 is supplied complete with the Model 660 exciter, crystal and oven, tubes and harmonic filter — factory tuned and tested on frequency. For stereo option specify Model 661 stereo generator — for SCA Model 662 SCA generator (specify sub-carrier frequency).	
FREQUENCY RESPONSE			
50 Hz to 10 KHz	± 0.5 db maximum		
10 KHz to 15 KHz	± 1/0 db maximum		



MODEL 660 EXCITER



This is the beginning of a flawless FM signal — the Sparta 660 Exciter, where even little flute tones are always crisp and pure.

The 660 uses direct carrier modulation, 100% solid state components, and modular construction. Its audio multimeter and metering probe are impressive service features. They check modulation levels, SCA injection, all important parameters, and permit servicing without additional test equipment. "Set it and forget it", is a reality with the 660.

The 660 can be used to up-date most FM transmitters, as a 10 watt FM transmitter for schools, or as an FM band STL. And it's the heart of all Sparta FM transmitters. It's the *amazing* 660.



5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488

T-01-06-71 PRINTED IN U.S.A.



STEREO GENERATOR 661. In stereo operation channel separation is at least 35 db from 50 to 15,000 Hz. Sub-carrier suppression in typical operating conditions is -60 db over the temperature range from 0° C to +50° C. Special built-in circuitry permits rapid switch-over to mono operation in case of a program line failure. The change is as fast as pushing a lighted button controlling the relay switching circuits that select between mono "left only" or "right only" on the front panel. This entire system is easy to remote. The 661 is available as an option at any time you choose.

FM EXCITER

Type of emission F3, standard monaural
 F9, stereo & SCA with optional plug-in modules

Frequency range 87 to 108 MHz, factory-tuned to specific operating frequency

Power output Adjustable from nominal 5 watts to at least 15 watts

Load impedance 50 ohms, tunable to 2:1 VSWR

Frequency deviation ± 75 kHz (for 100% modulation)

Modulation capability ± 150 kHz

Carrier frequency stability ± 100 Hz after initial warmup

Audio input impedance 600 ohm resistive

Audio input level + 10 ± 2 dbm at 400 Hz (100% mod.)

Audio frequency response
 50 Hz to 10 kHz ± 0.5 db max. (pre-emphasis 75 usec)

10 kHz to 15 kHz ± 1.0 db, max. (pre-emphasis 75 usec)

Harmonic distortion 0.5% maximum (50 Hz to 15 kHz)

FM noise level -65 db maximum (referred to 100% FM modulation at 400 Hz)

Incidental AM noise level - 60 db max. (ref. to carrier voltage)

Synchronous AM due to
 100% FM - 50 db max. (at 400 Hz)

Subcarrier input level 2 volts peak to peak (30% modulation of carrier max.)

Subcarrier input impedance 15,000 ohms

Subcarrier center freq. range 30 to 67 kHz (standard units supplied for 41 or 67 kHz)

ELECTRICAL

Power requirement 240/208 or 117 volts, AC, ± 5% — 50/60 Hz, single phase

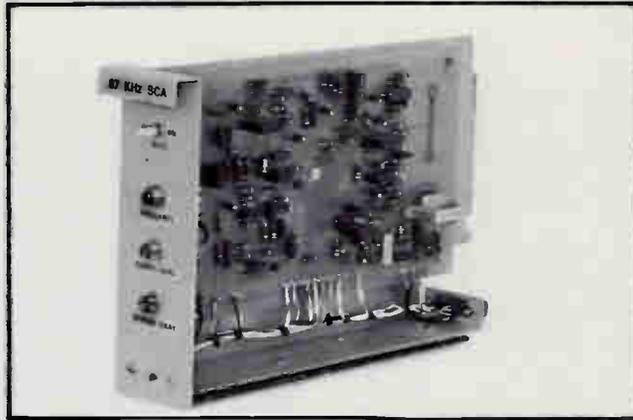
Power consumption 120 watts max. (including stereo & SCA)

MECHANICAL

Size 19" W x 12½" D x 10½" H (48.3 x 31.8 x 26.7 cm)

Weight 42 lbs (18.9 kg) with all plug-in modules

STANDARD COMPONENTS. The basic Model 660 Exciter includes the power supply, RF amplifier, FM exciter module, and the monaural generator module. Also included are the module extender and a dc probe. (Specify frequency required.)



SCA MODULE 662. Two SCA modules (41 and 67 kHz) are available as options. Both can be used during mono operation. During stereo broadcasting the 67 kHz unit is used and the 41 kHz module is automatically locked out. Both units contain muting circuits which automatically remove the subcarrier in the absence of audio. Muting delay is adjustable from 0.5 to about 4 seconds after the removal of audio input. The time constants are chosen for smooth click-free operation. A front panel switch selects "on", "off", or "automatic" SCA muting. Remote muting plus telemetry input connections are provided.

Maximum altitude to 10,000 feet
 Ambient temperature range +0° C to +50° C

STEREO GENERATOR 661

Pilot carrier stability 19 kHz ± 1 Hz

Subcarrier suppression - 45 db or better

Frequency response,
 50 Hz to 10 kHz ± 0.5 db maximum
 10 kHz to 15 kHz ± 1.0 db maximum

Pre-emphasis 75 usec — convertible to 50 usec

Left-right channel separation 35 db or better, 50 Hz to 15 kHz

Crosstalk-Stereophonic 42 db or better below 100% (main channel to subchannel) mod., 50 Hz to 15 kHz

Crosstalk (subchannel to main channel) 42 db or better below 100% mod., 50 Hz to 15 kHz

Distortion 0.75% or less distortion of composite wave form (100% modulation by composite stereo)

SUBCARRIER GENERATOR 662

Ambient temperature limits + 5° C to + 50° C

Type of modulation FM

Center frequency range of subcarrier Standard 41 or 67 kHz

Output voltage At least 2 volts peak to peak into 10,000 ohms

Frequency deviation ± 10% of center frequency (100% subcarrier modulation)

Modulation capability ± 15%

Carrier frequency stability ± 500 Hz over temperature range

Audio input impedance 600 ohms balanced

Audio input level + 10 dbm at 400 Hz (100% modulation)

Audio frequency response ± 2 db ref. 75 usec. pre-emphasis (convertible to 50 or 150 usec. pre-emphasis) (30 Hz to 7.5 kHz)

Harmonic distortion Less than 1.5% (50 Hz to 7.5 kHz)

FM noise level - 65 db maximum (ref. to 15% deviation)



SPARTA ELECTRONIC CORPORATION
BROADCAST TRANSMITTER
TYPE 612

PERFORMANCE SPECIFICATIONS

Type of modulation: F3, F9 direct frequency modulation of mono, stereo and SCA audio inputs Power output capability: 13,000W
Frequency range: 88 to 108 MHz Frequency stability: \pm 100 Hz after initial warm up
RF output impedance: 50 ohms nominal Modulation capability: \pm 150 KHz
FM noise: Better than 65 db below 100% modulation (Mono, Stereo, and SCA) referred to 400 Hz. AM noise: Better than 50 db below equivalent 100% AM
Harmonics: Exceeds all FCC requirements Line power consumption: 200 - 245 volts AC, 3 - phase, 50/60 Hz Line power consumption: 21 KW at 0.9 power factor
All audio inputs: 600 ohms \pm 10% balanced, + 10 dbm \pm 2 db for 100% modulation (referred to 400 Hz) Tube complement: 1 ea 4X150A, 5CX1500A, 3CX10,000A7 (Exciter and power supplies are completely solid state)
Cabinet Size: 75" high x 68" wide x 34" deep Weight: 2750 pounds
Altitude: to 7,500 feet Ambient temperature: To 113° F (45° C)

MONAURAL OPERATION

Frequency response within 1 db 50 - 15,000 Hz (referred to 75 usec pre-emphasis)
Distortion less than 0.5% 50 - 15,000 Hz

STEREOPHONIC OPERATION

Frequency response with 1 db 50 - 15,000 Hz (referred to 75 usec pre-emphasis)
Distortion less than 0.75% of composite waveform
Pilot carrier stability less than 1 Hz at 19 KHz. Left/Right separation better than 35 db
50 - 15,000 Hz Subcarrier suppression at least 45 db below 100% modulation
Crosstalk (main/subchannel) less than 42 db below 100% modulation

SCA OPERATION

Standard units supplied for 41 and 67 KHz
Frequency stability within 500 Hz Modulation is direct FM
Modulation capability of up to 15% SCA frequency (10% is 100% modulation)
Frequency response within 2 db 50 - 7,500 Hz (referred to 75 usec pre-emphasis)
Distortion is less than 1.5% 50 - 7,500 Hz
Muting is front panel controlled for on, off, or automatic muting of sub-carrier
Automatic mute sensitivity is less than 20 db below 10% deviation (100% modulation)

THE ABC'S OF Sparta-Charge

- A.** Complete and sign the attached application, fold and staple where indicated and deposit in the mail. No postage is needed.
- B.** Place your order for SPARTA professional broadcast products, parts or services through your SPARTA representative or direct with our Sacramento National Sales Office.
- C.** You will receive a shipment invoice and you may pay within 30 days of the invoice date, in which case your account is simply a regular 30 day, no service charge account.

OR

Wait for your monthly **Sparta-Charge** statement, check your account balance and select your minimum payment amount from the **Sparta-Charge** minimum payment schedule.

SPARTA-CHARGE MINIMUM PAYMENT SCHEDULE

Monthly Account Balance	Under \$500	\$501.00 to \$750.00	\$ 751.00 to \$1,000.00	\$1,001.00 to \$1,500.00	\$1,501.00 to \$2,000.00	Account Balance in excess of \$2,000.00
Minimum Monthly Payment	\$50.00	\$ 75.00	\$ 150.00	\$ 300.00	\$ 500.00	Pay 25% of your account Balance

Subject to the minimum, pay as much or as little as you like. It is up to you.

That's it, no fuss or bother, just the ABC's of **Sparta-Charge**. Now with this new SPARTA convenience, there is no need to "make do". You can now order those needed supplies, parts or new equipment, maintain your good sound and profitability and pay the simple **Sparta-Charge** way.

Remember — all accounts paid within 30 days of the invoice date incur no handling charge. Where applied, the **Sparta-Charge** handling charge is computed by a periodic rate of 1% per month (annual percentage rate of 12%) on a statement balance in excess of \$1,000.00 or more and 1½% per month (annual percentage rate of 18%) under \$1,000.00 which is applied to the unpaid balance after deducting current payments and credits.

DON'T DELAY — JOIN SPARTA-CHARGE TODAY

APPLICATION FOR Sparta-Charge

CALL

REFER

LEGAL NAME		<input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> CORPORATION		
MAILING ADDRESS				ZIP CODE
CALL LETTERS	STATION ESTABLISHED (YEAR)	PHONE	AREA CODE	EXT.

How long has present ownership or controlling interests operated the station? _____

Wholly owned affiliate stations:

Call _____ City _____ State _____

Call _____ City _____ State _____

Note others on reverse side.

List below the names and addresses of partners, if incorporated, officers and title.

List below the names, mailing address and branch as well as account number of banks.

NAME	STREET	CITY	STATE	BRANCH	ACCOUNT NUMBER

List below established accounts

NAME	STREET	CITY	STATE	ACCOUNT NUMBER

The purchaser, by accepting merchandise, consents and agrees to all of the following Terms and Conditions. The title and right of possession to all merchandise remains with the seller until the seller has received the full purchase price thereof in cash. If seller institutes legal action against buyer to enforce this contract or any part thereof, buyer agrees to pay such sum as the court may fix as attorneys fees. Credit will not be issued on goods returned unless returned with our consent. Deliveries are made subject to War, Strikes, Acts of God or any other cause beyond our control. Buyer agrees to make minimum monthly payments according to the following schedule, incurring a Handling Charge of 1% per month (annual percentage rate of 12%) on a statement balance in excess of \$1000.00 and 1½% per month (annual percentage rate of 18%) on the unpaid balance under \$1000.00. When payments are made within 30 days of invoice date there shall be no handling charge. In the event that the required minimum monthly payment is not made, the entire account balance shall become immediately due and payable and accrue a past due charge of 1½% per month on the entire balance until paid in full.

SPARTA-CHARGE MINIMUM PAYMENT SCHEDULE

Monthly Account Balance	Under \$500	\$501.00 to \$750.00	\$ 751.00 to \$1,000.00	\$1,001.00 to \$1,500.00	\$1,501.00 to \$2,000.00	Account Balance in excess of \$2,000.00
Minimum Monthly Payment	\$50.00	\$ 75.00	\$ 150.00	\$ 300.00	\$ 500.00	Pay 25% of your account Balance

X

SIGNATURE (OWNER OR CORPORATE OFFICER)

TITLE

DATE



SPARTA
 ELECTRONIC CORPORATION
 5851 Florin-Perkins Road
 Sacramento, California 95828
 Phone (916) 383-5353

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 Sacramento, California 95828

— STAPLE HERE —

Dear Broadcaster:

As you know, service to our customers has always been of prime importance at SPARTA. We are, however, continually searching for new and better ways to further enhance the respected reputation we have enjoyed over the years.

It is now a pleasure for me to introduce you to still another service. It is, I believe, an industry First, and should prove of immeasurable value to broadcasters throughout the country.

It is called **Sparta-Charge** and as the details on the following pages reveal, **Sparta-Charge** will be as easy to use as a regular consumer credit card.

When broadcasters need equipment, parts or services, they need it right now. Air time lost is lost forever. I know from experience that broadcasters cannot afford the frustration and the cost of time-consuming credit checks. Did you ever notice how emergencies invariably occur when cash funds are low and collections are down? I suspect it's happened to all of us at one time or another.

Sparta-Charge should alleviate that problem once and for all. I say should because for **Sparta-Charge** to be of benefit to you, the first step must be taken by you. Complete the application and return it. Right now. SPARTA will do the rest.

SPARTA ELECTRONIC CORPORATION

WILLIAM J. OVERHAUSER
 President

A DIVISION OF COMPUTER EQUIPMENT CORPORATION



SPARTA ELECTRONIC CORPORATION
BROADCAST TRANSMITTER
TYPE 601

PERFORMANCE SPECIFICATIONS

Type of modulation: F3, F9 direct frequency modulation of mono, stereo and
SCA audio inputs Power output capability: 1100 W
Frequency range: 88 to 108 MHz Frequency stability: ± 100 Hz after initial warm up
RF output impedance: 50 ohms nominal Modulation capability: ± 150 KHz
FM noise: Better than 65 db below 100% modulation (Mono, Stereo, and SCA) referred to
400 Hz. AM noise: Better than 50 db below equivalent 100% AM
Harmonics: Exceeds all FCC requirements Line power supply: 200 - 245 volts
AC, single phase, 50/60 Hz Line power consumption: 2300 watts at 0.9 power
factor All audio inputs: 600 ohms $\pm 10\%$ balanced, +10 dbm ± 2 db for 100%
modulation (referred to 400 Hz) Power tube complement: 1 ea 5CX1500A
(Exciter and power supplies are completely solid state)
Cabinet Size: 75" high x 34" wide x 25 1/2" deep Weight: 750 pounds
Altitude: to 7,500 feet Ambient temperature: To 113° F (45° C)

MONAURAL OPERATION

Frequency response within 1 db 50 - 15,000 Hz (referred to 75 usec pre-emphasis)
Distortion less than 0.5% 50 - 15,000 Hz

STEREOPHONIC OPERATION

Frequency response with 1 db 50 - 15,000 Hz (referred to 75 usec pre-emphasis)
Distortion less than 0.75% of composite waveform
Pilot carrier stability less than 1 Hz at 19 KHz. Left/Right separation better than 35 db
50 - 15,000 Hz Subcarrier suppression at least 45 db below 100% modulation
Crosstalk (main/subchannel) less than 42 db below 100% modulation

SCA OPERATION

Standard units supplied for 41 and 67 KHz
Frequency stability within 500 Hz Modulation is direct FM
Modulation capability of up to 15% SCA frequency (10% is 100% modulation)
Frequency response within 2 db 50 - 7,500 Hz (referred to 75 usec pre-emphasis)
Distortion is less than 1.5% 50 - 7,500 Hz
Muting is front panel controlled for on, off, or automatic muting of sub-carrier
Automatic mute sensitivity is less than 20 db below 10% deviation (100% modulation)

The SPARTA Model 701 AM Transmitter replaces the 707, which was one of the most successful transmitters in broadcast history. More Model 707's are in service throughout the world than any other transmitter of its type.

The 701 retains proven features of its illustrious predecessor, and boasts improvements in three major areas:

POWER TUBES . . . The 701 is the only broadcast transmitter using the new Eimac 4-500A Tetrode. By using the 4-500A's, SPARTA'S 701 will deliver full power easier, thus requiring less maintenance. And will produce better asymmetrical modulation.

COOLING SYSTEM . . . The larger blower (the same type used on SPARTA'S 5kw transmitters) increases air circulation in a semi-pressurized lower case, allowing tremendously greater operating efficiency and longer component life.

SOLID STATE DUAL OSCILLATORS . . . The 701 is delivered with *two* crystals and *two* oscillators, all contained in a single temperature-controlled oven. Equipped in this fashion, the Model 701 airs your signal with ± 2 Hz stability!

All of the time tested features of the Model 707 have been retained in the new 701: compactness . . . simultaneous full meter display of all important transmitter functions . . . circuit simplicity . . . variable vacuum capacitor for final plate tuning (no air capacitors to arc, or roller coils to freeze) . . . built-in dummy antenna . . . and oil filled modulation transformer to give dependable, long term service. Among innovations added to the newer model: the nuisance of momentary outages is eliminated by an automatic reset device, which also triggers a "tally light" overload indicator. A glance at the "tally light" which is left burning tells the engineer at what point the overload occurred within the transmitter, shortening his inspection and maintenance time.

The Model 701 is offered in the broadcaster's choice of switchable power combinations of 1000/250, 1000/500, or 500/250 watts.

PRELIMINARY SPECIFICATIONS — Model 701 — 1000/250 Watt — AM TRANSMITTER

AF INPUT IMPEDANCE	600 ohms	POWER OUTPUT	1000/500/250 Watts — Any combination of <i>two</i> power levels (capable 1100 Watts)
AF INPUT LEVEL	+10 DBM \pm 2DBM (100% Modulation)	POWER SUPPLY	208-240 volts \pm 5%, 50/60 Hz, Single Phase
AF RESPONSE	50-10,000 Hz (95% Modulation) \pm 1.5 DB	POWER CONSUMPTION	(1000 Watts output — 90% PF) Approx 0% Modulation 3200 Watts 40% Modulation 3630 Watts 100% Modulation 4300 Watts
AF DISTORTION	50-10,000 Hz (95% Modulation) less than 3%	AMBIENT OPERATING TEMPERATURE	To 113° F
NOISE	(below 100% Modulation) 1000 Watts 55 DB 250 Watts 50 DB	ALTITUDE RANGE	To 7500 — Higher altitudes on special order
FREQUENCY RANGE	540-1600 KHz	SIZE	75" High, 34" Wide, 25½" Deep
FREQUENCY STABILITY	\pm 2 Hz or better	WEIGHT	1000 lbs. NET
OUTPUT IMPEDANCE	50 Ohms unbalanced — others available on special order		
CARRIER SHIFT	3% or less (0-100% Modulation)		
DUMMY ANTENNA	50 Ohms — Capable full time operation 100% Program Modulation		

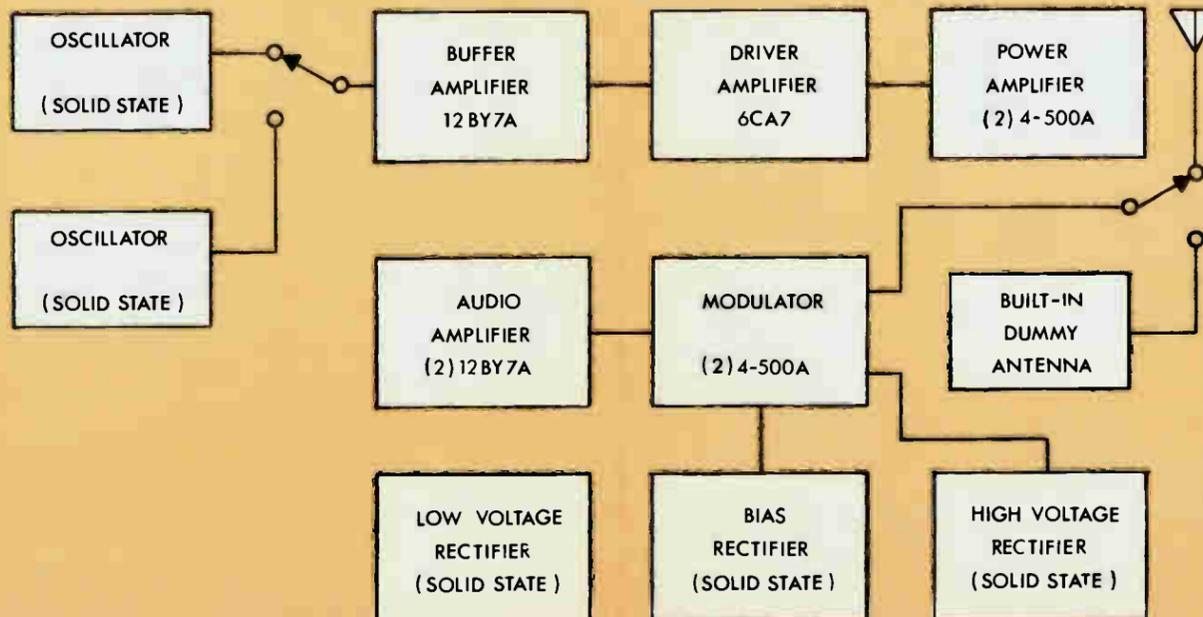
ORDERING INFORMATION:

The Model 701 is supplied in 1000/250 watts complete with tubes, and two crystals, tuned and tested on frequency. If 1000/500 or 500/250 watt power levels are desired SO SPECIFY.

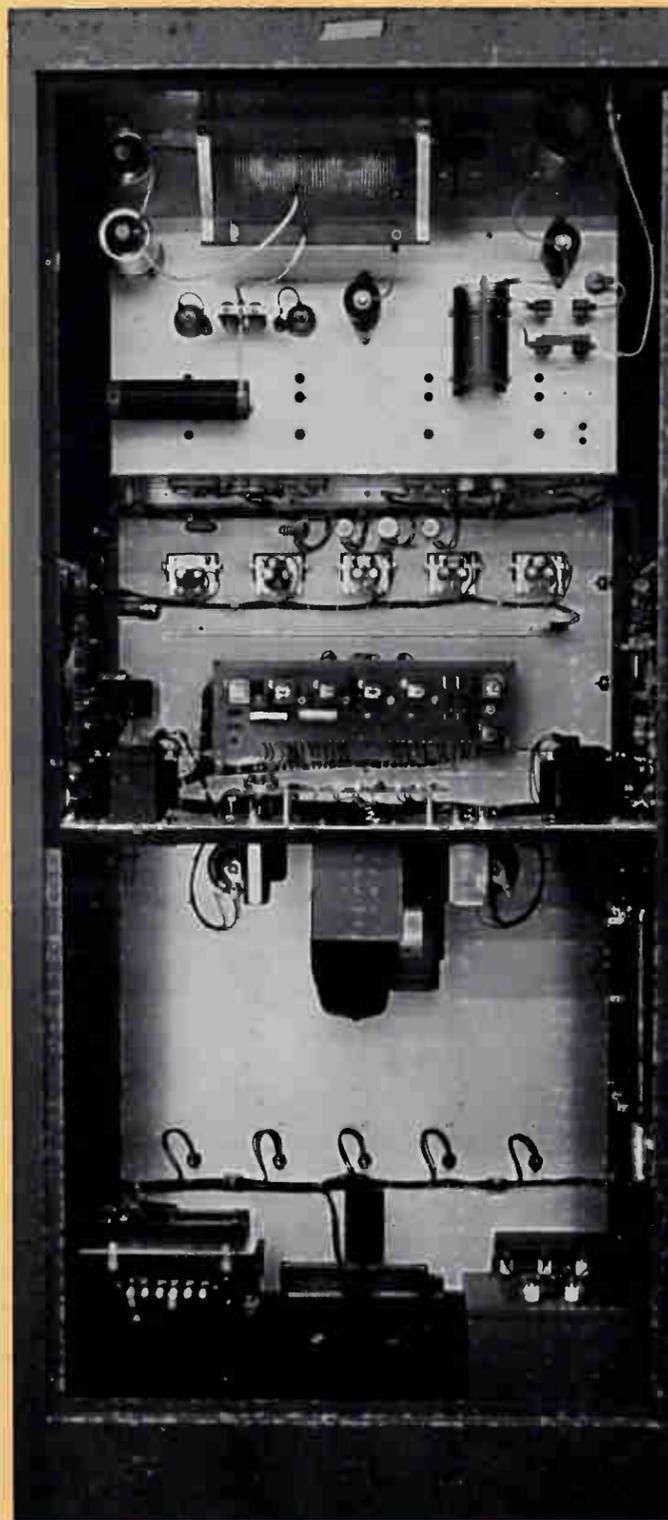
OPTIONAL EQUIPMENT: (factory installed)

- RMK-1 Remote Control Kit, including control relay assembly and motor rheostat.
- CVT Constant Voltage Transformer to maintain filament and low voltage supplies within $\pm 1\%$. SPECIFY 50 or 60 Hz.

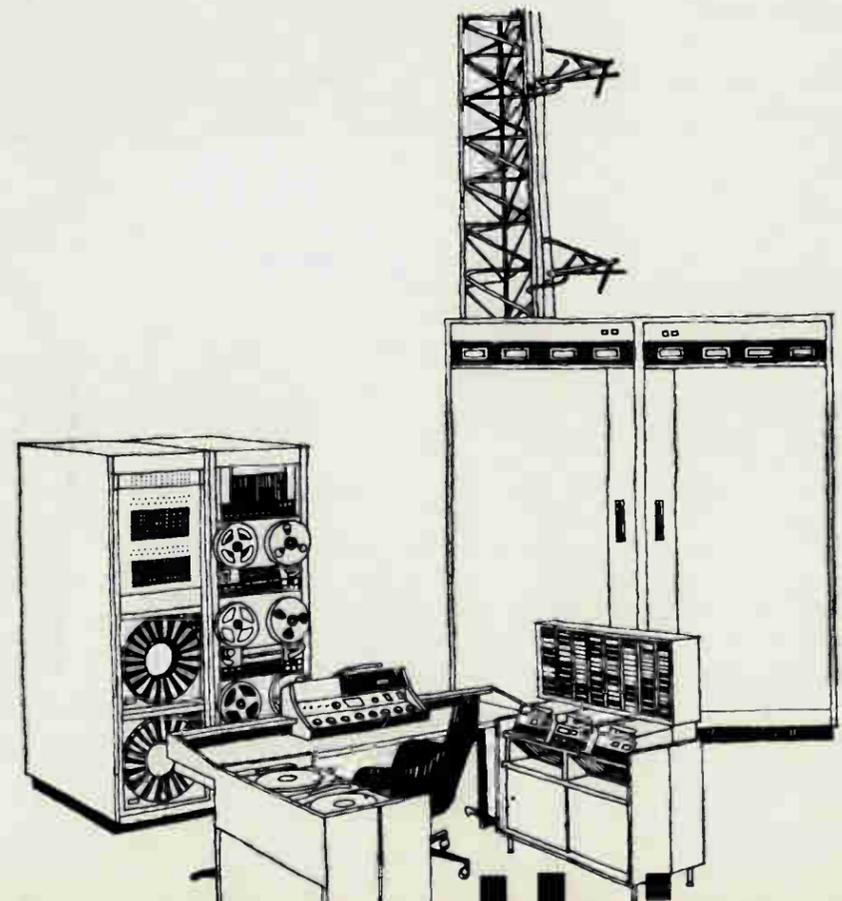
MODEL 701 SIMPLIFIED BLOCK DIAGRAM



The simple, straightforward engineering design of the new Model 701 is illustrated even in the classically simple layout of the front panel. The panel below the tubes and meters drops down for easy access. On its face are the "tally lights," which tell the engineer at a glance where his overload problem may have occurred, even though the automatic reset has returned the transmitter to the air.



The blower which supplies air to the pressurized upper case is actually adequate to cool a 5kw transmitter! And notice the room for maintenance ease, which was an integral part of the design concept for the 701. The big oil-filled modulation transformer is in the lower right hand corner of the transmitter case.



everything



SPARTA ELECTRONIC CORPORATION
 5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828 (916) 383-5353
 A DIVISION OF COMPUTER EQUIPMENT CORPORATION

701 AM TRANSMITTER



UNLIKE ORDINARY TRANSMITTERS



5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488

CENTURY SERIES TAPE CARTRIDGE EQUIPMENT

001-4510	Monaural Playback Module	430.00
001-4515	Monaural Playback Module w/Aux Cue	460.00
001-4520	Stereo Playback Module	530.00
001-4525	Stereo Playback Module w/Aux Cue	560.00
001-4610	Monaural Record/Playback System	660.00
001-4615	Monaural Record/Playback System w/Aux Cue	720.00
001-4620	Stereo Record/Playback System	880.00
001-4625	Stereo Record/Playback System w/Aux Cue	940.00
001-4710	Monaural Record Module	230.00
001-4715	Monaural Record Module w/Aux Cue	260.00
001-4720	Stereo Record Module	380.00
001-4725	Stereo Record Module w/Aux Cue	410.00
001-4810	Single Flip-Top Module Cover	15.00
001-4820	Dual Flip-Top Module Cover	18.00
001-4830	Triple Module Rack Mount Housing	45.00
001-4840	Quad Module Custom Cabinet	75.00
001-4850	Matching Blank Panels for #4830 & #4840	8.00

NOTE: Aux Cue Option is NAB 150Hz End-Of-Message Tone.

CD-15	Time Delay	450.00
M-1200TD	3-10 sec. Delay Cartridge	7.50
BP-22C	Briefcase Playback	195.00

TAPE CARTRIDGE ACCESSORIES

CR-80	Revolving Cartridge Rack	65.00
CR-120	Revolving Cartridge Rack	85.00
CR-100	Wall Cartridge Rack	65.00
CE-2	Bulk Reel/Cartridge Eraser	45.00
AL-1	Head Alignment Cartridge	6.50
DM-200	Head Demagnetizer	6.95
AG-2	Alignment Gauge	7.50
HM-2P	Head Mount (Playback)	20.00
HM-2RP	Head Mount (Record/Playback)	25.00

AUDIO CONSOLES & ACCESSORIES

AS-40B	8 Mixer stereo	1770.00
AS-40B-1	8 Mixer stereo with external MAS-50 & SM-3	1995.00
A-20B	8 Mixer Monaural Dual Capability	1395.00
EP-20	Extender Panel Cabinet for A-20B	210.00
A-15B	5 Mixer Monaural	650.00
EP-15	Extender Panel Cabinet for A-15B	210.00
A-16R	5 Mixer Dual Monaural (Rack Mount)	1250.00
AS-30B	5 Mixer Stereo	850.00
EP-30/40	Extender Panel Cabinet for AS-30B & AS-40B	250.00
1018	Installed or spare Preamplifier	29.50
RA-1	Utility Microphone/Line Amplifier	95.00
RA-4	4 Channel, AC/Battery Remote Amplifier	250.00
AC-155B	5 Mixer Studio/Remote	1450.00
ASC-305B	5 Mixer Stereo Studio/Remote	1750.00
BL-5	Bench-Lid Combination	85.00
MIC-5	Microphone with Custom Mounting	65.00
US-5	Top-Mounted Utility Shelf	75.00
MA-25	25 Watt Monitor Amplifier	150.00
MAS-50	50 Watt Stereo Monitor Amplifier	210.00
MA-25Q	25 Watt Stereo Monitor/Cue Amplifier	195.00
MAS-50Q	50 Watt Stereo Monitor/Cue Amplifier	255.00
SM-3	Muting & Relay Accessory	45.00

NOTE: All SPARTA Consoles, Extender Panels and Audio Control systems may be ordered with precision Step Attenuators in place of the Standard Mixing Control. Orders should clearly state this preference. The additional cost of this option is \$20 per channel for monaural and \$30 for Stereo equipment, which includes credit for the standard control.

TURNTABLE & ACCESSORIES

GT-12-4P	12" Custom; 4-Pole Motor	170.00
GT-12-SY	12" Custom; Sync. Motor	195.00
TEP-3M	Monaural Equalized Preamplifier	98.00
TEP-3S	Stereo Equalized Preamplifier	149.00
ST-220	Tone Arm (Less Cartridge)	39.50
M44C	Phono Cartridge (Stereo/Mono) includes N44C	17.95
N44C	Stylus for M44C	9.75

SHOWCASE CONTROL ROOM CABINETRY

101-1	Console Desk	225.00
101-1-3	Console Hood for A-20 & AS-40 with Speaker & Digital Clock	100.00
101-1-4	Digital Clock for custom mounting	45.00
101-1-4B	Digital Clock with housing	55.00

101-3-4	Dual Turntable Return (For 2 GT or equal)	250.00
101-3-5	Dual Utility Return	265.00
101-3-1	Rack Bracket Kit for 101-3	8.00
101-6	Cartridge Storage Hutch for 101-3-5	135.00
101-7	Single Turntable Return (For 1 GT or equal)	170.00

SHOWCASE PACKAGE SPECIALS

GROUP #1	8-mixer Console with Console Desk, Hood with Digital Clock & Monitor/Cue Speaker, Microphone, Dual Turntable Pedestal with SPARTA GT-12 Series Custom Turntable Systems	Monaural 2,600.00 Stereo 3,400.00
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GROUP #2	All of Group #1, plus Dual Utility Return Pedestal with Cartridge Hutch.	Monaural 2,900.00 Stereo 3,700.00
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GROUP #3	All of Group #1 & #2, plus a SPARTA Century Series Tape Cartridge System of two Playbacks and one Record/Playback	Monaural 4,400.00 Stereo 5,600.00
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AM TRANSMITTERS

701	(1000/500/250W) (Any two powers)	6,500.00
703	(3000W)	11,500.00
705	(5000/1000/500W) (Any two powers)	21,000.00
710	(10,000W)	24,000.00
715	(15,000W)	27,500.00
725	(25,000W)	62,500.00

(Two Crystals and two Oscillators are included in all AM Transmitters)

FM TRANSMITTERS

660	(10W)	2,950.00
661	(Stereo Generator)	1,295.00
662	(SCA Generator)	595.00
600	(250W)	5,750.00
600T	(250W; mono Tube Exciter)	3,850.00
601	(1,000 W)	7,650.00
602	(2,500 W)	10,500.00
603A5	(5,000 W)	15,500.00
620	(20,000 W)	28,500.00

(Spare oven and crystal included in all FM Transmitters)

MONITORS - AM

AMM-1	Frequency & Modulation Monitor	1,500.00
TBM-8000	Frequency Monitor	975.00
TBM-8500	Modulation Monitor	850.00

MONITORS - FM

FMM-1	Frequency & Modulation Monitor	1,550.00
FMS-1	Frequency & Modulation Monitor (Stereo)	1,350.00
SCM-1	Frequency & Modulation Monitor (SCA)	1,250.00
TBM-3700	Frequency & Modulation Monitor	1,350.00
TBM-3500A	Modulation Monitor	1,000.00
TBM-3000A	Frequency Monitor	975.00
TBM-4500A	Modulation Monitor Stereo	2,200.00
TBM-4000A	Modulation Monitor - SCA	2,200.00
TBM-2000A	Frequency & Modulation Monitor 1-SCA	1,200.00
TBM-2200	Stereo Modulation Monitor	1,200.00
TBM-1000A	FM Relay Receiver	300.00
TBM-2500C	RF Amplifier	485.00
RFA-1	RF Amplifier	400.00

ANTENNA COUPLING EQUIPMENT

ACU-300	(1KW)	595.00
ACU-301	(1KW) Deluxe	750.00
ACU-305	(5 KW)	1,100.00
ACU-310	(10 KW)	1,450.00
LC-3	Lighting Choke (3 wire)	115.00
RMD-1	Remote Diode	35.00
JIC-3-1/8	A M/FM Isocoupler (30 KW)	2,150.00
JIC-1-5/8	AM/FM Isocoupler (7.5KW)	1,550.00

ACCESSORIES

RMC-2AX (10)	10 Channel Remote Control	1,095.00
RMC-2AX (24)	24 Channel Remote Control	1,645.00
PBR-30AW	Remote Control - single AC pair	2,585.00
PBR-30AR	Remote control - radio STL	2,735.00
380	Phase Sampler	165.00
FIM-21	Field Intensity Meter (solid-state)	1,150.00
AM-19	Phase Monitor, Two Tower (add \$70.00 for each additional tower)	1,495.00
3005	Dummy Load 5 KW Modulated	450.00
3010	Dummy Load 10 KW Modulated	650.00

JAMPRO "PENETRATOR" FM ANTENNA
Circularly polarized 10KW per bay 3 1/8" line

JSCP-1	1 Bay, 0.46/0.46 power gain	1,250.00
JSCP-2	2 bay 1.0/1.0 power gain	1,890.00
JSCP-3	3 bay 1.5/1.5 power gain	2,730.00
JSCP-4	4 bay 2.1/2.1 power gain	3,570.00
JSCP-5	5 bay 2.7/2.7 power gain	4,410.00
JSCP-6	6 bay 3.2/3.2 power gain	5,150.00
JSCP-7	7 bay 3.8/3.8 power gain	6,190.00
JSCP-8	8 bay 4.3/4.3 power gain	6,750.00
JSCP-10	10 bay 5.5/5.5 power gain	8,820.00
JSCP-12	12 bay 6.6/6.6 power gain	10,300.00
JSCP-14	14 bay 7.8/7.8 power gain	12,280.00
JSCP-16	16 bay 8.9/8.9 power gain	13,550.00

Deicers, if any, add \$180/bay plus \$85 for Control Circuit

JAMPRO "PERFORMER" FM ANTENNA
Elliptically polarized 1 KW per bay 1 5/8" line

JLCP-1	1 bay 0.45/0.45 power gain	650.00
JLCP-2	2 bay 0.95/0.95 power gain	1,200.00
JLCP-3	3 bay 1.5/1.5 power gain	1,800.00
JLCP-4	4 bay 2.05/2.05 power gain	2,400.00
JLCP-5	5 bay 2.60/2.60 power gain	3,000.00
JLCP-6	6 bay 3.15/3.15 power gain	3,600.00
JLCP-7	7 bay 3.65/3.65 power gain	4,300.00
JLCP-8	8 bay 4.2/4.2 power gain	4,800.00

Deicers, if any, add \$120/bay plus \$85 for Control Circuit

JAMPRO "BRUTE" FM ANTENNA
Circularly polarized 20KW per bay 6 1/8" line

JHCP-3	3 bay 1.5/1.5 power gain	5,800.00
JHCP-4	4 bay 2.1/2.1 power gain	8,100.00
JHCP-6	6 bay 3.2/3.2 power gain	11,300.00
JHCP-8	8 bay 4.3/4.3 power gain	14,900.00
JHCP-10	10 bay 5.5/5.5 power gain	18,640.00
JHCP-12	12 bay 6.6/6.6 power gain	21,000.00
JHCP-14	14 bay 7.8/7.8 power gain	24,560.00

Deicers, if any, add \$240/bay plus \$160 for Control Circuit

SPARTA-MATION

1052	Automatic Program Controller: 10 regular audio channels (mono or stereo) plus net & fill music inputs. 52 overlapping events. Solid-state silence sensor. 8 3/4" custom rack housing with sliders.	2,350.00
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FX-52	Format Expander: Provides an additional 52 event format; using identical program board as 1052 Controller. Several FX-52's can be used with a single 1052 Program Controller. 8 3/4" rack space.	800.00
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25-SEN	25 Hz Sensor/Filter: A highly selective amplifier & relay driver, including active high-pass filters to remove 25 Hz tones from program audio. 3 1/2" rack panel.	
	Mono	325.00
	Stereo	350.00

LAM-1	Line Amplifier/Monitor Panel: VU meter and audio monitoring of program and cue levels. Optional built-in monitor amplifier. 3 1/2" rack space.	
	Line Amp (mono)	345.00
	(stereo)	445.00
	Monitor Amp (mono)	50.00
	(stereo)	100.00

DC-24	Digital Clock & Predetermining Switch Panel: a 24 hour clock with pushbutton decade switches. Provides an accurate timing source & switching signals to join & leave network at exact second selected. 3 1/2" rack space apiece.	1,495.00
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25-OSC	25 Hz Oscillator/Filter: Generates accurate 25 Hz tones for recording end cues on tape selections. Includes filters to remove low frequency components from program material. 3 1/2" rack mounting.	
	Mono	350.00
	Stereo	375.00

RRM-25	Remote Reel-to-Reel Record Control: Provides remote control of Metrotech reel-to-reel tape recorder & 25-SEN Oscillator. Time delay circuits assure ease of recording & accurate spacing between selections. Table-top enclosure & 25' cable included.	210.00
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TA-581	Time Announcer: Dual cartridge, for odd/even 7.5 ips announcements. One cartridge always ready. Supplied with sliders. Requires rack with front and rear rails. 7" rack space.	1,250.00
RS 124	Mono cartridge Carousel for random or sequential operation of up to 24 tape cartridges. Includes decoder output for automatic logging systems. (19 1/4" Rack Panel)	1,500.00
RS 224	Stereo cartridge Carousel	1,650.00
RS-100B	Random Cartridge Access: Preselects 100 cartridge events. Provides control & audio switching for 1 random and 1 sequential Carousel into a single audio input of the Program Controller. Requires 21" rack space.	1,495.00
RS-4100	Random Cartridge Access: Selects 100 cartridge events from four Carousels. Overlap audio switching into single input of Program Controller. Digital readouts. Supplied with sliders. Requires rack with front and rear rails. 10 1/2" rack space.	2,495.00

For complete pricing of SPARTA-MATION Systems & a variety of tape devices available, contact your representative or the factory.

REEL TAPE RECORDERS

A-1200	7" reel, 2 or 4 Track, Mono/Stereo	329.50
A-1230	7" reel, 2 or 4 Track, Mono/Stereo	399.50
3300	10 1/2" reel, 2 or 4 Track, Mono/Stereo	549.50
7030 SL	10 1/2" reel, 2 Track, 7 1/2 - 15 I.P.S. Mono/Stereo	949.50
MF-70	Rack Mount Adaptor for 7030 SL	30.00
CT-700	Floor Console Cabinet for 7030 SL	144.00
RC-701	Remote Control for 7030 SL	52.00
1302/4	Revox A77-Mk III 2 or 4 Track Mono/Stereo	649.00
SSP	Stainless Steel face-plate for A77	10.00
13-R	19" Rackmount Adaptor for A77	15.00
FT-HS	Full-Track Mono at 7 1/2 - 15 ips Mod. for A77	200.00
531R	10 1/2" reel full-track, Mono	1,695.00
543R	10 1/2" reel 2-Track, Stereo	1,995.00
M/S-280	10 1/2" reel (motion sense) full track	2,450.00
M/S-280-2	10 1/2" reel (motion sense) 2-track Stereo	3,100.00

All Equipment is 117 Volts, 60 Hz Standard. Others are available.

Terms: Sparta-Charge; Open-Account; Conditional Sale Contract or Lease/Purchase Agreement up to five years. All prices are F.O.B. Sacramento

Factory Sales/Service (916) 383-5353
Telex 377-488
Sacramento, California 95828

All equipment items and descriptions in this brochure are necessarily condensed and do not completely show the many other broadcast products supplied by SPARTA. For more information about professional quality Reel-to-Reel Tape Recorders, Tone Arms and Cartridges, Microphones, AM and FM transmitters available through SPARTA, contact your SPARTAMAN sales engineer or the sales office of SPARTA ELECTRONIC CORPORATION.

Our policy is one of continual improvement in design and manufacture; and therefore, we reserve the right to change prices, specifications and design without notice.

No order is binding upon SPARTA ELECTRONIC CORPORATION until accepted in writing from the SPARTA home office in Sacramento, California.



BROADCAST EQUIPMENT PRICE SCHEDULE

APRIL 1, 1972



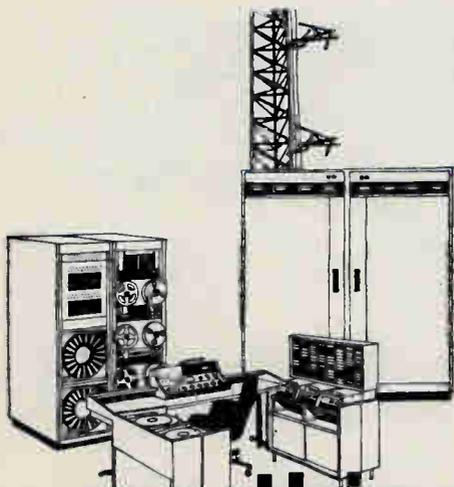
SPARTA ELECTRONIC CORPORATION

5051 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828 (916) 383-5353

A DIVISION OF COMPUTER EQUIPMENT CORPORATION

SPARTA
Electronic Corporation

QUICK REFERENCE PRODUCT BROCHURE



everything



SPARTA ELECTRONIC CORPORATION

5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828 (916) 383-5353

A DIVISION OF COMPUTER EQUIPMENT CORPORATION

SPARTA-MATION SYSTEMS & DEVICES GIVE YOU COMPLETE PROGRAMMING CONTROL

SPARTA-MATION systems offer more realistic value than any other, and are available on attractive financing programs. They have been developed by people with years of successful broadcasting experience. Stations throughout the world are improving their programming and increasing their profits with reliable, modern SPARTA-MATION. Any number of different programming formats can be accommodated, and your system can include automatic network joining, program logging and remote control. SPARTA-MATION devices can be used with, and will interface with, almost any system.

SHOWCASE SERIES AUDIO CONTROL ROOM CABINETRY

The efficiency and appearance of your existing studio arrangement can be greatly enhanced by one or more individual "Showcase" cabinets. A rich, quality studio look without custom cost can also be yours; several "Showcase" groups, including equipment, are offered by SPARTA at special package prices. The modular concept gives mix-or-match versatility from among the wide selection of cabinet pieces to create THE audio control center to fit nearly any requirement. In the "Showcase" selection, fine furniture craftsmanship has been combined with long lasting, easy-maintenance durability.



MONAURAL AND STEREO STUDIO CONTROL & REMOTE UNITS

MODEL AC-155B. A versatile monaural audio control center that combines maximum operational flexibility with professional quality in any location. A semi-permanent installation can become mobile at a moment's notice and enable you to cover more assignments and to produce added station revenue.

MODEL ASC-305B. A full-facility stereo audio control center that is tailor-made for production room chores, main control, or remote broadcast assignments. The equipment cabinet is of exceptionally fine construction and distinctive design with a very rugged and durable bonded plastic laminate finish. Accessories include a protective bench/lid, top-mounted utility shelf and professional dynamic microphone with special gooseneck mounting.



5-CHANNEL MONAURAL & STEREO CONSOLES

MODEL A-15B. Select five audio inputs at a time from the 14-source capability of this modestly priced professional quality console. Outstanding features include all-channel cue system, monitor amplifier, and muting delays.

MODEL AS-30B. Accommodates nine stereo sources with identical line amplifiers in both program and audition outputs, allowing different stereo programming to be controlled at the same time. Stereo mixing versatility unmatched by any other in its class.



EXTENDER PANEL CABINETS FOR 5 & 8-CHANNEL CONSOLES

MODELS EP-15B, 20B, 30B, and 40B. Five additional mixing channels may be added to your SPARTA console now or later with one of the Extender Panel cabinet series. Input configurations of each EP model are identical to the console for which it is designed. Adding the appropriate EP cabinet is a simple task and gives an attractive factory look. Plenty of free panel space to add individual custom features, and you can add it to either the right or left of your existing SPARTA console as desired. Input connectors to the EP from the main console are through rear panel barrier strips, so front or rear, the EP cabinet matches your attractive SPARTA console!



1000/500/250 WATT AM TRANSMITTER

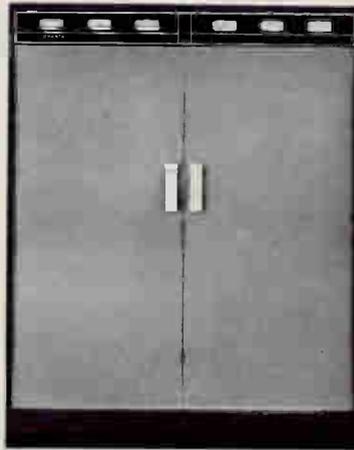
MODEL 701. The 701 has kept all of the plus features of its famed predecessor, the 707. The vacuum capacitor final tank tuning, built-in dummy antenna and oil filled modulation transformer. New are the "tally light" system and



solid state oscillator section. The 701 provides such quality AM broadcast performance that SPARTA expects it to beat the former champion, the Model 707 which is in use in more than 400 stations around the world!

5,000 AND 10,000 WATT AM TRANSMITTERS

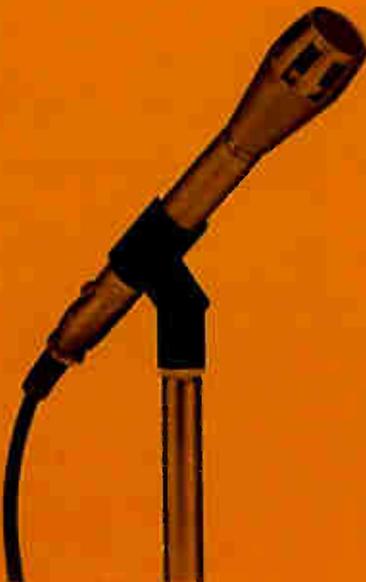
The Model 705 really "loafs" at 5000 watts. Reserve performance was SPARTA-designed to give finest asymmetrical modulation and long trouble-free tube life. Both the 705 and 710 are "tally light" equipped; after the transmitter has recovered automatically from an overload outage, the tally light tells the engineer where the overload occurred. The 705 is up to date with every engineering advance, producing a signal that punches into your secondary coverage with clarity and authority.



The 710 uses a larger power supply and modulation transformer and reactor than the outwardly similar 705. At either power this compact AM transmitter gives your station every modern development in technology that is truly useful, without overly complicating the circuitry. Oil filled modulators are square wave-tested, low-distortion, giving outstanding transient response. Here are 10,000 USEFUL AM watts performance with a reasonable SPARTA price tag.

... AND everything IN BETWEEN ... (INCLUDING 100% FINANCING)

With SPARTA'S modern, comprehensive product lines of Audio, Automation and Transmitter products and accessories, this short form catalog can no more than indicate to you the RANGE covered in total. In brief, SPARTA can supply every item from microphone and stylus to transmitter, tower and antennas. Limiters, amplifiers, speakers, complete custom cabinetry, STL or wire links, tower lights - SPARTA can fill your requirements with exactly matched systems that save you time, trouble and money. More detailed information is available in individual Product Guides, and in our Catalog and Price Schedule. We invite your further inquiry.



SPARTA ELECTRONIC CORPORATION

5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828 (916) 383-5353

A DIVISION OF COMPUTER EQUIPMENT CORPORATION

8-CHANNEL MONAUREL & STEREO CONSOLES

MODEL A-20B. The A-20B is today's finest 8-mixer, full facility, monaural audio console. Contemporary styling and advanced solid-state design have made the A-20B more compact than any other comparable console — yet it does the job of consoles twice its size and price!

MODEL A-40B. Crystal clarity, trouble free performance and VALUE are yours in stereo broadcasting with the new AS-40B. Incorporating the latest state-of-the-art design, it is built for reliability you can depend on! It's big enough to handle ANY stereo broadcasting assignment, at a price far less than you might expect.



RACK-MOUNTING DUAL CHANNEL MONAURAL CONSOLE

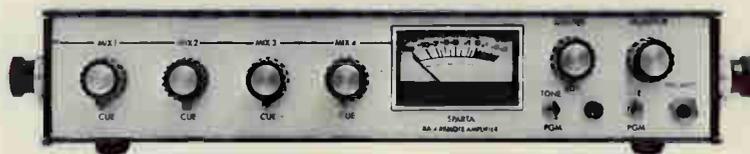


MODEL A-16R. This mixer, compact enough to fit neatly into video consoles, easily handles audio requirements from several studios simultaneously. Its dual channel output even gives identical crystal clear handling to different programming at one time. In its standard rack mount, or handsome optional custom cabinet, the A-16R's fifteen-input capability with push-button control gives fast and flexible handling for TV, CCTV and CATV audio. A wise investment at its modest price.

REMOTE BROADCAST MIXER AND LINE AMPLIFIER

MODEL RA-4. The neatest and most solid 4-channel remote mixer on the market. Its four channels accept microphone or line level inputs, and each has headphone-monitored cue. Two RA-4 units can be connected in series for double duty. Full-capacity console, operating AC or from self-contained batteries.

MODEL RA-1. This inexpensive little line or utility microphone remote amplifier features a fully integrated circuit design! Current drain is extremely low for a lifetime of dependable, trouble-free operation in your many general purpose applications.





CENTURY SERIES TAPE CARTRIDGE MODULAR SYSTEMS



Playback and record modules, in this unique and innovative system, are of identical size — allowing the great number of mounting configurations shown here, plus as many others as your station's needs and ingenuity can find. The rack mount housing accepts three modules and takes only SEVEN inches of rack space. In every case, space occupied by a playback module in these pictures can be occupied by a record amplifier module. Thus a triple rack mount housing can contain a record-playback system plus a playback module, or three playbacks only. Audio switching is built-in, allowing absolutely "popless" starts, and several playback modules to be connected to a single mixer channel without separate isolation equipment. The record amplifier module provides selection of THREE high-level audio inputs. Its meter monitors recording level, cue tone, or bias.

Size and cost of the CENTURY SERIES systems have been reduced through SPARTA'S use of the very latest engineering techniques, with resulting unrivaled flexibility and reliability.

TURNTABLE SYSTEMS & ACCESSORIES

MODEL GT-12 CUSTOM. The distinctive orange "power paddle" of the two-speed GT-12 enables the operator to cue records with one hand more conveniently than ever before. Operator convenience is emphasized throughout; speed indicators stay lit until the turntable is shifted to neutral, change record types with no adaptor or moving parts, and change speeds with minimal movement. Complete systems from SPARTA include floor cabinets, tone arms, pickup cartridges, and equalized mono or stereo preamps.

MODEL ST-220 TONEARM. A top-quality 12-inch tonearm which at a glance tells you it's PROFESSIONAL. Light alloy construction, with every adjustment necessary to insure maximum mono or stereo performance.



LOW POWER FM TRANSMITTER & EXCITER



MODEL 660. The Model 660 is the solid-state heart of every SPARTA FM transmitter. It is shown (right) complete with its plug-in stereo and SCA modules. Its rating is 10 watt direct carrier FM, although its full capability is up to 15 watts. Alternate uses are for educational FM broadcasting, or FM band STL.



MODEL 600 250 WATTS. The simple, straightforward Model 600 produces a top-quality FM signal with either the 660 exciter, or more economical M-10/FM tube-type monaural exciter. For low-power or standby use, the Model 600 is unmatched in value.

MEDIUM POWER FM TRANSMITTERS

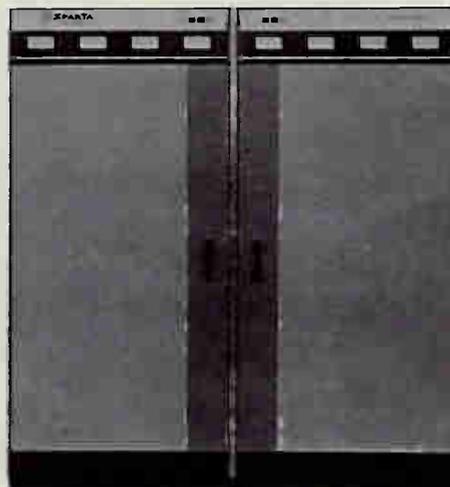
MODEL 602 2500 WATTS. Stereo and SCA operation are yours if desired, at full Class A FM signal strength with the Model 602. The "Stripline" final amplifier gives proven reliability; there are no moving contacts or expensive cavities. In fact, this SPARTA design makes the most economical package for full power Class A broadcasting; the 1.5 gain of a 3-bay antenna with the 602 provides what competing transmitters need 4 bays to accomplish.



MODEL 603A5 5000 WATTS. Not a scaled-up or scaled-down version of anything else! The 603A5 is fully designed for primary operation at 5,000 watts — resulting in the smallest self-contained 5 kw FM transmitter available. Metering is complete, and all remote control facilities are included in the basic price. Uncluttered layout and straightforward design, with swingout front panel for easy access, make the 603A5 a pleasure for the engineer.

HIGH POWER FM TRANSMITTER

MODEL 620 20,000 WATTS. Here is the transmitter that introduced the "Stripline" final stage concept to broadcasting! In fact, the "Stripline" driver of the 620 uses only about 1/3 of its capacity at 20,000 watts; the remaining power can be used to drive another 620 for a 40,000 watt total output. Optimum performance up to 23,000 watts is possible without continual



knob-tweaking adjustments. The broadband final amplifier tunes to exactly where you want it and STAYS there. The "tally light" fault locator system so popular on SPARTA'S AM transmitters has been engineered into the 620 also. Automatic Power Control assures operation within FCC tolerances, in addition to a high VSWR protection system.

CENTURY SERIES TAPE CARTRIDGE EQUIPMENT

001-4510	Monaural Playback Module	430.00
001-4515	Monaural Playback Module w/Aux Cue	460.00
001-4520	Stereo Playback Module	530.00
001-4525	Stereo Playback Module w/Aux Cue	560.00
001-4610	Monaural Record/Playback System	660.00
001-4615	Monaural Record/Playback System w/Aux Cue	720.00
001-4620	Stereo Record/Playback System	880.00
001-4625	Stereo Record/Playback System w/Aux Cue	940.00
001-4710	Monaural Record Module	230.00
001-4715	Monaural Record Module w/Aux Cue	260.00
001-4720	Stereo Record Module	380.00
001-4725	Stereo Record Module w/Aux Cue	410.00
001-4810	Single Flip-Top Module Cover	15.00
001-4820	Dual Flip-Top Module Cover	18.00
001-4830	Triple Module Rack Mount Housing	45.00
001-4840	Quad Module Custom Cabinet	75.00
001-4850	Matching Blank Panels for #4830 & #4840	8.00

NOTE: Aux Cue Option is NAB 150Hz End-Of-Message Tone.

CD-15	Time Delay	450.00
M-1200TD	3-10 sec. Delay Cartridge	7.50
BP-22C	Briefcase Playback	195.00

TAPE CARTRIDGE ACCESSORIES

CR-80	Revolving Cartridge Rack	65.00
CR-120	Revolving Cartridge Rack	85.00
CR-100	Wall Cartridge Rack	65.00
CE-2	Bulk Reel/Cartridge Eraser	45.00
AL-1	Head Alignment Cartridge	6.50
DM-200	Head Demagnetizer	6.95
AG-2	Alignment Gauge	7.50
HM-2P	Head Mount (Playback)	20.00
HM-2RP	Head Mount (Record/Playback)	25.00

AUDIO CONSOLES & ACCESSORIES

AS-40B	8 Mixer stereo	1770.00
AS-40B-1	8 Mixer stereo with external MAS-50 & SM-3	1995.00
A-20B	8 Mixer Monaural Dual Capability	1395.00
EP-20	Extender Panel Cabinet for A-20B	210.00
A-15B	5 Mixer Monaural	650.00
EP-15	Extender Panel Cabinet for A-15B	210.00
A-16R	5 Mixer Dual Monaural (Rack Mount)	1250.00
AS-30B	5 Mixer Stereo	850.00
EP-30/40	Extender Panel Cabinet for AS-30B & AS-40B	250.00
I018	Installed or spare Preamplifier	29.50
RA-1	Utility Microphone/Line Amplifier	95.00
RA-4	4 Channel, AC/Battery Remote Amplifier	250.00
AC-155B	5 Mixer Studio/Remote	1450.00
ASC-305B	5 Mixer Stereo Studio/Remote	1750.00
BL-5	Bench-Lid Combination	85.00
MIC-5	Microphone with Custom Mounting	65.00
US-5	Top-Mounted Utility Shelf	75.00
MA-25	25 Watt Monitor Amplifier	150.00
MAS-50	50 Watt Stereo Monitor Amplifier	210.00
MA-25Q	25 Watt Stereo Monitor/Cue Amplifier	195.00
MAS-50Q	50 Watt Stereo Monitor/Cue Amplifier	255.00
SM-3	Muting & Relay Accessory	45.00

NOTE: All SPARTA Consoles, Extender Panels and Audio Control systems may be ordered with precision Step Attenuators in place of the Standard Mixing Control. Orders should clearly state this preference. The additional cost of this option is \$20 per channel for monaural and \$30 for Stereo equipment, which includes credit for the standard control.

TURNTABLE & ACCESSORIES

GT-12-4P	12" Custom; 4-Pole Motor	170.00
GT-12-5Y	12" Custom; Sync. Motor	195.00
TEP-3M	Monaural Equalized Preamplifier	98.00
TEP-3S	Stereo Equalized Preamplifier	149.00
ST-220	Tone Arm (Less Cartridge)	39.50
M44C	Phono Cartridge (Stereo/Mono) includes N44C	17.95
N44C	Stylus for M44C	9.75

SHOWCASE CONTROL ROOM CABINETRY

101-1	Console Desk	225.00
101-1-3	Console Hood for A-20 & AS-40 with Speaker & Digital Clock	100.00
101-1-4	Digital Clock for custom mounting	45.00
101-1-4B	Digital Clock with housing	55.00

101-3-4	Dual Turntable Return (For 2 GT or equal)	250.00
101-3-5	Dual Utility Return	265.00
101-3-1	Rack Bracket Kit for 101-3	8.00
101-6	Cartridge Storage Hutch for 101-3-5	135.00
101-7	Single Turntable Return (For 1 GT or equal)	170.00

SHOWCASE PACKAGE SPECIALS

GROUP #1	8-mixer Console with Console Desk, Hood with Digital Clock & Monitor/Cue Speaker, Microphone, Dual Turntable Pedestal with SPARTA GT-12 Series Custom Turntable Systems	Monaural 2,600.00 Stereo 3,400.00
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GROUP #2	All of Group #1, plus Dual Utility Return Pedestal with Cartridge Hutch.	Monaural 2,900.00 Stereo 3,700.00
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GROUP #3	All of Group #1 & #2, plus a SPARTA Century Series Tape Cartridge System of two Playbacks and one Record/Playback	Monaural 4,400.00 Stereo 5,600.00
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AM TRANSMITTERS

701	(1000/500/250W) (Any two powers)	6,500.00
703	(3000W)	11,500.00
705	(5000/1000/500W) (Any two powers)	21,000.00
710	(10,000W)	24,000.00
715	(15,000W)	27,500.00
725	(25,000W)	62,500.00

(Two Crystals and two Oscillators are included in all AM Transmitters)

FM TRANSMITTERS

660	(10W)	2,950.00
661	(Stereo Generator)	1,295.00
662	(SCA Generator)	595.00
600	(250W)	5,750.00
600T	(250W; mono Tube Exciter)	3,850.00
601	(1,000 W)	7,650.00
602	(2,500 W)	10,500.00
603A5	(5,000 W)	15,500.00
620	(20,000 W)	28,500.00

(Spare oven and crystal included in all FM Transmitters)

MONITORS - AM

AMM-1	Frequency & Modulation Monitor	1,500.00
TBM-8000	Frequency Monitor	975.00
TBM-8500	Modulation Monitor	850.00

MONITORS - FM

FMM-1	Frequency & Modulation Monitor	1,550.00
FMS-1	Frequency & Modulation Monitor (Stereo)	1,350.00
SCM-1	Frequency & Modulation Monitor (SCA)	1,250.00
TBM-3700	Frequency & Modulation Monitor	1,350.00
TBM-3500A	Modulation Monitor	1,000.00
TBM-3000A	Frequency Monitor	975.00
TBM-4500A	Modulation Monitor Stereo	2,200.00
TBM-4000A	Modulation Monitor - SCA	2,200.00
TBM-2000A	Frequency & Modulation Monitor 1-SCA	1,200.00
TBM-2200	Stereo Modulation Monitor	1,200.00
TBM-1000A	FM Relay Receiver	300.00
TBM-2500C	RF Amplifier	485.00
RFA-1	RF Amplifier	400.00

ANTENNA COUPLING EQUIPMENT

ACU-300	(1KW)	595.00
ACU-301	(1KW) Deluxe	750.00
ACU-305	(5 KW)	1,100.00
ACU-310	(10 KW)	1,450.00
LC-3	Lighting Choke (3 wire)	115.00
RMD-1	Remote Diode	35.00
JIC-3-1/8	AM/FM Isocoupler (30 KW)	2,150.00
JIC-1-5/8	AM/FM Isocoupler (7.5KW)	1,550.00

ACCESSORIES

RMC-2AX (10)	10 Channel Remote Control	1,095.00
RMC-2AX (24)	24 Channel Remote Control	1,645.00
PBR-30AW	Remote Control - single AC pair	2,585.00
PBR-30AR	Remote control - radio STL	2,735.00
380	Phase Sampler	165.00
FIM-21	Field Intensity Meter (solid-state)	1,150.00
AM-19	Phase Monitor, Two Tower (add \$70.00 for each additional tower)	1,495.00
3005	Dummy Load 5 KW Modulated	450.00
3010	Dummy Load 10 KW Modulated	650.00

JAMPRO "PENETRATOR" FM ANTENNA
Circularly polarized 10KW per bay 3 1/8" line

JSCP-1	1 Bay, 0.46/0.46 power gain	1,250.00
JSCP-2	2 bay 1.0/1.0 power gain	1,890.00
JSCP-3	3 bay 1.5/1.5 power gain	2,730.00
JSCP-4	4 bay 2.1/2.1 power gain	3,570.00
JSCP-5	5 bay 2.7/2.7 power gain	4,410.00
JSCP-6	6 bay 3.2/3.2 power gain	5,150.00
JSCP-7	7 bay 3.8/3.8 power gain	6,190.00
JSCP-8	8 bay 4.3/4.3 power gain	6,750.00
JSCP-10	10 bay 5.5/5.5 power gain	8,820.00
JSCP-12	12 bay 6.6/6.6 power gain	10,500.00
JSCP-14	14 bay 7.8/7.8 power gain	12,280.00
JSCP-16	16 bay 8.9/8.9 power gain	13,650.00

Deicers, if any, add \$180/bay plus \$85 for Control Circuit

JAMPRO "PERFORMER" FM ANTENNA

Elliptically polarized 1 KW per bay 1 5/8" line

JLCP-1	1 bay 0.45/0.45 power gain	650.00
JLCP-2	2 bay 0.95/0.95 power gain	1,200.00
JLCP-3	3 bay 1.5/1.5 power gain	1,800.00
JLCP-4	4 bay 2.05/2.05 power gain	2,400.00
JLCP-5	5 bay 2.60/2.60 power gain	3,000.00
JLCP-6	6 bay 3.15/3.15 power gain	3,600.00
JLCP-7	7 bay 3.65/3.65 power gain	4,300.00
JLCP-8	8 bay 4.2/4.2 power gain	4,800.00

Deicers, if any, add \$120/bay plus \$85 for Control Circuit

JAMPRO "BRUTE" FM ANTENNA

Circularly polarized 20KW per bay 6 1/8" line

JHCP-3	3 bay 1.5/1.5 power gain	5,800.00
JHCP-4	4 bay 2.1/2.1 power gain	8,100.00
JHCP-6	6 bay 3.2/3.2 power gain	11,300.00
JHCP-8	8 bay 4.3/4.3 power gain	14,900.00
JHCP-10	10 bay 5.5/5.5 power gain	18,640.00
JHCP-12	12 bay 6.6/6.6 power gain	21,000.00
JHCP-14	14 bay 7.8/7.8 power gain	24,560.00

Deicers, if any, add \$240/bay plus \$160 for Control Circuit

SPARTA-MATION

1052	Automatic Program Controller: 10 regular audio channels (mono or stereo) plus net & fill music inputs. 52 overlapping events. Solid-state silence sensor. 8 3/4" custom rack housing with sliders.	2,350.00
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FX-52	Format Expander: Provides an additional 52 event format; using identical program board as 1052 Controller. Several FX-52's can be used with a single 1052 Program Controller. 8 3/4" rack space.	800.00
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25-SEN	25 Hz Sensor/Filter: A highly selective amplifier & relay driver, including active high-pass filters to remove 25 Hz tones from program audio. 3 1/2" rack panel.	
	Mono	325.00
	Stereo	350.00

LAM-1	Line Amplifier/Monitor Panel: VU meter and audio monitoring of program and cue levels. Optional built-in monitor amplifier. 3 1/2" rack space.	
	Line Amp (mono)	345.00
	(stereo)	445.00
	Monitor Amp (mono)	50.00
	(stereo)	100.00

DC-24	Digital Clock & Predetermining Switch Panel: a 24 hour clock with pushbutton decade switches. Provides an accurate timing source & switching signals to join & leave network at exact second selected. 3 1/2" rack space apiece.	1,495.00
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25-OSC	25 Hz Oscillator/Filter: Generates accurate 25 Hz tones for recording end cues on tape selections. Includes filters to remove low frequency components from program material. 3 1/2" rack mounting.	
	Mono	350.00
	Stereo	375.00

REM-25	Remote Reel-to-Reel Record Control: Provides remote control of Metrotech reel-to-reel tape recorder & 25-SEN Oscillator. Time delay circuits assure ease of recording & accurate spacing between selections. Table-top enclosure & 25' cable included.	210.00
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TA-581	Time Announcer: Dual cartridge, for odd/even 7.5 ips announcements. One cartridge always ready. Supplied with sliders. Requires rack with front and rear rails. 7" rack space.	1,250.00
RS 124	Mono cartridge Carousel for random or sequential operation of up to 24 tape cartridges. Includes decoder output for automatic logging systems. (19 1/4" Rack Panel)	1,500.00
RS 224	Stereo cartridge Carousel	1,650.00
RS-100B	Random Cartridge Access: Preselects 100 cartridge events. Provides control & audio switching for 1 random and 1 sequential Carousel into a single audio input of the Program Controller. Requires 21" rack space.	1,495.00
RS-4100	Random Cartridge Access: Selects 100 cartridge events from four Carousels. Overlap audio switching into single input of Program Controller. Digital readouts. Supplied with sliders. Requires rack with front and rear rails. 10 1/2" rack space.	2,495.00

For complete pricing of SPARTA-MATION Systems & a variety of tape devices available, contact your representative or the factory.

REEL TAPE RECORDERS

A-1200	7" reel, 2 or 4 Track, Mono/Stereo	329.50
A-1230	7" reel, 2 or 4 Track, Mono/Stereo	399.50
3300	10 1/2" reel, 2 or 4 Track, Mono/Stereo	549.50
7030 SL	10 1/2" reel, 2 Track, 7 1/2 - 15 I.P.S. Mono/Stereo	949.50
MF-70	Rack Mount Adaptor for 7030 SL	30.00
CT-700	Floor Console Cabinet for 7030 SL	144.00
RC-701	Remote Control for 7030 SL	52.00
1302/4	Revox A77-Mk III 2 or 4 Track Mono/Stereo	649.00
SSP	Stainless Steel face-plate for A77	10.00
13-R	19" Rackmount Adaptor for A77	15.00
FT-HS	Full-Track Mono at 7 1/2 - 15 ips Mod. for A77	200.00
531R	10 1/2" reel full-track, Mono	1,695.00
543R	10 1/2" reel 2-Track, Stereo	1,995.00
M/S-280	10 1/2" reel (motion sense) full track	2,450.00
M/S-280-2	10 1/2" reel (motion sense) 2-track Stereo	3,100.00

All Equipment is 117 Volts, 60 Hz Standard. Others are available.

Terms: Sparta-Charge; Open-Account; Conditional Sale Contract or Lease/Purchase Agreement up to five years. All prices are F.O.B. Sacramento

Factory Sales/Service (916) 383-5353
Telex 377-488
Sacramento, California 95828

All equipment items and descriptions in this brochure are necessarily condensed and do not completely show the many other broadcast products supplied by SPARTA. For more information about professional quality Reel-to-Reel Tape Recorders, Tone Arms and Cartridges, Microphones, AM and FM transmitters available through SPARTA, contact your SPARTAMAN sales engineer or the sales office of SPARTA ELECTRONIC CORPORATION.

Our policy is one of continual improvement in design and manufacture; and therefore, we reserve the right to change prices, specifications and design without notice.

No order is binding upon SPARTA ELECTRONIC CORPORATION until accepted in writing from the SPARTA home office in Sacramento, California.



BROADCAST EQUIPMENT PRICE SCHEDULE

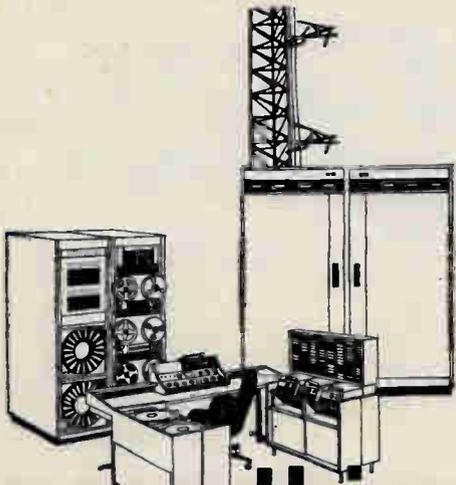
APRIL 1, 1972



SPARTA ELECTRONIC CORPORATION
5051 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828 (916) 383-5353
A DIVISION OF COMPUTER EQUIPMENT CORPORATION

SPARTA
Electronic Corporation

QUICK REFERENCE PRODUCT BROCHURE



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A DIVISION OF COMPUTER EQUIPMENT CORPORATION

SPARTA-MATION SYSTEMS & DEVICES GIVE YOU COMPLETE PROGRAMMING CONTROL

SPARTA-MATION systems offer more realistic value than any other, and are available on attractive financing programs. They have been developed by people with years of successful broadcasting experience. Stations throughout the world are improving their programming and increasing their profits with reliable, modern SPARTA-MATION. Any number of different programming formats can be accommodated, and your system can include automatic network joining, program logging and remote control. SPARTA-MATION devices can be used with, and will interface with, almost any system.

SHOWCASE SERIES AUDIO CONTROL ROOM CABINETRY

The efficiency and appearance of your existing studio arrangement can be greatly enhanced by one or more individual "Showcase" cabinets. A rich, quality studio look without custom cost can also be yours; several "Showcase" groups, including equipment, are offered by SPARTA at special package prices. The modular concept gives mix-or-match versatility from among the wide selection of cabinet pieces to create THE audio control center to fit nearly any requirement. In the "Showcase" selection, fine furniture craftsmanship has been combined with long lasting, easy-maintenance durability.



MONAURAL AND STEREO STUDIO CONTROL & REMOTE UNITS

MODEL AC-155B. A versatile monaural audio control center that combines maximum operational flexibility with professional quality in any location. A semi-permanent installation can become mobile at a moment's notice and enable you to cover more assignments and to produce added station revenue.

MODEL ASC-305B. A full-facility stereo audio control center that is tailor-made for production room chores, main control, or remote broadcast assignments. The equipment cabinet is of exceptionally fine construction and distinctive design with a very rugged and durable bonded plastic laminate finish. Accessories include a protective bench/lid, top-mounted utility shelf and professional dynamic microphone with special gooseneck mounting.



5-CHANNEL MONAURAL & STEREO CONSOLES

MODEL A-15B. Select five audio inputs at a time from the 14-source capability of this modestly priced professional quality console. Outstanding features include all-channel cue system, monitor amplifier, and muting relays.

MODEL AS-30B. Accommodates nine stereo sources with identical line amplifiers in both program and audition outputs, allowing different stereo programming to be controlled at the same time. Stereo mixing versatility unmatched by any other in its class.



EXTENDER PANEL CABINETS FOR 5 & 8-CHANNEL CONSOLES

MODELS EP-15B, 20B, 30B, and 40B. Five additional mixing channels may be added to your SPARTA console now or later with one of the Extender Panel cabinet series. Input configurations of each EP model are identical to the console for which it is designed. Adding the appropriate EP cabinet is a simple task and gives an attractive factory look. Plenty of free panel space to add individual custom features, and you can add it to either the right or left of your existing SPARTA console as desired. Input connectors to the EP from the main console are through rear panel barrier strips, so front or rear, the EP cabinet matches your attractive SPARTA console!



1000/500/250 WATT AM TRANSMITTER

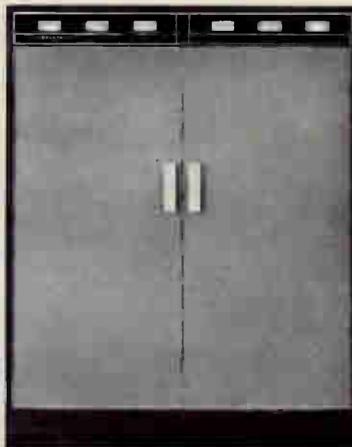
MODEL 701. The 701 has kept all of the plus features of its famed predecessor, the 707. The vacuum capacitor final tank tuning, built-in dummy antenna and oil filled modulation transformer. New are the "tally light" system and



solid state oscillator section. The 701 provides such quality AM broadcast performance that SPARTA expects it to beat the former champion, the Model 707 which is in use in more than 400 stations around the world!

5,000 AND 10,000 WATT AM TRANSMITTERS

The Model 705 really "loafs" at 5000 watts. Reserve performance was SPARTA-designed to give finest asymmetrical modulation and long trouble-free tube life. Both the 705 and 710 are "tally light" equipped; after the transmitter has recovered automatically from an overload outage, the tally light tells the engineer where the overload occurred. The 705 is up to date with every engineering advance, producing a signal that punches into your secondary coverage with clarity and authority.



The 710 uses a larger power supply and modulation transformer and reactor than the outwardly similar 705. At either power this compact AM transmitter gives your station every modern development in technology that is truly useful, without overly complicating the circuitry. Oil filled modulators are square wave-tested, low-distortion, giving outstanding transient response. Here are 10,000 USEFUL AM watts performance with a reasonable SPARTA price tag.

... AND everything IN BETWEEN ... (INCLUDING 100% FINANCING)

With SPARTA'S modern, comprehensive product lines of Audio, Automation and Transmitter products and accessories, this short form catalog can no more than indicate to you the RANGE covered in total. In brief, SPARTA can supply every item from microphone and stylus to transmitter, tower and antennas. Limiters, amplifiers, speakers, complete custom cabinetry, STL or wire links, tower lights - SPARTA can fill your requirements with exactly matched systems that save you time, trouble and money. More detailed information is available in individual Product Guides, and in our Catalog and Price Schedule. We invite your further inquiry.



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A DIVISION OF COMPUTER EQUIPMENT CORPORATION

8-CHANNEL MONAUREL & STEREO CONSOLES

MODEL A-20B. The A-20B is today's finest 8-mixer, full facility, monaural audio console. Contemporary styling and advanced solid-state design have made the A-20B more compact than any other comparable console — yet it does the job of consoles twice its size and price!

MODEL A-40B. Crystal clarity, trouble free performance and VALUE are yours in stereo broadcasting with the new AS-40B. Incorporating the latest state-of-the-art design, it is built for reliability you can depend on! It's big enough to handle ANY stereo broadcasting assignment, at a price far less than you might expect.



RACK-MOUNTING DUAL CHANNEL MONAURAL CONSOLE

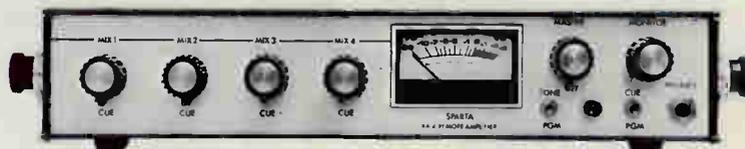


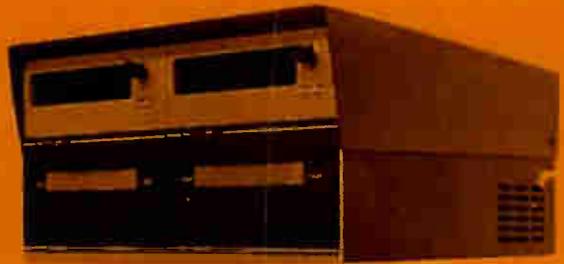
MODEL A-16R. This mixer, compact enough to fit neatly into video consoles, easily handles audio requirements from several studios simultaneously. Its dual channel output even gives identical crystal clear handling to different programming at one time. In its standard rack mount, or handsome optional custom cabinet, the A-16R's fifteen-input capability with push-button control gives fast and flexible handling for TV, CCTV and CATV audio. A wise investment at its modest price.

REMOTE BROADCAST MIXER AND LINE AMPLIFIER

MODEL RA-4. The neatest and most solid 4-channel remote mixer on the market. Its four channels accept microphone or line level inputs, and each has headphone-monitored cue. Two RA-4 units can be connected in series for double duty. Full-capacity console, operating AC or from self-contained batteries.

MODEL RA-1. This inexpensive little line or utility microphone remote amplifier features a fully integrated circuit design! Current drain is extremely low for a lifetime of dependable, trouble-free operation in your many general purpose applications.





CENTURY SERIES TAPE CARTRIDGE MODULAR SYSTEMS



Playback and record modules, in this unique and innovative system, are of identical size — allowing the great number of mounting configurations shown here, plus as many others as your station's needs and ingenuity can find. The rack mount housing accepts three modules and takes only SEVEN inches of rack space. In every case, space occupied by a playback module in these pictures can be occupied by a record amplifier module. Thus a triple rack mount housing can contain a record-playback system plus a playback module, or three playbacks only. Audio switching is built-in, allowing absolutely "popless" starts, and several playback modules to be connected to a single mixer channel without separate isolation equipment. The record amplifier module provides selection of THREE high-level audio inputs. Its meter monitors recording level, cue tone, or bias.

Size and cost of the CENTURY SERIES systems have been reduced through SPARTA'S use of the very latest engineering techniques, with resulting unrivaled flexibility and reliability.

TURNTABLE SYSTEMS & ACCESSORIES

MODEL GT-12 CUSTOM. The distinctive orange "power paddle" of the two-speed GT-12 enables the operator to cue records with one hand more conveniently than ever before. Operator convenience is emphasized throughout; speed indicators stay lit until the turntable is shifted to neutral, change record types with no adaptor or moving parts, and change speeds with minimal movement. Complete systems from SPARTA include floor cabinets, tone arms, pickup cartridges, and equalized mono or stereo preamps.

MODEL ST-220 TONEARM. A top-quality 12-inch tonearm which at a glance tells you it's PROFESSIONAL. Light alloy construction, with every adjustment necessary to insure maximum mono or stereo performance.



LOW POWER FM TRANSMITTER & EXCITER

MODEL 660. The Model 660 is the solid-state heart of every SPARTA FM transmitter. It is shown (right) complete with its plug-in stereo and SCA modules. Its rating is 10 watt direct carrier FM, although its full capability is up to 15 watts. Alternate uses are for educational FM broadcasting, or FM band STL.



MODEL 600 250 WATTS. The simple, straightforward Model 600 produces a top-quality FM signal with either the 660 exciter, or more economical M-10/FM tube-type monaural exciter. For low-power or standby use, the Model 600 is unmatched in value.

MEDIUM POWER FM TRANSMITTERS

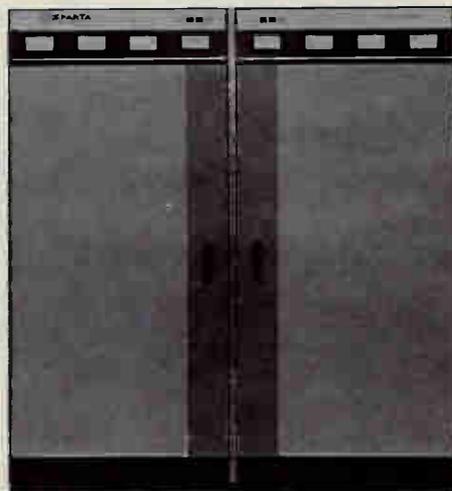
MODEL 602 2500 WATTS. Stereo and SCA operation are yours if desired, at full Class A FM signal strength with the Model 602. The "Stripline" final amplifier gives proven reliability; there are no moving contacts or expensive cavities. In fact, this SPARTA design makes the most economical package for full power Class A broadcasting; the 1.5 gain of a 3-bay antenna with the 602 provides what competing transmitters need 4 bays to accomplish.



MODEL 603A5 5000 WATTS. Not a scaled-up or scaled-down version of anything else! The 603A5 is fully designed for primary operation at 5,000 watts - resulting in the smallest self-contained 5 kw FM transmitter available. Metering is complete, and all remote control facilities are included in the basic price. Uncluttered layout and straightforward design, with swingout front panel for easy access, make the 603A5 a pleasure for the engineer.

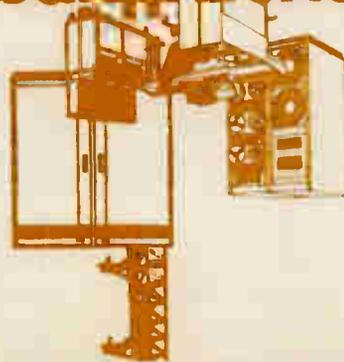
HIGH POWER FM TRANSMITTER

MODEL 620 20,000 WATTS. Here is the transmitter that introduced the "Stripline" final stage concept to broadcasting! In fact, the "Stripline" driver of the 620 uses only about 1/3 of its capacity at 20,000 watts; the remaining power can be used to drive another 620 for a 40,000 watt total output. Optimum performance up to 23,000 watts is possible without continual



knob-tweaking adjustments. The broadband final amplifier tunes to exactly where you want it and STAYS there. The "tally light" fault locator system so popular on SPARTA'S AM transmitters has been engineered into the 620 also. Automatic Power Control assures operation within FCC tolerances, in addition to a high VSWR protection system.

everything



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Signed _____ Title _____ Date _____

Yes, I am interested in upgrading my radio station with new CENTURY SERIES equipment . . . please contact me immediately.

Please rush me further details on the CENTURY SERIES line.

I want to know about the complete Sparta equipment line. Send me information on:

AUDIO products

SPARTAMATION systems

TRANSMITTER products

CENTURY SERIES by SPARTA WAS DESIGNED...

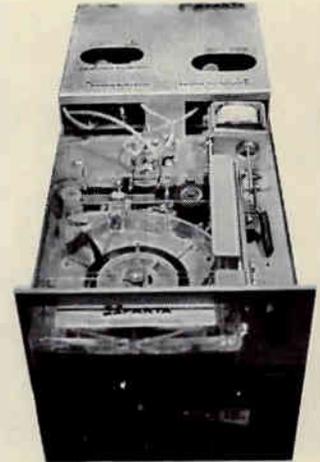
. . . to fit nearly ANY modern radio station! Identical-size playback and record amplifier modules are so compact they fit space available on desk, console table, or in standard racks for control room or production room purposes. Three modules take only SEVEN INCHES of rack space. Four modules stack in a beautiful desk-top cabinet. CENTURY SERIES modules are ultra-compact, yet individually powered. You can make full adjustments by simply raising the lid of desk-top modules, or sliding out rack-mount units. Unsurpassed wow and flutter characteristics result from the low-heat "flutter-filter" drive system. You'll welcome the THREE pushbutton-selected record inputs . . . the built-in audio switcher . . . the quick and quiet starts of NAB standard A cartridges. Check the SPARTA CENTURY SERIES prices; NOT introductory or sale prices . . . but everyday SPARTA prices for top SPARTA quality! **PLAYBACK MODULE JUST \$430!**



(DUAL REC/PB WITH FLIP-TOP COVER)
This desk-top record-playback system, complete with flip-top cover, sells from \$678. The cover is a textured Bittersweet Orange. Light Smoke and deep Leatherette Brown coupled with satin-finish metalwork create a highly attractive face plate on all CENTURY SERIES modules.



(TRIPLE RACK MOUNT WITH REC/PB)
Here is the CENTURY SERIES in one rack mount configuration: Record/Playback System plus one independent playback module. The rack mount is finished in Light Smoke to match the modular face plates. Cost of the unit above, complete, only \$1,135.



(SINGLE PB)

The CENTURY SERIES module (either playback or record-amplifier) is just six inches high by five-and-three-quarters wide. The basic playback module is only \$430. The integrated-circuit Auxiliary Cue Tone detector provides contact closure for an automation signal, as well as giving the operator a visual signal (unmistakable, and so important for a tight board operation!) at end of message.

(QUAD MOUNT...NEW CABINET...ALL PB's)
A compact unit which does a big job for your station completely out of keeping with its modest size! Four CENTURY SERIES playback modules as shown keep the self-lit "Touchbar" switches within sight of the operator, and groups all playbacks together within easy reach. Stereo and monaural units are identical in these respects. Unlike other compact systems, CENTURY SERIES playback modules are independently powered. Each can be removed from the cabinet for use elsewhere simply by unplugging. The built-in audio switcher eliminates the need for separate isolation equipment.



(DUAL PB's WITH FLIP-TOP COVER)
A pair of CENTURY SERIES playback modules packaged in this fashion provide your station with attractive and dependable tape cartridge handling for most of your purposes. A monaural pair, as shown above, cost only \$878. Stereo systems are of course available in the entire series.

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SPARTA
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5851 Florin-Perkins Road
Sacramento, California 95828
Phone (916) 383-5353

Dear Broadcaster:

As you know, service to our customers has always been of prime importance at SPARTA. We are, however, continually searching for new and better ways to further enhance the respected reputation we have enjoyed over the years.

It is now a pleasure for me to introduce you to still another service. It is, I believe, an industry First, and should prove of immeasurable value to broadcasters throughout the country.

It is called **Sparta-Charge** and as the details on the following pages reveal, **Sparta-Charge** will be as easy to use as a regular consumer credit card.

When broadcasters need equipment, parts or services, they need it right now. Air time lost is lost forever. I know from experience that broadcasters cannot afford the frustration and the cost of time-consuming credit checks. Did you ever notice how emergencies invariably occur when cash funds are low and collections are down? I suspect it's happened to **all of us** at one time or another.

Sparta-Charge should alleviate that problem once and for all. I say should because for **Sparta-Charge** to be of benefit to you, the first step must be taken by you. Complete the application and return it. Right now. SPARTA will do the rest.

SPARTA ELECTRONIC CORPORATION

WILLIAM J. OVERHAUSER
President

THE S OF *Sparta-Charge*

- A.** Complete and sign the attached application, fold and staple **where** indicated and deposit in the mail. No postage is needed.
- B.** Place your order for SPARTA professional broadcast products, parts or services through your SPARTA representative or direct **with** our Sacramento National Sales Office.
- C.** You will receive a shipment invoice and you may pay within **30 days** of the invoice date, in which case your account is simply a regular 30 day, no service charge account.

OR

Wait for your monthly *Sparta-Charge* statement, check your account balance and select your minimum payment amount from the *Sparta-Charge* minimum payment schedule.

SPARTA-CHARGE MINIMUM PAYMENT SCHEDULE

Monthly Account Balance	Under \$500	\$501.00 to \$750.00	\$ 751.00 to \$1,000.00	\$1,001.00 to \$1,500.00	\$1,501.00 to \$2,000.00	Account Balance in excess of \$2,000.00
Minimum Monthly Payment	\$50.00	\$ 75.00	\$ 150.00	\$ 300.00	\$ 500.00	Pay 25% of your account Balance

Subject to the minimum, pay as much or as little as you like. It is up to you.

That's it, no fuss or bother, just the ABC's of *Sparta-Charge*. Now with this new SPARTA convenience, there is no need to "make do". You can now order those needed supplies, parts or new equipment, maintain **your** good sound and profitability and pay the simple *Sparta-Charge* way.

Remember — all accounts paid within 30 days of the invoice date incur **no** handling charge. Where applied, the *Sparta-Charge* handling charge is computed by a periodic rate of 1% per month (annual percentage rate of 12%) on a statement balance in excess of \$1,000.00 or more and 1½% per month (annual percentage rate of 18%) under \$1,000.00 which is applied to the unpaid balance after deducting current payments and credits.

DON'T DELAY — JOIN SPARTA-CHARGE TODAY

APPLICATION FOR *Sparta-Charge*

CALL

REFER

LEGAL NAME		<input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> CORPORATION		
MAILING ADDRESS				ZIP CODE
CALL LETTERS	STATION ESTABLISHED (YEAR)	PHONE	AREA CODE	EXT.

How long has present ownership or controlling interests operated the station? _____
 Wholly owned affiliate stations: _____

Call _____ City _____ State _____

Call _____ City _____ State _____

Note others on reverse side.

List below the names and addresses of partners, if incorporated, officers and title.

List below the names, mailing address and branch as well as account number of banks.

NAME	STREET	CITY	STATE	BRANCH	ACCOUNT NUMBER

List below established accounts

NAME	STREET	CITY	STATE	ACCOUNT NUMBER

The purchaser, by accepting merchandise, consents and agrees to all of the following Terms and Conditions. The title and right of possession to all merchandise remains with the seller until the seller has received the full purchase price thereof in cash. If seller institutes legal action against buyer to enforce this contract or any part thereof, buyer agrees to pay such sum as the court may fix as attorneys fees. Credit will not be issued on goods returned unless returned with our consent. Deliveries are made subject to War, Strikes, Acts of God or any other cause beyond our control. Buyer agrees to make minimum monthly payments according to the following schedule, incurring a Handling Charge of 1% per month (annual percentage rate of 12%) on a statement balance in excess of \$1000.00 and 1 1/2% per month (annual percentage rate of 18%) on the unpaid balance under \$1000.00. When payments are made within 30 days of invoice date there shall be no handling charge. In the event that the required minimum monthly payment is not made, the entire account balance shall become immediately due and payable and accrue a past due charge of 1 1/2% per month on the entire balance until paid in full.

SPARTA-CHARGE MINIMUM PAYMENT SCHEDULE

Monthly Account Balance	Under \$500	\$501.00 to \$750.00	\$ 751.00 to \$1,000.00	\$1,001.00 to \$1,500.00	\$1,501.00 to \$2,000.00	Account Balance in excess of \$2,000.00
Minimum Monthly Payment	\$50.00	\$ 75.00	\$ 150.00	\$ 300.00	\$ 500.00	Pay 25% of your account Balance

X

SIGNATURE (OWNER OR CORPORATE OFFICER)

TITLE

DATE

— FOLD HERE —

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***5851 Florin-Perkins Road
Sacramento, California 95828***

— STAPLE HERE —

MODEL EP-15B, 20B, 30B and 40B EXTENDER PANELS FOR SPARTA CONSOLES



With you in mind, and a thought toward your expanding operation, SPARTA engineers have developed the EP Series Extender Panels. They're designed for you, the users of the versatile A-15B, A-20B, AS-30B and AS-40B Consoles. And the nice thing about it, is that they make your expansion inexpensive and convenient with that original factory look. The special customizing and high cost days of console expansion are gone for good with your use of the EP Series Extender Panels.

The Extender Panels will add to any job you're doing . . . and they will add a lot!



SPARTA
ELECTRONIC CORPORATION

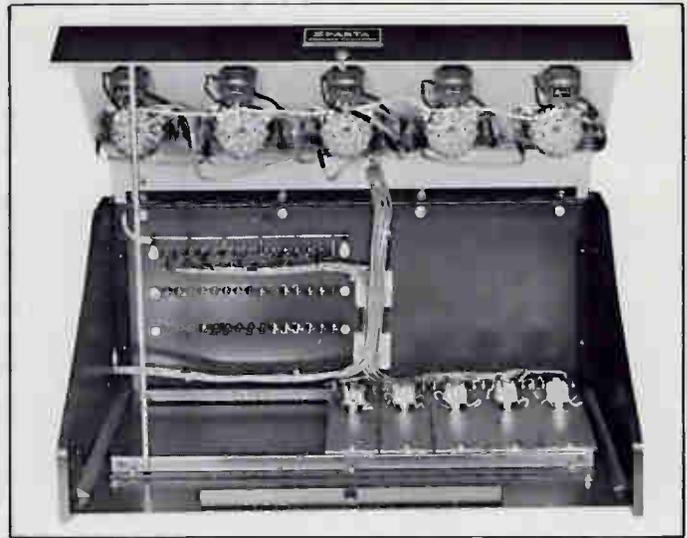
5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488

Five additional high-level mixing positions can be added to the SPARTA A-15B, 20B, 30B and 40B Consoles by adding one of the Extender Panel Series. The Extender Panel units are designed to be a perfect match to the SPARTA Consoles. The attractive cabinet, because of its functional design, can be added to either the left or right side of the main console. All holes are pre-drilled in the Extender Panel for the wiring harness and screws. Installation of the Extender Panel is the same for both right and left hand applications. In either case, the end panels supplied with the units are to be fastened together with screws provided and used as a joining section between the console and the Extender. The end panel removed from the main console is then attached to the open end of the Extender Panel. Internal connections are made to the appropriate console busses through the pre-drilled holes provided by the joining section. The process of adding the Extender Panel is a simple field modification and requires no factory assistance.

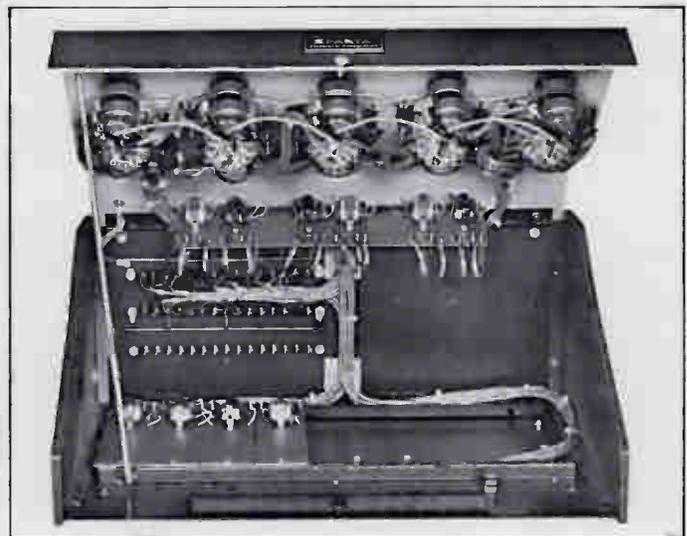
The input configurations of the EP-15B, 20B, 30B and 40B Extender Panels are identical to the Consoles for which they are designed. The inputs are via transformer cards that may be subsequently replaced with microphone preamplifiers. Adequate space is available in all of the Extender Panels for four additional transformer cards to meet specific customer installed applications. In addition to this, the front panel of the Extenders allow plenty of room for custom field modifications.

All input connectors from the Extender Panels to the console are made through barrier strips on the rear panel through the internal harness provided.

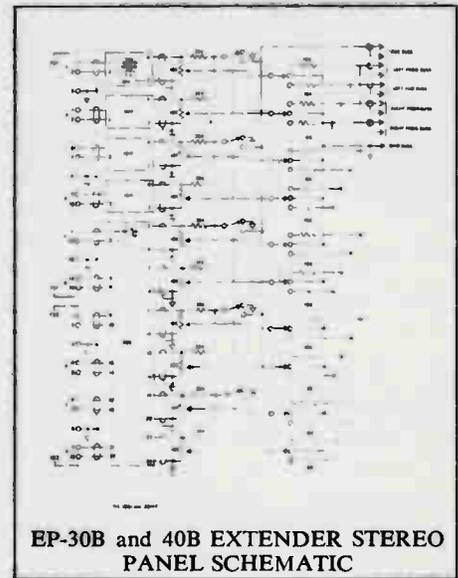
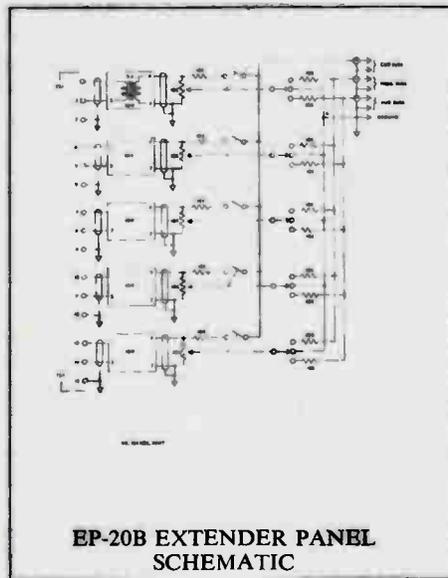
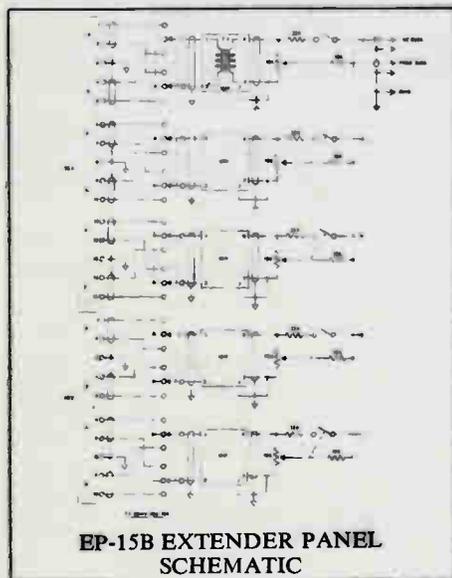
Voltage from the SPARTA Consoles power supply buss is not provided in the Extender Panel wiring harness. If active circuitry is desired by the user, it can be done as a customer option. SPARTA will provide recommendations and/or assistance.



Front Panel lifts for easy access to circuit modules.



All units have ample room for additional custom electronics. This unit is for stereo applications.



MODEL A-15B AUDIO CONSOLE



The new A-15B monaural audio console does the job better than any 5-mixer console. The A-15B can handle 14 audio source inputs with any combination of high or low-level you desire. It has a big 8-watt monitor amplifier with built-in relay muting and a 1-watt cue amplifier. Input switching is super-fast with quiet lever switching and 5-station push-button banks. Its top assignment is usually in the Production Room of a Broadcast Station. But it is equally efficient in radio or TV mobile vans, small main studios, CATV audio controls, school and college broadcast facilities, newsrooms, and in many more audio requirements.

All this, and styling too. Its low silhouette is emphasized by a compact layout between thick cast metal end plates. The gleam of spun aluminum is softly offset by a textured beige field and deep smoke colored trim.

For the most capable, versatile and stylish console, at a realistic price, nothing beats the A-15B.



5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488

The SPARTA A-15B is a compact audio console featuring five mixing channels with selection of A or B inputs on all mixers. A five-station push-button pre-selector is provided for the mixer five-B input. The microphone preamplifier is standard in mixer 1. However, high-level and low level cards may be installed in any combination in all five mixers.

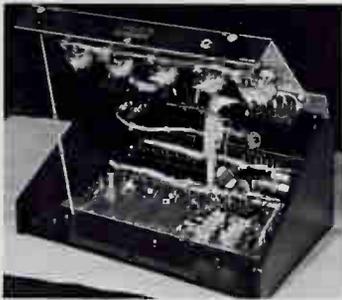
High-level inputs are 10K ohm balanced bridging. This avoids source loading and greatly increases console flexibility by allowing it to be used with sources which cannot drive the usual 600 ohm load. Where a terminated line is required, it is terminated simply by adding a resistor across the line at either the source or console ends.

The muting relay system is quite flexible in that each relay controls an independent muted speaker output terminal, while a fourth terminal allows uninterrupted monitoring. Relay operation is determined by connections on the relay board and may be operated in a variety of combinations from the first three mixer positions. Each relay also provides an isolated closure by a separate connector for control of external AC operated equipment such as "on-the-air" lights, turntables or cartridge equipment. The contacts are rated at 300v and 5 amps.

The cue and monitor amplifiers may be operated with speakers of 4 to 16 ohms impedance, either singly or in combination. The cue amplifier operates from the cue position of each mixer pot while the monitor amplifier operates continuously through its own level-control from the program line amplifier. This provides constant assurance of program output quality. On the rear panel a P.A. output is also provided. It has a separate gain control for use with an external power amplifier for driving remote, multiple-speaker loads. All rear-panel input and output connections are clearly marked by function and the terminal strips will accept bare or stranded wire, with or without terminals, plus the standard fanning-strip.

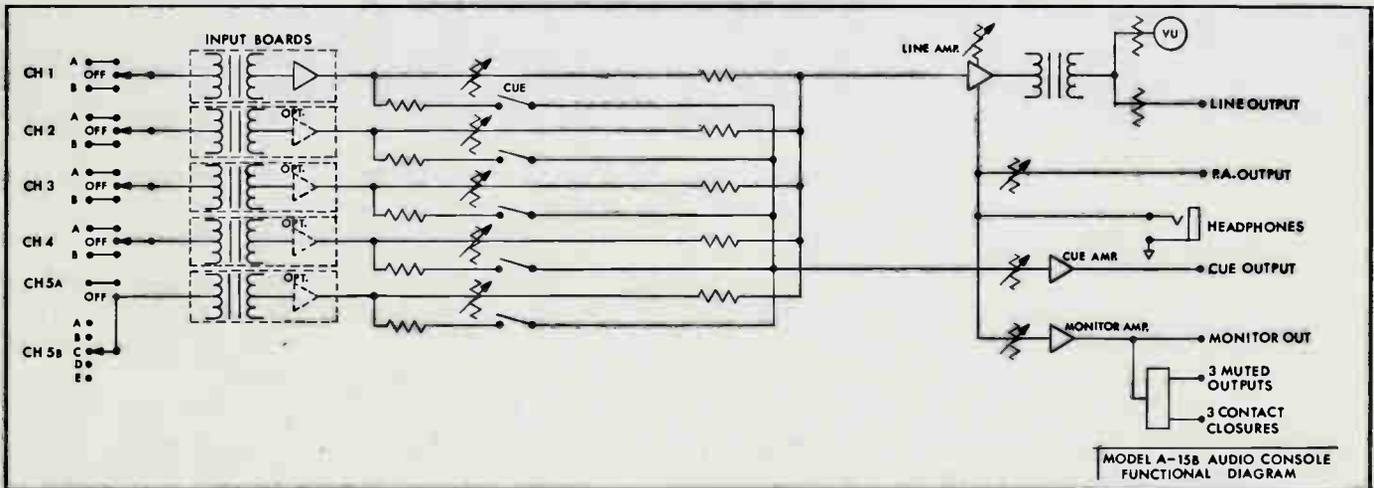
An added feature is a front-panel, five-station push-button assembly for user-installed custom switching functions. Suggested uses are expansion of input capability for a particular mixer, or directing the line output to various external loads.

MIXERS	Five
INPUTS	Fourteen Total: Two each, mixers 1 to 4; six for mixer 5.
INPUT LEVELS	Low-level: -55 db nominal from 50 or 150/250 ohms. Low-level preamps standard on mixer 1; optional for mixers 2 thru 5. High level; -10 dbm nominal, standard on mixers 2 thru 5; optional for mixer 1.
INPUT IMPEDANCE	Balanced bridging; 600 ohm, see Note 1.
OUTPUTS	Program, monitor, cue, headphones and P.A.
OUTPUT LEVELS	Program; 8 dbm/600 ohms at 0 vu. 22 dbm max. Monitor; 8 w/8 ohms (4-16 ohms). Cue; 1 w/3.2 or 4 ohms. P.A.; 1 v. nominal into 10,000 ohm.
RESPONSE	All outputs; ± 2 db, 20 Hz to 20 kHz.
NOISE	Below 65 db at 0 vu out with -55 db low level input. Below 75 db at 0 vu out with -10 dbm hi-level input.
DISTORTION	Program and Audition: Less than 0.5% THD at 8 dbm output. Monitor and Cue: Less than 1% THD at rated output.
CROSSTALK	Below noise in all channels and modes.
POWER	115/230 vac., 50/60 Hz.
SIZE	15" long, 6 $\frac{3}{4}$ " high, 11 $\frac{1}{2}$ " deep.
SHIPPING WT.	26 lbs.
MUTING	Three internal relays operate from mixers 1, 2 or 3 in any combination via internal patch-panel. Each relay provides independent muted monitor out plus isolated closure for control of external equipment (115 vac, 5A max).
NOTE 1	High level inputs are 10 K ohm balanced bridging, allowing individual termination of input lines at rear panel, if required.



Front panel lifts for easy access to individual circuit modules. A convenient quarter-turn fastener securely locks the panel in place.

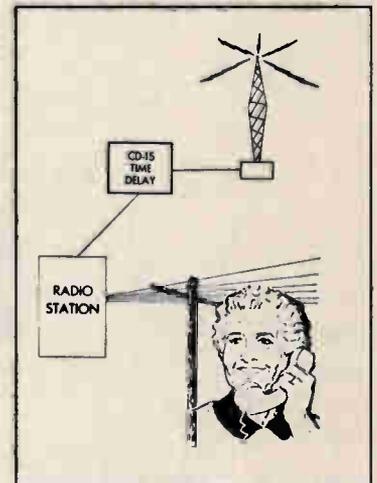
Installation is simple because of XLR microphone fittings. All terminals are clearly marked. No reference to a schematic is necessary.





MODEL CD-15

TIME DELAY & REVERB UNIT



PRODUCT GUIDE

The CD-15 is providing many radio stations with a quick and convenient solution to the requirement of censoring live, extemporaneous talk programing before it is broadcast. With this percision unit, a program delay from three seconds to as much as 31 minutes may be accomplished simply by selecting a tape cartridge that is wound to the desired length of time delay. Using the continuous-loop principal of the tape cartridge, it is now possible to record any audio material as it is being monitored, and still have ample time to delete what might be considered objectional material prior to its being broadcast. In this way, the CD-15 gives protection to the Broadcaster against violation of FCC Regulations.

The function of the CD-15 is based on the use of the unique tape cartridge principle and a special multiple tape head configuration. Three premium series, combination erase record/play heads provide the versatility needed to produce the time delay as well as the reverberation effects. The plug-in head cables can be quickly connected to this network of tape heads in a wide variety of combinations. For a time delay operation the sequence would be erase, record, delay and playback; in that order.

Reverberation effects are created by the audio feed-back from the playback amplified into the recording source input. A resultant "echo" effect will be given to the program material. The character of this echo or reverberation effect is determined by the physical distance, or time delay, between the two heads selected, and the input level of the feed-back audio.

- LIVE BROADCAST CENSORING
- 3 SECOND TO 31 MINUTE PROGRAM DELAY
- SELECTIVE REVERBERATION EFFECTS
- ALL TRANSISTORIZED
- CONTINUOUS DUTY RATED
- OUTSTANDING SOUND REPRODUCTION
- COMPACT & MODERN STYLING
- LOW COST

TECHNICAL INFORMATION

Technical advances by SPARTA, and the use of highest quality components account for the outstanding performance given by this precision Record/Playback unit. Audio quality of the CD-15 surpasses even the most critical industry standards. The all solid state electronics are constructed on individual epoxy-glass circuit boards conveniently located for rapid inspection and normal maintenance. They include a transistorized playback amplifier, record amplifier, bias oscillator and the transistorized regulated power supply. Plug-in head cables for the erase, record and playback circuits lead to the Micro-adjusting head mount, which incorporates three combination erase/program heads. These heads are a high quality, premium series with metal facing to assure long-lasting, dependable performance. Each head plugs into a precision threaded holder that allows quick and positive azimuth and vertical position alignment.

For a time delay function, the CD-15 head cables are arranged so as to use one combination erase/program head for erasing and recording, and another head (to the left of the first head) for playback. With the time delay cartridge inserted and running, the tape is erased, recorded, delayed and played back, in that order. The cartridge transport is designed for continuous duty and is manually engaged to start and stop the tape cartridge. As an added feature, a variety of special reverberation effects may be produced by the CD-15. Feedbacks of 160, 165 and 330 milli-seconds are available and governed by the fixed distances between the tape heads. Therefore, the head cables of the CD-15 may be set up so as to use one combination head for erasing and recording, and another head (to the right of the first head) for playback. The recorded audio may be taken immediately from the playback head, through the playback amplifier, and fed back into the recording source input. This procedure will produce an audio echo or reverberation effect creating an exciting audible-presence to both voice and music programming. Both playback gain and record level controls employ an on/off switch. When the record amplifier and erase bias are turned off, the CD-15 may be used as a continuous playback unit for background audio effects such as baseball re-creations, etc. One preloaded special SPARTA-MATIC time delay cartridge is supplied with the CD-15.

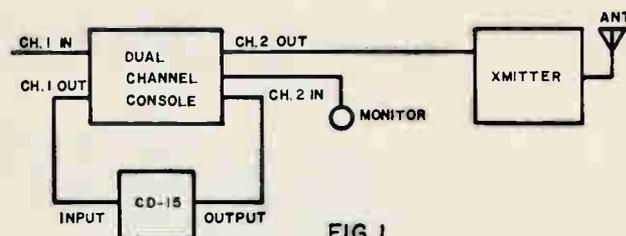


FIG. 1

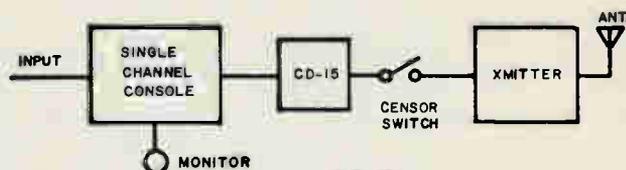


FIG. 2

The above diagrams show two basic installations of a CD-15. Fig. #1 is an installation with a dual-channel console using the console channel selector lever-switch to censor. Fig. #2 shows the CD-15 used with a single-channel console. A separate audio cut-off switch, or the output volume control of the CD-15 may be used for censoring. Many other installation methods may be developed to meet particular requirements.



The hinged top cover of the CD-15 provides immediate access to the head mount and cartridge engage lever. Input and output terminals are located on the rear panel. The cabinet housing and transport deck are of heavy gauge steel with a baked enamel finish. A precision VU meter is mounted in the anodized, brushed aluminum front panel. The record level control also acts as the on/off switch for the record and erase bias electronics. The switch on the playback gain control is the master on/off control.

SPECIFICATIONS

MODEL CD-15

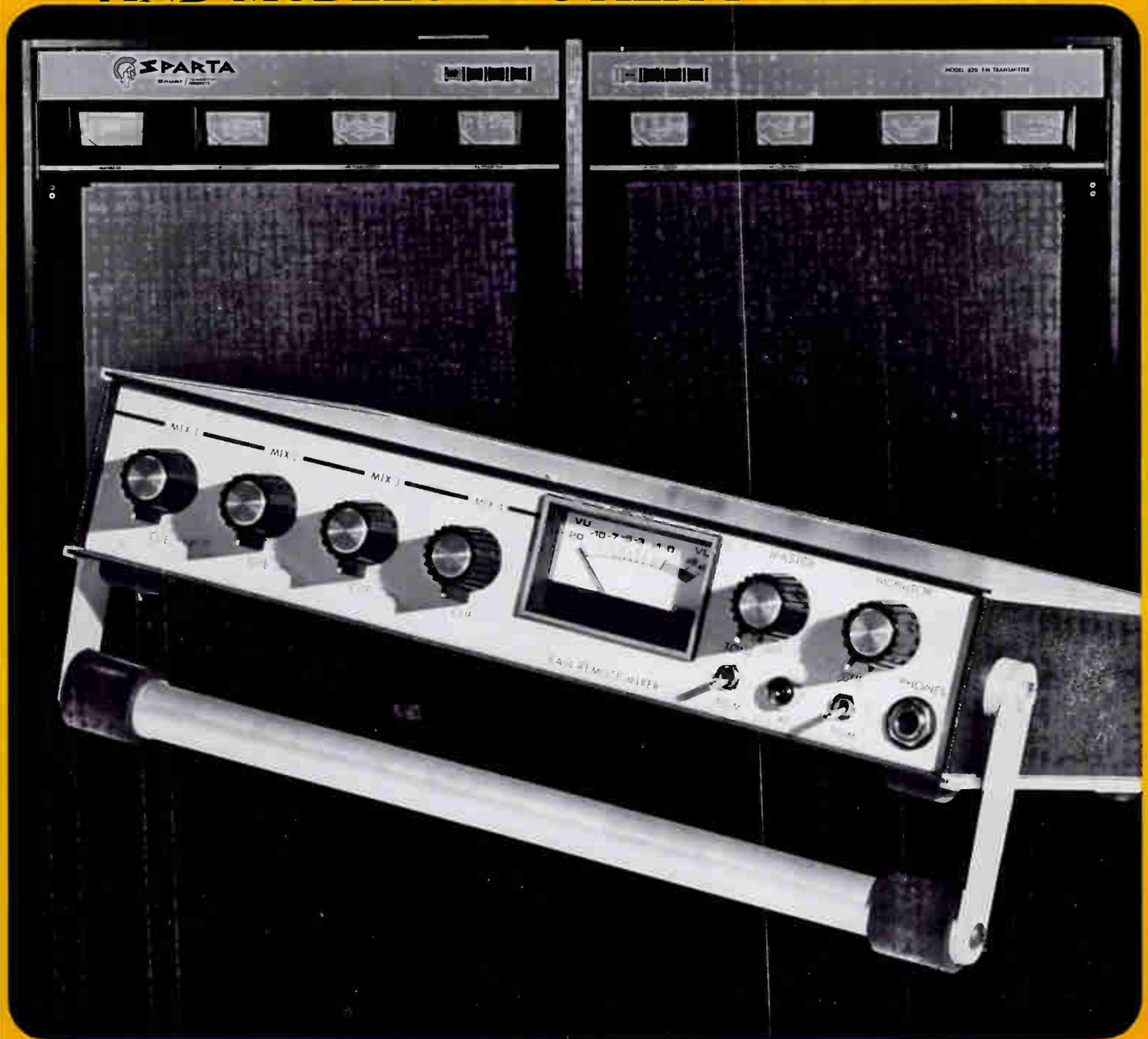
- TAPE SPEED:.....7.5 ips
- FREQUENCY RESPONSE:.....50 to 15,000 Hz \pm 2 db
- WOW AND FLUTTER:.....0.2% RMS max.
- NOISE:.....55 db below saturation recording
- DISTORTION:.....Total distortion less than 2%
- PLAYBACK OUTPUT:.....+4 dbm into 600 ohms balanced
- RECORDING INPUT:.....-10 to +8 dbm 600 ohms balanced
- METERING:.....Audio Record Level
- EQUALIZATION:.....NAB Record and Playback
- POWER:.....117 volts, 60 Hz standard
(others available)
- HEIGHT:.....5½ inches
- WIDTH:.....10¾ inches
- DEPTH:.....14 inches
- FRONT PANEL:.....Anodized aluminum
- CABINET:.....Heavy gauge steel—ARMORSOL brown enamel
- SHIPPING WEIGHT:.....27 pounds



5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828

A DIVISION OF COMPUTER EQUIPMENT CORPORATION

MODEL RA-4 REMOTE AMPLIFIER AND MODEL RA-1 UTILITY AMPLIFIER



For sporting events, religious services and the other profit building remote broadcasts your station may be considering, SPARTA's RA Series amplifiers will get your job done! They are attractive, functional and at a price so reasonable you can leave them on location!

All the quality features needed for a smooth and dependable professional remote operation are built into the RA series.

RA-4 REMOTE Amplifier and RA-1 UTILITY Amplifier, the outsiders!

The RA-4 is a four channel remote mixer providing a choice of either low-level microphone, or high-level program input to each channel. A 10 dbm nominal program level is delivered into a 600 ohm line through the program line amplifier. The low-level inputs will accommodate either 150-250 or 50 ohm microphones. The high-level inputs can be either 600 ohm terminated or high impedance bridging. The terminating resistors may be removed allowing the RA-4 to be operated with "semi-pro" tape units, tuners, or similar high impedance, single-ended sources.

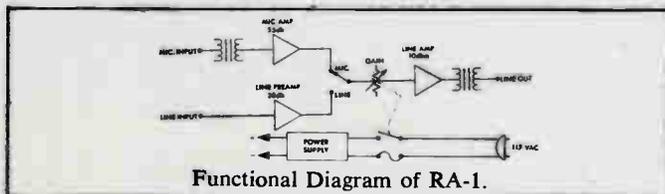
AC line and DC battery supplies are internal, with automatic battery operation in the event of AC line failure. During AC operation there is no load on the batteries. Extremely long battery life results from a unique line amplifier operating at very high efficiency. Only the actual program output draws significant current, the no-signal drain is very low.

A built in test-tone oscillator at 700 Hz is used for setting Master gain without changing preset Mixer positions. Both program and/or "studio talk-back" material may be monitored through a novel headphone circuit. The operator may monitor the outgoing program or, by the flip of a convenient switch, any of the cue positions. The headphone circuit operates via its own amplifier and either high or low impedance, stereo or mono headphones may be used without internal changes. The RA-4 Remote Amplifier can be "stacked" for multiple mixing applications and multiple line feed due to the accessibility of its mixer buss.

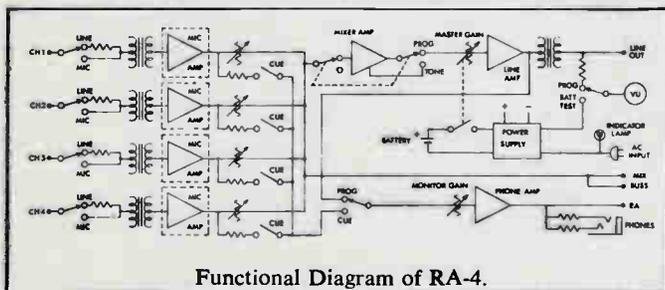
The RA-1 is a general purpose amplifier for use as a microphone preamplifier, a line booster amplifier or a remote station amplifier. As a microphone preamplifier, up to 65 db of gain is provided; as a line amplifier it will furnish up to 30 db of gain. In both applications, the output level is 10 dbm nominal into 600 ohms with a minimum of 12 db additional head-room.

Separate input connectors are provided for the microphone and line modes. The transient-free switching feature of the RA-1 Utility Amplifier allows "On-the-air" switching operations to be carried out in complete electronic silence. Portable tape recorders and similar sources can be operated through the high-impedance, balanced bridging input.

The RA-1 features a fully integrated-circuit design, and a unique line amplifier section with extremely low current drain for a lifetime of quiet, dependable and trouble-free operation.



Functional Diagram of RA-1.



Functional Diagram of RA-4.



Front view of RA-4 Remote Amplifier.



Rear view of RA-4 Remote Amplifier showing terminals.



RA-1 Utility Amplifier.

RA-4

MIXING CHANNELS	Four, with switch-selected low-level inputs (150-250 or 50 ohm microphones) or high-level inputs (balanced; choice of 600 ohm terminated or high-Z bridging).
INPUT LEVELS	-55 db nominal (low-level) or - ϕ db nominal (high-level).
OUTPUT LEVELS	10 dbm at ϕ VU into 600 ohms. 24 dbm max., AC line: 18 dbm max., battery.
FREQUENCY RESPONSE	Within 2 db from 20 Hz to 29 kHz at all operating levels.
DISTORTION	Less than 0.5% THD at all operating levels. Typically 0.2%.
NOISE LEVELS	-125 dbm or better, referred to input.
GAINS	Low-level, 95 db; high-level, 50 db.
MISC	Test-tone oscillator; 700 Hz sets output level (ϕ vu at 10 dbm) via Master gain control. Headphone monitor for program or talkback; high or low Z phones. Monitor output for external monitor power amplifier. Mixer buss access for stacking two or more units. Battery test switch, spring loaded for automatic return to line VU. Soft case option; black vinyl or leatherette with reinforced bottom panel. RA-4 handle serves as a carry handle. Size, 12x9x2½ inches, plus handle. Weight, approximately 7 lbs. Rack-mount option (handle removable).

RA-1

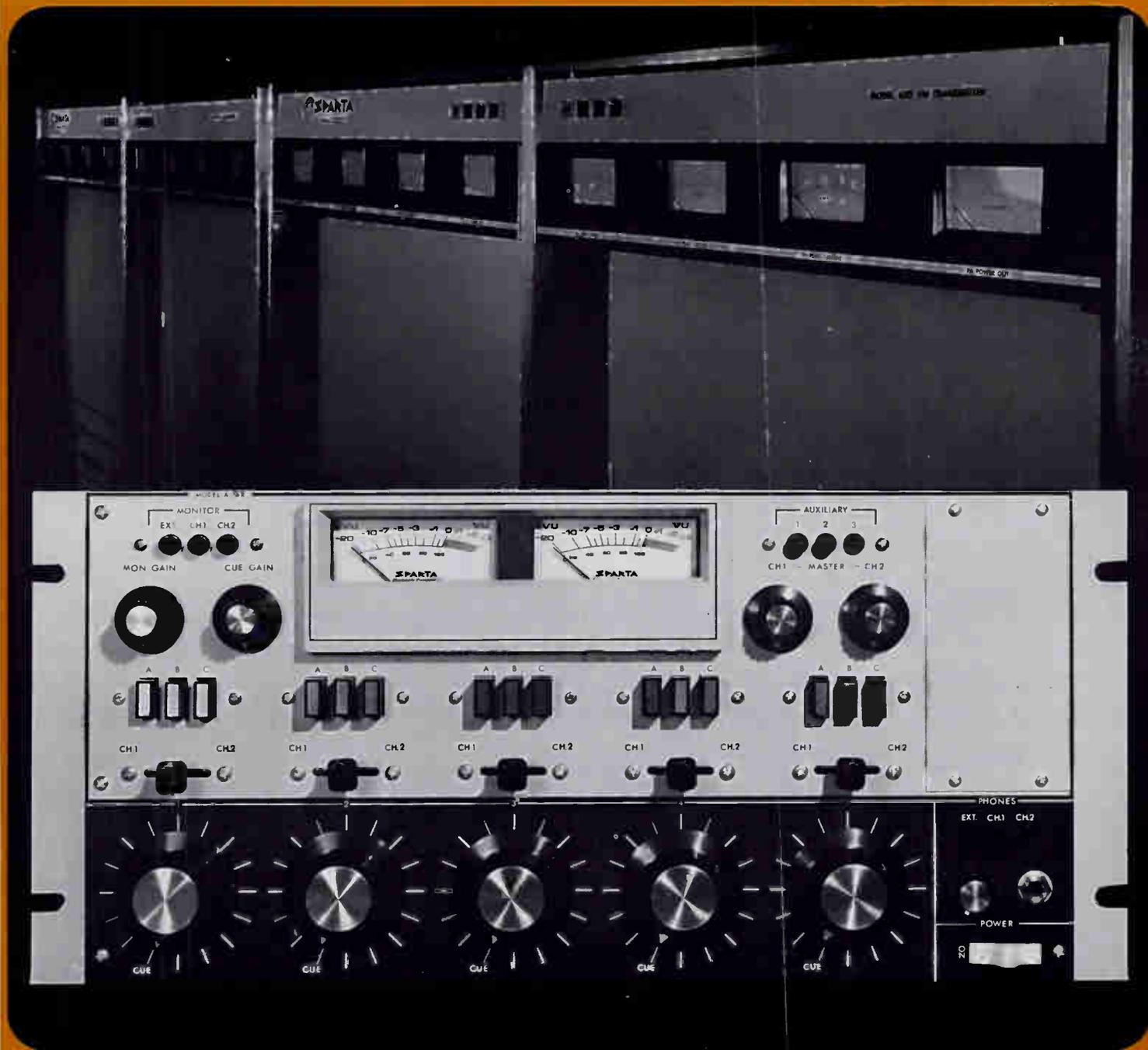
MICROPHONE	50 or 150/250 ohms, selected by jumper. Factory wired for 150/250 ohms.
LINE	20K ohms balanced bridging. 10K ohms for single-ended inputs. 150 or 600 ohm termination optional.
GAINS	Microphone: 65 db max. Line: 30 db max.
OUTPUT LEVEL	10 dbm nominal into 600 ohms balanced. 22 dbm max. Adjustable to zero.
NOISE	More than 65 db below 10 dbm output level. (70-75 db typical).
DISTORTION	Less than 1% THD at all levels (Less than 0.5% typical)
RESPONSE	Within 2 db from 20 Hz to 20 kHz.
POWER	115 vac, 50/60 Hz, 3 watts max.
SIZE	2½"x4½"x7".
WEIGHT	2½ lbs. (Shipping).



SPARTA
ELECTRONIC CORPORATION

5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828
A DIVISION OF COMPUTER EQUIPMENT CORPORATION

MODEL A-16R AUDIO CONSOLE



Fifteen inputs with two separate output channels! That's capability. And the new A-16R has it. It's a dual channel audio console. The A-16R easily handles several studios at once. Or with its independent VU meters you can air your program while doing production work. TV, CCTV and CATV stations are using the A-16R. It's handy for some. Essential for most.

The A-16R gives you exceptional flexibility. A spare removable front panel, spare controls and a spare terminal strip are available for custom needs. The A-16R uses only 8 $\frac{3}{4}$ " standard rack space or comes with a handsome custom cabinet as an optional accessory.

For doing two jobs at once, with custom flexibility at a modest price, the A-16R will prove a wise investment.



5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488

The SPARTA A-16R Audio Console is a 19" rack-mounted unit featuring five mixing channels with three separate push-button selected inputs for each channel, permitting a total of fifteen program sources to be used. Mixer 1 includes a low-level preamplifier for operation from standard 150/250 ohm microphones. The preamplifier may also be strapped for 50 ohm operation. The input cards are identical in size for all five channels, so high-level and low-level cards may be intermixed in any combination.

The high-level input transformers are 10 k ohm balanced, permitting the user to bridge or terminate any high-level source independently as he chooses, thereby greatly increasing the flexibility of the console. This is particularly useful when operating from sources such as portable tape units which cannot feed a 600 ohm terminated load. High-level inputs may be individually and selectively terminated, as required, simply by adding an appropriate terminating resistor.

Two program-line amplifiers and VU meters are provided, and selected by individual 3-position lever switches for each mixing channel. In addition, an uncommitted 3-station push-button switch is provided for auxiliary use, such as feed-line selection between the two output channels. A removable utility panel is provided for custom features of the user's option.

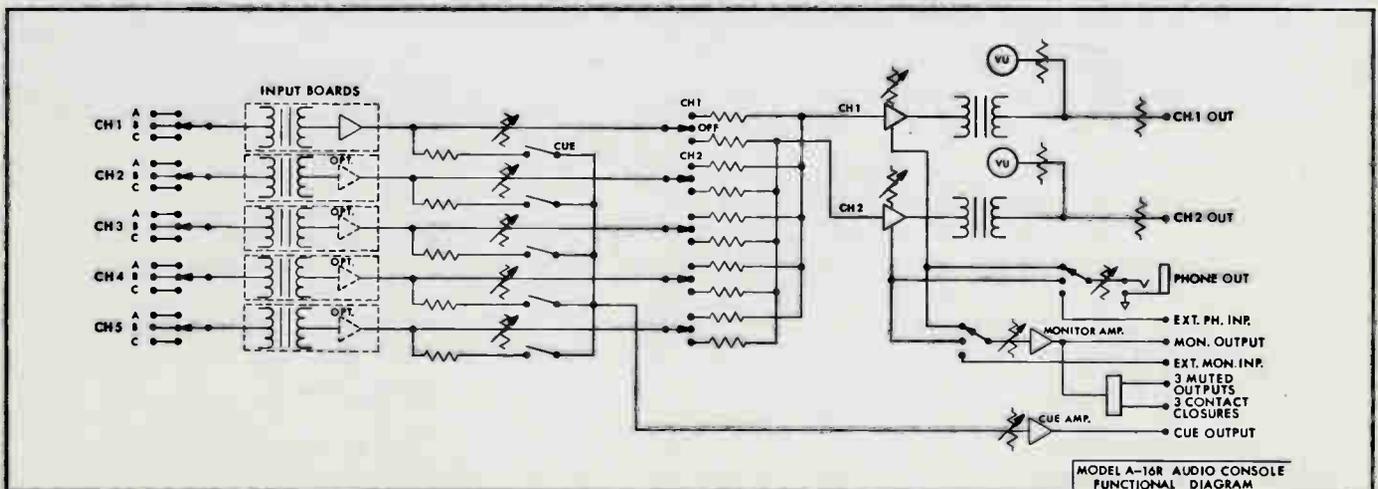
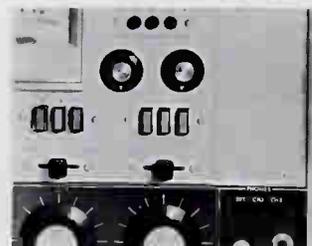
The muting system of the A-16R is made quite flexible by including three separate relays which are factory wired to provide muted audio output to the monitor speakers. The rear panel has four separate monitor speaker terminals, three which are muted by the individual relays, and a fourth which is not muted. In addition, each relay provides an isolated contact closure to a separate connector for direct control of external equipment, such as turntables or On-the-Air lights. The contacts are capable of switching five ampere loads at 300 v. rms. Control for each relay is determined by patch-panel connections made on the relay board. Each relay can be connected to close from any combination of pre-selected inputs on mixers 1 through 3, either together or individually. (In each case, the relays will activate from the appropriate Channel 1 — Off — Channel 2 lever switch in either active position and release in the center Off position. This can be altered if required by simple changes to the lever-switch wiring.)

A number of spare rear-panel barrier-strip terminals are provided to accommodate added custom features such as another relay board if expanded control facilities are needed, or other functions which might be installed on the accessory panel. The power supply is "hard-regulated" and features remote-sensing for minimum crosstalk. It is capable of supplying steady state currents approaching half an ampere and can be used to supply reasonable accessory loads.

The all solid-state design coupled with the choice of quality components assures long life and trouble-free operation. The rugged construction and steel enclosure assures the shielding rigidity necessary for mobile applications as well as fixed station use.

MIXERS.....	Five: with push-button selected inputs.
INPUTS.....	Fifteen total: Three per mixing channel (push-button selected), plus external monitor and external headphone.
INPUT LEVELS.....	Low-level: —55 db nominal from 150/250 ohm source (50 ohm source standard option). Low-level preamplifier standard for mixer 1. Optional for mixers 2 thru 5. High-level: —10 dbm nominal from 600 ohm source. Standard on mixers 2 thru 5. See note 1. External monitor: 1 volt rms. into 5 K ohm. External headphones: 1 mw. rms. into 10 K ohm.
OUTPUTS.....	Two program (CH-1, CH-2), cue, monitor, headphones.
OUTPUT LEVELS.....	Program: 8 dbm/600 ohms at 0 vu. 22 dbm. max. Cue: 1 watt, 3.2 ohms. Monitor: 8 watts, 8 ohms (4-16 ohms).
RESPONSE.....	Program, Monitor and Cue: within 2 db, 20 Hz to 20 kHz.
NOISE.....	Below 65 db at 0 vu out with —55 db low-level input. Below 75 db at 0 vu out with —10 dbm high-level input.
DISTORTION.....	Program: Less than 0.5% THD at 8 dbm out. Less than 1% THD at 22 dbm out. Monitor and Cue: Less than 1% THD at rated output.
CROSSTALK.....	Below noise in all channels and modes.
POWER.....	115/230 vac., 50/60 Hz.
SIZE.....	19" long, 8¾" high, 12" deep.
MUTING.....	Three internal relays operate from mixers 1, 2 or 3 in any combination via internal patch-panel. Each relay provides independent muted monitor out plus isolated closure for control of external equipment (115 vac., 5A max.).
NOTE 1.....	High-level inputs are 10 K ohm balanced bridging, allowing individual termination of input lines at rear-panel if required.

Above the master gain controls there are three auxiliary push-button switches for custom wiring. And for added flexibility, a removable utility panel is provided. It accommodates custom features of the user's option.



MODEL AS-30B STEREO AUDIO CONSOLE



Announcing the beautiful third dimension in stereo. Crystal clarity, trouble-free performance, *reasonable price* — that's the new Sparta stereo audio console.

The AS-30B is ideal for most stereo mixing needs. It's compact and versatile. The audition and program channels have identical stereo line amplifiers, ideal for simultaneous recording and on-air use. Five mixers and 9 stereo inputs add up to the best value ever, in a stereo console.

Quality-packed and feature-loaded, the AS-30B gives you beautiful stereo in style.



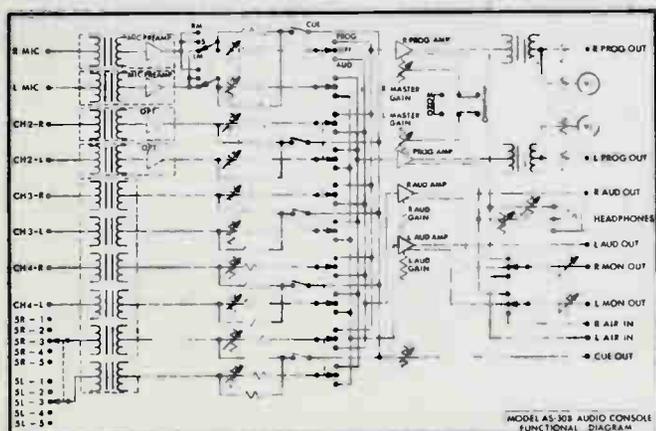
5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488

The AS-30B is a compact desk-type stereo audio console featuring five mixing channels with push-button selected multiple inputs for Mixer 5. The first mixer includes low-level preamplifiers. The remaining four are supplied with high-level balanced input transformers. Input transformers for Mixer 2 are located on cards to allow replacement with a second pair of low-level microphone preamplifiers. The microphone preamplifiers are supplied ready to operate with 150 to 250 ohm microphones; 50 ohm microphones are accommodated by relocating a jumper on the individual preamplifier cards.

All high-level inputs are balanced bridging, which greatly increases the flexibility of the console by allowing operation with semi-professional tape decks, tuners or similar sources made for high-impedance loads. For single-ended sources, the minus input terminals of the console are simply connected to the shield to provide a single-ended input. In both balanced and single-ended applications, the input impedance is 10K. Where 600 ohm termination is required, simply add a pair of 620 ohm resistors across the lines at either the source or load end.

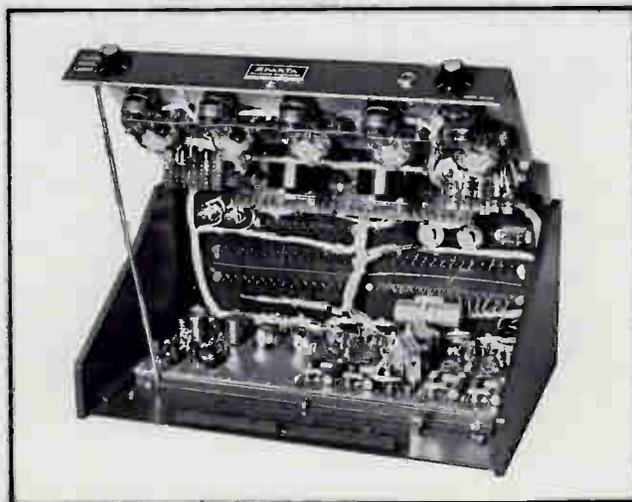
The Audition and Program amplifiers in the AS-30B are identical and interchangeable. Master Program Gain is set by the Master Gain Control. The gain of the Audition amplifiers is set by internal resistors to provide approximately the same level output as the program side. The Audition output terminals are fed directly from the audition line amplifiers from a single-ended source impedance of 60 ohms. The Audition output therefore is capable of driving multiple loads with little if any attenuation. The input source selector for Mixer 5 is a five station, multiple input push-button assembly.

The AS-30B console is intended to be used with external monitor and cue amplifiers such as the Sparta MAS-50 series. The stereo monitor output signal is controlled from a front panel monitor gain control. It delivers more than 1 volt of output signal. A push-button monitor-source selector switch is provided to allow monitoring of either the program or audition material, plus an external input. There are two unused push-button stations for user option. A front-panel selector permits the Mixer 1 microphones, either left or right, to drive both output lines monaurally. A rear-panel switch allows both program line amplifiers to be connected so that all mono or stereo sources will provide dual mono output to the program amplifiers. This latter feature provides a quick, easy check of proper phasing for stereo sources.



- MIXERS..... Five.
- INPUTS..... *Nine stereo pairs:* One each for Mixers 1 through 4 and five for Mixer 5, plus external AIR input.
- INPUT LEVELS..... *Low-level:* -55 db nominal from 150/250 ohms (50 ohm selected by jumper), standard on Mixer 1 (optional for Mixer 2).
Hi-level: -10 dbm nominal from 600 ohm source, standard on Mixers 2 through 5. See Note 1.
AIR: Depends upon external monitor-amp.
- INPUT IMPEDANCE... *Balanced bridging:* 600 ohm, see Note 1.
- OUTPUTS..... Program, Audition, Monitor, Cue and Headphones.
- OUTPUT LEVELS..... *Program:* 8 dbm/600 ohms at 0 vu, 22 dbm. max.
Audition: 8 dbm nominal/600 ohms (single-ended, 60 ohm source). See Note 2.
Monitor: 1v nominal into hi-Z load.
Cue: 0. 1v nominal into hi-Z load.
Headphones: 1 mw nominal into 10K ohms.
- RESPONSE..... *All outputs:* ± 2 db, 20 Hz to 20 kHz.
- NOISE..... Below 65 db at 0 vu out with -55 db low level input.
Below 75 db at 0 vu out with -10 dbm hi-level input.
- DISTORTION..... *All outputs:* Less than 0.5% THD at normal operating levels. Less than 1% THD at max outputs.
- CROSSTALK..... Below noise in all channels and modes.
- POWER..... 115/230 vac, 50/60 Hz.
- SIZE..... 15½" wide, 6¾" high, 11½" deep.
- SHIPPING WT..... 24 lbs. (incl. pwr. supply)
- MUTING..... Switch closure to rear-panel terminals from Mixers 1 to 3, closed in Aud. & Prog. modes for control of external DC relays.
- NOTE 1..... Hi-level inputs are balanced-bridging to allow individual termination of input lines at rear panel, if required. Permits constant line load plus use of high-impedance sources.
- NOTE 2..... Identical line amplifiers for Program and Audition inputs.

Front panel lifts showing the clean and functional design. Notice the easy access to individual circuit modules. A convenient quarter-turn fastener securely locks the panel in the closed position.



MODEL A-20B AUDIO CONSOLE



It's beautiful! And *functional*. The A-20B is today's newest 8-mixer, full facility, monaural, audio console. Contemporary styling and advanced solid-state design have made the A-20B more compact than any other comparable console in its class. Yet it does the job of consoles twice its size and price. Give your control room an uncluttered look, more room for other equipment, and still have plenty of operator work space.

The A-20B is feature loaded! Fast push-button selection makes for a tight-board operation. The 2 position meter switch provides dual monitoring capability for separate program outputs. Lasting quality of the A-20B is emphasized by its rugged and well shielded metal cabinet, tough textured vinyl finish, and its cast metal end plates and meter bezel.

The A-20B will do the job you want. And do it in style.

Full-facility operation of the A-20B is illustrated by the console functional diagram. The eight mixer controls are the preferred rotary attenuators with a counter-clockwise cue function. The cue position is present on all mixers. A lever switch above each mixer, with a center "off" position, directs the audio source to either the program or audition channels.

Mixers 1, 2 and 3 are provided as standard equipment with low-level preamplifiers for microphone mixing. A three-station push-button source selector switch for each of these mixers allows choice of three sources each, for a total of nine low-level inputs. If additional low-level channels are needed, perampifiers may be installed.

Three muting relays are supplied which can function with any of the first three mixing channels in any combination, or alternately can be connected by the user to operate with other mixing channels. Each relay provides muted monitor-audio output plus an isolated contact-pair for control of external equipment.

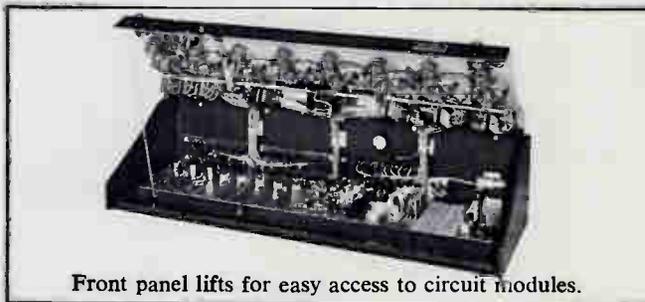
A talk-back selector switch allows the output of the mixer 1 preamplifier to be diverted to either A or B terminals on the rear panel. These outputs may be fed to a small amplifier/speaker combination of the user's choice, to provide studio talk-back facilities.

Inputs to mixers 4, 5 and 6 are normally high-level and are fed to the channel selector without additional switching. Mixers 7 and 8 are each provided with a five station, push-button source selector switch for maximum flexibility, for a total of ten high-level inputs to these two mixers. A three-position lever switch associated with the push-button source-selector switch of mixer 7 and 8 extend the flexibility of the SPARTA A-20B even further by adding provisions for Mix, Cue and Feed. In the Mix position, the audio chosen by the source selector switch is fed to the bus for normal mixing. In the Cue position, the source selected is fed to the cue system so the incoming signal may be monitored. When in the Feed position, the audio chosen by the monitor selector switch, Audition, Program, or Air (Air is an external input), may be fed down a remote line.

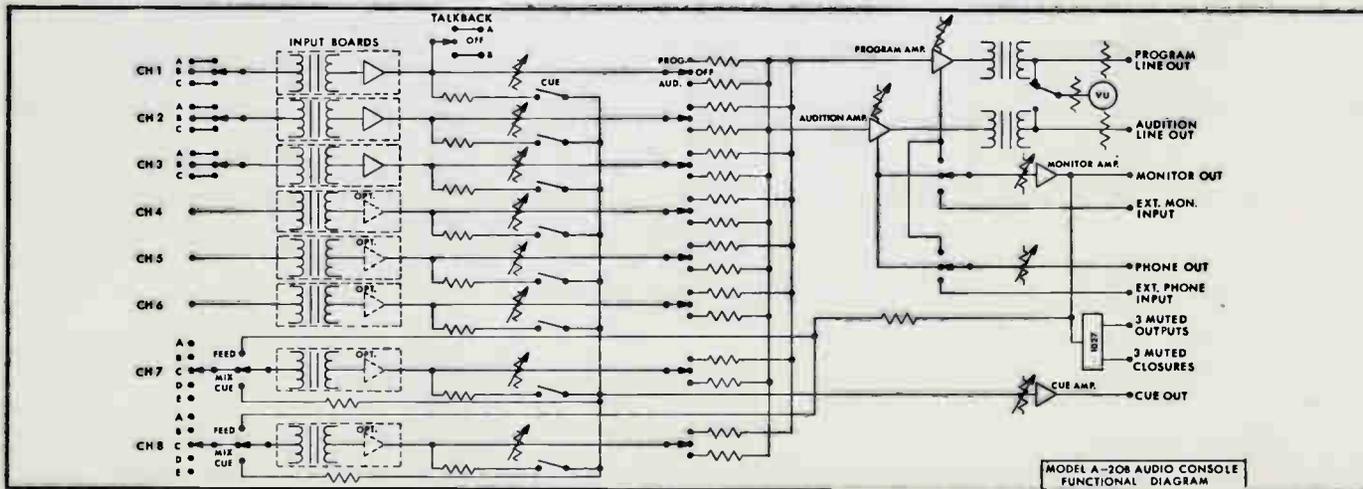
The Program and Audition channels are identical in all respects and a front-panel switch is provided to allow the VU meter to monitor either one. The monitor amplifier is also provided with a switch to allow it to monitor either the program channel, audition channel or an external input such as "Air". To further increase flexibility of the A-20B, an auxiliary three-station push-button switch is provided plus a group of spare terminals on the rear panel. These items may be connected, at user discretion, to provide additional features. The headphone station has its own gain control and three-position source selector switch.

A unique feature of the A-20B Console is the use of high-impedance bridging inputs on all high-level channels. This allows the console to be used with high-impedance sources while in no way limiting its performance from normal 600 ohm line. High-level inputs may be terminated, either singly or collectively, (if required) by the simple addition of 620 ohm resistors.

MIXERS.....	Eight.
INPUTS.....	Twenty-two: Three each, mixers 1 to 3; one each, mixers 4 to 6; five each, mixers 7 and 8. Plus external monitor and headphones.
INPUT LEVELS.....	Low-level; -55 dbm from 50/150/250 ohms. Preamplifiers standard on mixers 1 to 3; optional for mixers 4 to 8. High-level; -10 dbm nominal, standard on mixers 4 to 8. External monitor; 1 volt rms. External headphones; 1 mw. rms.
INPUT IMPEDANCE.....	Balanced bridging; 600 ohm, see note 1.
OUTPUTS.....	Two identical (Audition and Program), cue, monitor, headphones.
OUTPUT LEVELS.....	Program and Audition; 8 dbm at ϕ vu. 20 dbm maximum. 600 ohms, bridging. Cue; 0.5 watts into 3.2 or 4 ohms. Monitor; 8 watts into 8 ohms.
RESPONSE.....	Program and Audition; ± 2 db, 20 Hz to 20 kHz. Monitor and cue; ± 2 db, 20 Hz to 20 kHz.
NOISE.....	Below 65 db at ϕ vu out with -55 db low-level input. Below 75 db at ϕ vu out with -10 db hi-level input.
DISTORTION.....	Program and Audition: Less than 0.5% THD at 8 dbm output; 1% maximum. Monitor and Cue: Less than 1% THD at rated output.
CROSSTALK.....	Below noise in all channels and modes.
POWER.....	115/230 vac., 50/60 Hz.
SIZE.....	28 1/2" long, 6 1/2" high, 10" deep.
SHIPPING WT.....	35 lbs.
MUTING.....	Three internal relays operate from mixers 1, 2 or 3 in any combination via internal patch-panel. Each relay provides independent muted monitor out plus isolated closure for control of external equipment (115 vac., 5A max.)
NOTE 1.....	High level inputs are 10 K ohm balanced bridging, allowing individual termination of input lines at rear panel, if required.

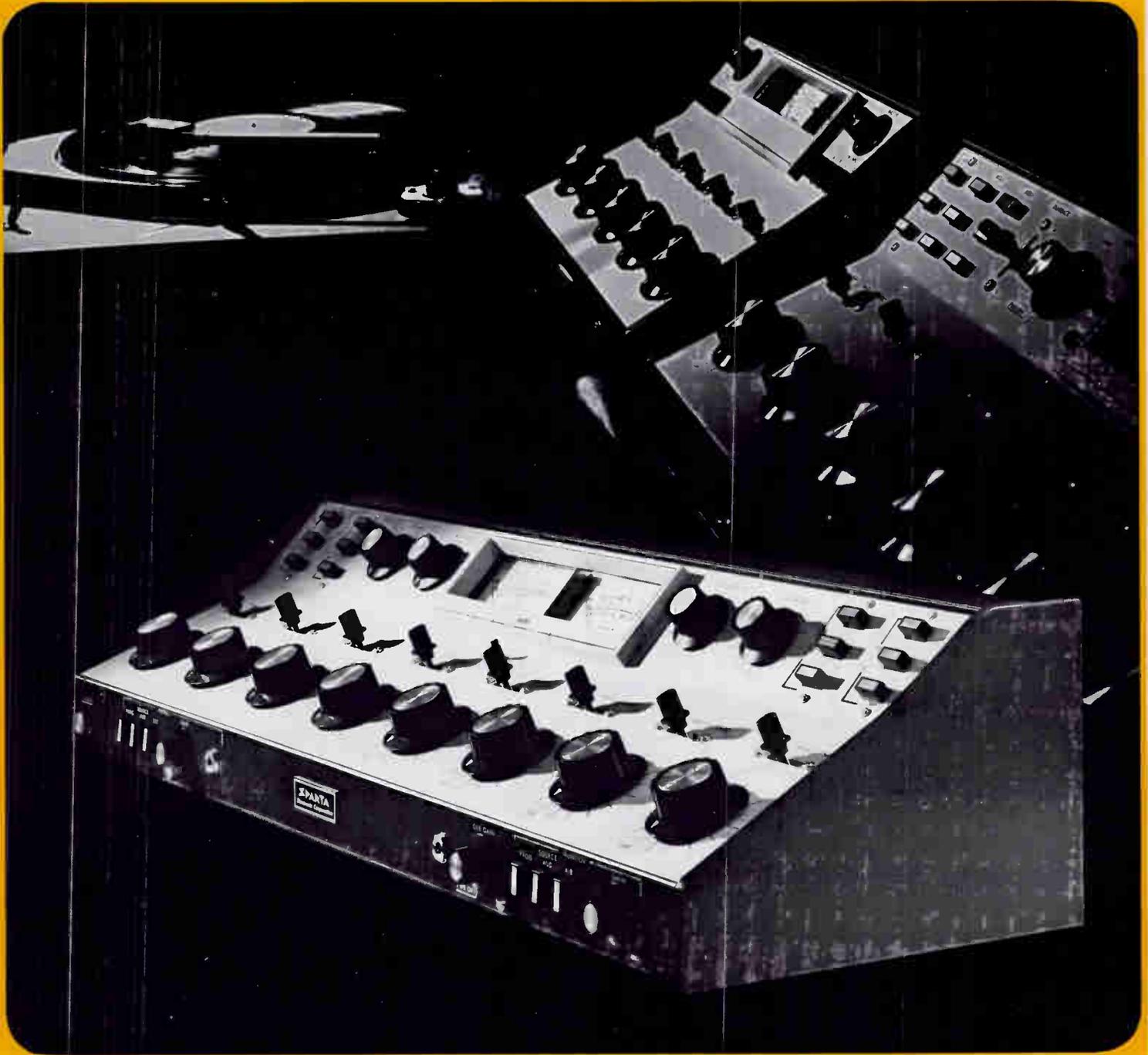


Front panel lifts for easy access to circuit modules.



MODEL A-20B AUDIO CONSOLE FUNCTIONAL DIAGRAM

MODEL AS-40B STEREO AUDIO CONSOLE



Crystal clarity, trouble-free performance and rugged built-in value are things of today in stereo broadcasting with the new AS-40B!

The AS-40B, incorporating the latest solid-state equipment design, is built for reliability that you can depend on! And it's big enough to handle ANY stereo broadcasting assignment! At a price far less than you would expect.

If you're serious about your stereo operation, you **MUST** consider the AS-40B Stereo Audio Console.



5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488

The all-new AS-40B Stereo Audio Console provides superb sound with rugged performance. SPARTA's advanced equipment design, results in eight mixing channels with pushbutton preselectors allowing 3 additional inputs each for mixers one, seven and eight, making a total of 14 stereo inputs. An auxiliary 3 station pushbutton bank is also included for custom purposes. Low-level preamplifiers for microphone operation are supplied as standard in mixing channels one and two, and the card-mounted high-level input transformers in mixing channel three can be replaced with an additional pair of microphone preamplifiers if desired. A microphone "pan pot," included in mixing channel one, plus the microphone mode switch, allows either the left or right microphone to be panned between the two channels. The "pan pot" also functions, in stereo mode, as an added balance control to compensate for variances in microphone levels. A selection of up to 6 microphone inputs is available through mixer one with the use of the microphone mode switch plus the 3 station pushbutton, input preselector.

Source loading of the high-level inputs in the AS-40B is optional due to the use of 10K ohm bridging transformers. This greatly increases the flexibility of the console by permitting operation from sources intended for single-ended, high impedance loads. However, in the instance when termination is required, it's a simple matter to add the appropriate value resistor across the line, at either the source or console end.

The audition and program amplifier modules, the line and meter pads and the output transformers in the AS-40B are identical and interchangeable, which permits standby operation from the audition side of the console. A two position switch under the VU meters provides the capability of visually monitoring either the program or audition outputs.

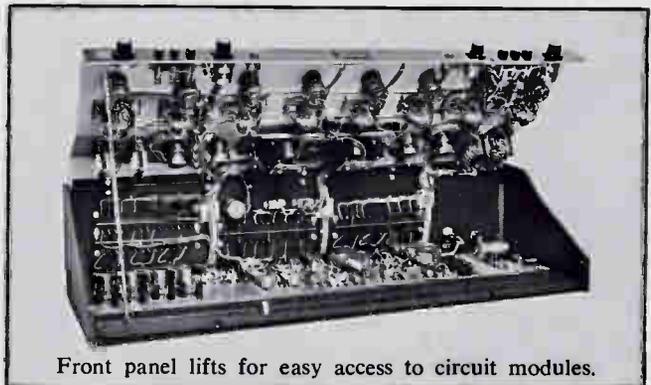
Both the program and audition output channels are provided with balance controls. These controls serve two purposes: One, to compensate for minor component imbalances with the console, and the other is to allow quick correction of any program source unbalance. These functions are carried out without significantly changing the total program output level.

All mixing channels have a cue position which is fed to the self-contained cue amplifier. A cue gain control as well as terminals for an external cue speaker are provided.

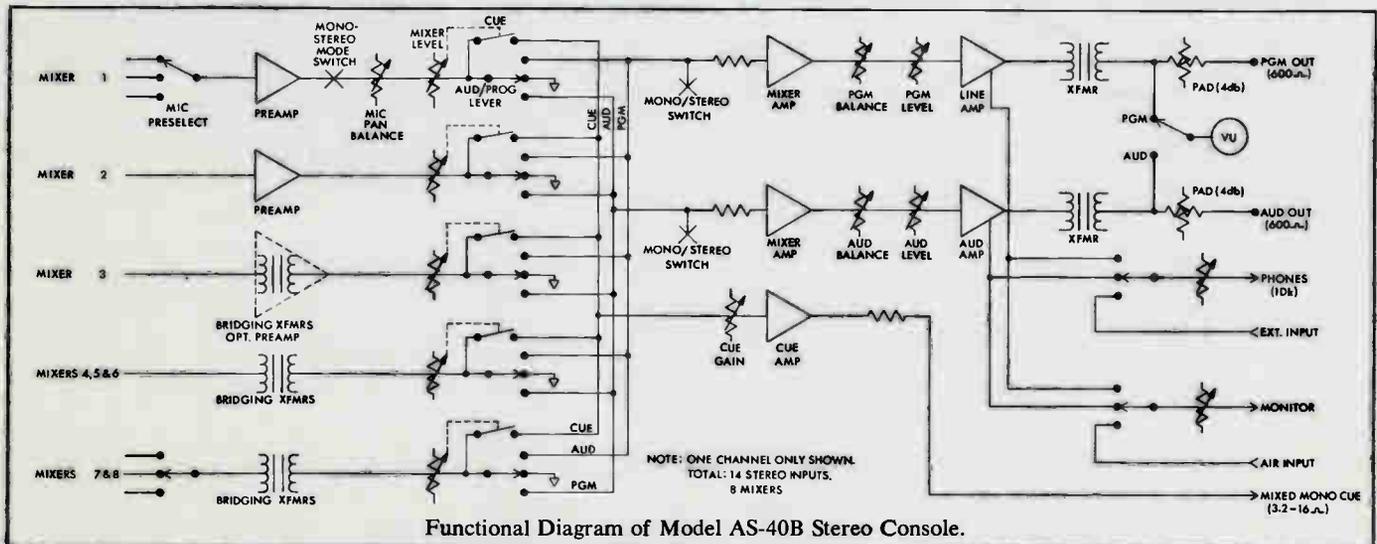
A headphone station with separate gain control is used to monitor program, audition and one other source of the user's choice, such as cue or air monitor.

The basic model AS-40B Stereo Console includes an external power supply to insure optimum performance. The SPARTA MAS-50, 50 Watt Stereo Power Monitor Amplifier and plug-in SM-3 Muting Relay System are complimentary accessories for the AS-40B.

MIXERS	Eight.
INPUTS	Fourteen stereo pairs; Mixer one; 3 low-level. Mixer 2; one low-level. Mixer 3; one high-level with low-level option. Mixers 4, 5, & 6; one each high-level. Mixers 7 & 8; three high-level.
INPUT LEVELS	Low-Level: -55 db nominal from 30/50 or 150/250 ohm sources. High-level: -10 dbm nominal from 600 ohm sources. AIR and EXT.; 1 volt nominal into 10k ohms (see Note 1.)
OUTPUTS	Program, Audition, Monitor, Cue and Headphones.
OUTPUT LEVELS	Program and Audition: 8 dbm into 600 ohms at ϕ vu. 22 dbm max. (14 db headroom). Monitor: 1 volt nominal into high $-z$ load. Cue: 1 watt mixed-mono into external 3.2 to 8 ohm speaker. Headphones: 1 mw nominal into 10K ohms
RESPONSE	All outputs: Less than 1 db down, 30 Hz to 15kHz; less than 2 db down, 20 Hz to 20kHz.
NOISE	65 db or more below ϕ vu out (8 dbm) with -55 db low-level input. 75 db or more below ϕ vu out (8 dbm) with -10 dbm high-level input.
DISTORTION	All outputs: Less than 0.5% THD at normal operating levels. Less than 1% THD at maximum output.
CROSSTALK	Below noise in all channels and modes at normal operating levels.
POWER	115/230 vac, 50/60 Hz.
SIZE	AS-40B Console; 29"x11 1/2"x6 3/4". PS-7 Power Supply; 5"x4"x2", 35 lbs total.
SHIPPING WEIGHT	35 lbs total.
MUTING	Switch closure on Audition and Program for mixers 1, 2 and 3 (for control of external relays.)
NOTE 1	High-level inputs 10k bridging. Optional 150/600 resistive terminations.



Front panel lifts for easy access to circuit modules.



Functional Diagram of Model AS-40B Stereo Console.



ST-220 PROFESSIONAL STEREO TONE ARM

FOR BROADCAST APPLICATIONS

USING HIGH COMPLIANCE CARTRIDGES



FEATURES

CONSTRUCTION: Light alloy arm, with low-mass cartridge shell

MOUNTING: 7/8" diameter single hole, 1" long threaded shank

ROTATION: Miniature precision ball bearing

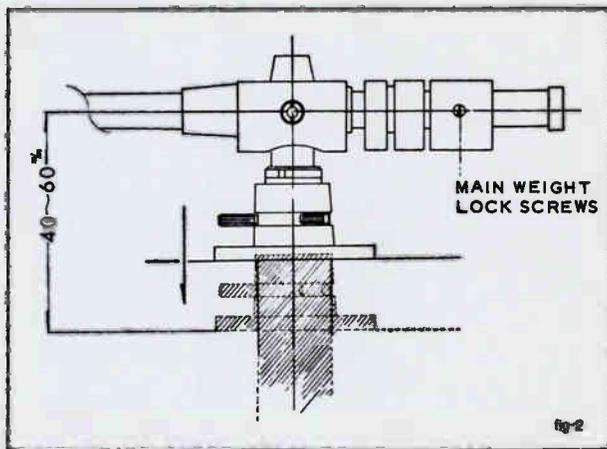
LATERAL BALANCE: Adjustable, to compensate for variations in center of gravity between various cartridges

TRACKING FORCE ADJUSTABLE: Movable weight, with locking screw, adjusts tracking force for any cartridge

ARM HEIGHT ADJUSTABLE: Locking screws on shafts of arm and rest adjust height of arm from 40-60 mm (1-9/16" - 2-3/8")

CARTRIDGE SHELL REMOVABLE: Uses international standard 4 pin connector

CONNECTING CABLE PLUG-IN: 5' cable plugs into base of arm, has color-coded phono plugs and ground wire



SPECIFICATIONS

TOTAL LENGTH 310 mm (12-13/32")

EFFECTIVE LENGTH 220 mm (8-21/32")

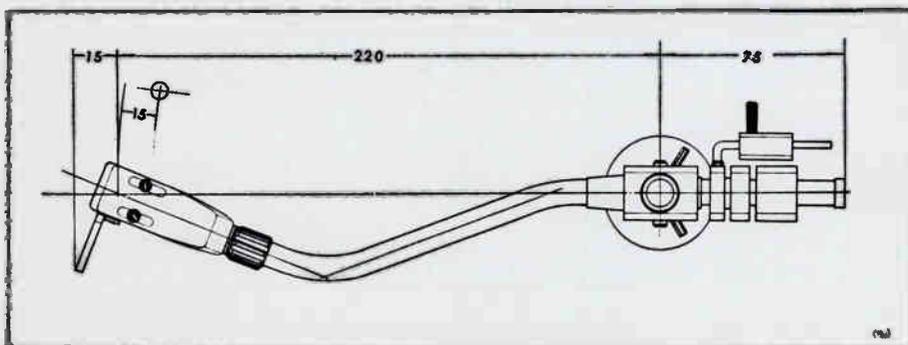
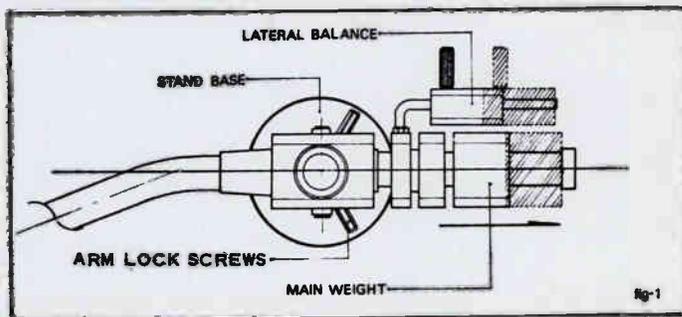
OVERHANG 15 mm (19/32")

OFFSET ANGLE 22°

LATERAL BALANCE Adjustable, all cartridges

STYLUS PRESSURE ... Adjustable, 1-6 grams recommended, depending on cartridge

TRACKING ERROR + 4°, - 1°



GT-12 CUSTOM TURNTABLE



- Rugged one-piece cast aluminum ribbed frame
- 3 vibration isolators and neoprene idler wheel
- Plays 45's without an adapter
- Heavy duty hysteresis synchronous motor (4-pole motor also available)

BASE.....	16" wide, 15½" deep
BOTTOM CLEARANCE.....	5½" w/4-pole motor; 6½" w/synchronous motor
TOP CLEARANCE.....	2" (without tone arm)
PLATTER SIZE.....	12"
ACCELERATION.....	Less than 1/16th turn @ 33⅓ RPM Less than 1/10th turn @ 45 RPM
RUMBLE.....	45 db @ 33⅓ RPM 40 db @ 45 RPM
WOW & FLUTTER.....	0.1% @ 33⅓ RPM
MOTOR.....	Hysteresis synchronous: GT-12-SY 4-pole: GT-12-4P
POWER.....	115 volt 60 cps (50 Hz available)
CONSTRUCTION.....	Chassis: One piece cast aluminum alloy Platter: Machined aluminum alloy
FINISH.....	Base: Light smoke gray baked enamel, orange peel texture Platter: Burnt orange felt Front control: Brushed aluminum Other base & felt colors available on special order
SHIPPING WEIGHT.....	27 lbs.

ST-220 STEREO TONEARM



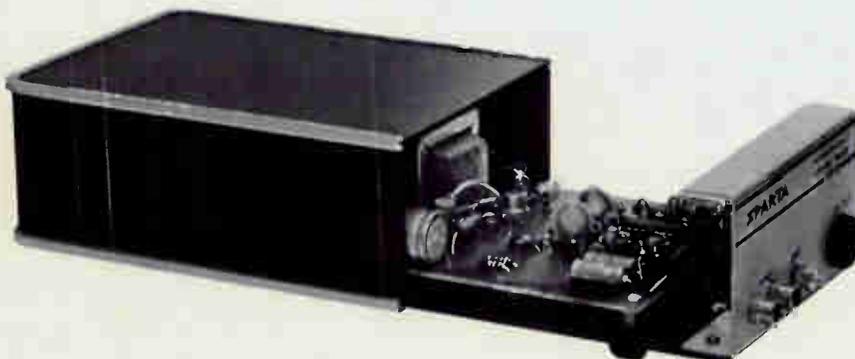
The ST-220 Tonearm from SPARTA gives you either monaural or stereo operation, use of any cartridge and stylus of your choice, and a full range of adjustment including lateral balance. With the ST-220 you realize the full potential of your cartridge and every record.

TEP-3S (STEREO) & TEP-3M (MONO) TURNTABLE PREAMPLIFIERS

These are high quality professional preamplifiers, equalized for the RIAA standard curve. They are designed for use with all modern hi-Z cartridges with added gain for the newer low output cartridges without compromising any other performance feature.

The basic design features integrated-circuit preamplifiers which have extremely high open-loop gain (typ. 20,000). This allows the operating gain and equalization to depend solely on the characteristics of simple passive components for long-term stability and reliability.

FREQ. RESPONSE.....	RIAA (NAB) within typical ± 0.5 db (± 1 db max)
OUTPUT LEVEL, PROGRAM.....	0 dbm into 600 ohms balanced, adjustable to below -20 dbm
OUTPUT LEVEL, MAX.....	± 10 dbm
DISTORTION.....	Less than .5% (.15% typical) THD
INPUT IMPEDANCE.....	47K ohms
SENSITIVITY.....	5 millivolts for 0 dbm output at 1 kHz
NOISE.....	70 db below Program Level. More than 80 db below max. output.
HUM.....	Inaudible and virtually un-measurable. (Below noise)
SEPARATION.....	Stereo: 70 db typical (65 db min.)
SIZE.....	4½" high, 2⅝" wide, 6½" deep.
WEIGHT.....	1 lb. 6 oz.
POWER.....	115 to 130 VAC, 50-60 Hz., 0.25A
MOUNTING.....	Rubber feet plus two single-hole "Z" clamps



TURNTABLES AND ACCESSORIES

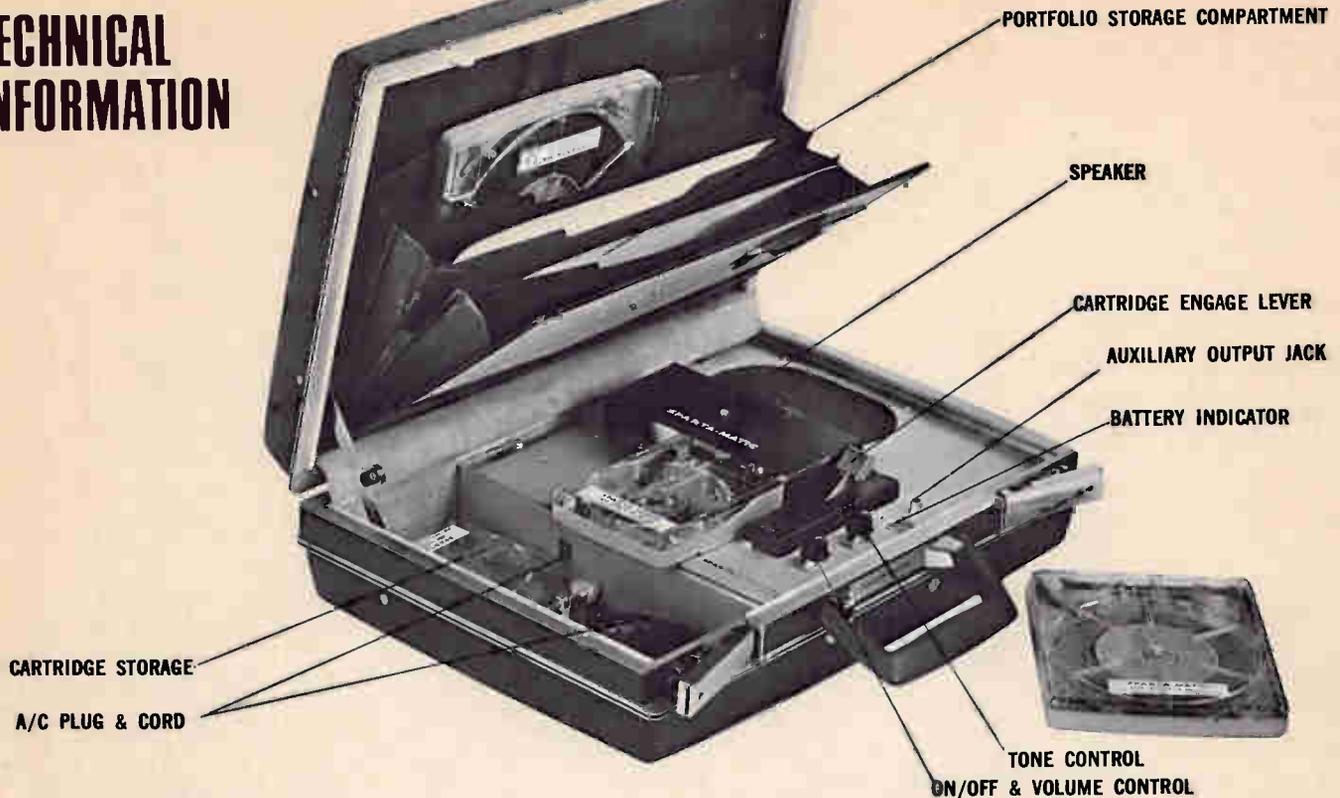


Now, the Custom GT-12 — a professional turntable that's much faster *in two ways*. Its jet speed acceleration gives you top speed immediately. And, its extra large power-paddle with spring-loaded action, gives you quicker and easier start/cue convenience.

Dependability and ruggedness are foremost — from the thick cast metal control facing and one piece cast frame to the heavy platter and beefy hysteresis synchronous motor.

GT appointments couple beauty with convenience. From the special sure-grip felt to the handy speed reminder lights, you'll find the GT your best buy in a high performance turntable.

TECHNICAL INFORMATION



The BP-22 is packaged in a handsome "Showcase" attache case with a solid magnesium frame, covered in a tough vinyl plastic and featuring dual lock fasteners. The main transport chassis is finished in brushed anodized aluminum with semi-gloss black textured accents. The unit is completely self-contained with a fully transistorized amplifier, full-fidelity speaker and internal power pack. Power is supplied by either the built-in 12 volt Nickel Cadmium battery or 117 VAC 50/60 cycle. The battery receives a "trickle" charge during normal A/C operation which will maintain the battery at maximum capacity. To re-charge to peak capacity after extended battery operation, the charging circuit is automatically energized when the A/C cord is plugged in and the unit is in an "off" mode. A battery power level meter is provided to indicate the charge condition of the battery. Approximately two hours of playing time is given on a fully charged battery. This playback time may vary since greater playback volume requires more power consumption. Environmental conditions also will effect the battery life.

The BP-22 also features, as standard equipment, audible cueing, auxiliary output and an automatic on-off interlock. The audible cueing feature detects the 1KHz cue tone recorded on the lower track of the tape, which is then amplified through the program amplifier/speaker. The moment the cue tone is heard, the operator may manually disengage the cartridge, thus "cueing up" the cartridge for replay. The auxiliary output feature consists of a phono-jack connected to the power amplifier output. This jack can be used to connect an external speaker or to connect mixers, consoles, program lines, etc. The on-off interlock provides for the automatic turn off of the drive motor and amplifier whenever the cover of the attache case is closed.

The BP-22 will play all NAB Cartridge sizes. There is ample storage area within the case for six SPARTA-MATIC M-300 cartridges. Larger sizes may be carried in the portfolio compartment.

SPECIFICATIONS

- CARTRIDGES:**..... All sizes (300, 600 and 1200 ft) NAB Standard metal or plastic endless Loop Cartridges
- SPEED:**.....7.5 ips \pm 3%
- POWER OUTPUT:**.....2.0 Watts maximum
- TRANSISTORS:**.....Eight Total
- HARMONIC DISTORTION:**.....3% at 1 watt (typical)
- NOISE:**.....Approximately 50db below saturation recording
- EQUALIZATION:**.....NAB Standard
- TONE VARIATION:**.....Maximum 20db "cut" at 10 KHz
- FREQUENCY RESPONSE:**.....40 Hz to 18 KHz \pm 3db (Amplifier)
- POWER:**..... Either 117 VAC, 50/60 Hz or self-contained 12 volt Nickel Cadmium Rechargeable Battery, 500 MAH Capacity
- OPERATING TIME:**..... Battery—Depending on volume setting, approximately two hours. A/C — Continuous
- RECHARGING TIME:**..... 15 hours maximum for fully discharged battery, proportionately less for partially discharged battery
- WEIGHT:**.....13 pounds
- SIZE:**.....17½" wide, 13" deep, 5" high

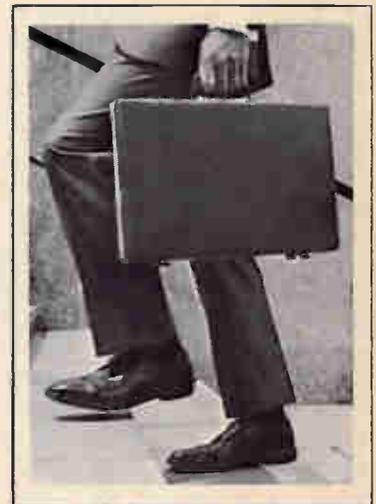
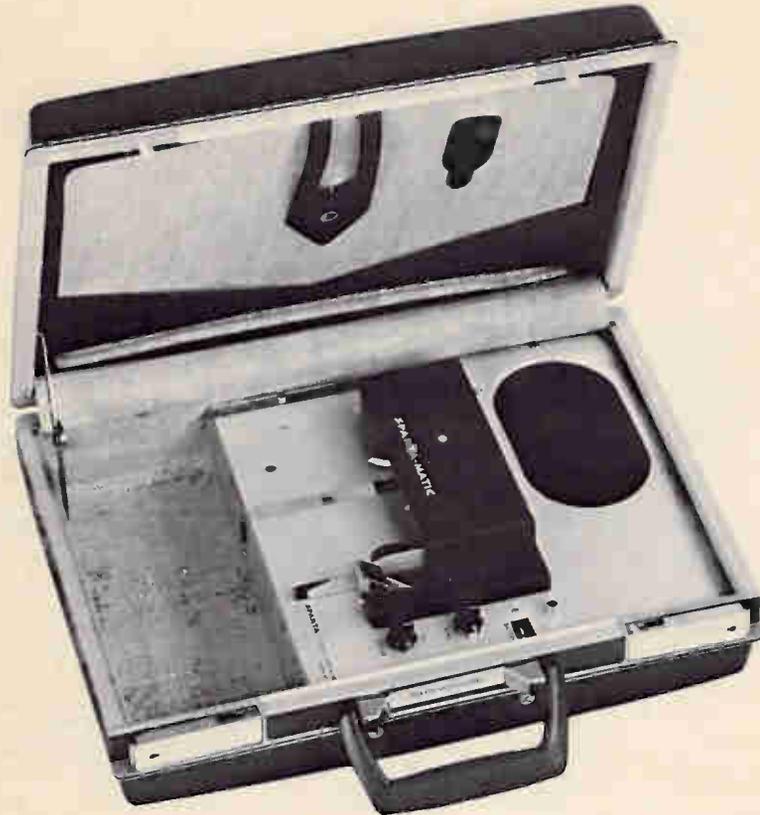


5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828

A DIVISION OF COMPUTER EQUIPMENT CORPORATION



MODEL BP-22 PORTABLE CARTRIDGE PLAYBACK



PRODUCT GUIDE

The new model BP-22 represents the fourth generation of a SPARTA-MATIC Portable Tape Cartridge Playback device. The latest electronic and mechanical developments have been incorporated into its design. Simplified and dependable operation are the keynotes to its many features. Wherever required a professional and highly impressive client sales presentation can be made on the spot, using the quick and convenient tape cartridge principle. The BP-22 is almost unlimited in the number of applications for which it can be used. It is the perfect sales aid for broadcast time salesmen and other executives. Pre-recorded capsules of the types of programming offered, such as music, news, public service, station promotions and announcer personalities can be instantly injected to add dramatic emphasis to any radio sales presentation. The self-contained re-chargeable battery provides approximately two hours of operation before re-charging is necessary. For full time continuous operation, the BP-22 can be operated from a 117 VAC source. The heavy-duty cartridge transport and electronics are packaged in an attractive "Showcase" attache case. A portfolio compartment has been incorporated into the lid of the case for storing sales literature, visual sales aids, brochures, etc. In addition, an area has been provided for storage of tape cartridges. The BP-22 can also be a convenient and useful programming aid for stations on remote broadcasts. An auxiliary audio output jack has been provided whereby cartridge spot announcements and other material may be fed into a remote amplifier.

- COMBINATION BRIEFCASE & TAPE CARTRIDGE PLAYBACK
- ALL TRANSISTORIZED
- RECHARGEABLE BATTERY & A/C OPERATION
- BATTERY CHARGING CIRCUIT & LEVEL METER
- 2 HRS. APPROX. OPERATION PER BATTERY CHARGE
- AUTOMATIC ON/OFF INTERLOCK
- AUDIBLE TAPE CUEING
- ATTRACTIVE LIGHTWEIGHT DESIGN



A.



B.



C.



D.



SHOWCASE PACKAGE

Save money over the single unit price by choosing one of several packages. Groups include equipment and furniture (except chair).

GROUP 1

A-20B Console with 101-1 Console Desk, 101-1-3 Console Hood including Digital Clock and Monitor/Cue Speaker, professional MIC-5 omnidirectional microphone with gooseneck mounting hardware, 101-3-4 Dual Turntable Return with 2 GT-12-4 Custom Turntable Systems.

GROUP 2

All of Group 1, plus 101-3-5 Dual Utility Return Pedestal with 101-6 Cartridge Hutch.

GROUP 3

All of Group 1 and 2, plus a SPARTA Century Series Tape Cartridge System of two playbacks and one record/playback.

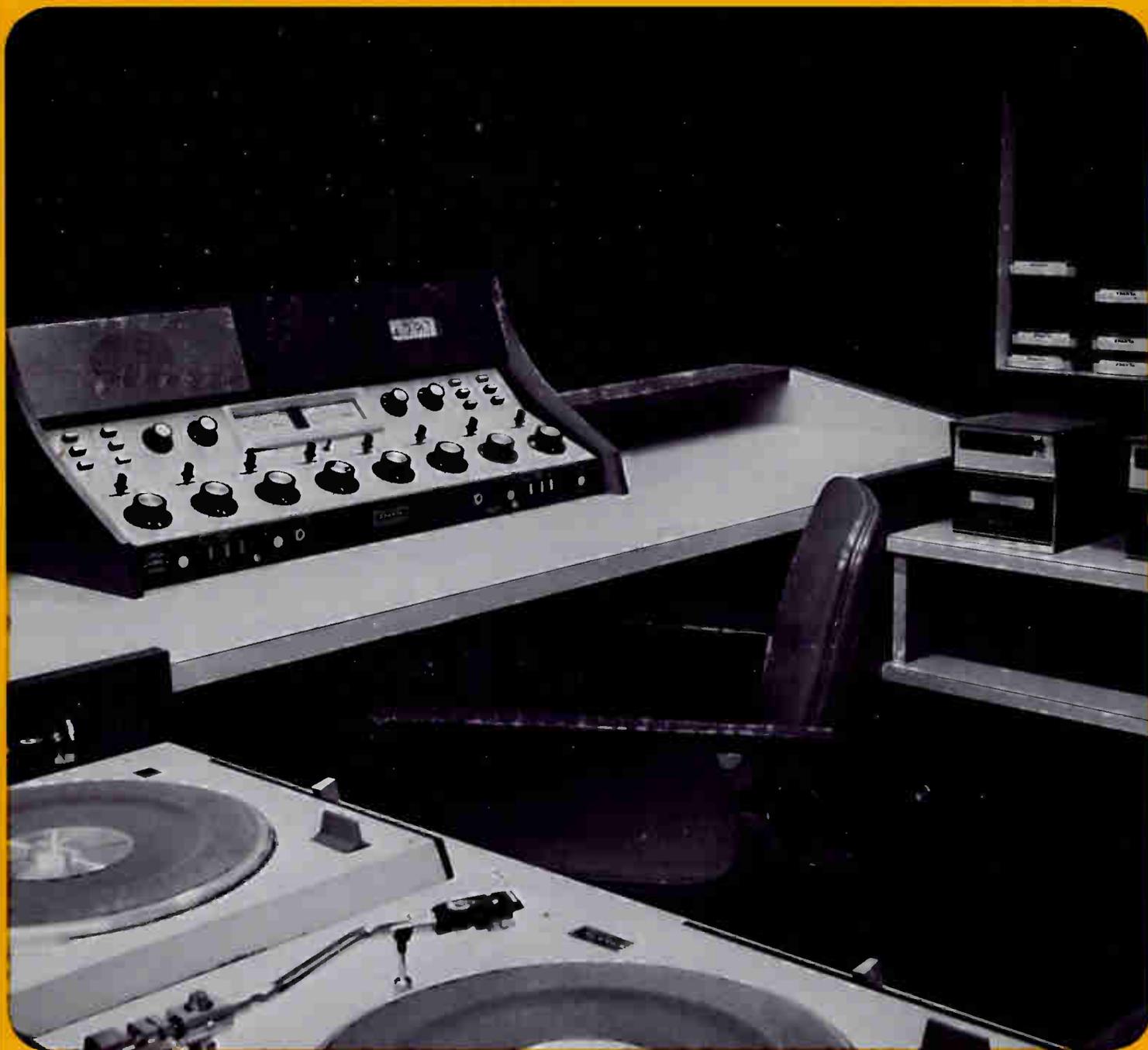
A. The Dual Turntable Return (101-3-4) displays 2 new SPARTA GT-12 Custom Turntable Systems. An area directly below the top surface is for cables and accessories. Behind the sliding doors, a full set of metal record dividers is supplied. Optional Rack Brackets (101-3-1) provide 28" of standard 19" rack space. Dimensions: 30" high with level-adjusting feet, 40 $\frac{1}{8}$ " wide, 20 $\frac{1}{8}$ " deep.

B. The Single Turntable Return (101-7) has the same features as the Dual Return. It can be ordered without the turntable cut-out to serve as a utility cabinet. Dimensions: 30" high with level-adjusting feet, 20 $\frac{3}{4}$ " wide, 20 $\frac{1}{8}$ " deep.

C. The Console Desk (101-1A) with stainless steel legs, is designed for the A-20B Console and Console Hood (101-1-3). This unit is also available to fit any console. Dimensions: 82 $\frac{1}{4}$ " long, 24 $\frac{1}{4}$ " deep and 28 $\frac{1}{2}$ " high to the work surface.

D. The Dual Utility Return (101-3-5) is shown with the Tape Cartridge Hutch (101-6). The Hutch stores 96 model 300 cartridges. The area beneath the top is for rack mount equipment as is the area behind the sliding doors. Optional Rack Brackets (101-3-1) provide 28" of standard 19" rack space. Dimensions: Dual Return and Hutch, 50" high with level-adjusting feet, 40 $\frac{1}{8}$ " wide, 20 $\frac{1}{8}$ " deep.

SHOWCASE CONTROL ROOM CABINETY



It's a DJ's delight! A *beautiful* place to work. It's the Sparta Showcase control room cabinetry series.

Each piece features rugged construction. The designs include extra heavy material, modular construction and special leveling devices. All surfaces are made of hard, mar-resistant plastic laminate. The finish is color-coordinated in a rich walnut grain brown, offset by a light decorator beige.

Equipment and cabinetry are available individually or in several different groups, at attractive group discounts. Your control room can now have the custom look of richness and quality without the expensive custom cost.



5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488

Professional in every respect, the new Model AC-155B is unmatched in its diversified application as well as value. Here is a complete audio control center of professional quality that employs outstanding operational flexibility to serve as a permanent installation. At the same time it has the versatile portability that is required for remote broadcasts, mobile vans, and temporary setups. The AC-155B features two SPARTA GT-12 CUSTOM Turntables complete with tone arms, phono cartridges, equalized preamplifiers, plus the all-transistorized A-15B Audio Console.

The A-15B, the heart of the AC-155B Audio Console, is of modular construction. A total of fourteen inputs are available through the console's channels. As normally supplied, the A-15B accommodates low-level microphone inputs to channels 1A and 1B, with left and right turntables in channel 2A and 3A. Channels 2B and 3B are available for added high-level inputs, as are 4A, 4B, 5A and 5B. Channel 4 or 5 may be changed to accept low-level sources by the simple addition of a microphone preamplifier. Program monitor and separate cue functions are provided for with 2 speakers mounted in the AC-155B cabinet. A dual equalized preamplifier and console power supply are also contained in the AC-155B cabinet. The A-15B Console may be used separately from the AC-155B cabinet by simply removing the connections from the rear panel. The console can be battery operated or used with the power supply from the AC-155B.

The input impedance of the high-level mixing channels is 10K ohm transformer-coupled balanced, which avoids loading the source and greatly increases the flexibility of the console. This also permits the console to be driven from sources that are not designed to work into a 600 ohm load. If a 600 ohm termination is required, it is a simple matter to add a 620 ohm resistor across the line at either the source or the console end.

Three separate relays are provided in the A-15B console for muting. Each relay may be connected so as to close from any combination of pre-selected inputs on mixers one through three.

Common to all SPARTA Consoles is a "cue" position on each mixer potentiometer. In the AC-155B, program material from each mixer, through the cue switches and isolation resistors, is delivered to the internal amplifier and speaker



Optional accessories for the versatile AC-155B include the accessory shelf shown installed and below, a dynamic cardioid microphone, the MIC-5B, with uniform pick-up about the axis at all frequencies, producing a remarkably faithful reproduction of voice. It is complete with wind "pop" filter, gooseneck and mounting hardware. The bench/lid provides added protection during transit and seating convenience on location.



MODEL A-15B Console

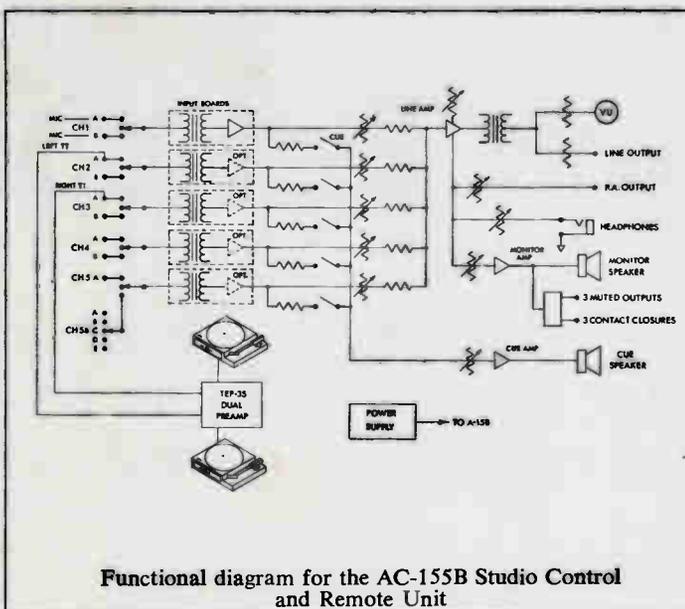
MIXERS	Five
INPUTS	Fourteen total: Two each for mixers 1 to 4, six for mixer 5.
INPUT LEVELS	Low-level; -55 db nominal for 50 or 150/250 ohms. Low-level preamp standard on mixer one. Optional for mixers four and five. High-level; -10 dbm nominal. Standard on mixers two thru five.
OUTPUTS	Program, monitor, cue, phones, P.A.
OUTPUT LEVELS	Program; 8 dbm/600 ohms at 0 VU. 22 dbm max. Monitor; 8 w/8 ohms (4-16 ohms). Cue; 1 w/3.2 or 4 ohms. P.A. 1v. nominal into 10,000 ohms.
RESPONSE	All outputs; ±2 db, 20 Hz to 20 kHz.
NOISE	Below 65 db at 0 VU out with -55 db low-level input. Below 75 db at 0 VU out with -10 dbm high-level input.
DISTORTION	Program and audition: Less than 0.5% THD at 8 dbm out. Monitor and cue: Less than 1% THD at rated output.
CROSSTALK	Below noise in all channels and modes.
POWER	115/230 vac, 50/60 Hz.
MUTING	Three internal relays operate from mixers 1, 2, or 3 in any combination via internal patch-panel. Each relay provides independent muted Monitor Out plus isolated closure for control of external equipment (117 vac. 5A max).

MODEL GT-12-4P Turntable System

Professional 2 speed (33 1/3 and 45 RPM); spring loaded paddle switch for one-hand cueing; speed indicator lamps. Instant start; 4 pole motor; Model ST-220 tone arm with stereo/mono phono cartridge and diamond stylus. 115 vac, 60 Hz. (Other power requirements upon request.)

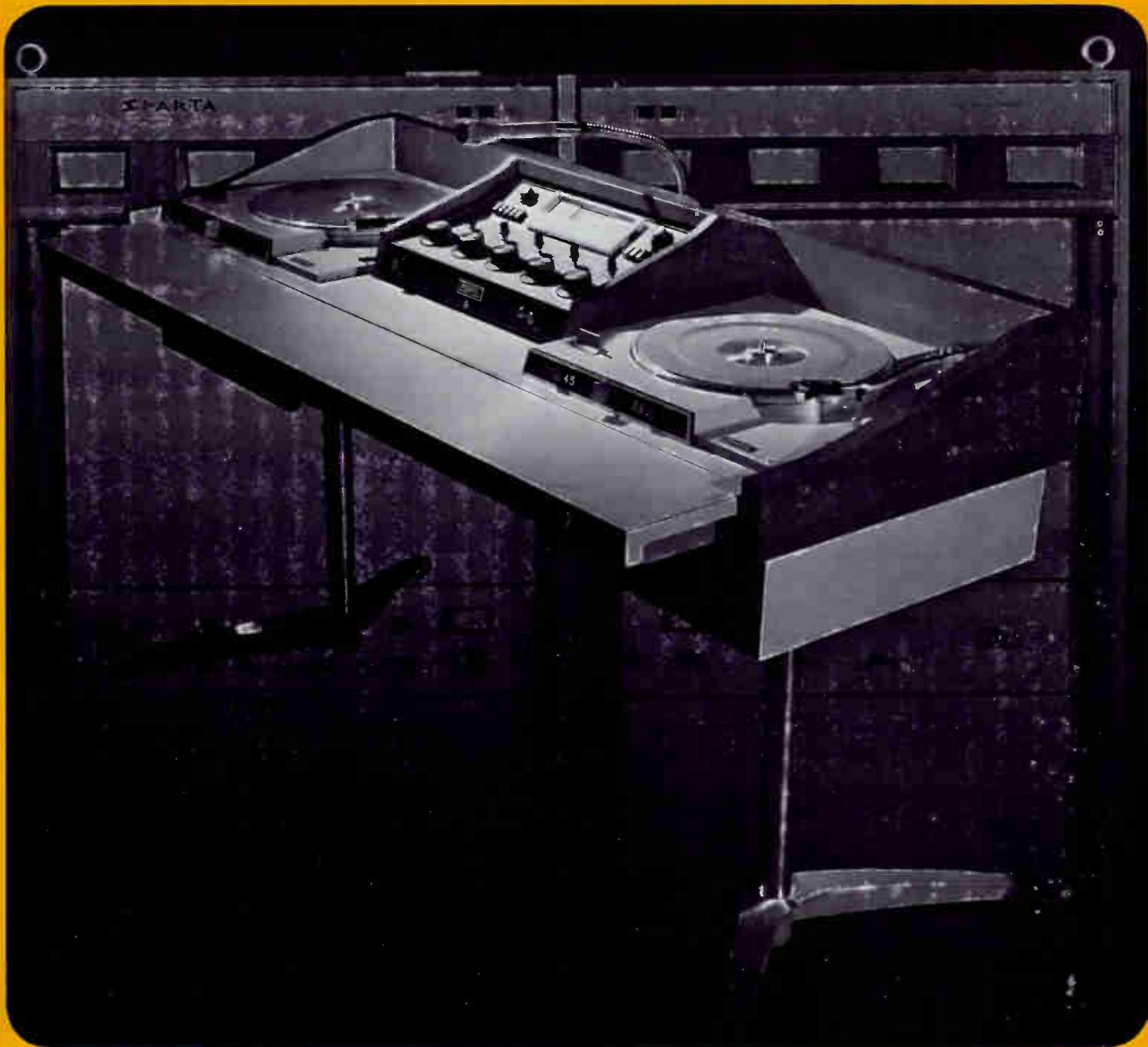
MODEL AC-155B Cabinet

HEIGHT	28" to work surface; 34" overall
WIDTH	54"
DEPTH	25 3/4" with 6 3/4" lift-leaf work surface extenders; 5 inch monitor speaker
SHIPPING WEIGHT	185 lbs.



Functional diagram for the AC-155B Studio Control and Remote Unit

MODEL AC-155B STUDIO CONTROL AND REMOTE UNIT



Remotes add spice to your daily programming. With the all new AC-155B, your remotes are done in style and convenience. This Studio Control and Remote Unit is right at home in a neighborhood supermarket, department store, or in the back of a mobile van. It's also extremely comfortable in your production room. And the price fits nicely too!

All this and styling! A beautifully designed one-piece cabinet in rich walnut woodgrain and contrasting beige finish make the AC-155B an attractive display . . . anywhere!



SPARTA
ELECTRONIC CORPORATION

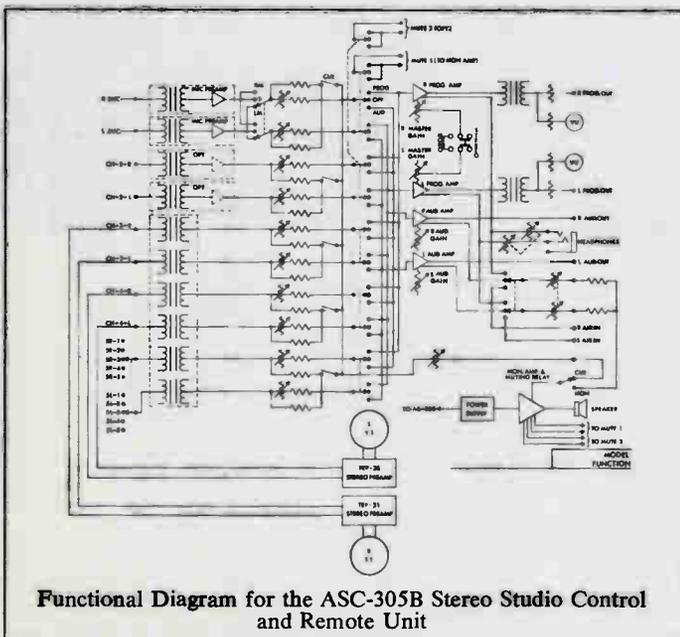
5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488

A neatly packaged all purpose, professional quality, stereo broadcast facility is embodied in the SPARTA Model ASC-305B. Its application is as varied as the imagination of a resourceful broadcaster. Because of its professional quality and all-purpose flexibility, the ASC-30B offers the stereo broadcaster a permanent integrated studio audio control as well as a hard working remote broadcasting unit. The ASC-305B features the all-transistorized AS-30B Stereo Console, plus two SPARTA GT-12 CUSTOM Turntables complete with tone arms, phono cartridges and stereo equalized preamplifiers.

At the center of the console is the extremely versatile SPARTA AS-30B Stereo Audio Console featuring five mixing channels with push-button-selected multiple inputs for mixer five. The first mixer includes low-level preamplifiers for 50 to 150 ohm microphones and the remaining are supplied with high-level balanced input transformers. The high-level inputs are balanced bridging, which avoids the source loading of the typical 600 ohm input and greatly increases the flexibility of the console. In the instance where a 600 ohm termination is required, it is a simple matter to add a pair of 620 ohm resistors across the line at either the source or load end. The audition and program amplifiers in the AS-30B are identical and interchangeable. In the audition side, the line amplifier gain is determined by internal resistors and is set to provide the same level output as the program side with normal gain control settings. The input source selector for mixer five is via a push-button assembly.

Each mixer potentiometer in the AS-30B Console has a "cue" position. Program material from each mixer, through the cue switches and isolation resistors, is delivered to the monitor/cue system.

The ASC-305B cabinet is of exceptionally fine construction and distinctive design. Thoughtful consideration has been made for operator legroom, lift-leaf work surface and an optional bench/lid arrangement. The tubular steel leg supports provide a solid jar-proof foundation and can be quickly removed for the convenience of portable setups. The cabinet finish is a very durable and rugged plastic laminate to provide years of lasting beauty and protection. The walnut woodgrain and contrasting beige color scheme make the ASC-305B an attractive display in the studio or on location.



Optional accessories for the versatile ASC-305B include the accessory shelf shown installed and the bench/lid providing added protection during transit and seating convenience on location.

Model AS-30B Stereo Console

MIXERS	Five
INPUTS	Nine Stereo pairs: One each for mixers 1 through 4 and five for mixer five, plus external AIR input.
INPUT LEVELS	Low-level; -55 dbm nominal from 150/250 ohms (50 ohm selected by jumper), standard on mixer 1 (optional for mixer 2). High level; -10 dbm nominal from 600 ohm source, standard on mixers 2 through 5. See Note 1. AIR: Depends upon external monitor-amp.
OUTPUTS	Program, Audition, Monitor, Cue and Headphones.
OUTPUT LEVELS	Program; 8 dbm balanced 600 ohms at 0 VU. 22 dbm max. Audition; 8 dbm nominal into 600 ohms single-ended. (from 60 ohm source). See Note 2. Monitor; 1 v nominal into high-Z load. Cue; 0.1 v nominal into high-Z load. Headphones; 1 mv nominal into 10K ohm.
RESPONSE	All outputs; ± 2 db, 20 Hz to 20 kHz.
NOISE	Below 65 db at 0 VU out with -55 db low-level input. Below 75 db at 0 VU out with -10 dbm high-level input.
DISTORTION	All outputs: Less than 0.5% THD at normal operating levels. Less than 1% THD at max. outputs.
CROSSTALK	Below noise in all channels and modes.
POWER	115/230 vac. 50/60 Hz.
MUTING	Switch closure to rear panel terminals from mixers 1 to 3, closed in Audition and Program modes for control of external DC relays.
NOTE 1	High-level inputs are balanced-bridging to allow individual termination of input lines at rear panel, if required. Permits constant line-load plus use of high impedance sources.
NOTE 2	Identical line amplifiers for Program and Audition outputs.

MODEL GT-12-4P Turntable System

Professional 2 speed (33 $\frac{1}{3}$ and 45 RPM); spring loaded power paddle switch for one hand cueing; speed indicator lamps; instant start; 4 pole motor; Model ST-220 tone arm with stereo/mono phono cartridge and diamond stylus. 115 vac. 60 Hz. (Other power requirements available upon request).

MODEL ASC-305B Cabinet.

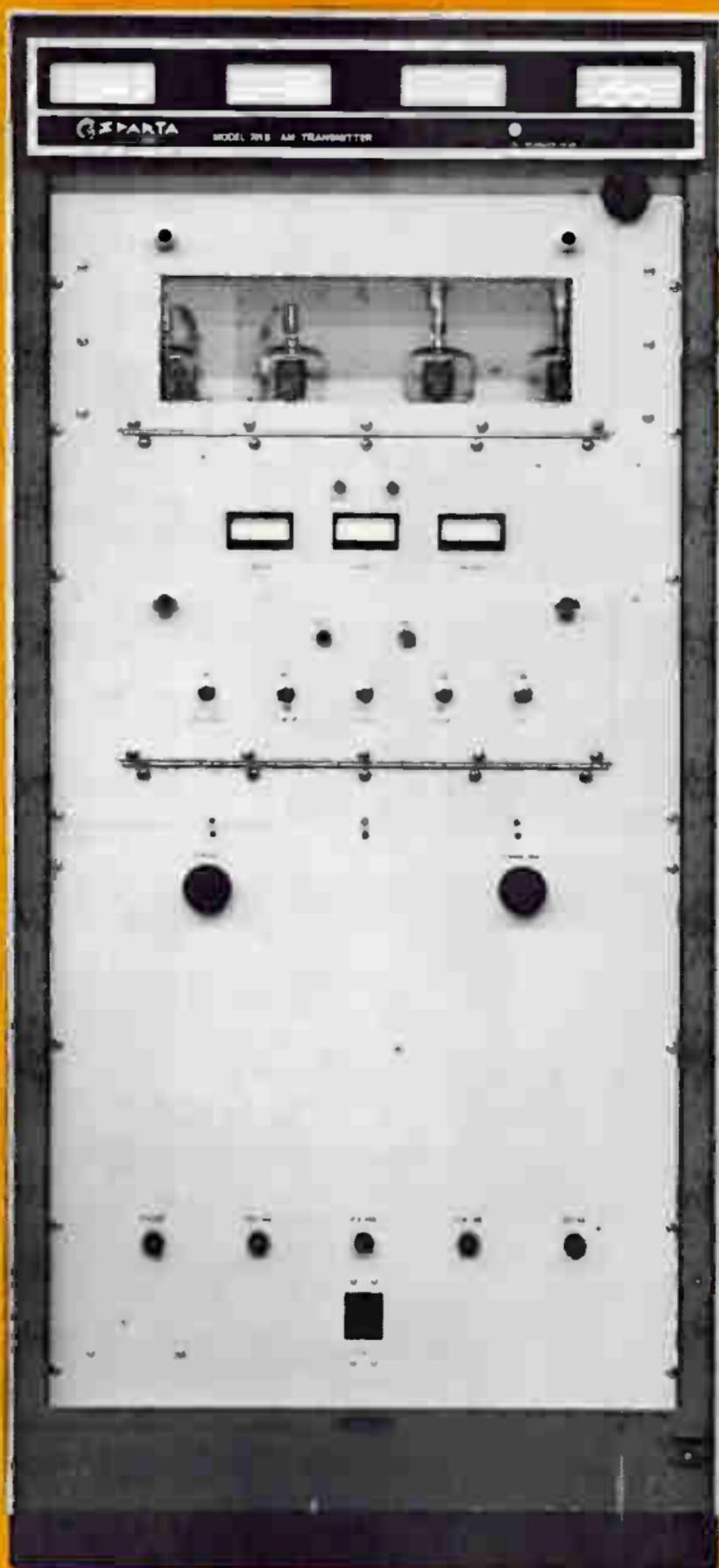
HEIGHT	28" to work surface; 34" overall.
WIDTH	54"
DEPTH	25 $\frac{3}{4}$ " with 6 $\frac{3}{4}$ " lift-leaf work surface extenders; 5 inch monitor speaker.
SHIPPING WEIGHT	185 lbs.

MODEL ASC-305B STEREO STUDIO CONTROL AND REMOTE UNIT



Stereo in style! This is the *HEART* of your stereo production center . . . this is *YOUR IMAGE* on remotes . . . this is the ASC-305B. It features everything you need for stereo studio control and remotes. An integral unit of beauty and performance with a very modest price! It's rugged, mobile and stylish! The rich walnut woodgrain is offset by a soft beige in a distinctive one-piece design. You'll be broadcasting stereo in style with the ASC-305B . . . wherever you use it!

NEW! SPARTA



701B

1 kw AM TRANSMITTER

This will introduce you to the **NEWEST** member of the **SPARTA AM TRANSMITTER** line . . .

THE MODEL 701B!

- Only four low cost 4-500 tubes
- 125% positive modulation capability
- Tally Light overload system
- Vacuum capacitor final tank tuning
- Oil filled modulation transformer
- Built-in dummy load
- Available in 1000/500, 1000/250, or 500/250 Watt power configurations

THE NEW SPARTA MODEL 701B AM

Transmitter; the **ONLY 1kw AM** with **ALL** of these quality features!

SPECIFICATIONS

- AF Input Level + 10 dbM \pm 2 dbM (100% Modulation)
- AF Response 50-10,000 Hz (95% Modulation) \pm 1.5 db
- AF Distortion 50-10,000 Hz (95% Modulation) Less than 2.5%
- Noise -60 db (Below 100% Modulation)
- Carrier Shift 3% or less (0-100% Modulation)
- Power Supply 208-240 Volts \pm 5%, 50-60 Hz Single Phase
- Power Consumption . . . 1,000 Watts Output, 90% PF
0% Modulation – 3,100 Watts
40% Modulation – 3,500 Watts
100% Modulation – 4,150 Watts
- Size 75" H, 34" W, 25.5" D
- Weight 1,000 Lbs. Net

The SPARTAN

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SPARTA ELECTRONIC CORPORATION
A Division of Computer Equipment Corporation
5851 Florin-Perkins Road
SACRAMENTO, CA 95828



We'll See You In Washington At The 1973 NAB Convention

When you read this issue of "The Spartan", months of research, design, production and other preparations will be tapering off and our equipment and display will be on the way to Washington, DC for the opening of the NAB Convention at the Sheraton-Park and Shoreham hotels March 25.

Sparta, Jampro and Vega will be in booth 310, Hall No. 3, at the Sheraton-Park hotel.

Since we have so much that's new, and about which we are so excited, we have rented the largest exhibit space ever and plan on a busy and pleasant time demonstrating our new equipment.

Our plans also include hosting as many of you for breakfast as we can manage in the four days of the show. We'll serve breakfast in our hospitality suite so you may avoid restaurant lines and chat with the Sparta and Jampro staff as you start the day off in a relaxed atmosphere. The suite will be open during the day so that you may take a few minutes off to sit down with a cup of coffee. Look for Sparta hospitality suite information in your program or on one of the bulletin boards at the convention.

When you are at booth 310 in the Sheraton-Park, you'll be able to examine the new Model 680 FM Exciter, displayed both in the Model 601 and 620 FM Transmitters, and by itself. Also new in the Sparta transmitter line: the Model 701B 1kw AM Transmitter. A Model 705 5kw AM transmitter will round out the Sparta display of RF equipment.

The Audio spotlight will be on the CENTURION Series — which offers features not found elsewhere in broadcast consoles — and the new concept in Spartamation, the SPARTAMATE I and SPARTAMATE II and their options.

The new RS250 Random Access will be on display as part of the SPARTAMATE

II, and separately as well. Dave Evans has promised to bring along a spare Model 1052 Program Controller so visitors can see for themselves the ease with which programming is changed in the Spartamation manner. Automatic logging will be operational with the SPARTAMATE II system.

The Vega 55/56 Wireless Microphone system will be demonstrated as an audio source for the operational CENTURION II audio console.

In brief, you'll see all the Sparta, Jampro and Vega equipment which, prior to this, you've only seen in product guides, new products sections of the trade magazines, or in this newsletter.

Elsewhere in this issue you'll find more details about the equipment. We hope that you make a point of stopping by.

News From

JAMPRO

Jampro has developed an FM antenna with outstanding performance and power handling capabilities. Designated the Model JSDP, it is to be on display at the NAB Convention.

A 3-bay version has been delivered to WASH-FM, Washington, DC, a Metro-media station, and should be in operation by Convention time.

The measured performance of the WASH-FM antenna is:

Horizontal Plane Circularity: Hpol. 2.16 db Vpol. 2.85; Axial Ratio: 1.89 db; Maximum VSWR 89 to 108 MHz, 1.10/1; Maximum output: 70 kw.

By using 1-5/8" interbay feed cables, power input ratings of 240 kw are possible with the JSDP.

701B Xmitter An Absolute Tops In Field

The Sparta Model 701B (above) brings to the 1kw AM broadcaster the latest and finest transmitter since the Bauer Model 707 hit broadcasting 13 years ago with the kit idea.

The Model 701B is, in fact, the grandson of the Bauer 707 and still retains many of the original precedent-setting features of that famous unit. Just recall that over 400 Bauer 707's were sold, and all of them are still operating in every conceivable part of the world! Such features as oil filled modulation transformer, vacuum capacitor final tank tuning, and the built-in dummy load have never been improved upon by any-

(continued on page 2)

Death Takes Fritz Bauer

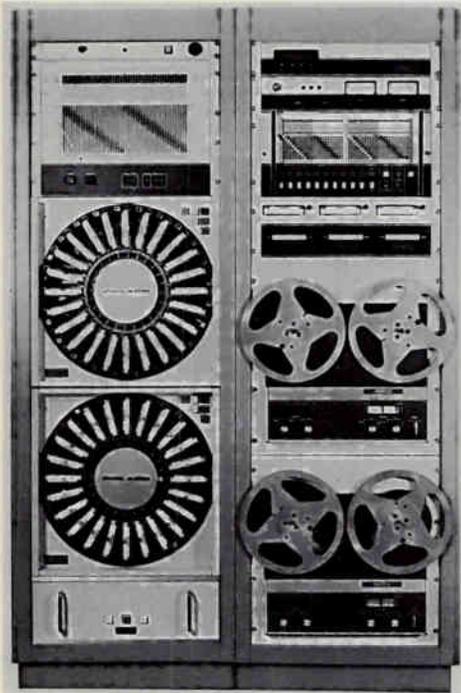
Fritz Bauer, founder of Bauer Electronic Manufacturing Co., co-founder of Bauer Electronic Corp. and a broadcast pioneer, died of a heart attack in Tracy, CA, Jan. 31. He was 67.

Bauer retired from the broadcast equipment field two years ago with the sale of Bauer Electronic Manufacturing Co. to Sparta. Since then he has been active in pursuit of his latest hobby, the building and flying of a gyrocopter.

The broadcast industry will miss Fritz Bauer ... his contributions were many. His designs were characterized by a straight-forward approach and his quality of workmanship set a high standard.

Bauer had resided in San Mateo, CA. He leaves his wife and two daughters.

Spartamate - A New Concept



SPARTAMATE II . . . complete with optional AP2 Alarm Panel and TA581 Time Announcer. SPARTAMATE I consists of the right hand rack only for limited commercial content or part-time automation.
—Sparta Photo

The SPARTAMATE concept, new to the Spartamate family of broadcast automation equipment, starts with a basic system costing only \$6,550. The SPARTAMATE II (shown in photo above) sells for just \$12,495. The basic system, SPARTAMATE I, consists of the right-hand "control" rack with reel/reel machines in the photo.

These prices, Sparta feels, and the entire "building block" idea, will allow more stations in the mid-range of American broadcasting to take advantage of relaxed operator license rules for more economy and better use of gifted personnel.

SPARTAMATE I gives part-time automation with limited commercial loads. The rack contains (top to bottom in photo): Digital clock, Line and Monitor Amplifier, Model 1052 Program Controller, triple rack of Century Series tape cartridge playbacks and two reel/reel machines.

SPARTAMATE II adds the heavier commercial load capability of the RS250 Random Access with the two 24-cartridge Carousels.® The RS250 operates in "search ahead" style so that the two cartridges are always ready for play. Uneven spot loads may be handled by the RS250 through operation of the "skip" feature so

Simple! That's The Model 680 Direct Exciter

There is no oven in the Sparta Model 680 Direct FM Exciter. And no field adjustment is EVER NEEDED. It is simple. It uses a minimum number of parts and it will retrofit into any type accepted FM transmitter and respond with factory guaranteed specifications.

Now those, we know, are thought-provoking claims for this latest RF development from Sparta, as the Model 680 replaces the popular Model 660. The 680 becomes the Model 681 10 Watt FM transmitter. The Model 682 is the Stereo Generator, and 683 the SCA Generator to complement the basic 680 Exciter.

Now, to other features. Latest techniques are employed in the 680, such as Strip-Line RF Circuitry and Automatic Carrier Balance. Integrated circuits are not liberally scattered throughout the equipment as a sales point, but are carefully chosen to accomplish the best job. Transistors, likewise, are used where they do the best job. The Model 680 Exciter IS ENGI-

(continued on page 3)

that re-programming the Controller is not necessary.

Network joining capability is a no-cost feature of the SPARTAMATE I or II. This is the first time such an important option has been available as an integral with the systems, rather than separate equipment.

SPARTAMATE II, as shown, has all the favored options with the exception of automatic logging, which can be added.

a little of . . .

EVERYTHING

The annual National Association of Broadcasters convention becomes nearly nomadic during the next few years. We'll be in Washington, DC at the end of March, but the '74 schedule takes the big show to Houston, TX, then to Las Vegas, NV in 1975 and to New Orleans, LA in 1976.

This means considerably greater expense for the exhibitor but we at Sparta are in favor of the convention moving about in this fashion. We know it's not every station which can send a delegate to the NAB convention if it's far away from home.

If the broadcasters cannot all make it to the Convention, then take the Convention to the broadcasters, seems to be the new NAB concept . . . and we agree. We're all for whatever makes and keeps broadcasting a great and vital industry.

So, if Washington is too far away from you to make the Convention this year, maybe we'll be in your neighborhood next year. We'll look forward to making your acquaintance one year soon, if not this spring.

701B Xmitter

(continued from page 1)

one's designs . . . they are still among the features of the Sparta 701B.

But, the NEW features! The Tally Light overload indicator system tells the engineer at a glance where the overload occurred which knocked him off the air . . . although the transmitter has since re-set and is again operating. The Tally Light stays lit until the engineer gets to the transmitter site to inspect and re-set the lights manually.

The new 4-500 tubes are the finals in the 701B. They are superb, long-life tubes which just loaf along at the rated 1kw. The 701B is the only broadcast transmitter yet to use these tubes. And the 4-500's are the ONLY tubes in the 701B . . . it is completely solid-state right up to the finals.

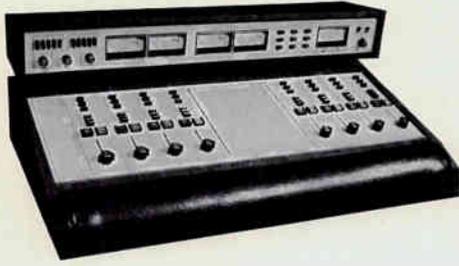
And, of course, the 125% positive modulation is provided for with the 701B.

You get all the above features when you purchase the new Sparta Model 701B 1kw AM transmitter, available in 1000/500, 1000/250 or 500/250 watt power configurations. It's the only 1kw AM transmitter offering EVERY ONE of these features as standard equipment.

The Sparta 701B . . . today's (and tomorrow's) newest 1kw AM transmitter.

Included in the left-hand rack (top to bottom) are the AP2 Alarm Panel which gives both visual and audible signals when dead air is sensed. Directly below the small AP2 panel is the RS250 with its digital readouts showing the next Carousel and tray number to play. The twin Carousels leave exactly enough room for the TA581 Time Announcer which most stations using the SPARTAMATE II also order as an option.

BILL OVERHAUSER
President
Sparta Electronic Corporation



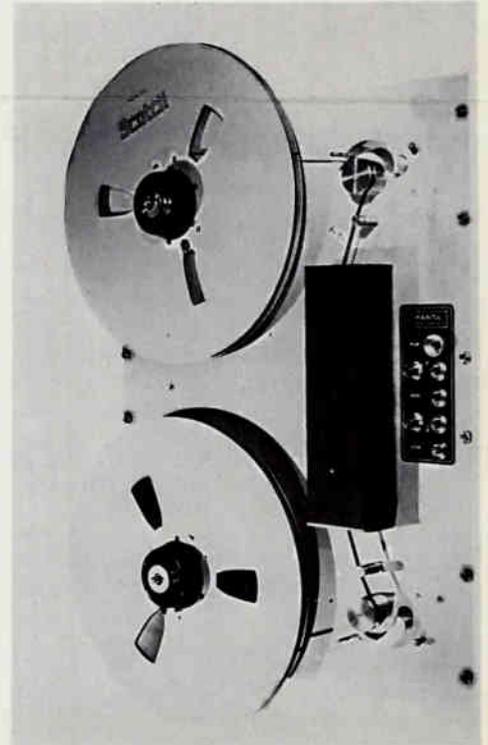
A PAIR TO DRAW TO! . . . CENTURION I (above, right) in one of the many optional configurations. As shown, 10 channels are equipped with rotary attenuators. CENTURION II, at left, in another of the many arrangements of the total 12 channels. Here, eight channels are supplied with vertical attenuators. Optional copy board is centered, one unused channel is covered with blank matching panel. —Sparta Photos

Big Reels? You Need The Corinthian

When bigger reels of tape are available to play, the Sparta CORINTHIAN will be there to play them!

But, for the moment, this new machine plays 14-inch reels and at a price competitive with machines of only 10½-inch capacity.

Direct capstan drive, three motors, foil reversing and air-damped tape tension arms



FOR BIG ONES . . . the new Corinthian by Sparta will accept up to 16-inch reels of tape. Only 14-inch reels are shown in the above photo. —Sparta Photo

Centurion Series Audio Consoles Offer Even Greater Versatility

The CENTURION Series audio consoles, being introduced at the NAB Convention, offer even greater versatility than Sparta's famous audio consoles have previously.

The CENTURION, with its walnut-grain finish, choice of rotary or slide attenuators and 4-channel capability, brings to either radio station, or recording studio, all the Sparta audio handling experience, plus the most advanced design features available.

In the CENTURION bulky wiring harnesses have been replaced by separate "mother boards" for high and low level circuits. Individual mixer modules plug directly into the low level mother board and input terminations are made to it as well. The use of printed circuit ground plane techniques eliminates most shielded cables that otherwise would be required.

Each mixer position, of the 12 possible, is in itself a plug-in module, internally switchable to high, or low level, input. Thirty-six stereo inputs are possible if all 12 channels are used; three switched inputs are provided for each channel module.

Operation of the board is free from either mechanical or electrical noise. Illuminated pushbuttons and electronic switching are used throughout. In spite of its rather imposing specifications (36 stereo inputs in 12 channels) the printed circuit ground plane, and other techniques, have held the CENTURION's size to a comfortable radio station control room dimensions. It is 38" wide, 23½" deep and a bit less than 16" at the highest point.

In choosing among the many options, purchasers are asked to keep in mind that the CENTURION is capable of quadraphonic broadcasting or four-channel recording. Separate metering systems are provided for Program and Audition channels, so two adjacent mixers can be "ganged" to originate quad operations. Vertical or rotary attenuator selection should be made

with this prospect in mind.

Sparta's long experience in the quality broadcasting audio console field has produced a blend of the most modern techniques and designs, flavored with that certain something identifiable always as the Sparta "just right" quality.

The CENTURION . . . NAB Booth 310, Sheraton-Park Hotel.

680 Exciter

(continued from page 2)

NEEDED FOR SIMPLICITY, RELIABILITY, AND MAINTENANCE-FREE PERFORMANCE FOR YEARS AND YEARS.

Known failure points in other exciters have been given special attention. The few components which can conceivably wear out are not mounted in the middle of a PC board (such as filter capacitors), but are made easily accessible by themselves. Instruction books and schematics list all of the significant information about these units.

A special digital AFC control circuit keeps the transmitter on frequency, rather than relying on ovens or any other special environment-controlling equipment. Adjustments are so broad in range that anyone without field test equipment could never tell if the Model 680 was misadjusted, even when deliberate maladjusting is done far out of any normal range.

Sparta has not made any unnecessary mystery about any part of the simple foolproof design. The complete schematic of the special phase-linear filter for the stereo generator for instance, is shown in the tech manual, complete with component values!

Should the stereo generator fail in service, there is a separate mono audio input on the exciter; no jumpers to connect or special stereo modifications to disconnect. Most of the stereo generator's circuitry is

for smooth tape handling are standard.

As is 16-inch reel capacity. The standard two speeds are 3¾ and 7½ ips, in either monaural or stereo.

More about the CORINTHIAN in the near future.

bypassed when operating mono, so there's always a way to stay on the air even if something SHOULD go wrong.

In brief, the Sparta Model 680 is the simplest, most foolproof, and secret-free Direct FM Exciter yet devised. Sparta guarantees that it can be plugged into your transmitter, at your site, and IT WILL WORK.

See it at NAB, or send for schematics and look it over for yourself . . . the Sparta Model 680 Direct FM Exciter.

SAVE! N.A.B. SPECIAL **Sparta GT12 Synchronous Motor Complete Turntable System ... Monaural or Stereo!**



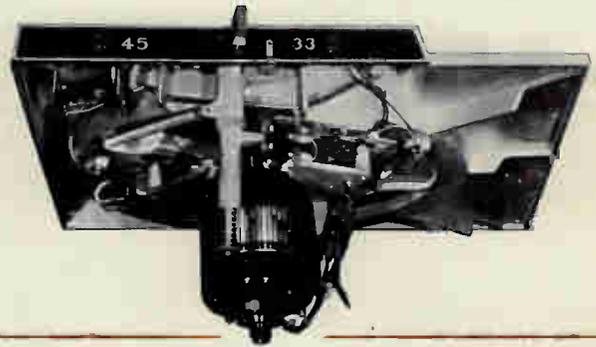
MONAURAL SPECIAL:

GT12SY 12" Custom Turntable \$195.00
 TEP3M Equalized Preamplifier 98.00
YOU PAY ONLY \$293.00

AND YOU RECEIVE – ST220 Tone Arm
 (mounted) with M44C Cartridge and Stylus –
A \$57.45 VALUE FREE

STEREO SPECIAL:

GT12SY 12" Custom Turntable \$195.00
 TEP3S Equalized Preamplifier \$149.00
YOU PAY ONLY \$344.00



AND YOU RECEIVE – ST220 Tone Arm
 (mounted) with M44C Cartridge and Stylus,
 and spare N44C Stylus –
A \$67.20 VALUE FREE

YES, I want to take advantage of this Sparta N.A.B. Special Offer (good until April 15th, 1973). Enter my order for _____ turntable kits, complete as described above. I understand that my satisfaction is guaranteed.

- GT12SY Monaural Turntable Systems
- GT12SY Stereo Turntable Systems
- C.O.D. (add \$10 per kit for handling; air shipment)
- Add to my existing account, plus air shipment costs.

SIGNATURE _____

NAME (Print) _____

TITLE _____ STATION _____

ADDRESS (If Different Than Below) _____

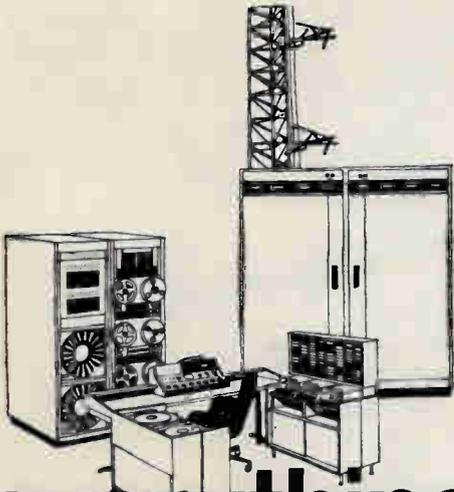
CITY _____ STATE _____ ZIP _____

TELEPHONE NUMBER _____

THE
 'JUST RIGHT'
 COMPANY
 small enough to be
 first name friends
 . . . big enough to
 supply EVERYTHING.
 Call us.
 Collect.

BULK RATE
 U. S. POSTAGE
PAID
 PERMIT NO. 997
 Sacramento, Calif.

QUICK REFERENCE PRODUCT BROCHURE



everything



SPARTA ELECTRONIC CORPORATION

5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828 (916) 383-5353

A DIVISION OF COMPUTER EQUIPMENT CORPORATION



SPARTA-MATION SYSTEMS & DEVICES GIVE YOU COMPLETE PROGRAMMING CONTROL

SPARTA-MATION systems offer more realistic value than any other, and are available on attractive financing programs. They have been developed by people with years of successful broadcasting experience. Stations throughout the world are improving their programming and increasing their profits with reliable, modern SPARTA-MATION. Any number of different programming formats can be accommodated, and your system can include automatic network joining, program logging and remote control. SPARTA-MATION devices can be used with, and will interface with, almost any system.

SHOWCASE SERIES AUDIO CONTROL ROOM CABINETRY

The efficiency and appearance of your existing studio arrangement can be greatly enhanced by one or more individual "Showcase" cabinets. A rich, quality studio look without custom cost can also be yours; several "Showcase" groups, including equipment, are offered by SPARTA at special package prices. The modular concept gives mix-or-match versatility from among the wide selection of cabinet pieces to create THE audio control center to fit nearly any requirement. In the "Showcase" selection, fine furniture craftsmanship has been combined with long lasting, easy-maintenance durability.



MONAURAL AND STEREO STUDIO CONTROL & REMOTE UNITS

MODEL AC-155B. A versatile monaural audio control center that combines maximum operational flexibility with professional quality in any location. A semi-permanent installation can become mobile at a moment's notice and enable you to cover more assignments and to produce added station revenue.

MODEL ASC-305B. A full-facility stereo audio control center that is tailor-made for production room chores, main control, or remote broadcast assignments. The equipment cabinet is of exceptionally fine construction and distinctive design with a very rugged and durable bonded plastic laminate finish. Accessories include a protective bench/lid, top-mounted utility shelf and professional dynamic microphone with special goose-neck mounting.



5-CHANNEL MONAURAL & STEREO CONSOLES

MODEL A-15B. Select five audio inputs at a time from the 14-source capability of this modestly priced professional quality console. Outstanding features include all-channel cue system, monitor amplifier, and muting relays.

MODEL AS-30B. Accommodates nine stereo sources with identical line amplifiers in both program and audition outputs, allowing different stereo programming to be controlled at the same time. Stereo mixing versatility unmatched by any other in its class.



EXTENDER PANEL CABINETS FOR 5 & 8-CHANNEL CONSOLES

MODELS EP-15B, 20B, 30B, and 40B. Five additional mixing channels may be added to your SPARTA console now or later with one of the Extender Panel cabinet series. Input configurations of each EP model are identical to the console for which it is designed. Adding the appropriate EP cabinet is a simple task and gives an attractive factory look. Plenty of free panel space to add individual custom features, and you can add it to either the right or left of your existing SPARTA console as desired. Input connectors to the EP from the main console are through rear panel barrier strips, so front or rear, the EP cabinet matches your attractive SPARTA console!



1000/500/250 WATT AM TRANSMITTER

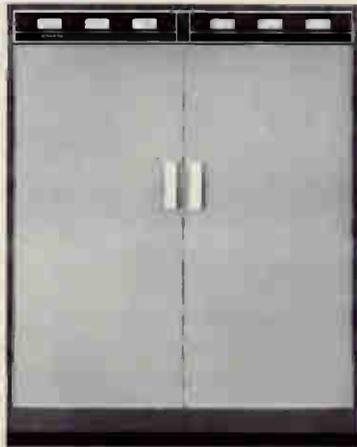
MODEL 701. The 701 has kept all of the plus features of its famed predecessor, the 707. The vacuum capacitor final tank tuning, built-in dummy antenna and oil filled modulation transformer. New are the "tally light" system and



solid state oscillator section. The 701 provides such quality AM broadcast performance that SPARTA expects it to beat the former champion, the Model 707 which is in use in more than 400 stations around the world!

5,000 AND 10,000 WATT AM TRANSMITTERS

The Model 705 really "loafs" at 5000 watts. Reserve performance was SPARTA-designed to give finest asymmetrical modulation and long trouble-free tube life. Both the 705 and 710 are "tally light" equipped; after the transmitter has recovered automatically from an overload outage, the tally light tells the engineer where the overload occurred. The 705 is up to date with every engineering advance, producing a signal that punches into your secondary coverage with clarity and authority.



The 710 uses a larger power supply and modulation transformer and reactor than the outwardly similar 705. At either power this compact AM transmitter gives your station every modern development in technology that is truly useful, without overly complicating the circuitry. Oil filled modulators are square wave-tested, low-distortion, giving outstanding transient response. Here are 10,000 USEFUL AM watts performance with a reasonable SPARTA price tag.

... AND **everything** IN BETWEEN ...
(INCLUDING 100% FINANCING)

With SPARTA'S modern, comprehensive product lines of Audio, Automation and Transmitter products and accessories, this short form catalog can no more than indicate to you the RANGE covered in total. In brief, SPARTA can supply every item from microphone and stylus to transmitter, tower and antennas. Limiters, amplifiers, speakers, complete custom cabinetry, STL or wire links, tower lights - SPARTA can fill your requirements with exactly matched systems that save you time, trouble and money. More detailed information is available in individual Product Guides, and in our Catalog and Price Schedule. We invite your further inquiry.



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8-CHANNEL MONAURAL & STEREO CONSOLES

MODEL A-20B. The A-20B is today's finest 8-mixer, full facility, monaural audio console. Contemporary styling and advanced solid-state design have made the A-20B more compact than any other comparable console — yet it does the job of consoles twice its size and price!

MODEL A-40B. Crystal clarity, trouble free performance and VALUE are yours in stereo broadcasting with the new AS-40B. Incorporating the latest state-of-the-art design, it is built for reliability you can depend on! It's big enough to handle ANY stereo broadcasting assignment, at a price far less than you might expect.



RACK-MOUNTING DUAL CHANNEL MONAURAL CONSOLE



MODEL A-16R. This mixer, compact enough to fit neatly into video consoles, easily handles audio requirements from several studios simultaneously. Its dual channel output even gives identical crystal clear handling to different programming at one time. In its standard rack mount, or handsome optional custom cabinet, the A-16R's fifteen-input capability with push-button control gives fast and flexible handling for TV, CCTV and CATV audio. A wise investment at its modest price.

REMOTE BROADCAST MIXER AND LINE AMPLIFIER

MODEL RA-4. The neatest and most solid 4-channel remote mixer on the market. Its four channels accept microphone or line level inputs, and each has headphone-monitored cue. Two RA-4 units can be connected in series for double duty. Full-capacity console, operating AC or from self-contained batteries.

MODEL RA-1. This inexpensive little line or utility microphone remote amplifier features a fully integrated circuit design! Current drain is extremely low for a lifetime of dependable, trouble-free operation in your many general purpose applications.





CENTURY SERIES TAPE CARTRIDGE MODULAR SYSTEMS



Playback and record modules, in this unique and innovative system, are of identical size – allowing the great number of mounting configurations shown here, plus as many others as your station's needs and ingenuity can find. The rack mount housing accepts three modules and takes only SEVEN inches of rack space. In every case, space occupied by a playback module in these pictures can be occupied by a record amplifier module. Thus a triple rack mount housing can contain a record-playback system plus a playback module, or three playbacks only. Audio switching is built-in, allowing absolutely "popless" starts, and several playback modules to be connected to a single mixer channel without separate isolation equipment. The record amplifier module provides selection of THREE high-level audio inputs. Its meter monitors recording level, cue tone, or bias.

Size and cost of the CENTURY SERIES systems have been reduced through SPARTA'S use of the very latest engineering techniques, with resulting unrivaled flexibility and reliability.

TURNTABLE SYSTEMS & ACCESSORIES

MODEL GT-12 CUSTOM. The distinctive orange "power paddle" of the two-speed GT-12 enables the operator to cue records with one hand more conveniently than ever before. Operator convenience is emphasized throughout; speed indicators stay lit until the turntable is shifted to neutral, change record types with no adaptor or moving parts, and change speeds with minimal movement. Complete systems from SPARTA include floor cabinets, tone arms, pickup cartridges, and equalized mono or stereo preamps.

MODEL ST-220 TONEARM. A top-quality 12-inch tonearm which at a glance tells you it's PROFESSIONAL. Light alloy construction, with every adjustment necessary to insure maximum mono or stereo performance.



LOW POWER FM TRANSMITTER & EXCITER



MODEL 660. The Model 660 is the solid-state heart of every SPARTA FM transmitter. It is shown (right) complete with its plug-in stereo and SCA modules. Its rating is 10 watt direct carrier FM, although its full capability is up to 15 watts. Alternate uses are for educational FM broadcasting, or FM band STL.



MODEL 600 250 WATTS. The simple, straightforward Model 600 produces a top-quality FM signal with either the 660 exciter, or more economical M-10/FM tube-type monaural exciter. For low-power or standby use, the Model 600 is unmatched in value.

MEDIUM POWER FM TRANSMITTERS

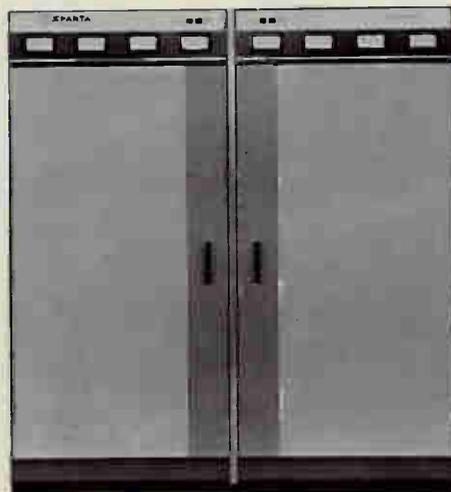
MODEL 602 2500 WATTS. Stereo and SCA operation are yours if desired, at full Class A FM signal strength with the Model 602. The "Stripline" final amplifier gives proven reliability; there are no moving contacts or expensive cavities. In fact, this SPARTA design makes the most economical package for full power Class A broadcasting; the 1.5 gain of a 3-bay antenna with the 602 provides what competing transmitters need 4 bays to accomplish.



MODEL 603A5 5000 WATTS. Not a scaled-up or scaled-down version of anything else! The 603A5 is fully designed for primary operation at 5,000 watts — resulting in the smallest self-contained 5 kw FM transmitter available. Metering is complete, and all remote control facilities are included in the basic price. Uncluttered layout and straightforward design, with swingout front panel for easy access, make the 603A5 a pleasure for the engineer.

HIGH POWER FM TRANSMITTER

MODEL 620 20,000 WATTS. Here is the transmitter that introduced the "Stripline" final stage concept to broadcasting! In fact, the "Stripline" driver of the 620 uses only about 1/3 of its capacity at 20,000 watts; the remaining power can be used to drive another 620 for a 40,000 watt total output. Optimum performance up to 23,000 watts is possible without continual



knob-tweaking adjustments. The broadband final amplifier tunes to exactly where you want it and STAYS there. The "tally light" fault locator system so popular on SPARTA'S AM transmitters has been engineered into the 620 also. Automatic Power Control assures operation within FCC tolerances, in addition to a high VSWR protection system.

TA-581	Time Announcer: Dual cartridge, for odd/even 7.5 ips announcements. One cartridge always ready. Supplied with sliders. Requires rack with front and rear rails. 7" rack space.	1,250.00
RS 124	Mono cartridge Carousel for random or sequential operation of up to 24 tape cartridges. Includes decoder output for automatic logging systems. (19 1/4" Rack Panel)	1,500.00
RS 224	Stereo cartridge Carousel	1,650.00
RS-100B	Random Cartridge Access: Preselects 100 cartridge events. Provides control & audio switching for 1 random and 1 sequential Carousel into a single audio input of the Program Controller. Requires 21" rack space.	1,495.00
RS-4100	Random Cartridge Access: Selects 100 cartridge events from four Carousels. Overlap audio switching into single input of Program Controller. Digital readouts. Supplied with sliders. Requires rack with front and rear rails. 10 1/2" rack space.	2,495.00

For complete pricing of SPARTA-MATION Systems & a variety of tape devices available, contact your representative or the factory.

REEL TAPE RECORDERS

A-1200	7" reel, 2 or 4 Track, Mono/Stereo	329.50
A-1230	7" reel, 2 or 4 Track, Mono/Stereo	399.50
3300	10 1/2" reel, 2 or 4 Track, Mono/Stereo	549.50
7030 SL	10 1/2" reel, 2 Track, 7 1/2 - 15 I.P.S.	
	Mono/Stereo	949.50
MF-70	Rack Mount Adaptor for 7030 SL	30.00
CT-700	Floor Console Cabinet for 7030 SL	144.00
RC-701	Remote Control for 7030 SL	52.00
1302/4	Revox A77-Mk III 2 or 4 Track Mono/Stereo	649.00
SSP	Stainless Steel face-plate for A77	10.00
13-R	19" Rackmount Adaptor for A77	15.00
FT-HS	Full-Track Mono at 7 1/2 - 15 ips Mod. for A77	200.00
531R	10 1/2" reel full-track, Mono	1,695.00
543R	10 1/2" reel 2-Track, Stereo	1,995.00
M/S-280	10 1/2" reel (motion sense) full track	2,450.00
M/S-280-2	10 1/2" reel (motion sense) 2-track Stereo	3,100.00

All Equipment is 117 Volts, 60 Hz Standard. Others are available.

Terms: Sparta-Charge; Open-Account; Conditional Sale Contract or Lease/Purchase Agreement up to five years. All prices are F.O.B. Sacramento

Factory Sales/Service (916) 383-5353
Telex 377-488
Sacramento, California 95828

All equipment items and descriptions in this brochure are necessarily condensed and do not completely show the many other broadcast products supplied by SPARTA. For more information about professional quality Reel-to-Reel Tape Recorders, Tone Arms and Cartridges, Microphones, AM and FM transmitters available through SPARTA, contact your SPARTAMAN sales engineer or the sales office of SPARTA ELECTRONIC CORPORATION.

Our policy is one of continual improvement in design and manufacture; and therefore, we reserve the right to change prices, specifications and design without notice.

No order is binding upon SPARTA ELECTRONIC CORPORATION until accepted in writing from the SPARTA home office in Sacramento, California.



BROADCAST EQUIPMENT PRICE SCHEDULE

APRIL 1, 1972



SPARTA ELECTRONIC CORPORATION
5051 FLOWN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828 (916) 383-5353
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SPARTA
Electronic Corporation

CENTURY SERIES TAPE CARTRIDGE EQUIPMENT

001-4510	Monaural Playback Module	430.00
001-4515	Monaural Playback Module w/Aux Cue	460.00
001-4520	Stereo Playback Module	530.00
001-4525	Stereo Playback Module w/Aux Cue	560.00
001-4610	Monaural Record/Playback System	660.00
001-4615	Monaural Record/Playback System w/Aux Cue	720.00
001-4620	Stereo Record/Playback System	880.00
001-4625	Stereo Record/Playback System w/Aux Cue	940.00
001-4710	Monaural Record Module	230.00
001-4715	Monaural Record Module w/Aux Cue	260.00
001-4720	Stereo Record Module	380.00
001-4725	Stereo Record Module w/Aux Cue	410.00
001-4810	Single Flip-Top Module Cover	15.00
001-4820	Dual Flip-Top Module Cover	18.00
001-4830	Triple Module Rack Mount Housing	45.00
001-4840	Quad Module Custom Cabinet	75.00
001-4850	Matching Blank Panels for #4830 & #4840	8.00

NOTE: Aux Cue Option is NAB 150Hz End-Of-Message Tone.

CD-15	Time Delay	450.00
M-1200TD	3-10 sec. Delay Cartridge	7.50
BP-22C	Briefcase Playback	195.00

TAPE CARTRIDGE ACCESSORIES

CR-80	Revolving Cartridge Rack	65.00
CR-120	Revolving Cartridge Rack	85.00
CR-100	Wall Cartridge Rack	65.00
CE-2	Bulk Reel/Cartridge Eraser	45.00
AL-1	Head Alignment Cartridge	6.50
DM-200	Head Demagnetizer	6.95
AG-2	Alignment Gauge	7.50
HM-2P	Head Mount (Playback)	20.00
HM-2RF	Head Mount (Record/Playback)	25.00

AUDIO CONSOLES & ACCESSORIES

AS-40B	8 Mixer stereo	1770.00
AS-40B-1	8 Mixer stereo with external MAS-50 & SM-3	1995.00
A-20B	8 Mixer Monaural Dual Capability	1395.00
EP-20	Extender Panel Cabinet for A-20B	210.00
A-15B	5 Mixer Monaural	650.00
EP-15	Extender Panel Cabinet for A-15B	210.00
A-16R	5 Mixer Dual Monaural (Rack Mount)	1250.00
AS-30B	5 Mixer Stereo	850.00
EP-30/40	Extender Panel Cabinet for AS-30B & AS-40B	250.00
1018	Installed or spare Preamplifier	29.50
RA-1	Utility Microphone/Line Amplifier	95.00
RA-4	4 Channel, AC/Battery Remote Amplifier	250.00
AC-155B	5 Mixer Studio/Remote	1450.00
ASC-305B	5 Mixer Stereo Studio/Remote	1750.00
BL-5	Bench-Ltd Combination	85.00
MIC-5	Microphone with Custom Mounting	65.00
US-5	Top-Mounted Utility Shelf	75.00
MA-25	25 Watt Monitor Amplifier	150.00
MAS-50	50 Watt Stereo Monitor Amplifier	210.00
MA-25Q	25 Watt Monitor/Cue Amplifier	195.00
MAS-50Q	50 Watt Stereo Monitor/Cue Amplifier	255.00
SM-3	Muting & Relay Accessory	45.00

NOTE: All SPARTA Consoles, Extender Panels and Audio Control systems may be ordered with precision Step Attenuators in place of the Standard Mixing Control. Orders should clearly state this preference. The additional cost of this option is \$20 per channel for monaural and \$30 for Stereo equipment, which includes credit for the standard control.

TURNTABLE & ACCESSORIES

GT-12-4P	12" Custom; 4-Pole Motor	170.00
GT-12-SY	12" Custom; Sync. Motor	195.00
TEP-3M	Monaural Equalized Preamplifier	98.00
TEP-3S	Stereo Equalized Preamplifier	149.00
ST-220	Tone Arm (Less Cartridge)	39.50
M44C	Phono Cartridge (Stereo/Mono) includes N44C	17.95
N44C	Stylus for M44C	9.75

SHOWCASE CONTROL ROOM CABINETRY

101-1	Console Desk	225.00
101-1-3	Console Hood for A-20 & AS-40 with Speaker & Digital Clock	100.00
101-1-4	Digital Clock for custom mounting	45.00
101-1-4B	Digital Clock with housing	55.00

101-3-4	Dual Turntable Return (For 2 GT or equal)	250.00
101-3-5	Dual Utility Return	265.00
101-3-1	Rack Bracket Kit for 101-3	8.00
101-6	Cartridge Storage Hutch for 101-3-5	135.00
101-7	Single Turntable Return (For 1 GT or equal)	170.00

SHOWCASE PACKAGE SPECIALS

GROUP #1	8-mixer Console with Console Desk, Hood with Digital Clock & Monitor/Cue Speaker, Microphone, Dual Turntable Pedestal with SPARTA GT-12 Series Custom Turntable Systems	Monaural 2,600.00 Stereo 3,400.00
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GROUP #2	All of Group #1, plus Dual Utility Return Pedestal with Cartridge Hutch.	Monaural 2,900.00 Stereo 3,700.00
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GROUP #3	All of Group #1 & #2, plus a SPARTA Century Series Tape Cartridge System of two Playbacks and one Record/Playback	Monaural 4,400.00 Stereo 5,600.00
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AM TRANSMITTERS

701	(1000/500/250W) (Any two powers)	6,500.00
703	(3000W)	11,500.00
705	(5000/1000/500W) (Any two powers)	21,000.00
710	(10,000W)	24,000.00
715	(15,000W)	27,500.00
725	(25,000W)	62,500.00

(Two Crystals and two Oscillators are included in all AM Transmitters)

FM TRANSMITTERS

660	(10W)	2,950.00
661	(Stereo Generator)	1,295.00
662	(SCA Generator)	595.00
600	(250W)	5,750.00
600T	(250W; mono Tube Exciter)	3,850.00
601	(1,000 W)	7,650.00
602	(2,500 W)	10,500.00
603A5	(5,000 W)	15,500.00
612	(12,500 W)	24,500.00
620	(20,000 W)	28,500.00

(Spare oven and crystal included in all FM Transmitters)

MONITORS - AM

AMM-1	Frequency & Modulation Monitor	1,500.00
TBM-8000	Frequency Monitor	975.00
TBM-8500	Modulation Monitor	850.00

MONITORS - FM

FMM-1	Frequency & Modulation Monitor	1,550.00
FMS-1	Frequency & Modulation Monitor (Stereo)	1,350.00
SCM-1	Frequency & Modulation Monitors (SCA)	1,250.00
TBM-3700	Frequency & Modulation Monitor	1,350.00
TBM-2200	Stereo Modulation Monitor Adaptor	1,200.00
TBM-3019	19KHz Pilot Frequency Counter	125.00
TBM-2000A	SCA Mod & Freq. Monitor Adaptor	1,200.00
TBM-3500A	Mono Modulation Monitor	1,000.00
TBM-3000A	Digital Frequency Monitor, Main & 19KHz	975.00
TBM-4500A	Stereo Modulation Monitor	2,200.00
TBM-4000A	SCA Mod & SCA Frequency Monitor	2,200.00
TBM-1000B	Relay Receiver, 88-108 MHz	250.00
TBM-2500C	RF Amplifier, Remote Monitor	485.00
RFA-1	RF Amplifier	400.00

ACCESSORIES

RMC-2AX	(10) 10 Channel Remote Control	1,295.00
RMC-2AX	(24) 24 Channel Remote Control	1,645.00
PBR-15AW	Remote Control - Single AC pair	1,495.00
PBR-30AR	Remote Control - radio STL	2,735.00
380	Phase Sampler	165.00
FIM-21	Field Intensity Meter (solid-state)	1,150.00
3005	Dummy Load 5 KW Modulated	450.00
3010	Dummy Load 10 KW Modulated	650.00

5000/7-72

JAMPRO "PENETRATOR" FM ANTENNA
Circularly polarized 10KW per bay 3 1/8" line

JSCP-1	1 Bay, 0.46/0.46 power gain	1,250.00
JSCP-2	2 Bay 1.0/1.0 power gain	1,890.00
JSCP-3	3 Bay 1.5/1.5 power gain	2,730.00
JSCP-4	4 Bay 2.1/2.1 power gain	3,570.00
JSCP-5	5 Bay 2.7/2.7 power gain	4,410.00
JSCP-6	6 Bay 3.2/3.2 power gain	5,150.00
JSCP-7	7 Bay 3.8/3.8 power gain	6,190.00
JSCP-8	8 Bay 4.3/4.3 power gain	6,750.00
JSCP-10	10 Bay 5.3/5.3 power gain	8,820.00
JSCP-12	12 Bay 6.6/6.6 power gain	10,500.00
JSCP-14	14 Bay 7.8/7.8 power gain	12,280.00
JSCP-16	16 Bay 8.9/8.9 power gain	13,650.00

Deicers, if any, add \$180/bay plus \$85 for Control Circuit

JAMPRO "PERFORMER" FM ANTENNA

Elliptically polarized 1 KW per bay 1 5/8" line

JLCP-1	1 bay 0.45/0.45 power gain	650.00
JLCP-2	2 bay 0.95/0.95 power gain	1,200.00
JLCP-3	3 bay 1.5/1.5 power gain	1,800.00
JLCP-4	4 bay 2.05/2.05 power gain	2,400.00
JLCP-5	5 bay 2.60/2.60 power gain	3,000.00
JLCP-6	6 bay 3.15/3.15 power gain	3,600.00
JLCP-7	7 bay 3.65/3.65 power gain	4,300.00
JLCP-8	8 bay 4.2/4.2 power gain	4,800.00

Deicers, if any, add \$120/bay plus \$85 for Control Circuit

JAMPRO "BRUTE" FM ANTENNA

Circularly polarized 30KW per bay 6 1/8" line

JHCP-3	3 bay 1.5/1.5 power gain	5,800.00
JHCP-4	4 bay 2.1/2.1 power gain	8,100.00
JHCP-6	6 bay 3.2/3.2 power gain	11,300.00
JHCP-8	8 bay 4.3/4.3 power gain	14,900.00
JHCP-10	10 bay 5.5/5.5 power gain	18,640.00
JHCP-12	12 bay 6.6/6.6 power gain	21,000.00
JHCP-14	14 bay 7.8/7.8 power gain	24,560.00

Deicers, if any, add \$240/bay plus \$160 for Control Circuit

SPARTAMATION

1052	Automatic Program Controller: 10 regular audio channels (mono or stereo) plus net & fill music inputs. 52 overlapping events. Solid-state silence sensor. 8 3/4" custom rack housing with sliders.	2,350.00
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FX-52	Format Expander: Provides an additional 52 event format; using identical program board as 1052 Controller. Several FX-52's can be used with a single 1052 Program Controller. 8 3/4" rack space.	800.00
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25-SBN	25 Hz Sensor/Filter: A highly selective amplifier & relay driver, including active high-pass filters to remove 25 Hz tones from program audio. 3 1/2" rack panel.	
	Mono	325.00
	Stereo	350.00

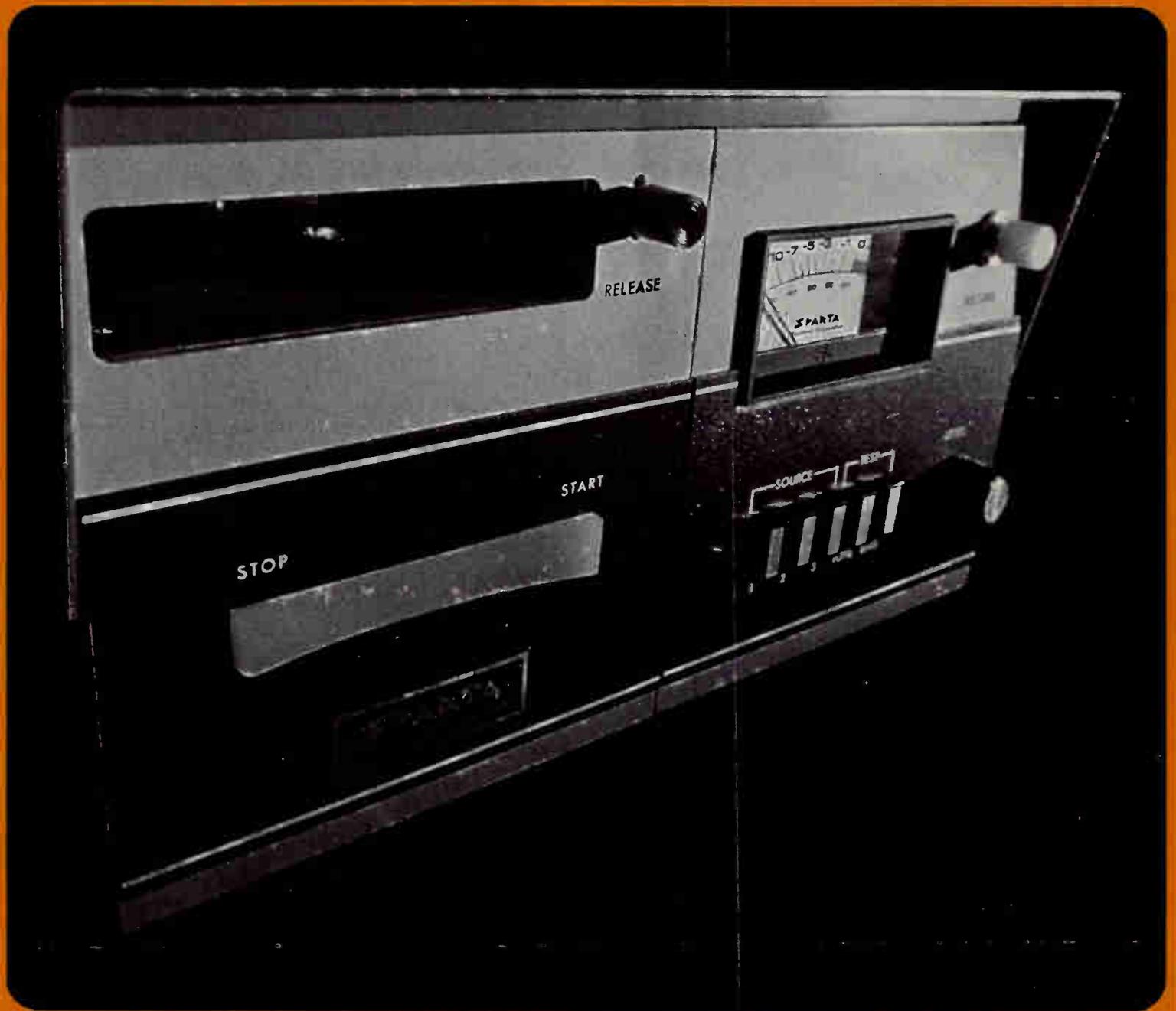
LAM-1	Line Amplifier/Monitor Panel: VU meter and audio monitoring of program and cue levels. Optional built-in monitor amplifier. 3 1/2" rack space.	
	Line Amp (mono)	345.00
	(stereo)	445.00
	Monitor Amp (mono)	50.00
	(stereo)	100.00

DC-24	Digital Clock & Predetermining Switch Panel: a 24 hour clock with pushbutton decade switches. Provides an accurate timing source & switching signals to join & leave network at exact second selected. 3 1/2" rack space apiece.	1,495.00
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25-OSC	25 Hz Oscillator/Filter: Generates accurate 25 Hz tones for recording end cues on tape selections. Includes filters to remove low frequency components from program material. 3 1/2" rack mounting.	
	Mono	350.00
	Stereo	375.00

REM-25	Remote Reel-to-Reel Record Control: Provides remote control of Metrotech reel-to-reel tape recorder & 25-SEN Oscillator. Time delay circuits assure ease of recording & accurate spacing between selections. Table-top enclosure & 25' cable included.	210.00
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CENTURY SERIES



The CENTURY SERIES by Sparta is a modular line of tape cartridge equipment uniquely styled and engineered to set new standards of excellence. The compactness of the modules enables three to be mounted side-by-side in standard rack cabinets. There are also single, dual, and 'quad' housings for table-top use. The CENTURY SERIES line is ultra-compact, giving the user full control of his available space . . . ultra-modern to keep its design advantage for years to come . . . feature-loaded for ease and convenience of operation . . . and priced so reasonably that every radio station can enjoy EVERYTHING expected of the finest tape cartridge handling system.



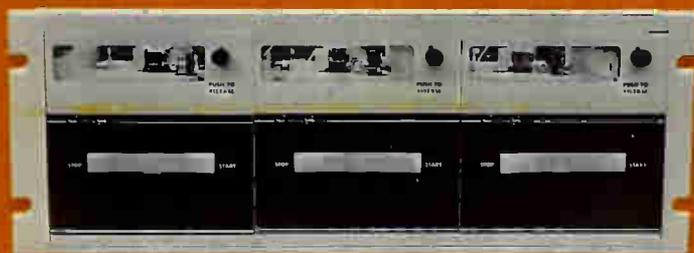
5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488



The compact CENTURY SERIES playback module is shown here with its single Fliptop cover for table-top use. The Stop/Start 'Touchbar' control is illuminated for positive control room identification. A soft but definite rose-red glow lights the left side of the bar when the module is at standby or ready. When running, the right side glows lime-green and the red light is out.



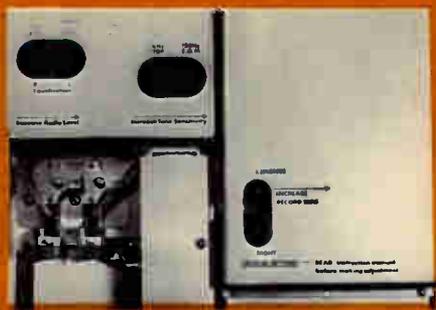
The record amplifier module, here in a monaural Record/Playback system, shows the care with which CENTURY SERIES was designed for user flexibility. The record preset button is also the EOM auxiliary cue tone control. The 'Touchbar' flashes when the EOM tone is read on playback, verifying that it was recorded. The standard function of the VU meter is to monitor record level; by pushbutton selection it ALSO tests bias and cue tone level. Note the pushbutton selection of THREE audio sources, designed to multiply the capability of any system in which CENTURY SERIES is used.



The triple rack mount illustrates the sturdy steel construction of the CENTURY SERIES system. This configuration houses playback modules as shown, or a Record/Playback system with another independent playback module which can be wired to one of the three audio source inputs of the record amplifiers. Used in that fashion, the operator controls a complete Record/Playback system with cart-to-cart dubbing, as well as having two playbacks for on-air use. The rack matches CENTURY SERIES colors. Stereo and monaural playback modules are externally identical in appearance.



The compactness of the CENTURY SERIES design pays off handsomely in this 'quad' configuration. It accommodates four playbacks as shown, or a Record/Playback system plus two independent playbacks. Both playbacks may be wired back to the record amplifier audio source inputs for cart-to-cart dubbing. CENTURY SERIES does not achieve its compactness through any common-capstan drive system; each module contains its own motor, which enables the user to dismount a module from any configuration and replace it with another. Modules slide out smoothly from the 'quad' or triple rack mounts for full and easy access to maintenance or adjustment points. In desk-top single or dual configurations the same easy access is provided simply by tilting up the Fliptop cover. The handsome cabinet is a complete container, finished in remarkably tough walnut-grain laminated plastic which complements the CENTURY SERIES colors and matches Sparta "Showcase" cabinetry.



All critical adjustments are made on CENTURY SERIES modules through these convenient fingertip access ports. Printed Circuit Board covers are identical in monaural or stereo models, since mono modules can be field-converted later to stereo at the user's convenience. The Sparta improved 'True Tangent' head mount (HM-2) gives full adjustments plus spring-loaded lock to insure against drift. You are looking down at a Record/Playback system just as if you had raised the Fliptop cover of a desk unit, or slid the unit from a rack mount or custom cabinet.

The Record/Playback system ties together with utmost economy of wiring. All playback modules are prewired to become part of a Record/Playback system. AC can be fed from the outlet on the playback module to another playback or to the record amplifier. The record control plugs into its receptacle on the playback module as shown. Barrier strip wiring and absolutely clear labeling of the rear panels assures full use of the CENTURY SERIES flexibility. This is a desk-top system with dual Fliptop cover.

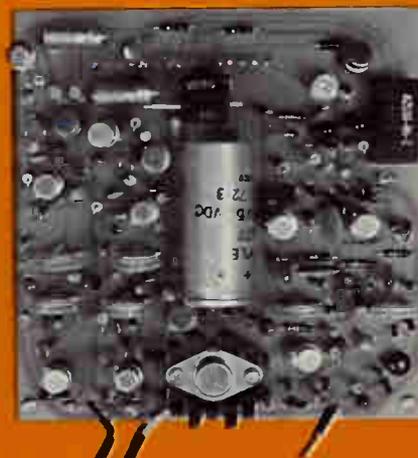


Note the stacked stereo VU meters, giving the user the easiest comparison possible of right and left channel balance. Meter functions are multiple; record level, bias, and cue tone level. The handsome module face plates and blank panels are finished in Leatherette Brown and Light Smoke. Fliptop covers have a non-glare 'orangepeel' textured Bittersweet Orange finish. At the End-of-Message optional auxiliary cue tone, the red side of the 'Touchbar' control flashes while the green light remains on during runout. This gives the operator a highly visible signal even without taking his eye from copy or clock. The same features are standard in either monaural or stereo models. The entire Record/Playback system occupies only 11½" x 15" of desk space, and stands a fraction over 6" high.

OUTSTANDING CENTURY SERIES FEATURES IN BRIEF:

- New mechanical design produces almost noiseless operation of the CENTURY SERIES playback, while eliminating the need for complex or expensive damping mechanisms. The pinch roller is raised to within less than $\frac{1}{8}$ " of the capstan upon insertion of a cartridge, thereby positioning the cartridge positively and correctly for play. With such a short distance to travel, the pinch roller makes virtually no noise in contacting the capstan.
- Play of NAB Standard 'A' cartridges (up to 10½ minute capacity) is accomplished by the CENTURY SERIES with unsurpassed wow and flutter characteristics. A high-speed motor is coupled to the non-magnetic capstan flywheel by a dual 'flutter-filter' belt system. The drive system, INDEPENDENT in EACH playback module, runs cooler, costs less and is less likely to vary from motor to motor than even the most expensive direct-drive system.
- The CENTURY SERIES provides a dual cartridge release. A 'tilt up' release is coupled with a pushbutton release so operators used to either type will not be inconvenienced.
- Sparta's 'True Tangent' precision head mount adjusts for height, zenith and azimuth (the latter without affecting head height). It is of non-magnetic construction with long-wearing stainless steel tape guides. The record head (see page 3) is offset slightly; this Sparta innovation results in more consistent high frequency recording characteristics.
- The nominal audio output is a husky +6dbm, with a maximum output of over +16dbm. A built-in audio switcher eliminates 'pops' on tape starts, and also facilitates sending the output of several playback modules into a single audio console channel without separate isolation equipment.
- The cue channel output of the CENTURY SERIES playback is amplified for an automation signal, and ease of checking cue tone quality.
- Field conversion of monaural CENTURY SERIES systems to stereo is made possible through simply replacing or adding a few components.

- Illuminated 'Touch Bar' operating control
- Easy access to heads and adjustments
- Quiet starting, with positive cartridge position
- Cool running indirect drive
- Outstanding wow and flutter characteristics
- Built-in audio switcher
- Single plug-in PCB for all electronics
- Optional EOM cue tone, amplified cue channel output
- Integrated Circuit tone detectors
- Playbacks pre-wired to convert to Record/Playback system
- Monaural playbacks field-convert to stereo
- Accessory AC socket in each playback module
- Laminated anti-warp deck plate
- Flexibility of same-size modules
- HM-2 'True Tangent' head mount
- Pushbutton selection of 3 audio inputs to Record
- Separate power supply for Record electronics
- VU meter test of cue tone and bias record levels



Both record and playback modules of the CENTURY SERIES have single plug-in Printed Circuit Boards. Integrated Circuits are also plug-in. IC use in both program and cue amplifiers reduces the number of components substantially, while giving absolutely reliable cue detection. Each record amplifier contains its own power supply. PCB's are warranted by Sparta for one full year.

SPECIFICATIONS

Frequency Response:	50-15,000 Hz \pm 2db
Noise:	55db or more below saturation recording (mono) 52db or more below saturation recording (stereo)
Distortion:	2% or less
Wow & Flutter:	0.2% or less
Equalization:	NAB (adjustable)
Audio Output:	600 ohms balanced, +6dbm nominal, +16dbm maximum
Metering:	Audio record level, cue record level, bias
Record Inputs:	3 selected by pushbuttons. Balanced bridging -10 to +8dbm
Cue Signals:	NAB primary cue (stop) 1 KHz standard; secondary cue (EOM) 150Hz optional; EOM signal provided as Form A contact closure.
Tape Speed:	7.5 ips; shielded hysteresis synchronous motor; non-magnetic dynamically balanced flywheel; dual belt flutter-filter drive system.
Playing Time:	2 seconds to 10-1/2 minutes, NAB size A cartridge
Remote Control:	All functions available
Mounting:	Single desk, dual desk, 7" rack mount adapter for 3 modules, custom walnut grain cabinet for 4 modules (15"H x 14"W x 15-1/2"D)
Dimensions:	Playback module and record amplifier module each 6"H x 5-3/4"W x 14"D for interchangeable mounting.
Power:	117 volts, 60 Hz (available for other power line standards on special order)



SPARTA
ELECTRONIC CORPORATION

5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828

A DIVISION OF COMPUTER EQUIPMENT CORPORATION

CENTURY SERIES TAPE CARTRIDGE EQUIPMENT

4510	Monaural Playback Module	440.00
4515	Monaural Playback Module w/Auxiliary Cue	470.00
4520	Stereo Playback Module	590.00
4525	Stereo Playback Module w/Auxiliary Cue	620.00
4610	Monaural Record/Playback System	725.00
4615	Monaural Record/Playback System w/Aux Cue	780.00
4620	Stereo Record/Playback System	980.00
4625	Stereo Record/Playback System w/Aux Cue	1,040.00
4810	Single Flip-Top Module Cover	15.00
4820	Dual Flip-Top Module Cover	20.00
4830	Triple Module Rack Mount Housing	45.00
4840	Quad Module Custom Cabinet	80.00
4850	Matching Blank Panels for 4830 and 4840	10.00

NOTE: Auxiliary Cue is NAB 150 Hz End-of-Message Tone

GD-15	Time Delay, Tape Cartridge System	450.00
M-1200TD	Tape Cartridge; 3-10 sec. Delay	7.50

TAPE CARTRIDGE ACCESSORIES

CR-80	Revolving Cartridge Rack	65.00
CR-100	Wall Cartridge Rack	65.00
CR-120	Revolving Cartridge Rack	85.00
CE-3	Cartridge and Reel Tape Eraser	45.00
AL-1	Head Alignment Cartridge	6.50
CL-1	Test Tape Cartridge; 1 KHz at Std. Reference Level	5.00
CL-2	Test Tape Cartridge; 1 KHz at -10 db	5.00
NAB-3	Test Tape Cartridge; NAB-approved Mono	
	Frequency Response	16.50
DM-200	Head Demagnetizer	6.95
AG-2	Alignment Gauge	7.50

CENTURION SERIES CUSTOM AUDIO CONSOLES

CENTURION I (up to 12 mixers)

2300	Dual Channel Monaural with 8 Rotary Faders	TBA
2310	Dual Channel Monaural with 8 Slide Faders	TBA

CENTURION II (up to 12 mixers)

2400	Dual Channel Stereo with Mono Feed, 8 Rotary Faders	TBA
2410	Dual Channel Stereo with Mono Feed, 8 Slide Faders	TBA

CENTURION SERIES MIXER MODULES & ACCESSORIES

2505	Additional Mono plug in Mixer Module Rotary Fader	TBA
2515	Additional Mono plug in Mixer Module, Slide Fader	TBA
2525	Additional Stereo plug in Mixer Module Rotary Fader	TBA
2535	Additional Stereo plug in Mixer Module, Slide Fader	TBA
2540	Equalizer Module	TBA
2550	Reverberation Module	TBA

B-SERIES CONSOLES AND AUDIO ACCESSORIES

AS-40B	8 Mixer stereo	1,770.00
AS-40B-1	8 Mixer stereo with MAS-50 and SM-3	1,995.00
A-20B	8 Mixer Monaural Dual Capability	1,395.00
EP-20	Extender Panel Cabinet for A-20B	210.00
A-15B	5 Mixer Monaural	650.00
EP-15	Extender Panel Cabinet for A-15B	210.00
A-16R	5 Mixer Dual Monaural (Rack Mount)	1,250.00
AS-30B	5 Mixer stereo	850.00
EP-30/40	Extender Panel Cabinet for AS-30B and AS-40B	250.00
1018	Installed or spare Preamplifier	29.50
RA-1	Utility Microphone/Line Amplifier	95.00
RA-4	4 Channel, AC/Battery Remote Amplifier	250.00
AC-155B	5 Mixer Studio/Remote	1,450.00
ASC-305B	5 Mixer Stereo Studio/Remote	1,750.00
BL-5	Bench/Lid Combination	85.00
US-5	Top-Mounted Utility Shelf	75.00
MIC-5	Microphone with Custom Mounting	65.00
MA-25	25 Watt Monitor Amplifier	150.00
MAS-50	50 Watt Stereo Monitor Amplifier	210.00
MA-25Q	25 Watt Monitor/Cue Amplifier	195.00
MAS-50Q	50 Watt Stereo Monitor/Cue Amplifier	255.00
SM-3	Muting and Relay Accessory	45.00
AR-40	3-Way Speaker System	80.00

All B-Series Consoles may be supplied with precision step

attenuators in place of standard faders. Add \$20 per Mixer for monaural, \$30 per Mixer for stereo.

TURNTABLE AND ACCESSORIES

GT-12-4F	12" Custom; 4-Pole Motor	170.00
GT-12-SY	12" Custom; Synchronous Motor	195.00
TEP-3M	Monaural Equalized Preamplifier	98.00
TEP-3S	Stereo Equalized Preamplifier	149.00
ST-220	Tone Arm (Less Cartridge)	45.00
M44C	Shure Phono Cartridge	17.95
N44C	Replacement Stylus for M44C	9.75
500E	Stanton Phono Cartridge (Elliptical Stylus)	19.25
5100E	Replacement Stylus for 500E	11.00
500AL	Stanton Phono Cartridge	16.50
5107AL	Replacement Stylus for 500AL	6.60

SHOWCASE CONTROL ROOM CABINETRY

101-1	Console Desk	225.00
101-1-3	Console Hood for A-20B or AS-40B with speaker	100.00
101-3-4	Dual Turntable Return	250.00
101-3-5	Dual Utility Return	265.00
101-3-1	Rack Bracket Kit for 101-3	8.00
101-6	Cartridge Storage Hutch for 101-3-5	135.00
101-7	Single Turntable Return	170.00

SHOWCASE PACKAGE SPECIALS

GROUP 1	8-Mixer B-Series Console with Console Desk, Hood with Monitor/Cue Speaker, Microphone(s), Dual Turntable Pedestal with GT-12 Series Custom Turntable Systems	Mono 2,650.00 Stereo 3,450.00
GROUP 2	All of GROUP 1 plus Dual Utility Return Pedestal with Cartridge Hutch	Mono 3,000.00 Stereo 3,800.00
GROUP 3	All of GROUPS 1 & 2 plus CENTURY SERIES Tape Cartridge Record/Playback System and two Playbacks	Mono 4,650.00 Stereo 5,950.00

AM TRANSMITTERS

701B	1000/500/250 W (any two powers)	6,500.00
703	3000 W	11,500.00
705	5000/1000/500 W (any two powers)	21,000.00
710	10,000 W	24,000.00
715	15,000 W	27,500.00
725	25,000 W	62,500.00

FM TRANSMITTERS

680	Direct FM Exciter	2,200.00
680/1	10 W Transmitter	2,350.00
682	Stereo Generator	1,250.00
683	SCA Generator	650.00
600A	250 W	5,750.00
601A	1,000 W	7,650.00
602A	2,500 W	10,500.00
605A	5,000 W	15,500.00
612A	12,500 W	24,500.00
620A	20,000 W	28,500.00

AM MONITORS

AMM-1	Frequency and Modulation Monitor	1,500.00
TBM-8000	Frequency Monitor	975.00
TBM-8500	Modulation Monitor	850.00

FM MONITORS

FMM-1	Frequency and Modulation Monitor	1,550.00
FMS-1	Frequency and Modulation Monitor-Stereo	1,350.00
SCM-1	Frequency and Modulation Monitor-SCA	1,250.00
TBM-3700	Frequency and Modulation Monitor	1,350.00
TBM-2200	Stereo Modulation Monitor Adaptor	1,200.00
TBM-3019	19 KHz Pilot Frequency Counter	125.00
TBM-2000A	SCA Modulation and Frequency Monitor Adaptor	1,200.00
TBM-3000A	Digital Frequency Monitor, Main & 19 KHz	975.00
TBM-4500A	Stereo Modulation Monitor	2,200.00
TBM-1000B	Relay Receiver 88-108 MHz	250.00
TBM-2500C	RF Amplifier, Remote Monitor	485.00
RFA-1	RF Amplifier	400.00

ACCESSORIES

RMC-2AX(10)	10 Channel Remote Control	1,295.00
RMC-2AX(24)	24 Channel Remote Control	1,645.00
TRC15AW	Remote Control, Single AC Pair	1,595.00
PBR-30AR	Remote Control, Radio STL	2,735.00
380	Phase Sampler	165.00
FIM-21	Field Intensity Meter, Solid State	1,150.00

JAMPRO "PENETRATOR" FM ANTENNA

Circularly polarized 10KW per bay 3 1/8" line

JSCP-1	1 Bay, 0.46/0.46 gain	1,250.00
JSCP-2	2 Bay, 1.0/1.0 gain	1,890.00
JSCP-3	3 Bay 1.5/1.5 gain	2,730.00
JSCP-4	4 Bay, 2.1/2.1 gain	3,570.00
JSCP-5	5 Bay, 2.7/2.7 gain	4,410.00
JSCP-6	6 Bay, 3.2/3.2 gain	5,150.00
JSCP-7	7 Bay, 3.8/3.8 gain	6,190.00
JSCP-8	8 Bay, 4.3/4.3 gain	6,750.00
JSCP-10	10 Bay, 5.5/5.5 gain	8,820.00
JSCP-12	12 Bay, 6.6/6.6 gain	10,500.00
JSCP-14	14 Bay, 7.8/7.8 gain	12,280.00
JSCP-16	16 Bay, 8.9/8.9 gain	13,650.00

Deicers, if any, add \$180/bay plus \$85 for Control Circuit

JAMPRO "PERFORMER" FM ANTENNA

Elliptically polarized 1 KW per bay 1 5/8" line

JLCP-1	1 Bay, 0.45/0.45 gain	722.00
JLCP-2	2 Bay, 0.95/0.95 gain	1,333.00
JLCP-3	3 Bay, 1.5/1.5 gain	2,000.00
JLCP-4	4 Bay, 2.05/2.05 gain	2,666.00
JLCP-5	5 Bay, 2.60/2.60 gain	3,333.00
JLCP-6	6 Bay, 3.15/3.15 gain	4,000.00
JLCP-7	7 Bay, 3.65/3.65 gain	4,777.00
JLCP-8	8 Bay, 4.2/4.2 gain	5,333.00
JLCP-10	10 Bay	6,000.00
JLCP-12	12 Bay	7,500.00

Deicers, if any, add \$120/bay plus \$85 for Control Circuit

ISOCOUPLERS

2.5 KW	1 5/8" Input and Output	550.00
7.5 KW	1 5/8" Input and Output	775.00
20.0 KW	3 1/8" Input and Output	1,229.00

JAMPRO "BRUTE" FM ANTENNA

Circularly polarized 30 KW per bay 6 1/8" line

J8DP	BROADBAND CIRCULARLY POLARIZED MULTI-STATION INPUT FM TRANSMITTING ANTENNA 88-108 MHz VSWR 1.1/1 over 20 MHz	
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ANTENNA COUPLING UNITS and ANTENNA TUNING UNITS AVAILABLE ON CUSTOM ORDER.

Contact Factory for price information on JHCP, JSDP, ACU and ATU.

SPARTAMATION

1052B	Automatic Program Controller, plus Digital Clock system timer: 10 regular audio channels (mono or stereo) plus net & fill music inputs. 52 overlapping events. Includes 25 Hz tone sensor and Auto Restart on silence. Net Join option available. 8 3/4" Rack Space.	2,650.00
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FX-52	Format Expander: Provides an additional 52 event format, using same type program board as 1052. 8 3/4" Rack Space.	800.00
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LAM-1	Line Amplifier/Monitor Panel; VU meter and audio monitoring of program and cue levels. Optional built-in monitor amplifier. 3 1/2" Rack Space.	
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Line Amp (mono)	345.00
(stereo)	445.00
Monitor Amp (mono)	50.00
(stereo)	100.00

HP-40	High Pass Filter, 40Hz cutoff, removes 25 Hz tones from program output. Mount in LAM-1. Two required for stereo.	40.00
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25-OSC	25 Hz Oscillator/Filter: Generates accurate 25 Hz tones for recording end cues on tape selections. Includes filters to remove low frequency compon-	
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	ents from program material. 3 1/2" rack space.	
	(mono)	350.00
	(stereo)	375.00
25-GEN	25 Hz Sensor/Filter: A highly selective amplifier & relay driver, including active high-pass filters to remove 25 Hz tones from program audio. 3 1/2" rack space.	
	(mono)	325.00
	(stereo)	350.00
TA-581	Time Announcer: Dual Cartridge, for odd/even 7.5 ips announcements. One cartridge always ready. Supplied with sliders. Requires rack with front and rear rails. 7" rack space.	1,300.00
RS-124	Mono cartridge Carousel [®] for random or sequential operation of up to 24 tape cartridges. Includes decoder output for automatic logging systems. 19 1/4" Rack Space.	1,500.00
RS-224	Stereo cartridge Carousel [®]	1,650.00
RS-250	Random Cartridge Access: Selects 50 cartridge events from 2 random Carousels. Overlap audio switching into single audio input. Has "skip" and "search ahead" features. 14" rack space.	1,295.00
RS-4100	Random Cartridge Access: Selects 100 cartridge events from four Carousels. Overlap audio switching into single input of Program Controller. Digital readouts. Supplied with sliders. Requires rack with front and rear rails. 14" rack space.	2,495.00

SPARTAMATE I

Basic Automation System, consisting of Digital Clock, Program Controller, Line Amplifier and Monitor Panel, 3 Century playbacks, 2 reel/reel record/play. Rack mounted, wired and tested. Stereo music. 6,550.00

SPARTAMATE II

Expanded Automation System, consisting of all components in SPARTAMATE I, plus silence-activated Alarm Panel, two 24-cartridge Carousels, Cartridge Random Access, Time Announcer, Net Join. Stereo Music. 12,595.00

REEL/REEL TAPE RECORDERS & REPRODUCERS

SPARTA 14" CORINTHIAN SERIES

4911	Monaural Full Track	1,295.00
4912	Monaural Half-Track	1,295.00
4922	Stereo Half-Track	1,495.00
4924	Stereo Quarter-Track	1,495.00
CORINTHIAN Series Reproducers have up to 16" reel capacity. Speeds are 3 3/4 and 7 1/2 ips, with foil reversing. Hubs are NAB and EIA. Tape tension arms are adjustable and air-damped. Level adjustments on front panel. Three motors, with direct drive capstan. 28" rack space.		
A-1230	Teac 7" reel, 2 or 4 track, Mono or Stereo	359.50
3300	10 1/2" reel, 2 or 4 track, Mono or Stereo	499.50
3340	10 1/2" reel, 4 track, Simul - Sync	849.50
7030GSL	10 1/2" reel, 2 track, 7 1/2 and 15 ips Mono or Stereo	949.50
MF-70	Rack Mount Adaptor for 7030GSL	30.00
RC701	Remote Control for 7030GSL	52.00
1302/4	Revox A77 Mk III, 2 or 4 track, Mono or Stereo	799.00
SSP	A77 Stainless Steel Faceplate	10.00
13-R	A77 Rackmount Adaptor	15.00
FT-HS	A77 7 1/2 and 15 ips Full Track Monaural Modification	210.00
EA	A77 NAB Adaptor Hubs, per pair	19.00
531R	Metrotech 10 1/2" reel, full track, Monaural	1,695.00
543R	10 1/2" reel, 2 track, Stereo	1,995.00
M/S280	Scully 10 1/2" full track, motion sensing	2,450.00
M/S280-2	10 1/2" 2 track, Stereo, motion sensing	3,100.00
SX812	Crown 10 1/2" reel, half-track, Monaural	1,395.00
SX822	10 1/2" reel, 2 track, Stereo	1,495.00

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All equipment items and descriptions in this brochure are necessarily condensed and do not completely show the many other broadcast products supplied by SPARTA. For more information about professional quality Reel-to-Reel Tape Recorders, Tone Arms and Cartridges, Microphones, AM and FM transmitters available through SPARTA, contact your SPARTAMAN sales engineer or the sales office of SPARTA ELECTRONIC CORPORATION.

Our policy is one of continual improvement in design and manufacture; and therefore, we reserve the right to change prices, specifications and design without notice.

No order is binding upon SPARTA ELECTRONIC CORPORATION until accepted in writing from the SPARTA home office in Sacramento, California.

All Equipment is 117 Volts, 60 Hz Standard. Others are available.

Terms: Sparta-Charge; Open Account; Conditional Sale Contract or Lease/Purchase Agreement up to five years. All prices are F.O.B. Sacramento.

Factory Sales/Service (916) 383-5353
Telex 377-488
Sacramento, California 95828



SPARTA ELECTRONIC CORPORATION
5651 FLOREN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828 (916) 383-5353
A DIVISION OF COMPUTER EQUIPMENT CORPORATION

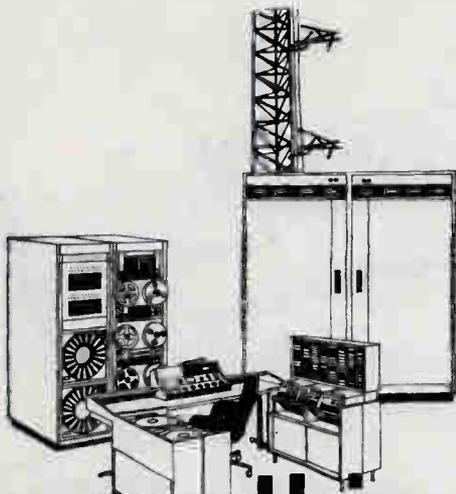


BROADCAST EQUIPMENT PRICE SCHEDULE

APRIL 1, 1973

SPARTA
Electronic Corporation

QUICK REFERENCE PRODUCT BROCHURE



everything



SPARTA ELECTRONIC CORPORATION

5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828 (916) 383-5353

A DIVISION OF COMPUTER EQUIPMENT CORPORATION



SPARTA-MATION SYSTEMS & DEVICES GIVE YOU COMPLETE PROGRAMMING CONTROL

SPARTA-MATION systems offer more realistic value than any other, and are available on attractive financing programs. They have been developed by people with years of successful broadcasting experience. Stations throughout the world are improving their programming and increasing their profits with reliable, modern SPARTA-MATION. Any number of different programming formats can be accommodated, and your system can include automatic network joining, program logging and remote control. SPARTA-MATION devices can be used with, and will interface with, almost any system.

SHOWCASE SERIES AUDIO CONTROL ROOM CABINETRY

The efficiency and appearance of your existing studio arrangement can be greatly enhanced by one or more individual "Showcase" cabinets. A rich, quality studio look without custom cost can also be yours; several "Showcase" groups, including equipment, are offered by SPARTA at special package prices. The modular concept gives mix-or-match versatility from among the wide selection of cabinet pieces to create THE audio control center to fit nearly any requirement. In the "Showcase" selection, fine furniture craftsmanship has been combined with long lasting, easy-maintenance durability.



MONAURAL AND STEREO STUDIO CONTROL & REMOTE UNITS

MODEL AC-155B. A versatile monaural audio control center that combines maximum operational flexibility with professional quality in any location. A semi-permanent installation can become mobile at a moment's notice and enable you to cover more assignments and to produce added station revenue.

MODEL ASC-305B. A full-facility stereo audio control center that is tailor-made for production room chores, main control, or remote broadcast assignments. The equipment cabinet is of exceptionally fine construction and distinctive design with a very rugged and durable bonded plastic laminate finish. Accessories include a protective bench/lid, top-mounted utility shelf and professional dynamic microphone with special gooseneck mounting.



5-CHANNEL MONAURAL & STEREO CONSOLES

MODEL A-15B. Select five audio inputs at a time from the 14-source capability of this modestly priced professional quality console. Outstanding features include all-channel cue system, monitor amplifier, and muting relays.

MODEL AS-30B. Accommodates nine stereo sources with identical line amplifiers in both program and audition outputs, allowing different stereo programming to be controlled at the same time. Stereo mixing versatility unmatched by any other in its class.



EXTENDER PANEL CABINETS FOR 5 & 8-CHANNEL CONSOLES

MODELS EP-15B, 20B, 30B, and 40B. Five additional mixing channels may be added to your SPARTA console now or later with one of the Extender Panel cabinet series. Input configurations of each EP model are identical to the console for which it is designed. Adding the appropriate EP cabinet is a simple task and gives an attractive factory look. Plenty of free panel space to add individual custom features, and you can add it to either the right or left of your existing SPARTA console as desired. Input connectors to the EP from the main console are through rear panel barrier strips, so front or rear, the EP cabinet matches your attractive SPARTA console!



1000/500/250 WATT AM TRANSMITTER

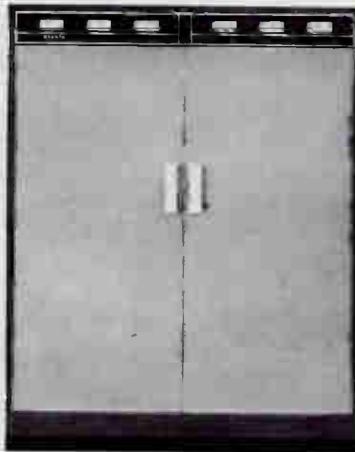
MODEL 701. The 701 has kept all of the plus features of its famed predecessor, the 707. The vacuum capacitor final tank tuning, built-in dummy antenna and oil filled modulation transformer. New are the "tally light" system and



solid state oscillator section. The 701 provides such quality AM broadcast performance that SPARTA expects it to beat the former champion, the Model 707 which is in use in more than 400 stations around the world!

5,000 AND 10,000 WATT AM TRANSMITTERS

The Model 705 really "loafs" at 5000 watts. Reserve performance was SPARTA-designed to give finest asymmetrical modulation and long trouble-free tube life. Both the 705 and 710 are "tally light" equipped; after the transmitter has recovered automatically from an overload outage, the tally light tells the engineer where the overload occurred. The 705 is up to date with every engineering advance, producing a signal that punches into your secondary coverage with clarity and authority.



The 710 uses a larger power supply and modulation transformer and reactor than the outwardly similar 705. At either power this compact AM transmitter gives your station every modern development in technology that is truly useful, without overly complicating the circuitry. Oil filled modulators are square wave-tested, low-distortion, giving outstanding transient response. Here are 10,000 USEFUL AM watts performance with a reasonable SPARTA price tag.

... AND **everything** IN BETWEEN ...
(INCLUDING 100% FINANCING)

With SPARTA'S modern, comprehensive product lines of Audio, Automation and Transmitter products and accessories, this short form catalog can no more than indicate to you the RANGE covered in total. In brief, SPARTA can supply every item from microphone and stylus to transmitter, tower and antennas. Limiters, amplifiers, speakers, complete custom cabinetry, STL or wire links, tower lights - SPARTA can fill your requirements with exactly matched systems that save you time, trouble and money. More detailed information is available in individual Product Guides, and in our Catalog and Price Schedule. We invite your further inquiry.



SPARTA ELECTRONIC CORPORATION

5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828 (916) 383-5353

A DIVISION OF COMPUTER EQUIPMENT CORPORATION

8-CHANNEL MONAURAL & STEREO CONSOLES

MODEL A-20B. The A-20B is today's finest 8-mixer, full facility, monaural audio console. Contemporary styling and advanced solid-state design have made the A-20B more compact than any other comparable console — yet it does the job of consoles twice its size and price!

MODEL A-40B. Crystal clarity, trouble free performance and VALUE are yours in stereo broadcasting with the new AS-40B. Incorporating the latest state-of-the-art design, it is built for reliability you can depend on! It's big enough to handle ANY stereo broadcasting assignment, at a price far less than you might expect.



RACK-MOUNTING DUAL CHANNEL MONAURAL CONSOLE

MODEL A-16R. This mixer, compact enough to fit neatly into video consoles, easily handles audio requirements from several studios simultaneously. Its dual channel output even gives identical crystal clear handling to different programming at one time. In its standard rack mount, or handsome optional custom cabinet, the A-16R's fifteen-input capability with push-button control gives fast and flexible handling for TV, CCTV and CATV audio. A wise investment at its modest price.



REMOTE BROADCAST MIXER AND LINE AMPLIFIER

MODEL RA-4. The neatest and most solid 4-channel remote mixer on the market. Its four channels accept microphone or line level inputs, and each has headphone-monitored cue. Two RA-4 units can be connected in series for double duty. Full-capacity console, operating AC or from self-contained batteries.

MODEL RA-1. This inexpensive little line or utility microphone remote amplifier features a fully integrated circuit design! Current drain is extremely low for a lifetime of dependable, trouble-free operation in your many general purpose applications.





CENTURY SERIES TAPE CARTRIDGE MODULAR SYSTEMS



Playback and record modules, in this unique and innovative system, are of identical size – allowing the great number of mounting configurations shown here, plus as many others as your station's needs and ingenuity can find. The rack mount housing accepts three modules and takes only SEVEN inches of rack space. In every case, space occupied by a playback module in these pictures can be occupied by a record amplifier module. Thus a triple rack mount housing can contain a record-playback system plus a playback module, or three playbacks only. Audio switching is built-in, allowing absolutely "popless" starts, and several playback modules to be connected to a single mixer channel without separate isolation equipment. The record amplifier module provides selection of THREE high-level audio inputs. Its meter monitors recording level, cue tone, or bias.

Size and cost of the CENTURY SERIES systems have been reduced through SPARTA'S use of the very latest engineering techniques, with resulting unrivaled flexibility and reliability.

TURNTABLE SYSTEMS & ACCESSORIES

MODEL GT-12 CUSTOM. The distinctive orange "power paddle" of the two-speed GT-12 enables the operator to cue records with one hand more conveniently than ever before. Operator convenience is emphasized throughout; speed indicators stay lit until the turntable is shifted to neutral, change record types with no adaptor or moving parts, and change speeds with minimal movement. Complete systems from SPARTA include floor cabinets, tone arms, pickup cartridges, and equalized mono or stereo preamps.

MODEL ST-220 TONEARM. A top-quality 12-inch tonearm which at a glance tells you it's PROFESSIONAL. Light alloy construction, with every adjustment necessary to insure maximum mono or stereo performance.



LOW POWER FM TRANSMITTER & EXCITER

MODEL 660. The Model 660 is the solid-state heart of every SPARTA FM transmitter. It is shown (right) complete with its plug-in stereo and SCA modules. Its rating is 10 watt direct carrier FM, although its full capability is up to 15 watts. Alternate uses are for educational FM broadcasting, or FM band STL.



MODEL 600 250 WATTS. The simple, straightforward Model 600 produces a top-quality FM signal with either the 660 exciter, or more economical M-10/FM tube-type monaural exciter. For low-power or standby use, the Model 600 is unmatched in value.

MEDIUM POWER FM TRANSMITTERS

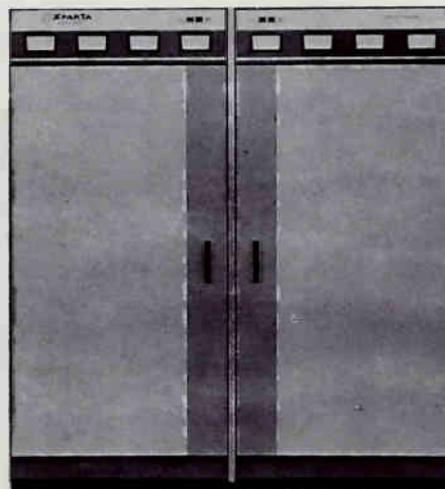
MODEL 602 2500 WATTS. Stereo and SCA operation are yours if desired, at full Class A FM signal strength with the Model 602. The "Stripline" final amplifier gives proven reliability; there are no moving contacts or expensive cavities. In fact, this SPARTA design makes the most economical package for full power Class A broadcasting; the 1.5 gain of a 3-bay antenna with the 602 provides what competing transmitters need 4 bays to accomplish.



MODEL 603A5 5000 WATTS. Not a scaled-up or scaled-down version of anything else! The 603A5 is fully designed for primary operation at 5,000 watts - resulting in the smallest self-contained 5 kw FM transmitter available. Metering is complete, and all remote control facilities are included in the basic price. Uncluttered layout and straightforward design, with swingout front panel for easy access, make the 603A5 a pleasure for the engineer.

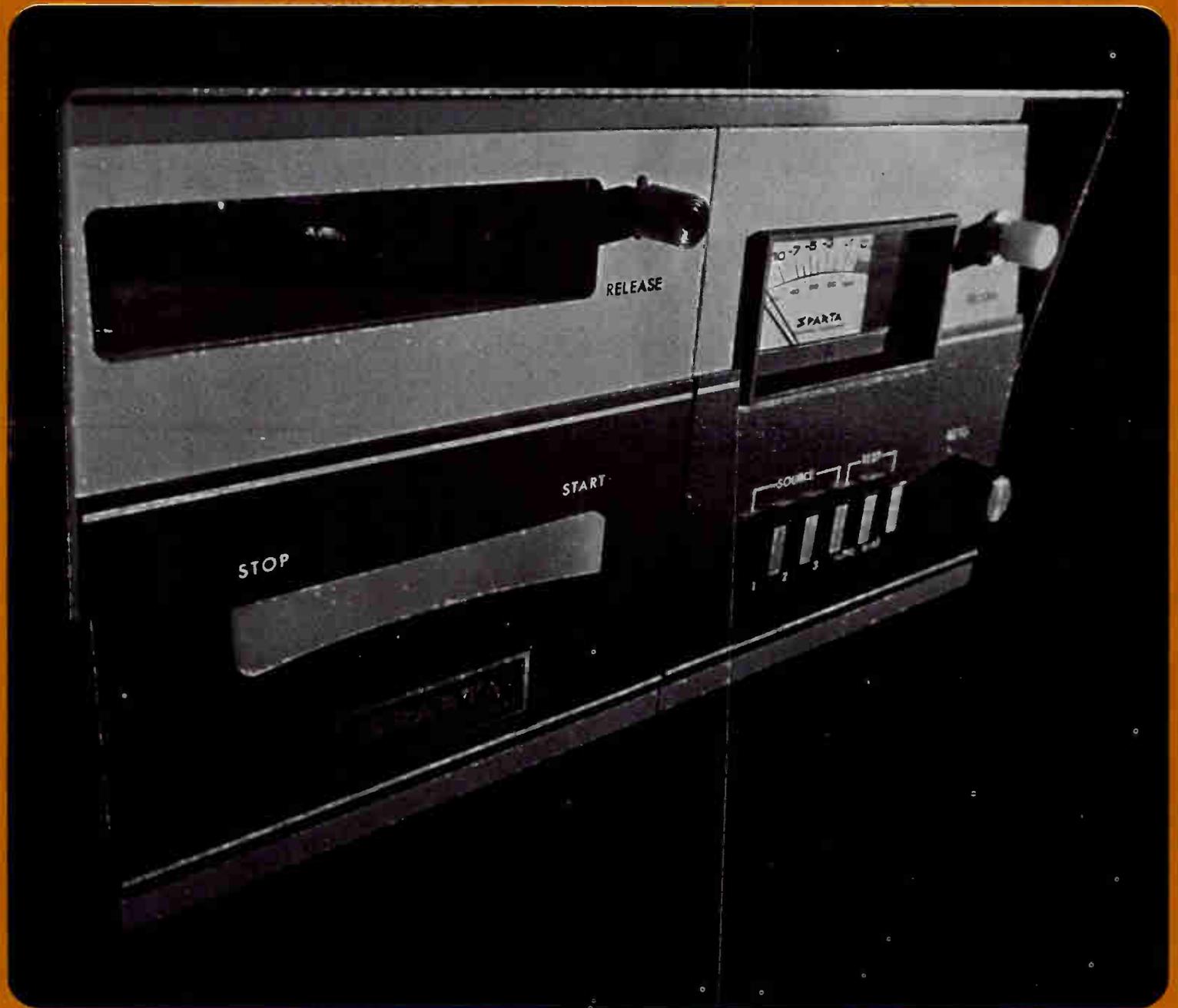
HIGH POWER FM TRANSMITTER

MODEL 620 20,000 WATTS. Here is the transmitter that introduced the "Stripline" final stage concept to broadcasting! In fact, the "Stripline" driver of the 620 uses only about 1/3 of its capacity at 20,000 watts; the remaining power can be used to drive another 620 for a 40,000 watt total output. Optimum performance up to 23,000 watts is possible without continual



knob-tweaking adjustments. The broadband final amplifier tunes to exactly where you want it and STAYS there. The "tally light" fault locator system so popular on SPARTA'S AM transmitters has been engineered into the 620 also. Automatic Power Control assures operation within FCC tolerances, in addition to a high VSWR protection system.

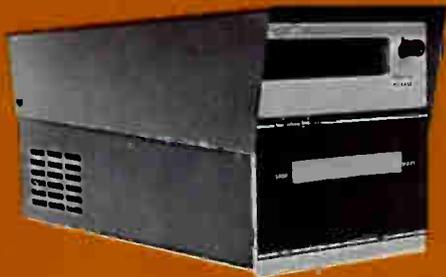
CENTURY SERIES



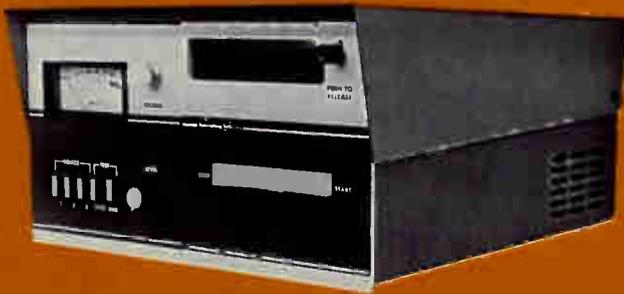
The CENTURY SERIES by Sparta is a modular line of tape cartridge equipment uniquely styled and engineered to set new standards of excellence. The compactness of the modules enables three to be mounted side-by-side in standard rack cabinets. There are also single, dual, and 'quad' housings for table-top use. The CENTURY SERIES line is ultra-compact, giving the user full control of his available space . . . ultra-modern to keep its design advantage for years to come . . . feature-loaded for ease and convenience of operation . . . and priced so reasonably that every radio station can enjoy EVERYTHING expected of the finest tape cartridge handling system.



5851 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828, (916) 383-5353, TELEX SAC 377-488



The compact CENTURY SERIES playback module is shown here with its single Fliptop cover for table-top use. The Stop/Start 'Touchbar' control is illuminated for positive control room identification. A soft but definite rose-red glow lights the left side of the bar when the module is at standby or ready. When running, the right side glows lime-green and the red light is out.



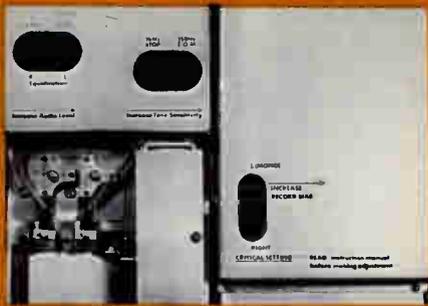
The record amplifier module, here in a monaural Record/Playback system, shows the care with which CENTURY SERIES was designed for user flexibility. The record preset button is also the EOM auxiliary cue tone control. The 'Touchbar' flashes when the EOM tone is read on playback, verifying that it was recorded. The standard function of the VU meter is to monitor record level; by pushbutton selection it ALSO tests bias and cue tone level. Note the pushbutton selection of THREE audio sources, designed to multiply the capability of any system in which CENTURY SERIES is used.



The triple rack mount illustrates the sturdy steel construction of the CENTURY SERIES system. This configuration houses playback modules as shown, or a Record/Playback system with another independent playback module which can be wired to one of the three audio source inputs of the record amplifiers. Used in that fashion, the operator controls a complete Record/Playback system with cart-to-cart dubbing, as well as having two playbacks for on-air use. The rack matches CENTURY SERIES colors. Stereo and monaural playback modules are externally identical in appearance.



The compactness of the CENTURY SERIES design pays off handsomely in this 'quad' configuration. It accommodates four playbacks as shown, or a Record/Playback system plus two independent playbacks. Both playbacks may be wired back to the record amplifier audio source inputs for cart-to-cart dubbing. CENTURY SERIES does not achieve its compactness through any common-capstan drive system; each module contains its own motor, which enables the user to dismount a module from any configuration and replace it with another. Modules slide out smoothly from the 'quad' or triple rack mounts for full and easy access to maintenance or adjustment points. In desk-top single or dual configurations the same easy access is provided simply by tilting up the Fliptop cover. The handsome cabinet is a complete container, finished in remarkably tough walnut-grain laminated plastic which complements the CENTURY SERIES colors and matches Sparta "Showcase" cabinetry.



All critical adjustments are made on CENTURY SERIES modules through these convenient fingertip access ports. Printed Circuit Board covers are identical in monaural or stereo models, since mono modules can be field-converted later to stereo at the user's convenience. The Sparta improved 'True Tangent' head mount (HM-2) gives full adjustments plus spring-loaded lock to insure against drift. You are looking down at a Record/Playback system just as if you had raised the Fliptop cover of a desk unit, or slid the unit from a rack mount or custom cabinet.



The Record/Playback system ties together with utmost economy of wiring. All playback modules are prewired to become part of a Record/Playback system. AC can be fed from the outlet on the playback module to another playback or to the record amplifier. The record control plugs into its receptacle on the playback module as shown. Barrier strip wiring and absolutely clear labeling of the rear panels assures full use of the CENTURY SERIES flexibility. This is a desk-top system with dual Fliptop cover.



Note the stacked stereo VU meters, giving the user the easiest comparison possible of right and left channel balance. Meter functions are multiple; record level, bias, and cue tone level. The handsome module face plates and blank panels are finished in Leatherette Brown and Light Smoke. Fliptop covers have a non-glare 'orangepeel' textured Bittersweet Orange finish. At the End-of-Message optional auxiliary cue tone, the red side of the 'Touchbar' control flashes while the green light remains on during runout. This gives the operator a highly visible signal even without taking his eye from copy or clock. The same features are standard in either monaural or stereo models. The entire Record/Playback system occupies only 11½ x 15" of desk space, and stands a fraction over 6" high.

OUTSTANDING CENTURY SERIES FEATURES IN BRIEF:

- New mechanical design produces almost noiseless operation of the CENTURY SERIES playback, while eliminating the need for complex or expensive damping mechanisms. The pinch roller is raised to within less than $\frac{1}{8}$ " of the capstan upon insertion of a cartridge, thereby positioning the cartridge positively and correctly for play. With such a short distance to travel, the pinch roller makes virtually no noise in contacting the capstan.
- Play of NAB Standard 'A' cartridges (up to 10½ minute capacity) is accomplished by the CENTURY SERIES with unsurpassed wow and flutter characteristics. A high-speed motor is coupled to the non-magnetic capstan flywheel by a dual 'flutter-filter' belt system. The drive system, INDEPENDENT in EACH playback module, runs cooler, costs less and is less likely to vary from motor to motor than even the most expensive direct-drive system.
- The CENTURY SERIES provides a dual cartridge release. A 'tilt up' release is coupled with a pushbutton release so operators used to either type will not be inconvenienced.
- Sparta's 'True Tangent' precision head mount adjusts for height, zenith and azimuth (the latter without affecting head height). It is of non-magnetic construction with long-wearing stainless steel tape guides. The record head (see page 3) is offset slightly; this Sparta innovation results in more consistent high frequency recording characteristics.
- The nominal audio output is a husky +6dbm, with a maximum output of over +16dbm. A built-in audio switcher eliminates 'pops' on tape starts, and also facilitates sending the output of several playback modules into a single audio console channel without separate isolation equipment.
- The cue channel output of the CENTURY SERIES playback is amplified for an automation signal, and ease of checking cue tone quality.
- Field conversion of monaural CENTURY SERIES systems to stereo is made possible through simply replacing or adding a few components.

- Illuminated 'Touch Bar' operating control
- Easy access to heads and adjustments
- Quiet starting, with positive cartridge position
- Cool running indirect drive
- Outstanding wow and flutter characteristics
- Built-in audio switcher
- Single plug-in PCB for all electronics
- Optional EOM cue tone, amplified cue channel output
- Integrated Circuit tone detectors
- Playbacks pre-wired to convert to Record/Playback system
- Monaural playbacks field-convert to stereo
- Accessory AC socket in each playback module
- Laminated anti-warp deck plate
- Flexibility of same-size modules
- HM-2 'True Tangent' head mount
- Pushbutton selection of 3 audio inputs to Record
- Separate power supply for Record electronics
- VU meter test of cue tone and bias record levels



Both record and playback modules of the CENTURY SERIES have single plug-in Printed Circuit Boards. Integrated Circuits are also plug-in. IC use in both program and cue amplifiers reduces the number of components substantially, while giving absolutely reliable cue detection. Each record amplifier contains its own power supply. PCB's are warranted by Sparta for one full year.

SPECIFICATIONS

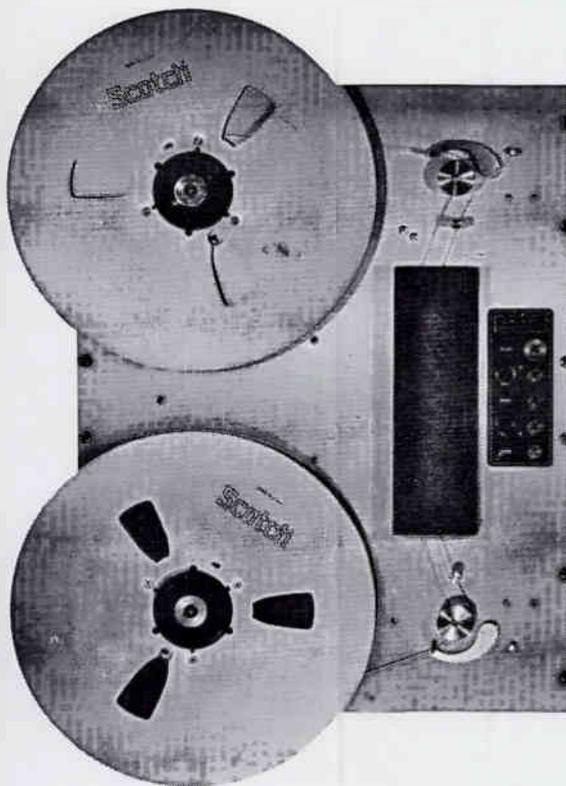
Frequency Response:	50-15,000 Hz \pm 2db
Noise:	55db or more below saturation recording (mono) 52db or more below saturation recording (stereo)
Distortion:	2% or less
Wow & Flutter:	0.2% or less
Equalization:	NAB (adjustable)
Audio Output:	600 ohms balanced, +6dbm nominal, +16dbm maximum
Metering:	Audio record level, cue record level, bias
Record Inputs:	3 selected by pushbuttons. Balanced bridging -10 to +8dbm
Cue Signals:	NAB primary cue (stop) 1 KHz standard; secondary cue (EOM) 150Hz optional; EOM signal provided as Form A contact closure.
Tape Speed:	7.5 ips; shielded hysteresis synchronous motor; non-magnetic dynamically balanced flywheel; dual belt flutter-filter drive system.
Playing Time:	2 seconds to 10-1/2 minutes, NAB size A cartridge
Remote Control:	All functions available
Mounting:	Single desk, dual desk, 7" rack mount adapter for 3 modules, custom walnut grain cabinet for 4 modules (15"H x 14"W x 15-1/2"D)
Dimensions:	Playback module and record amplifier module each 6"H x 5-3/4"W x 14"D for interchangeable mounting.
Power:	117 volts, 60 Hz (available for other power line standards on special order)



SPARTA
ELECTRONIC CORPORATION

5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828
A DIVISION OF COMPUTER EQUIPMENT CORPORATION

2500 JUNE, 1972



E The SPARTA CORINTHIAN reel/reel deck provides up to 16" reel capacity for long periods of unattended SPARTAMATION operation. Foil reversing ensures maximum use of tapes. The capstan is direct drive with dual speed hysteresis synchronous motor. A front panel level control is screwdriver adjusted. Amplifiers are plug in; there is easy access to all the transport construction.

SPECIFICATIONS

HEAD CONFIGURATION HALF AND FULL-TRACK MONAURAL, HALF AND QUARTER-TRACK STEREO

TAPE SPEED 3.75 and 7.5 IPS

REEL SIZE UP TO 16"

REEL HUBS NAB and EIA

STARTING TIME 1/10 SECOND

REWIND TIME 120 SECONDS for a 4800' REEL

PLAYING TIME (14" reel, 1.0 mil tape @ 7.5 ips) 6 HOURS

WOW AND FLUTTER 13% RMS @ 7.5 IPS

TIMING ACCURACY 99.8%

SIZE (TRANSPORT) 19W x 24.5H x 5 3/4"D

(ELECTRONICS) 19W x 3.5H x 7 3/4"D



SPARTA
ELECTRONIC CORPORATION

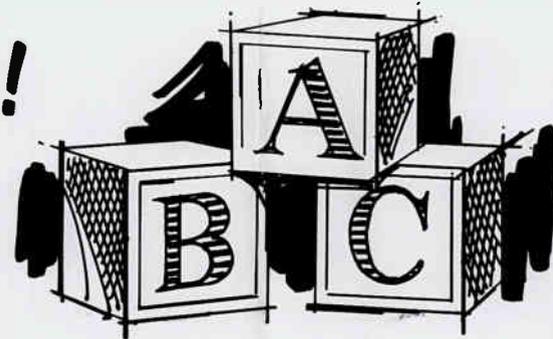
5861 FLORIN-PERKINS ROAD
SACRAMENTO, CALIFORNIA 95828

(916) 383-5353

A DIVISION OF COMPUTER EQUIPMENT CORPORATION

FULL TRACK MONO \$ 1,295
 HALF TRACK MONO 1,295
 HALF TRACK STEREO 1,495
 QUARTER TRACK STEREO 1,495

IT'S EASY!



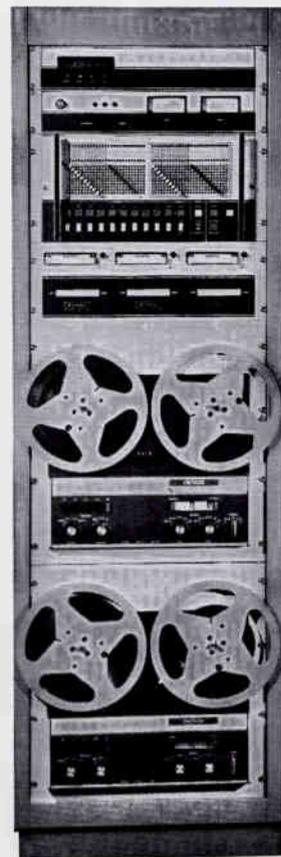
**CHOOSE YOUR
AUTOMATION SYSTEM THE NEW SPARTA WAY!**

SPARTA ELECTRONIC CORPORATION solves the "automate or not to automate" question for the small and medium market station with the new SPARTAMATE concept . . . the building block approach to which component subsystems from Sparta can be added to suit changing program or technical needs. Depending on your programming, SPARTAMATE I ALONE can give you over six hours of "parttime" automation! And SPARTAMATE I is block "A" to build your custom system no matter what your future needs.



SPARTAMATE I basic system consists of the single rack shown. From top to bottom;

- **SPARTAMATE I GIVES YOU NETWORK JOIN AT NO ADDITIONAL COST!**
- **DC24 DIGITAL CLOCK;** provides timing signals for program time correction. LED readouts.
- **LAM1S STEREO LINE AMPLIFIER AND MONITOR PANEL;** +8 dbM out, 8 Watts per channel monitor, switchable to audition buss of Controller for cueing tapes.
- **1052 AUTOMATIC PROGRAM CONTROLLER;** ten audio channels plus network and back-timed music channels, 52 overlapping events, priority interrupt. Built-in silence sensor and 25Hz tone detector.
- **(THREE) CENTURY SERIES TAPE CARTRIDGE PLAYBACKS;** modules slide out of triple rack adaptor for easy access; indicator for End-of-Messsage tone, decoder output for logging systems.
- **(TWO) REVOX A77 MARK III TAPE RECORDER/PLAYBACKS;** stereo, 10 1/2" reel capacity, 3 3/4 and 7 1/2 ips speeds. (Other popular tape transports available).
- **CAB61 RACKS;** welded construction with movable rails front and rear are standard, AC strips and wiring ducts supplied as part of the system.
- **STEREO MUSIC TAPES and MONAURAL CARTRIDGE ANNOUNCEMENTS.**
- **PRICE GIVEN** includes system assembly, wiring, and extensive performance testing using customer's tapes and cartridges if available.



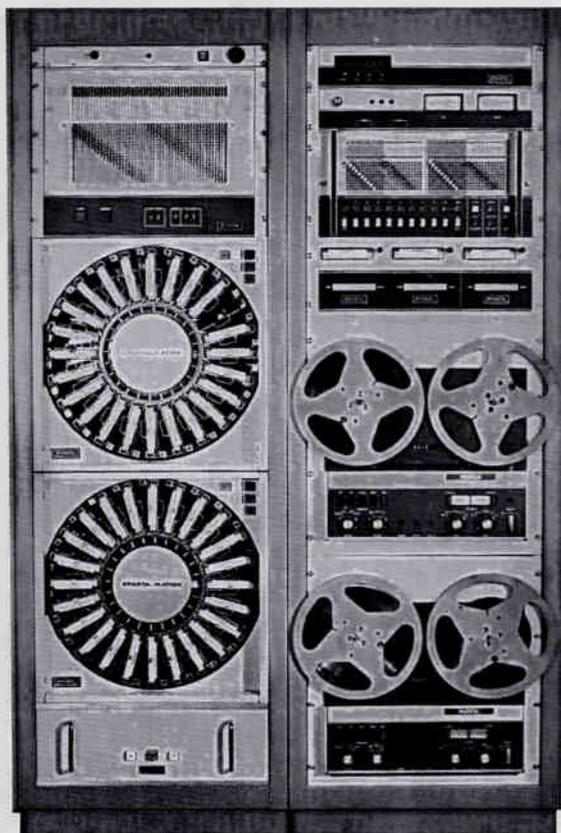
SPARTAMATE I, as shown \$ 6,550

B SPARTAMATE II extends the usefulness of SPARTAMATE I with the addition of 48 10-minute tape cartridges, playable in any order you choose by selection with the Sparta RS250 Random Access. With the addition of the rack shown at left in the photo you have added building block "B" to your automated future!

The right-hand rack of SPARTAMATE II is SPARTAMATE I complete as described above. The rack at left adds, from top to bottom:

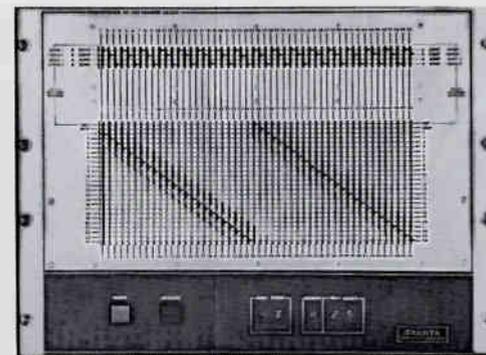
- **SPARTAMATE II GIVES YOU NETWORK JOIN AT NO ADDITIONAL COST!**
- **AP-2 ALARM PANEL;** gives a visual and audible signal when auto restart circuit is operated by a period of silence.
- **RS250 RANDOM ACCESS;** selects 50 cartridge 'events' from two random Carousels®, overlap audio switching plays selection into single audio input, has skip and search ahead features.
- **RS124 MONAURAL CAROUSELS®;** two in system, each with 24-cartridge capacity, decoder output for automatic logging system, front LED readouts show next Carousel and tray number to play, two cartridges already ready and multiple spotting can be done, skip feature handles uneven spot loads when used with the 1052 Program Controller, built-in audio switcher connects to single input of system 'brain'.
- **TA581 TIME ANNOUNCER;** dual cartridge for odd/even announcements, one cartridge always ready so time announcement can be programmed for any period.
- **CAB61 RACKS;** welded construction with movable rails front and rear are standard, AC strips and wiring ducts supplied as part of the system.
- **STEREO MUSIC TAPES and MONAURAL CARTRIDGE ANNOUNCEMENTS.**
- **PRICE GIVEN** includes system assembly, wiring, and extensive performance testing using customer's tapes and cartridges if available.

SPARTAMATE II, as shown \$12,595



C THE SPARTA RS250 RANDOM ACCESS is available as a separate component to existing automation systems . . . SPARTAMATION and others. With its LED readouts showing the Carousel and tray number next to play, and multiple spotting capability, it swiftly modernizes any system which does not have search ahead cueing . . . whether tape cartridges are used for musical selections or commercials in your present system. The audio switcher is built in so that the RS250's battery of some 50 events consist of only one input to the Program Controller being used.

RS250 RANDOM ACCESS ALONE \$ 1,295



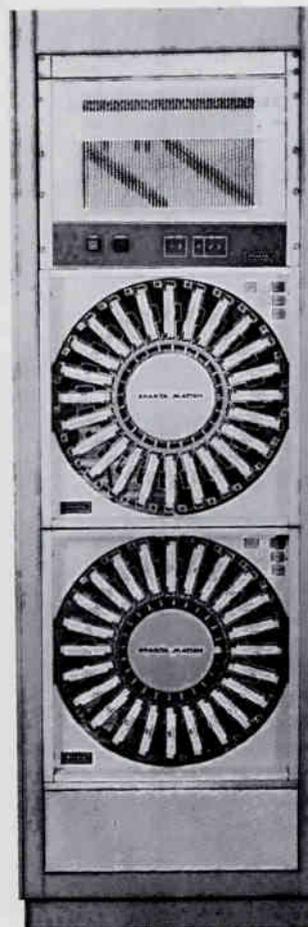
D THE SPARTAMATE "SPOT BANK" is an entire sub-system of the SPARTAMATE concept, but also serves to interface with an existing system of another manufacturer for added flexibility. The components of the SPARTAMATE "SPOT BANK" are:

- **RS250 RANDOM ACCESS;** with all the features described under SPARTAMATE II.
- **RS124 MONAURAL CAROUSELS;** two in the subsystem as described under SPARTAMATE II.

The components are supplied with inter-connecting cables cut for mounting as shown, with the RS250 uppermost in the rack and the twin RS250's adjacent below.

Price does not include rack.

SPARTAMATE "SPOT BANK" LESS RACK . . . \$ 4,295



CENTURY SERIES TAPE CARTRIDGE EQUIPMENT

4510	Monaural Playback Module	440.00
4515	Monaural Playback Module w/Auxiliary Cue	470.00
4520	Stereo Playback Module	590.00
4525	Stereo Playback Module w/Auxiliary Cue	620.00
4610	Monaural Record/Playback System	725.00
4615	Monaural Record/Playback System w/Aux Cue	780.00
4620	Stereo Record/Playback System	980.00
4625	Stereo Record/Playback System w/Aux Cue	1,040.00
4810	Single Flip-Top Module Cover	15.00
4820	Dual Flip-Top Module Cover	20.00
4830	Triple Module Rack Mount Housing	45.00
4840	Quad Module Custom Cabinet	80.00
4850	Matching Blank Panels for 4830 and 4840	10.00

NOTE: Auxiliary Cue is NAB 150 Hz End-of-Message Tone

CD-15	Time Delay, Tape Cartridge System	450.00
M-1200TD	Tape Cartridge; 3-10 sec. Delay	7.50

TAPE CARTRIDGE ACCESSORIES

CR-80	Revolving Cartridge Rack	65.00
CR-100	Wall Cartridge Rack	65.00
CR-120	Revolving Cartridge Rack	85.00
CE-3	Cartridge and Reel Tape Eraser	45.00
AL-1	Head Alignment Cartridge	6.50
CL-1	Test Tape Cartridge; 1 KHz at Std. Reference Level	5.00
CL-2	Test Tape Cartridge; 1 KHz at -10 db	5.00
NAB-3	Test Tape Cartridge; NAB-approved Mono Frequency Response	16.50
DM-200	Head Demagnetizer	6.95
AG-2	Alignment Gauge	7.50

CENTURION SERIES CUSTOM AUDIO CONSOLES

<u>CENTURION I (up to 12 mixers)</u>		
2300	Dual Channel Monaural with 8 Rotary Faders	TBA
2310	Dual Channel Monaural with 8 Slide Faders	TBA

<u>CENTURION II (up to 12 mixers)</u>		
2400	Dual Channel Stereo with Mono Feed, 8 Rotary Faders	TBA
2410	Dual Channel Stereo with Mono Feed, 8 Slide Faders	TBA

CENTURION SERIES MIXER MODULES & ACCESSORIES

2505	Additional Mono plug in Mixer Module Rotary Fader	TBA
2515	Additional Mono plug in Mixer Module, Slide Fader	TBA
2525	Additional Stereo plug in Mixer Module Rotary Fader	TBA
2535	Additional Stereo plug in Mixer Module, Slide Fader	TBA
2540	Equalizer Module	TBA
2550	Reverberation Module	TBA

B-SERIES CONSOLES AND AUDIO ACCESSORIES

AS-40B	8 Mixer stereo	1,770.00
AS-40B-1	8 Mixer stereo with MAS-50 and SM-3	1,995.00
A-20B	8 Mixer Monaural Dual Capability	1,395.00
EP-20	Extender Panel Cabinet fro A-20B	210.00
A-15B	5 Mixer Monaural	650.00
EP-15	Extender Panel Cabinet for A-15B	210.00
A-16R	5 Mixer Dual Monaural (Rack Mount)	1,250.00
AS-30B	5 Mixer stereo	850.00
EP-30/40	Extender Panel Cabinet for AS-30B and AS-40B	250.00
1018	Installed or spare Preamplifier	29.50
RA-1	Utility Microphone/Line Amplifier	95.00
RA-4	4 Channel, AC/Battery Remotes Amplifier	250.00
AC-155B	5 Mixer Studio/Remote	1,450.00
ASC-305B	5 Mixer Stereo Studio/Remote	1,750.00
BL-5	Bench/Lid Combination	85.00
US-5	Top-Mounted Utility Shelf	75.00
MIC-5	Microphone with Custom Mounting	65.00
MA-25	25 Watt Monitor Amplifier	150.00
MAS-50	50 Watt Stereo Monitor Amplifier	210.00
MA-25Q	25 Watt Monitor/Cue Amplifier	195.00
MAS-50Q	50 Watt Stereo Monitor/Cue Amplifier	255.00
SM-3	Muting and Relay Accessory	45.00
AR-40	3-Way Speaker System	80.00

All B-Series Consoles may be supplied with precision step

attenuators in place of standard faders. Add \$20 per Mixer for monaural, \$30 per Mixer for stereo.

TURNTABLE AND ACCESSORIES

GT-12-4P	12" Custom; 4-Pole Motor	170.00
GT-12-SY	12" Custom; Synchronous Motor	195.00
TEP-3M	Monaural Equalized Preamplifier	98.00
TEP-3S	Stereo Equalized Preamplifier	149.00
ST-220	Tone Arm (Less Cartridge)	45.00
M44C	Shure Phono Cartridge	17.95
N44C	Replacement Stylus for M44C	9.75
500E	Stanton Phono Cartridge (Elliptical Stylus)	19.25
5100E	Replacement Stylus for 500E	11.00
500AL	Stanton Phono Cartridge	16.50
5107AL	Replacement Stylus for 500AL	6.60

SHOWCASE CONTROL ROOM CABINETRY

101-1	Console Desk	225.00
101-1-3	Console Hood for A-20B or AS-40B with speaker	100.00
101-3-4	Dual Turntable Return	250.00
101-3-5	Dual Utility Return	265.00
101-3-1	Rack Bracket Kit for 101-3	8.00
101-6	Cartridge Storage Hutch for 101-3-5	135.00
101-7	Single Turntable Return	170.00

SHOWCASE PACKAGE SPECIALS

<u>GROUP 1</u>		
8-Mixer B-Series Console with Console Desk, Hood with Monitor/Cue Speaker, Microphone(s), Dual Turntable Pedestal with GT-12 Series Custom Turntable Systems		
	Mono	2,650.00
	Stereo	3,450.00
<u>GROUP 2</u>		
All of GROUP 1 plus Dual Utility Return Pedestal with Cartridge Hutch		
	Mono	3,000.00
	Stereo	3,800.00
<u>GROUP 3</u>		
All of GROUPS 1 & 2 plus CENTURY SERIES Tape Cartridge Record/Playback System and two Playbacks		
	Mono	4,650.00
	Stereo	5,950.00

AM TRANSMITTERS

701B	1000/500/250 W (any two powers)	6,500.00
703	3000 W	11,500.00
705	5000/1000/500 W (any two powers)	21,000.00
710	10,000 W	24,000.00
715	15,000 W	27,500.00
725	25,000 W	62,500.00

FM TRANSMITTERS

680	Direct FM Exciter	2,200.00
680/1	10 W Transmitter	2,350.00
682	Stereo Generator	1,250.00
683	SCA Generator	650.00
600A	250 W	5,750.00
601A	1,000 W	7,650.00
602A	2,500 W	10,500.00
605A	5,000 W	15,500.00
612A	12,500 W	24,500.00
620A	20,000 W	28,500.00

AM MONITORS

AMM-1	Frequency and Modulation Monitor	1,500.00
TBM-8000	Frequency Monitor	975.00
TBM-8500	Modulation Monitor	850.00

FM MONITORS

FMM-1	Frequency and Modulation Monitor	1,550.00
FMS-1	Frequency and Modulation Monitor-Stereo	1,350.00
SCM-1	Frequency and Modulation Monitor-SCA	1,250.00
TBM-3700	Frequency and Modulation Monitor	1,350.00
TBM-2200	Stereo Modulation Monitor Adaptor	1,200.00
TBM-3019	19 KHz Pilot Frequency Counter	125.00
TBM-2000A	SCA Modulation and Frequency Monitor Adaptor	1,200.00
TBM-3000A	Digital Frequency Monitor, Main & 19 KHz	975.00
TBM-4500A	Stereo Modulation Monitor	2,200.00
TBM-1000B	Relay Receiver 88-108 MHz	250.00
TBM-2500C	RF Amplifier, Remote Monitor	485.00
RFA-1	RF Amplifier	400.00

ACCESSORIES

RMC-2AX(10)	10 Channel Remote Control	1,295.00
RMC-2AX(24)	24 Channel Remote Control	1,645.00
TRC15AW	Remote Control, Single AC Pair	1,595.00
PBR-30AR	Remote Control, Radio STL	2,735.00
380	Phase Sampler	165.00
FIM-21	Field Intensity Meter, Solid State	1,150.00

JAMPRO "PENETRATOR" FM ANTENNA

Circularly polarized 10KW per bay 3 1/8" line

JSCP-1	1 Bay, 0.46/0.46 gain	1,250.00
JSCP-2	2 Bay, 1.0/1.0 gain	1,890.00
JSCP-3	3 Bay 1.5/1.5 gain	2,730.00
JSCP-4	4 Bay, 2.1/2.1 gain	3,570.00
JSCP-5	5 Bay, 2.7/2.7 gain	4,410.00
JSCP-6	6 Bay, 3.2/3.2 gain	5,150.00
JSCP-7	7 Bay, 3.8/3.8 gain	6,190.00
JSCP-8	8 Bay, 4.3/4.3 gain	6,750.00
JSCP-10	10 Bay, 5.5/5.5 gain	8,820.00
JSCP-12	12 Bay, 6.6/6.6 gain	10,500.00
JSCP-14	14 Bay, 7.8/7.8 gain	12,280.00
JSCP-16	16 Bay, 8.9/8.9 gain	13,650.00

Delciers, if any, add \$180/bay plus \$85 for Control Circuit

JAMPRO "PERFORMER" FM ANTENNA

Elliptically polarized 1 KW per bay 1 5/8" line

JLCP-1	1 Bay, 0.45/0.45 gain	722.00
JLCP-2	2 Bay, 0.95/0.95 gain	1,333.00
JLCP-3	3 Bay, 1.5/1.5 gain	2,000.00
JLCP-4	4 Bay, 2.05/2.05 gain	2,666.00
JLCP-5	5 Bay, 2.60/2.60 gain	3,333.00
JLCP-6	6 Bay, 3.15/3.15 gain	4,000.00
JLCP-7	7 Bay, 3.65/3.65 gain	4,777.00
JLCP-8	8 Bay, 4.2/4.2 gain	5,333.00
JLCP-10	10 Bay	6,000.00
JLCP-12	12 Bay	7,500.00

Delciers, if any, add \$120/bay plus \$85 for Control Circuit

ISOCOUPERS

2.5 KW	1 5/8" Input and Output	550.00
7.5 KW	1 5/8" Input and Output	775.00
20.0 KW	3 1/8" Input and Output	1,229.00
JHCP	JAMPRO "BRUTE" FM ANTENNA Circularly polarized 30 KW per bay 6 1/8" line	

JSDP BROADBAND CIRCULARLY POLARIZED MULTI-STATION INPUT FM TRANSMITTING ANTENNA
88-108 MHz VSWR 1.1/1 over 20 MHzANTENNA COUPLING UNITS and ANTENNA TUNING UNITS AVAILABLE ON CUSTOM ORDER.

Contact Factory for price information on JHCP, JSDP, ACU and ATU.

SPARTAMATION

1052B	Automatic Program Controller, plus Digital Clock system timer: 10 regular audio channels (mono or stereo) plus net & fill music inputs. 52 overlapping events. Includes 25 Hz tone sensor and Auto Restart on silence. Net Join option available. 8 3/4" Rack Space.	2,650.00
FX-52	Format Expander: Provides an additional 52 event format, using same type program board as 1052. 8 3/4" Rack Space.	800.00
LAM-1	Line Amplifier/Monitor Panel: VU meter and audio monitoring of program and cue levels. Optional built-in monitor amplifier. 3 1/2" Rack Space.	
	Line Amp (mono)	345.00
	(stereo)	445.00
	Monitor Amp (mono)	50.00
	(stereo)	100.00
HP-40	High Pass Filter, 40Hz cutoff, removes 25 Hz tones from program output. Mount in LAM-1. Two required for stereo.	40.00
25-06C	25 Hz Oscillator/Filter: Generates accurate 25 Hz tones for recording end cues on tape selections. Includes filters to remove low frequency compon-	

	ents from program material. 3 1/2" rack space.	
	(mono)	350.00
	(stereo)	375.00
25-SEN	25 Hz Sensor/Filter: A highly selective amplifier & relay driver, including active high-pass filters to remove 25 Hz tones from program audio. 3 1/2" rack space.	
	(mono)	325.00
	(stereo)	350.00
TA-581	Time Announcer: Dual Cartridge, for odd/even 7.5 ips announcements. One cartridge always ready. Supplied with sliders. Requires rack with front and rear rails. 7" rack space.	1,300.00
RB-124	Mono cartridge Carousel [®] for random or sequential operation of up to 24 tape cartridges. Includes decoder output for automatic logging systems. 19 1/4" Rack Space.	1,500.00
RS-224	Stereo cartridge Carousel [®]	1,650.00
RB-250	Random Cartridge Access: Selects 50 cartridge events from 2 random Carousels. Overlap audio switching into single audio input. Has "skip" and "search ahead" features. 14" rack space.	1,295.00
RS-4100	Random Cartridge Access: Selects 100 cartridge events from four Carousels. Overlap audio switching into single input of Program Controller. Digital readouts. Supplied with sliders. Requires rack with front and rear rails. 14" rack space.	2,495.00

SPARTAMATE I

Basic Automation System, consisting of Digital Clock, Program Controller, Line Amplifier and Monitor Panel, 3 Century playbacks, 2 reel/reel record/play. Rack mounted, wired and tested. Stereo music. 6,550.00

SPARTAMATE II

Expanded Automation System, consisting of all components in SPARTAMATE I, plus silence-activated Alarm Panel, two 24-cartridge Carousels, Cartridge Random Access, Time Announcer, Net Join. Stereo Music. 12,595.00

REEL/REEL TAPE RECORDERS & REPRODUCERS

SPARTA 14" CORINTHIAN SERIES

4911	Monaural Full Track	1,295.00
4912	Monaural Half-Track	1,295.00
4922	Stereo Half-Track	1,495.00
4924	Stereo Quarter-Track	1,495.00
CORINTHIAN Series Reproducers have up to 16" reel capacity. Speeds are 3 3/4 and 7 1/2 ips, with foil reversing. Hubs are NAB and EIA. Tape tension arms are adjustable and air-damped. Level adjustments on front panel. Three motors, with direct drive capstan. 28" rack space.		
A-1230	<u>Teac</u> 7" reel, 2 or 4 track, Mono or Stereo	359.50
3300	10 1/2" reel, 2 or 4 track, Mono or Stereo	499.50
3340	10 1/2" reel, 4 track, Simul - Sync	849.50
7030GSL	10 1/2" reel, 2 track, 7 1/2 and 15 ips Mono or Stereo	949.50
MP-70	Rack Mount Adaptor for 7030GSL	30.00
RC701	Remote Control for 7030GSL	52.00
1302/4	<u>Revox</u> A77 Mk III, 2 or 4 track, Mono or Stereo	799.00
SSP	A77 Stainless Steel Faceplate	10.00
13-R	A77 Rackmount Adaptor	15.00
FT-HB	A77 7 1/2 and 15 ips Full Track Monaural Modification	210.00
HA	A77 NAB Adaptor Hubs, per pair	19.00
531R	<u>Metrotech</u> 10 1/2" reel, full track, Monaural	1,695.00
543R	10 1/2" reel, 2 track, Stereo	1,995.00
M/S280	<u>Scully</u> 10 1/2" full track, motion sensing	2,450.00
M/S280-2	10 1/2" 2 track, Stereo, motion sensing	3,100.00
SX812	<u>Crown</u> 10 1/2" reel, half-track, Monaural	1,395.00
SX822	10 1/2" reel, 2 track, Stereo	1,495.00

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All equipment items and descriptions in this brochure are necessarily condensed and do not completely show the many other broadcast products supplied by SPARTA. For more information about professional quality Reel-to-Reel Tape Recorders, Tone Arms and Cartridges, Microphones, AM and FM transmitters available through SPARTA, contact your SPARTAMAN sales engineer or the sales office of SPARTA ELECTRONIC CORPORATION.

Our policy is one of continual improvement in design and manufacture; and therefore, we reserve the right to change prices, specifications and design without notice.

No order is binding upon SPARTA ELECTRONIC CORPORATION until accepted in writing from the SPARTA home office in Sacramento, California.

All Equipment is 117 Volts, 60 Hz Standard. Others are available.

Terms: Sparta-Charge; Open Account; Conditional Sale Contract or Lease/Purchase Agreement up to five years. All prices are F.O.B. Sacramento.

Factory Sales/Service (916) 383-5353
Telex 377-488
Sacramento, California 95828



SPARTA ELECTRONIC CORPORATION
3651 FLORIN-PERKINS ROAD, SACRAMENTO, CALIFORNIA 95828 (916) 383-5353
A DIVISION OF COMPUTER EQUIPMENT CORPORATION



BROADCAST EQUIPMENT PRICE SCHEDULE

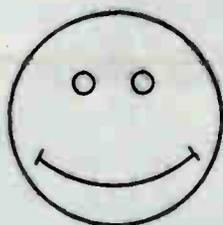
APRIL 1, 1973

SPARTA
Electronic Corporation



By your circling the number appearing under one of our recent magazine advertisements, you've given us cause to smile!

We're always happy to pass along requested information about our products, and we're content to wait until you've looked through it before continuing.



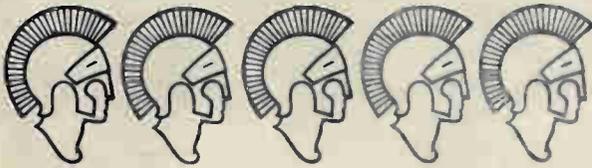
Now that you've had the chance to look us over, we're sure you'll find that SPARTA equipment offers the best dollar for dollar value available in professional broadcasting equipment today. And the price schedule says this better than we ever could!

The icing on the cake is our service department and financing plans. SPARTA's service department operates on a simple principle, "NO CUSTOMER SHALL EVER BE DISSATISFIED!" Our financing plans are a little more flexible. You can make it easy on yourself with "SPARTA-CHARGE" or you can make it VERY easy on yourself with 100% financing or anything in between. Your choice.

We're sure that once you've reviewed our products and policies you'll agree with us when we say that SPARTA ELECTRONIC CORPORATION is a step ahead in keeping your operation both smooth and profitable!

Let us know your thoughts or answer your questions. Jot them down on the back of this and use the post-paid envelope enclosed for your convenience. Please include your name and address.

We sincerely thank you for your interest in SPARTA!



SPARTA ELECTRONIC CORPORATION

5851 FLORIN-PERKINS ROAD / SACRAMENTO, CALIFORNIA 95828
A Division of Computer Equipment Corporation

Sparta, the 'just right' company. Small enough to be first name friends . . . big enough to supply EVERYTHING.

BULK RATE
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Sacramento
California

QUICK REFERENCE PRODUCT BROCHURE

Space limits this brochure to views and descriptions of only a part of the Sparta broadcast equipment line. More detailed information is available in individual Product Guides, Catalog and Price Schedule.



SHOWCASE SERIES CABINETRY

The efficiency and appearance of your existing studio arrangement can be greatly enhanced by one or more individual "Showcase" cabinets. A rich, quality studio look without custom cost can also be yours; several "Showcase" groups, including equipment, are offered by SPARTA at special package prices. The modular concept gives mix-or-match versatility from among the wide selection of cabinet pieces to create THE audio control center to fit nearly any requirement. In the "Showcase" selection, fine furniture craftsmanship has been combined with long lasting, easy-maintenance durability.

CENTURION SERIES CONSOLES

The new CENTURION has features not previously available in a broadcast audio console. Each mixer is a self-contained plug in module, internally selectable for high or low level inputs. In 12-channel configuration, 36 inputs are available. The stereo CENTURION II is capable of quadrasonic broadcast. CENTURION I designates monaural model. Operation is free of mechanical or electrical noise, and virtually free of cable harnesses due to extensive use of mother-boards and ground-plane p.c. techniques. Dual power supply is standard. Options include slide or rotary attenuators, reverberation and equalization controls, plus a 6-mixer/18-input matching extender.





8-CHANNEL CONSOLES

MODEL A-20B. The A-20B is today's finest 8-mixer, full facility, monaural audio console. Contemporary styling and advanced solid-state design have made the A-20B more compact than any other comparable console — yet it does the job of consoles twice its size and price!

MODEL A-40B. Crystal clarity, trouble free performance and VALUE are yours in stereo broadcasting with the new AS-40B. Incorporating the latest state-of-the-art design, it is built for reliability you can depend on! It's big enough to handle ANY stereo broadcasting assignment, at a price far less than you might expect.

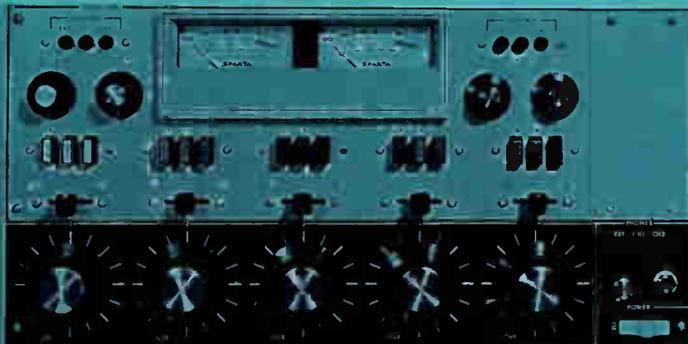
5-CHANNEL CONSOLES

MODEL A-15B. Select five audio inputs at a time from the 14-source capability of this modestly priced professional quality console. Outstanding features include all-channel cue system, monitor amplifier, and muting relays.

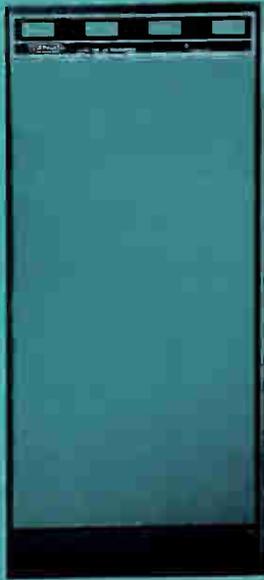
MODEL AS-30B. Accommodates nine stereo sources with identical line amplifiers in both program and audition outputs, allowing different stereo programming to be controlled at the same time. Stereo mixing versatility unmatched by any other in its class.



DUAL CHANNEL MONAURAL CONSOLE



MODEL A-16R. This mixer, compact enough to fit neatly into video consoles, easily handles audio requirements from several studios simultaneously. Its dual channel output even gives identical crystal clear handling to different programming at one time. In its standard rack mount, or handsome optional custom cabinet, the A-16R's fifteen-input capability with push-button control gives fast and flexible handling for TV, CCTV and CATV audio. A wise investment at its modest price.



LOW POWER AM TRANSMITTERS

MODEL 701B 1000 Watts

● There is room here for only a partial list of the many quality features of the Sparta Model 701B 1 kw AM Transmitter: 125% positive modulation capability, built-in dummy load, uses low cost 4-500 tubes, and has Sparta Tally-Light fault locator system. The 701B, solid state up to the finals, is built in 1000/500, 1000/250, and 500/250 Watt configurations. The 1 kw AM radio station will see in the 701B so many concentrated state-of-the-art advances that its performance will satisfy the most discriminating engineer for many years.

HIGH POWER AM TRANSMITTERS

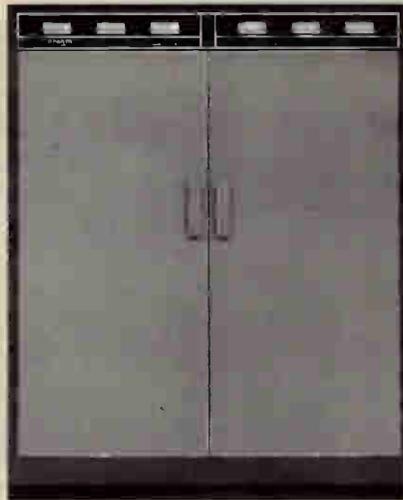
MODEL 705 5000 Watts

MODEL 710 10000 Watts

MODEL 715 15000 Watts

MODEL 725 25000 Watts

● These models employ a basic design which is up to date with every engineering advance. The saving in re-engineering for each power makes the Sparta high power AM transmitter price tag a very attractive one. The line relies on simple and straight-forward circuitry, while using every development that is truly useful. Full metering, oil filled modulation transformer, and the Tally-Light fault locator system are among



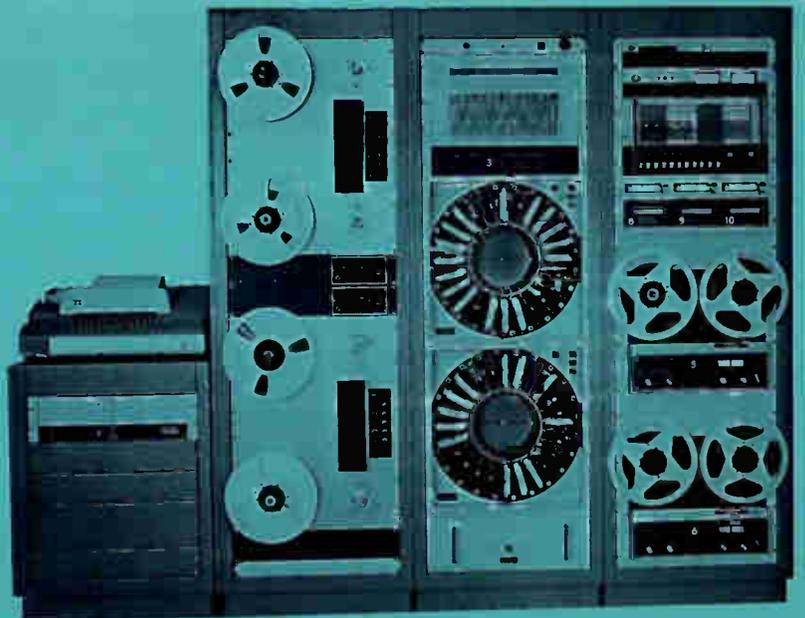
features in the line.

● The Models 705, 710 and 715 are nearly identical in appearance; the 715 power supply is mounted externally. Internally the differences are mainly in high voltage power supplies and modulation components.

● The Model 725 consists of two Model 715's operating at 12.5 kw each into the exclusive Sparta Ferrite Combiner. The combiner, reject and test loads, and control panel are all mounted in a matching cabinet which is usually placed between the transmitter cabinets.

SPARTAMATION SYSTEMS & DEVICES

SPARTA-MATION systems offer more realistic value than any other, and are available on attractive financing programs. They have been developed by people with years of successful broadcasting experience. Stations throughout the world are improving their programming and increasing their profits with reliable, modern SPARTA-MATION. Any number of different programming formats can be accommodated, and your system can include automatic network joining, program logging and remote control. SPARTA-MATION devices can be used with, and will interface with, almost any system.





STUDIO CONTROL & REMOTE UNITS

MODEL AC-155B. A versatile monaural audio control center that combines maximum operational flexibility with professional quality in any location. A semi-permanent installation can become mobile at a moment's notice and enable you to cover more assignments and to produce added station revenue.

MODEL ASC-305B. A full-facility stereo audio control center that is tailor-made for production room chores, main control, or remote broadcast assignments. The equipment cabinet is of exceptionally fine construction and distinctive design with a very rugged and durable bonded plastic laminate finish. Accessories include a protective bench/lid, top-mounted utility shelf and professional dynamic microphone with special goose-neck mounting.

REMOTE BROADCAST MIXER AND LINE AMPLIFIER

MODEL RA-4. The neatest and most solid 4-channel remote mixer on the market. Its four channels accept microphone or line level inputs, and each has headphone-monitored cue. Two RA-4 units can be connected in series for double duty. Full-capacity console, operating AC or from self-contained batteries.

MODEL RA-1. This inexpensive little line or utility microphone remote amplifier features a fully integrated circuit design! Current drain is extremely low for a lifetime of dependable, trouble-free operation in your many general purpose applications.



TURNTABLE SYSTEMS

MODEL GT-12 CUSTOM. The distinctive orange "power paddle" of the two-speed GT-12 enables the operator to cue records with one hand more conveniently than ever before. Operator convenience is emphasized throughout; speed indicators stay lit until the turntable is shifted to neutral, change record types with no adaptor or moving parts, and change speeds with minimal movement. Complete systems from SPARTA include floor cabinets, tone arms, pickup cartridges, and equalized mono or stereo preamps.

MODEL ST-220 TONEARM. A top-quality 12-inch tonearm which at a glance tells you it's PROFESSIONAL. Light alloy construction, with every adjustment necessary to insure maximum mono or stereo performance.



CENTURY SERIES

TAPE CARTRIDGE SYSTEMS

Playback and record modules, in this unique and innovative system, are of identical size – allowing the great number of mounting configurations shown here, plus as many others as your station's needs and ingenuity can find. The rack mount housing accepts three modules and takes only SEVEN inches of rack space. In every case, space occupied by a playback module in these pictures can be occupied by a record amplifier module.



Audio switching is built-in, allowing absolutely "popless" starts, and several playback modules to be connected to a single mixer channel without separate isolation equipment. The record amplifier module provides selection of THREE high-level audio inputs. Its meter monitors recording level, cue tone, or bias.

Size and cost of the CENTURY SERIES systems have been reduced through SPARTA'S use of the very latest engineering techniques, with resulting unrivaled flexibility and reliability.

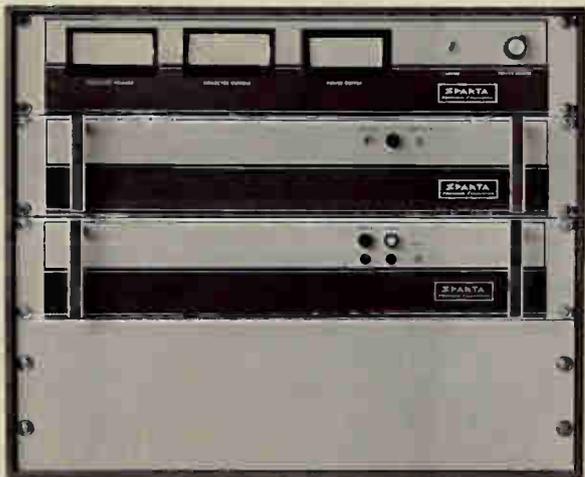


REEL/REEL EQUIPMENT



- The Sparta CORINTHIAN reproducer provides up to 16" reel capacity for long periods of unattended Spartamation operation, with foil reversing to insure maximum use of tapes. Capstan is direct drive, amplifiers are plug in, transport construction is easily accessible and front panel level control is provided. Two mono and two stereo playback head configurations are available.
- Other makes and models of reel/reel equipment can be supplied to suit every purpose.

LOW POWER FM TRANSMITTERS



MODEL 680	Direct FM Exciter
MODEL 680/1	10 Watts
MODEL 682	Stereo Generator
MODEL 683	SCA Generator
MODEL 600A	250 Watts

- The Model 680 Direct FM Exciter, which is the heart of every Sparta FM Transmitter, is so simple and foolproof that Sparta reasonably claims that NO field adjustment is EVER needed. Its features include Strip Line RF Circuitry, Automatic Carrier Balance, Digital AFC Frequency Control Circuit (no oven needed) and others. The 680 will retrofit into any type accepted FM transmitter and respond with factory guaranteed specifications.

- The Model 680/1 with full meter panel accommodates low-power educational broadcasting assignments.

- Complementary units for the Model 680 and 680/1 are the 682 Stereo and 683 SCA Generators.

- The Model 600A produces a top quality FM signal using the Model 680 Exciter. For low power or standby use, the simple, small 600A is unmatched in value. Only 4.5' high, weighing 350 pounds, it is fully capable of stereo and SCA operation.

MEDIUM POWER FM TRANSMITTERS

MODEL 601A 500/1500 Watts
 MODEL 602A . . . 1000/2500 Watts
 MODEL 605A . . . 3000/5200 Watts

- Sparta covers the medium power FM range using the economical 5CS1500A pentode (two in the 605A). Uncluttered layout and straightforward design, with



swingout front panel for easy access are features of all of these models. The Tally-Light overload indicator system will be found in these units, along with the new Model 680 Exciter. For top stereo operation, the companion 682 Stereo Generator is available.

HIGH POWER FM TRANSMITTERS

MODEL 612A

MODEL 612A	7500/13000 Watts
MODEL 620A	13000/23000 Watts
MODEL 640A	30000/50000 Watts

- Grounded grid final, Tally-Light fault locator, Automatic Power Control, and a built-in VSWR protection system are common features in the Sparta high power line. Outwardly they look the same; inside you find a 3CX10,000A7 in the 612A and the 3CX15,000A7 in the 620A. Two of the 620A type operating into a combiner make up the dual, redundant Model 640A . . . the optimal way of reaching super power. All use the new Model 680 Exciter. Stereo is optional with the 682 Stereo Generator.

