





PRODUCT CATALOG

Product quality, customer service, and competitive pricing are the policies we have followed in becoming one of the nation's leading manufacturers of professional audio broadcast equipment.

This product catalog covers in detail, the products that are paramount to SPARTA's Success, and there will be many more to come. We are building for the future, because there is no future in the past.



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



"SHOWCASE" SERIES CONTROL ROOM CABINETRY



Efficiency and functional beauty are the key desires in studio design. If your plans include a move or remodeling of your facilities, **SAVE INSTALLATION TIME!** . . . **SAVE MOVING COSTS!** . . . **INCREASE OPERATOR EFFICIENCY!** SPARTA "Showcase" Series Control Room Equipment Cabinets have the custom look of richness and quality without the expensive custom cost. The design and construction are based on the modular concept, to give mix'n match versatility among the many cabinet combinations and create a well-planned Audio Control Center to fit most any requirement. The efficiency and appearance of many existing room arrangements can be greatly improved by one or more "Showcase" cabinets. The above illustration shows a typical "Showcase" Audio Control Center, featuring the SPARTA Model A-20 Audio Console with a matching hood cabinet housing and console deck; two Model TC-12" Custom Turntable Systems within a dual return pedestal; and on the right a Basic Return pedestal is shown with a SPARTA-MATIC 800C Series Tape Cartridge System and cartridge storage hutch.

The "Showcase" cabinetry has the craftsmanship of fine furniture with long lasting durability, and careful consideration for operator convenience and efficiency is fully evident. An optional writing platform and a generous area is provided for copy or logs in front of the console, with large areas for utility use on either side. The hood over the console housing incorporates a speaker which may be used for monitor or cue functions. The digital clock is a thoughtful operator convenience which gives accurate time at just a glance. The single and dual return pedestals may be used with a number of accessories depending on the need. One or two returns may be used with the console desk to form an "L" shaped control center or one or more returns at each end of the desk for a "U" configuration. The lower portions of the return pedestals have sliding doors as standard equipment. This area may be used for general or record storage. By removing the doors and using optional rack brackets, this area provides 28 inches of standard 19" rack space for transmitter remote control, power supplies, tape machines, etc. The opposite side is fitted with magnetic cabinet hardware for easy removal to gain access to the rear of such equipment. Another important feature is that the SPARTA "Showcase" Cabinetry is shipped to you completely assembled, not in knock-down packages. This means that your facility can be put into operation in record time.

- CUSTOM BEAUTY AT REASONABLE COST
- MIX 'N MATCH VERSATILITY
- PRACTICAL OPERATOR EFFICIENCY
- QUICK MODERNIZATION
- HEAVY, RUGGED CONSTRUCTION
- TOUGH PLASTIC LIMINATE FINISH
- SHIPPED ASSEMBLED
- SAVE INSTALLATION TIME

TECHNICAL INFORMATION



**Basic Return Pedestal
(P/N 101-3 fitted
with turntable insert
(P/N 101-4)**

The Basic Return Pedestal may be used with a number of accessories depending on the need. Using the Turntable Insert (P/N 101-4) the return becomes a housing for two SPARTA Model TC-12" Custom Turntable Systems (As illustrated). An area directly below the turntable surface is provided for cables and accessories, such as the SPARTA Model TEP-2 Equalized Turntable Preamplifiers. A full set of metal record/dividers is supplied to be used in the large storage area behind the front sliding doors. These sliding doors may be removed and using optional Rack Brackets (P/N 101-3-1) this area provides 28 inches of standard 19" equipment rack space. Overall Dimension P/N 101-3: 28 $\frac{5}{8}$ " high with level-adjusting pedestal feet; 40 $\frac{7}{8}$ " wide; 20 $\frac{1}{8}$ " deep.

Sleek modern styling accents the spacious "Showcase" Console Desk that is designed for ideal operator convenience. Stainless steel pedestal legs provide rugged stability and plenty of knee room with just the right height for the console. The Console Desk is primarily designed for the SPARTA Model A-20 Audio Console, though it will accommodate most other types. When ordered with the Console Hood (P/N 101-1-3), the rear shelf will be cut out for the A-20 Console. If it is to be used with another console and the overall length is furnished, the cut out will be made at the factory. The Writing Platform (P/N 101-1-2) is a convenient optional extra. Dimensions: 82 $\frac{1}{4}$ " long; 24 $\frac{1}{4}$ " deep; 28 $\frac{1}{2}$ " high (to counter top).



**CONSOLE DESK
(P/N 101-1B)**

The SPARTA "Showcase" Cabinets and Console desk are constructed of top grade laminated wood. All exterior surfaces are finished in an extremely durable stain and mar resistant bonded plastic laminate assuring years of lasting beauty. An attractive platinum wood grain and contrasting beige tone color scheme is used, which adds to the custom designed appearance. The design thoughtfully provides easy access to all equipment wiring, yet keeps it out of sight for a truly customized appearance. All leg supports have adjustable leveling to correct for uneven floor surfaces. All cabinets have front and rear access through either sliding panel doors or removable panels using magnetic cabinet hardware.



**SINGLE
RETURN
PEDESTAL
(P/N 101-7)**

The Single Return Pedestal has the same features as the Basic Pedestal. As illustrated, it may be ordered with cut-out for a SPARTA Model TC-12" CUSTOM turntable system. Without the cut-out, it may be used as a utility cabinet to fill a variety of needs. Overall Dimensions P/N 101-7: 28 $\frac{3}{8}$ " high (with level-adjusting pedestal feet); 20 $\frac{3}{4}$ " wide; 20 $\frac{1}{8}$ " deep.

In this configuration, the Basic Return Pedestal is fitted with the Utility Table Insert (P/N 101-5) and the Tape Cartridge Storage Hutch (P/N 101-6) is added. This makes an excellent facility in which to operate a complete SPARTA-MATIC Tape Cartridge System. The Cartridge Hutch will store a library of 96 Model 300 tape cartridges. Two generous shelving areas for storage or to rack mount equipment are below the table-top surface. In addition, a large storage area is available behind the front sliding doors. These doors may be removed and using the optional Rack Brackets (P/N 101-3-1), this area provides 28 inches of standard 19" equipment rack space. Overall Dimensions P/N 101-3 with Cartridge Hutch P/N 101-6: 49 $\frac{1}{2}$ " high (with level-adjusting pedestal feet); 40 $\frac{7}{8}$ " wide; 20 $\frac{1}{8}$ " deep.

**Basic Return
Pedestal P/N
101-3 fitted
with Utility
Table Insert
P/N 101-5 and
Tape Cartridge
Storage Hutch
P/N 101-6**





MODEL A-20 AUDIO CONSOLE



PRODUCT GUIDE

The SPARTA A-20 Audio Console is designed to provide maximum flexibility and operator convenience in every audio mixing application; whether it be television audio control, radio main control room, or full facility production center. The 8 mixing channels, which accommodate 22 separate audio inputs, are controlled in the conventional manner, with rotary attenuators and lever selector switches. The electronics incorporate the very latest quality components and transistorized design. For engineering convenience, the preamplifiers, line amplifier, and cue amplifier are packaged on individual printed circuit boards. Input balancing transformers and a cue function are standard equipment for all eight channels.

Preamplifiers are installed in channels 1 through 3 to provide a total of 9 microphone or low level inputs, which are selected through 3 three-position key switches. Channels 3, 4 and 5 are normally used as high level inputs for turntables or other such sources. If additional low level channels are needed, then preamplifiers may be installed. Channels 7 and 8 each have a new type positive selective-action switch, which prevents overshoot and selects five auxiliary inputs such as tape, network, projectors or remote lines. Provisions for two studio talk-back systems, three key selected line outputs and multi-source selection for the monitor and head phone amplifiers are just a few more of the important features. The compact size of the SPARTA A-20 allows it to be positioned on almost any standard or custom studio console desk. The ideal installation accessory for most situations is the A-20 Console Desk (Part No. 101-1), or Utility Console Desk (Part No. 101-1B) of the SPARTA "Showcase" Series Control Room Cabinetry.

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- ALL TRANSISTORIZED
- SELF-CONTAINED
POWER SUPPLY
MONITOR & CUE
AMPLIFIER
- TWENTY-TWO INPUTS
- EIGHT MIXERS
- ACCOMMODATES 8
PREAMPS (3 SUPPLIED)
- THREE MUTING RELAYS
- INDIVIDUAL
ELECTRONIC MODULES
- SPACE-SAVING
COMPACTNESS

Full facility operation of the A-20 is illustrated by the console schematic diagram. The 8 mixer controls are conventional rotary attenuators with a counter-clockwise cue function. This function is identified only on mixers 4, 5 and 6. It is, however, provided as a standard feature on all mixers. The channel lever switch above each mixer directs the audio source to either the Program or Audition channel, with the middle position being off.

Mixers 1, 2 & 3 each are provided with a preamplifier for resulting high level mixing. These mixers will normally be used with microphones or similar devices of the appropriate level. A Source Selector switch for each mixer selects inputs A, B or C into its associated mixer. This, then, provides a capability of nine low-level inputs through mixers 1, 2 and 3. Input connections to Mixers 4, 5 and 6 are fed directly to these mixers without additional switching. They will be used in most applications as turntable inputs.

Mixers 7 and 8 are provided with a rapid selection, push-button type rocker source selector switch for maximum flexibility. These push-button selector switches provide five separate inputs into each mixer, or a total of ten into the two mixers. The function switch associated with the source selector switches of mixers 7 and 8 extend the flexibility of the SPARTA A-20 even further. The three functions are mix, cue and feed. In the mix position, the audio chosen by the source selector switch is fed directly to the mixer.

In cue position, the source selected is fed to the cue system and may be monitored. When in the Feed position, the audio chosen by the monitor selector switch (Audition, Program or External) may be fed down a remote line. Three muting relays are supplied, which can function with any of the mixer channels.

Placing the talk-back selector switch in either the A or B position diverts the preamplifier of mixer 1 to rear panel connections. These outputs are fed to a small power amplifier and speaker of the user's choice.

The monitor level control (to the left of the large illuminated VU meter) adjusts the output level of the A-20's 5 watt monitor amplifier. Associated with it is a monitor selector switch by which the operator may choose one of three different sources, program channel, audition channel or an external "air monitor" source.

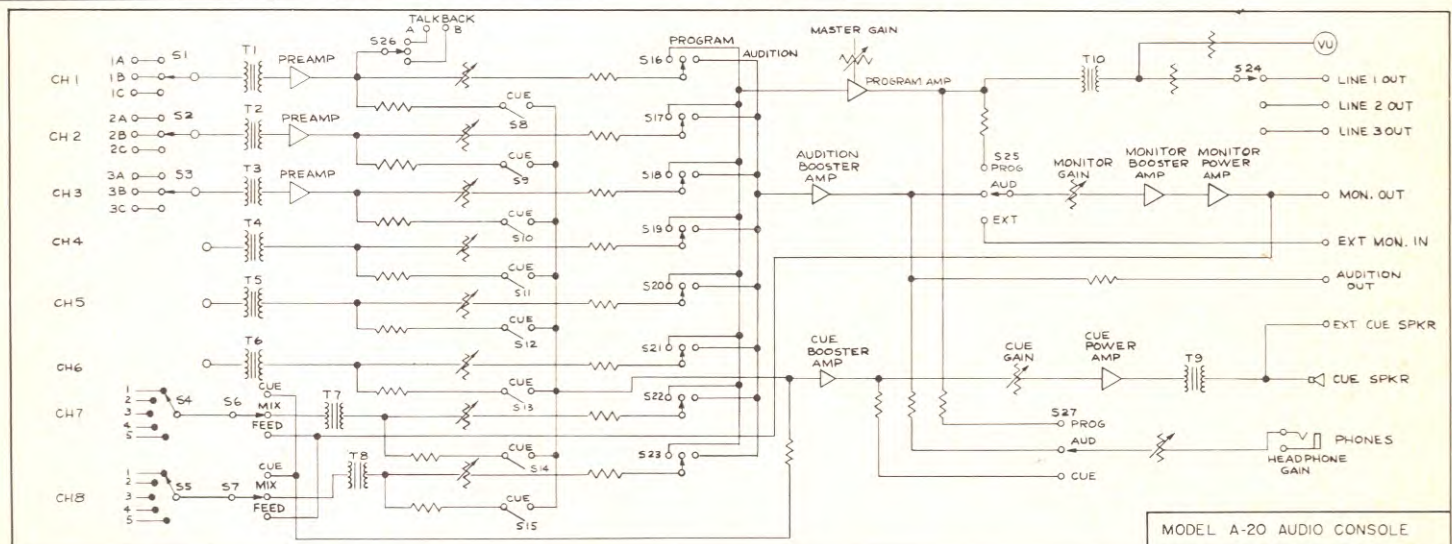
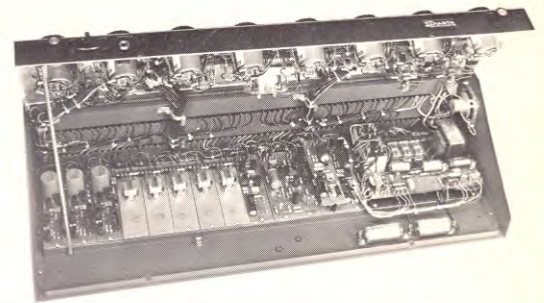
Another valuable feature is the three-position Program Output lever switch. This control diverts the console program output to one of three sets of output terminals. In addition, a pair of output terminals is also provided across the Audition Booster amplifier. These terminals provide simultaneous mixing for recording purposes at the same time the console is being used for "On Air" programming. Since the A-20 is completely self-contained, there need not be any concern for the mounting of an external power supply, or monitor amplifier.

TECHNICAL INFORMATION

INPUTS:	9 low level and 13 high level; See note on additional preamps
OUTPUTS:	3 program; 1 monitor speaker; 1 external cue; 1 headphone
IMPED:	Low level, 150/250 ohms; High level and program, 600 ohms; monitor, 8 ohms; cue, 3.2 ohms
LEVEL:	Input: Low level -60dbm; High level -10dbm Output: Program +8dbm; Monitor 5 watts; Cue .5 watts
FREQ. RESP.:	Program, ± 2 dbm 30 — 25K Hz Monitor ± 3 db 50 — 15K Hz
DISTORTION:	Program less than 1% @ +8dbm; Monitor less than 5% @ 5 watts
NOISE:	Below 60db with -60dbm in; +8dbm out
POWER:	117 volts 50/60 Hz (240 volts available)
SIZE:	28 $\frac{3}{4}$ " long; 6 $\frac{3}{4}$ " high; 11 $\frac{1}{2}$ " deep
FINISH:	Cabinet — Brown ARMORSOL Control Panel — Anodized Aluminum
SHIPPING WEIGHT:	35 pounds

NOTE: Three preamplifiers are supplied as standard. Up to five more mixer-channel preamplifiers may be ordered for factory installation or at a later date.

INSIDE VIEW
A-20





MODEL A-15 AUDIO CONSOLE



PRODUCT GUIDE

An almost endless list of applications can be found for the Model A-15 transistorized audio console. Professional quality throughout, the A-15 is modestly priced and still offers features and audio mixing flexibility usually associated with larger, more expensive audio equipment. Five different audio input sources, conveniently selected from a total of fourteen, may be mixed at one time. Among the outstanding features are: Self-contained Monitor Amplifier with internal speaker; all-channel cue system; speaker muting function; additional cue and studio program feed facilities for remote broadcast line functions; three program line outputs; P.A. and external speaker outputs; and, the A-15 may be battery operated to become a full-facility broadcast remote amplifier.

Broadcasters will find the A-15 an excellent recording studio console with the capability of acting as an emergency back-up console for the master control room. In many radio operations, the A-15 will adequately fulfill the requirement as the master audio control center. TV stations burdened with a heavy schedule of local VTR and other production assignments use the A-15 as an auxiliary audio mixer. This eliminates the embarrassing "on air" audio switching errors that can occur when using the main audio control board for this double duty. Other representative uses of the A-15 are: sound recording studios, public address or sound system mixer, and motion picture sound recording.

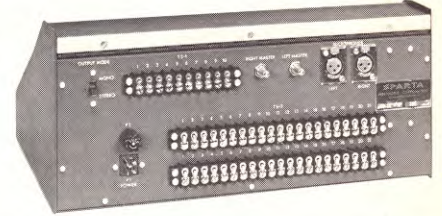
The latest solid state design, rugged construction and highest quality components are used in the A-15 to assure long-life and dependability. The heavy gauge steel cabinet finished in durable SPARTA brown ARMORSOL is complimented by the anodized aluminum control panel with an attractive brushed finish. This offers a pleasant contrast to the black control knobs and meter casing.

- RECORDING STUDIO
MASTER STUDIO
REMOTE AMPLIFIER
- 14 AUDIO SOURCE
INPUTS
- ALL SOLID STATE DESIGN
- MONITOR/CUE AMPLIFIER
AND SPEAKER
- TRANSFORMER BALANCED
INPUT AND OUTPUTS
- INDIVIDUAL MODULAR
ELECTRONICS
- SPEAKER MUTING
- MAY BE BATTERY POWERED

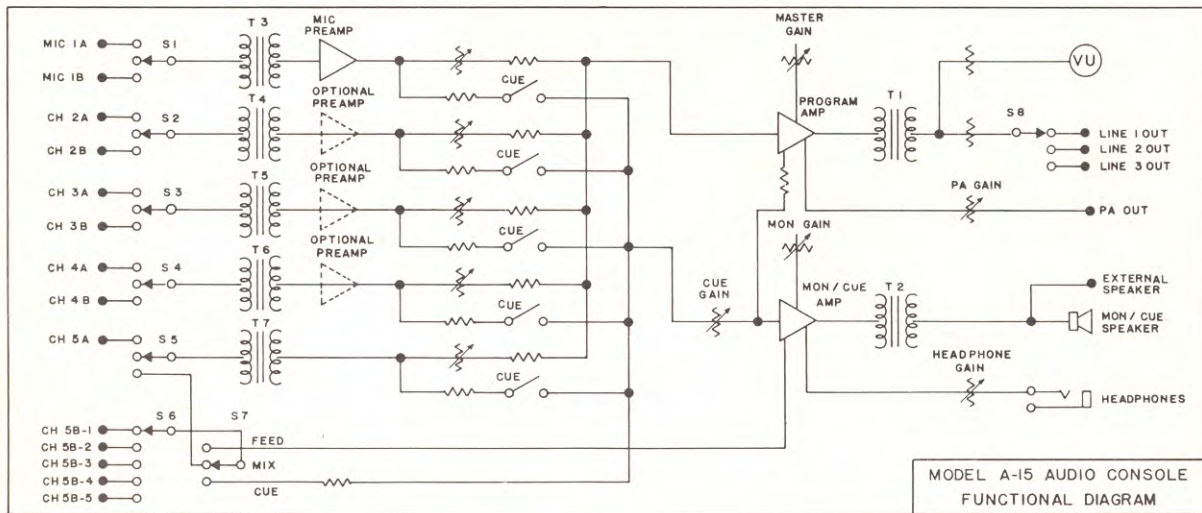
TECHNICAL INFORMATION

The outstanding operation versatility of the A-15 is shown by the functional diagram and illustrations. A total of 14 audio inputs are provided. Mixers 1 through 4 each have two inputs connecting to a three-position lever switch with a center "off" position. Mixer 5 will accommodate six additional audio inputs. Channel position 5A accommodates one input. Channel 5B is connected to a five-position push-button switch for occasionally used inputs. This usually eliminates the need for a patch panel. Each mixer channel accommodates a solid state transformer balanced pre-amplifier for low-level operation or a transformer card for high-level operation. (See ordering information for standard equipment supplied and optional equipment that may be installed.) A cueing function is provided on all mixer channels. When the channel gain control is turned to its full counter-clockwise position, a switch closure connects the input selected by the channel lever switch to the monitor buss for cueing purposes. The position of the channel lever switch determines if A or B input will appear at the monitor buss. By using the separate cue gain control, (located on the rear panel) in connection with the front panel monitor gain control, the desired balance between cue and monitor level may be obtained. The audio output of the cue and monitor may be heard through the monitor speaker or headphones. The speaker muting feature does not mute the headphone output. An additional cue feature is provided in connection with the 5 input positions of the pushbutton rotary switch through chan-

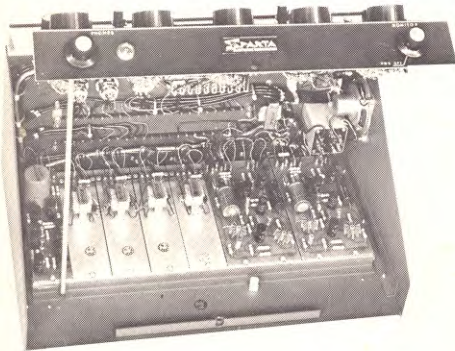
nel 5B. This is controlled by a three-position "function" lever switch adjacent to the multiple input selector. Placing the function switch in the downward cue position allows the operator to monitor the input audio source selected, such as a remote broadcast line. The middle position feeds the remote line to channel 5B for mixing. The upward position feeds the output of the monitor amplifier back down the remote line allowing two-way communication between remote and studio. The program output of the console may be switched to three separate line feeds through the three-position lever switch to the left of the VU meter. Program output, with separate gain control, is also provided for a public address system including provisions for an external monitor speaker. A master program gain control is provided as is a gain control for monitor and headphones. The monitor gain control also controls the A-15 on/off power switch.



A-15
REAR VIEW



SPECIFICATIONS



A-15
INSIDE
VIEW

A full control panel hinge at the rear of the A-15 allows quick and easy accessibility to all electronic components. A convenient quarter-turn fastener is used to securely lock the panel in place. Note the individual pre-amplifier modules and same-size input transformer cards that may easily be interchanged to meet individual requirements.

- INPUTS:**.....2 Low level and 12 high level: See note on additional preamps.
- OUTPUTS:**.....3 program, 1 external speaker, PA feed and headphones.
- IMPEDANCE:**.....Low level, 150/250; high level input and program output, 600 ohms; external speaker, 3.2 ohms
- LEVEL:**.....Input: Low level, -60dbm; high level, -10dbm
Output: Program, +8dbm; Monitor/Cue .25 watts
- FREQUENCY RESPONSE:**.....Program: ± 2 dbm 30 to 25K Hz
Monitor/cue: ± 2 dbm 50 to 15K Hz
- DISTORTION:**.....Program: Less than 1% @ +8dbm
Monitor/Cue: Less than 1% @ .25 watts
- NOISE:**.....Below 60db with -60dbm in and +8dbm out
- PA OUTPUT:**.....(Unbalanced) 0.5 volts max. into 600 ohms
0.9 volts max. into 10K ohms
- POWER:**.....117 volts 50/60 Hz (240 volts available) or
27 volts DC using battery power source.
- DIMENSIONS:**.....(Overall) Width—15", Height—6 $\frac{3}{4}$ ", Depth—11 $\frac{1}{2}$ "
- SHIPPING WEIGHT:**.....26 pounds

STANDARD EQUIPMENT: The A-15 is supplied with one 150/250 ohm transformer balanced microphone preamplifier installed in channel 1 and 600 ohm transformer cards in channels 2-5. Additional pre-amplifiers can be supplied as optional extras at time of purchase or at a later date.

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MODEL AC-155

STUDIO CONTROL & REMOTE UNIT



AC-155 WITH BENCH LID



PRODUCT GUIDE

The new SPARTA Model AC-155 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 Trucks and temporary set ups. Professional in every respect, the AC-155 features two SPARTA TC-12" CUSTOM turntables complete with tone arms, phono cartridges and TE-2 Dual equalizer; plus the all transistorized A-15 Audio Console. A total of fourteen audio inputs are available through the console's five mixing channels. As supplied, the AC-155 will accommodate six low-level audio sources, including the right and left turntables and eight high-level sources. Add these facilities to the other outstanding features such as: all channel cue system, muting, monitor amplifier and speaker; and you have a ready-made, full-facility audio control center which will adequately cover a variety of assignments. In addition, the A-15 Audio Console may be easily removed for use as a separate remote amplifier which can operate from a battery power source if desired.

Several optional accessories are offered, including a matching Bench/Lid which gives protection to the equipment when being transported as well as seating convenience for the operator on remote location. The removable equipment shelf accessory provides for the use of a complete SPARTA-MATIC Tape Cartridge system in conjunction with production studio or remote broadcast assignments. A dynamic cardioid microphone, the M545Q, with uniform pickup about the axis at all frequencies, produces a remarkably faithful reproduction of voice. It is complete with wind "pop" filter, gooseneck and mounting hardware.

- FULL BROADCAST FACILITY
- RECORDING STUDIO
REMOTE BROADCAST
MAIN STUDIO
- SOLID STATE
REMOVABLE CONSOLE
- MONITOR AND CUE SYSTEM
- 14 AUDIO INPUTS
- 3-SPEED CUSTOM
TURNTABLES
- LIFT-LEAF WORK SURFACE

Two SPARTA Model TC-12" Custom Turntable systems together with the new Model A-15 Audio Console have been combined into a distinctively designed one-piece cabinet. The use of Formica® laminated plastic, bonded to a heavy base foundation, provides almost indestructible durability. A beautiful two-tone effect of Platinum walnut wood-grain and contrasting beige colors make the AC-155 an attractive display no matter where it is used. Thoughtful consideration has been made for operator leg room and a lift-leaf work surface. An external speaker enclosure protected by metal meshing is directly below the work surface. The cabinet wall rises above and around all of the equipment, giving protection from outside physical interference, and offers greater security to the operator. Two inch chrome tubular steel leg supports, with foot rests molded at an outward angle, provide a solid jar-proof foundation. They can be easily removed for the convenience of quick portable set-ups.

The outstanding electronic facilities of the AC-155 are illustrated in the functional diagram and illustrations. There are five mixing channels through which a total of fourteen audio sources may be selected. Solid state preamplifier cards are supplied for channels 1, 2 and 3 of the audio console. The left and right turntables work through channels 2A and 3A respectively in conjunction with an external passive type equalizer that is mounted within the AC-155 cabinet. In addition to the operation of turntables, there are four other low level inputs available in channel 1A, 1B, 2B and 3B. All of these may be used for low impedance 50, 150/250 ohm microphones. Channels 4A-B and 5A-B are supplied with balanced 600 ohm transformer cards. These channels are designed for high level input operation such as tape machines or remote lines. Channel 5B is connected to a special five-position push-button input switch making a total of eight high level inputs available through mixing channels 4 and 5. Should more low-level inputs be required, preamps may be installed in channels 4 or 5 at the time of ordering or at a later date.

A cueing function is provided on all mixer controls. The audio output of the cue and monitor may be heard through the AC-155 Monitor speaker or headphones. An additional cue feature is provided in connection with the 5 input positions of the push-button rotary switch through channel 5B. This is controlled by a three position "function" level switch adjacent to the multiple input selector. Placing this function switch in the downward cue position allows the operator to monitor the input audio source selected, such as a remote broadcast line. The middle position feeds the remote line to channel 5B for mixing. The upward position feeds the output of the monitor amplifier back down the remote line, allowing two-way communication between remote and studio.

The program output of the console may be switched to three separate line feeds through the 3-position lever switch to the left of the VU meter. Program output with separate gain control is also provided for a public address system. There are separate gain controls for program, monitor and headphones. It is important to note that the A-15 Audio Console is easily removed from the AC-155 cabinet enclosure for use as a separate remote amplifier. Containing its own monitor/cue speaker, it provides this double duty with ease. The external AC power supply (PS-5) may be quickly removed from the AC-155 cabinet, or the console may be battery operated if desired.

TECHNICAL INFORMATION

AC-155

AC-155
WITH ACCESSORY
SHELF
51½" WIDE
15¼" DEEP



AUDIO MIXER: MODEL A-15

INPUTS:.....2 Microphone; 2 turntable (externally equalized);
2 low-level auxiliary; 8 high-level auxiliary

OUTPUTS:.....3 program, 1 monitor, PA feed and headphone

IMPEDENCE:.....Low level 150/250; high level input and program
output, 600 ohms; monitor speaker, 3.2 ohm

LEVEL:.....Input: Low level, -60dbm; high level, -10dbm
Output: Program +8dbm; monitor/cue, .25 watts

FREQUENCY RESPONSE:.....Program: ±2dbm 30 to 25K Hz
Monitor/cue: ±2dbm 50 to 15K Hz

DISTORTION:.....Program: Less than 1% @ +8dbm
Monitor/Cue: Less than 1% @ .25 watts

NOISE:.....Below 60db with -60dbm in and +8dbm out

PA OUTPUT:.....(Unbalanced) 0.5 volts max. into 600 ohm
0.9 volts max. into 10K ohm

POWER:.....117 volts 50/60 Hz or 27 volt battery source

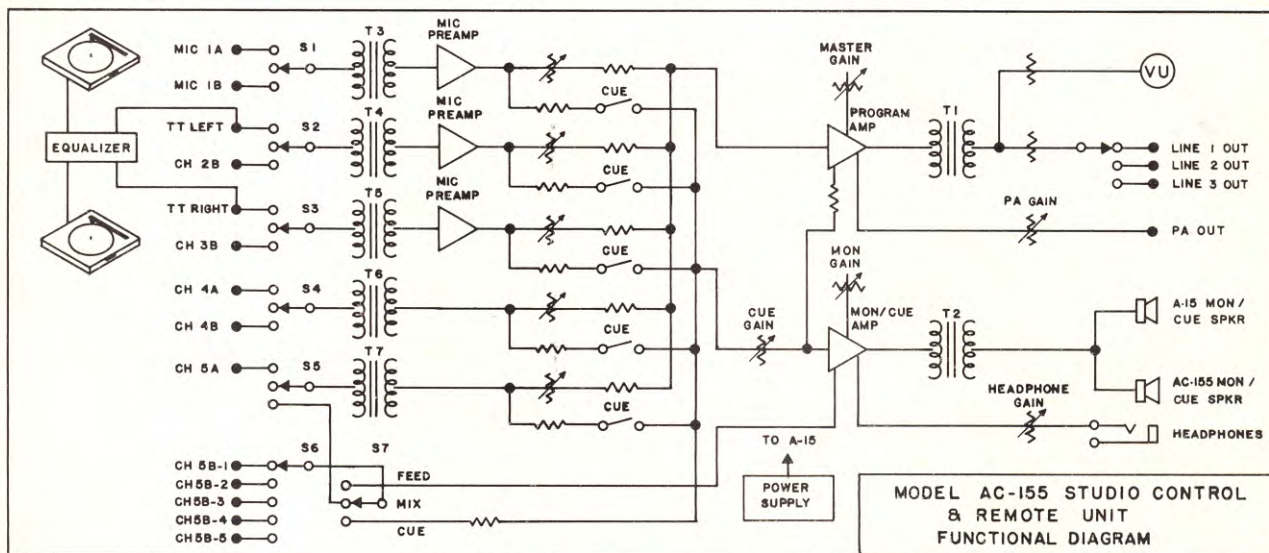
TURNTABLES:

Model TC-12" CUSTOM Heavy Duty, professional 3-speed. Front/center speed selector level with indicator lamp and silent ON/OFF lever switch. 4 pole motor standard. M232 Tone Arm and 1 mil diamond M44C phono pick-up.

AC-155 CABINET:

Height: 28" to work surface; 34" overall
Width: 51½"
Depth: 25¾" (with 6¾" lift-leaf work surface extended)

OPTIONAL BENCH/LID:.....49" wide, 19" deep, 17" high (with legs)
SHIPPING WEIGHT:.....185 pounds (crated)



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MODEL AS-30

STEREO AUDIO CONSOLE



PRODUCT GUIDE

No longer is it necessary to purchase a costly stereo console knowing that you require the use of only half of its facilities. Whether your mixing requirement is for an automation system, production and recording studio, remote broadcast, or main studio stereo audio control the AS-30 fills the need. The features and facilities of the AS-30 are among those that you would find in many of the larger more expensive units. The latest solid state design, rugged construction and highest quality components are used throughout to assure quality performance and long-life dependability. The five channel facilities accommodating nine stereo audio inputs provide for microphone, turntable and auxiliary program mixing through the console program amplifiers as well as audition mixing. The AS-30 may also be operated in a monaural mode with the combined right and left channel audio appearing through the right program amplifier output. Among other quality features each channel mixer control has a cue position to function with an external cue amplifier. In addition, there are provisions for a muting function in connection with those channels designated for microphone operation. A new solid state electronic design has been used to provide for easy exchange or replacement of all electronic modules. It is also important to note that the AS-30 may be battery operated in connection with remote broadcast assignments. Specifications and electronic construction conform to exacting requirements and will meet or exceed those established by professional users. The heavy gauge steel cabinet protected by SPARTA brown Armorsol, is complimented by the attractive anodized aluminum control panel.

- FIVE STEREO CHANNELS
- NINE STEREO AUDIO INPUTS
- MONAURAL OR STEREO OPERATION
- PROGRAM AND AUDITION MIXING
- NEW MODULAR CONSTRUCTION
- SOLID STATE DESIGN
- UP TO FOUR PREAMPS (2 SUPPLIED)
- PROVISIONS FOR MUTING, CUE AND MONITOR

TECHNICAL INFORMATION

Facilities of the Model AS-30 are illustrated by the Console functional diagram. The five mixing channels will accommodate up to nine stereo audio source inputs; one input each for channels 1 through 4 and five auxiliary inputs for channel 5 which is connected to a positive action, five position push button selector switch. Each channel has a provision for program mixing or audition mixing. A monitor selector switch and gain control are located on the front panel to the left of the VU meters. Program, audition, or external audio may be chosen by the monitor selector switch and the gain control adjusts the audio level appearing at the rear panel monitor terminals. A wide variety of power amplifiers and speaker systems are available to complete the monitor system. The console power switch is located at the minimum position of the monitor gain control.

An all channel cueing system may be arranged in connection with the "cue" function that is provided on all five channels and is mixed right and left audio. The cue output is of sufficient level to work into a bridging or high impedance input of an external monaural amplifier.

Channel 1 is supplied with a pair of microphone preamplifiers. Should it be required, another pair of preamplifiers may be easily installed in channel 2 which will give multiple stereo microphone operation. Microphone channel 1 is provided with a front panel switch allowing a single microphone to be used. When the microphone mode switch is in the monaural position, the output of the left microphone preamplifier is fed to both right and left program amplifiers, providing "stereo centered" output. In the stereo position, right and left audio is directed to the respective program amplifiers. Other wiring provisions are possible to meet specific requirements. Muting contacts for microphone channels are located on the rear panel. This muting function is part of the microphone lever switch and may be used for low current relay control or for direct audio muting.

As supplied, channel 1 microphone inputs are 150/250 ohm transformer balanced and use standard Cannon XLR Connectors. High level channels 2 through 4 are 600 ohm transformer balanced inputs. Channel 5 is 600 ohm unbalanced although it is transformer coupled. All input connections are made on the rear panel terminal strip. Provision has been made to operate the AS-30 Console in a monaural mode through a rear panel selector switch. The combined right and left stereo inputs are mixed in the right program channel, providing a monaural output with the left program amplifier being disabled. A front panel gain control and phone jack is provided for a high impedance stereo head phone output. The right and left channel master level controls for the program amplifiers are placed on the rear panel of the console to avoid accidental changes in the balance settings. An external power supply (PS-5) is provided with the console.. It is important to note that the PS-5 has an auxiliary output that may be used to power as many as two model TEP-2S Stereo Turntable Preamplifiers when used in conjunction with the AS-30 Console.

INPUTS:.....1 Low Level, 8 High Level: (*See Note on additional preamplifiers)

OUTPUTS:.....Program, Audition, Monitor, Cue, Headphones

IMPEDANCE:.....Low Level, 150/250 ohm; High level input and program output 600 ohm

LEVEL:.....Input: Low Level -60dbm; High level -10dbm
Output: Program +8dbm

FREQUENCY RESPONSE:.....±2dbm 30 — 25K Hz

DISTORTION:.....Less than 1% @ +8dbm out

NOISE:.....Below 60DB with -60dbm in and +8dbm out

POWER:.....117 v. 50/60 Hz (240 Volt Available) or 27 volts DC using battery power source

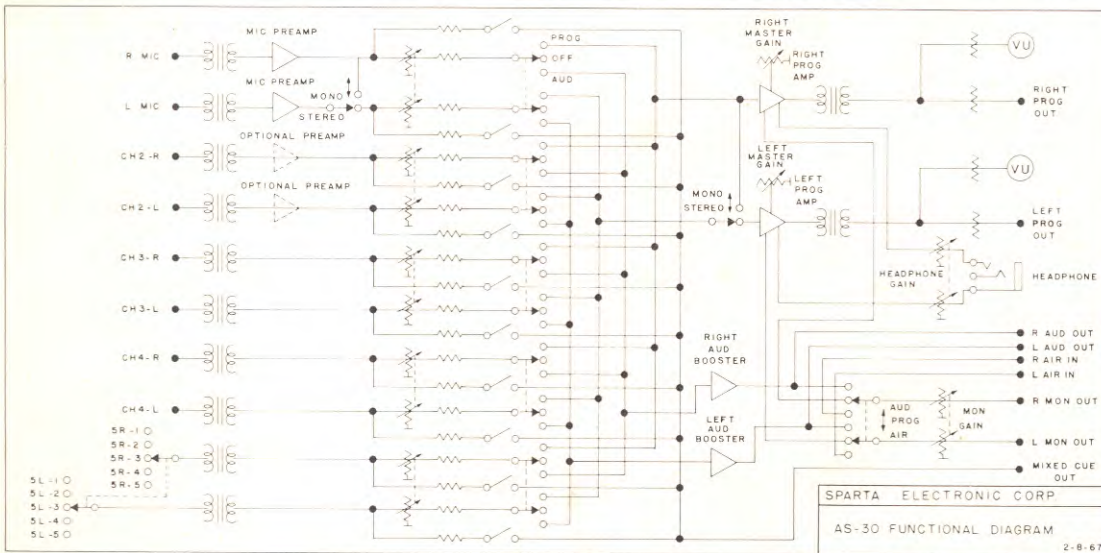
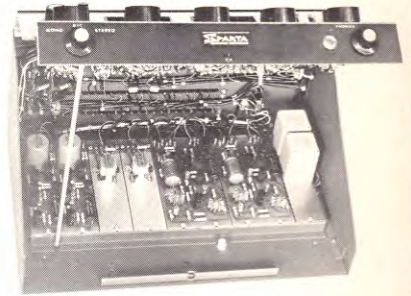
DIMENSIONS:.....(Overall) Width—15", Height—6¾", Depth—11½"

SHIPPING WEIGHT:.....28 pounds

***STANDARD EQUIPMENT:** The AS-30 is supplied with right and left program amplifiers and two 150/250 ohm transformer balanced preamplifiers for one stereo microphone through channel 1. At optional cost microphone preamplifiers may be installed in Channel 2 in place of the two high level transformer cards.

The front panel is hinged to the rear panel allowing quick and easy accessibility to all electronic components. A convenient quarter turn fastener is used to securely lock the control panel in place. Note that two additional preamp modules may be installed in place of the two transformer cards to meet individual input requirements. All input and output terminations are made at the rear panel. Connectors are terminal barrier strips and XLR fittings for two microphones through channel 1.

AS-30
INSIDE
VIEW



MODEL AS-30
STEREO CONSOLE
FUNCTIONAL
DIAGRAM

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MODEL ASC-305

STEREO CONTROL & REMOTE UNIT



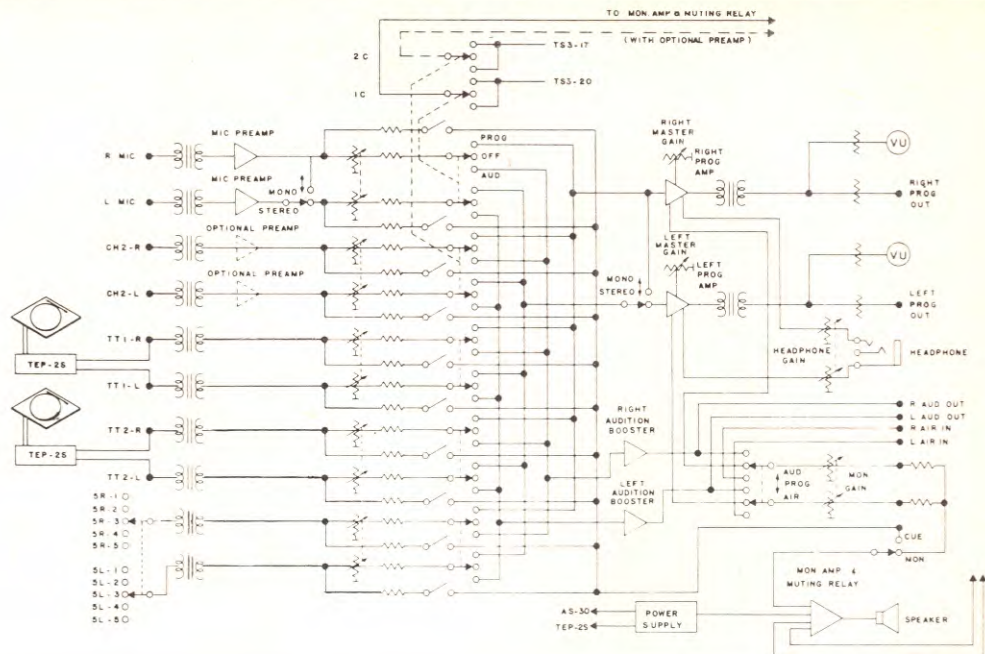
PRODUCT GUIDE

The new Model ASC-305 is an audio control unit neatly packaged into an all-purpose, professional quality, stereo broadcast facility. Its application is as varied as the imagination of a resourceful broadcaster or recording studio operator. Because of its professional quality and all-purpose flexibility, the ASC-305 offers the stereo broadcaster a permanent, integrated studio audio control as well as a hard working remote broadcasting unit that is always ready for any temporary assignment. Having five stereo channels through which a selection of nine stereo inputs may be mixed, the ASC-305 can easily handle the chores of a recording studio, remote broadcast; and in many cases, its exceptional versatility provides a complete facility for a main studio audio control center. The expansion to such a facility can easily be made with the addition of one or several components from the SPARTA "Showcase" series of control room cabinetry. Among the very distinct features is that the Model AS-30 Stereo Console may be easily removed from the ASC-305 and used as a separate stereo remote amplifier; using battery power if desired. Used within the ASC-305, the AS-30 works in conjunction with the transistorized all-channel monitor/cue system and two SPARTA Model TC-12 Custom Turntable Systems incorporating solid state stereo preamplifiers external to the console.

The ASC-305 Cabinet is of exceptionally fine construction and distinctive design. Thoughtful consideration has been made for operator leg room, 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 in a very rugged and durable pressure bonded plastic laminate to provide years of lasting beauty and protection. The platinum walnut woodgrain and contrasting beige color scheme make the ASC-305 an attractive display in the studio or on location.

- RECORDING STUDIO
REMOTE BROADCASTING
MAIN STUDIO CONTROL
- HEAVY DUTY CONSTRUCTION
- THREE SPEED CUSTOM
TURNTABLES
- NEW MODULAR SOLID
STATE DESIGN
- REMOVABLE CONSOLE
- MONITOR & CUE SYSTEM
- FIVE STEREO MIXERS
- NINE STEREO INPUTS

TECHNICAL INFORMATION & SPECIFICATIONS



Technical illustration of the professional electronic design of the ASC-305 is shown in the functional diagram. As supplied, channel 1 is for 150/250 ohm microphone use. A microphone mode switch on the console front panel allows a single microphone to be used when desired. In the monaural switch position, the output of the right microphone preamplifier is fed to both right and left program amplifiers providing "stereo-centered" output. In the stereo switch position, right and left audio is directed to the respective program amplifiers. Other wiring provisions are possible to meet specific requirements. Channel 2 is a transformer balanced 600 ohm input for any high level output device or optional microphone. Another pair of preamplifiers may be easily installed in channel 2 which will give multiple stereo microphone operation. Muting contacts for microphone channels are on the rear panel and are used for relay audio muting of the ASC-305 monitor amplifier system.

The left and right turntables work through channels 3 and 4 respectively. The professional three-speed stereo turntable systems include separate solid state preamplifiers mounted within the ASC-305 cabinet. A five position push button input selector switch is connected to channel 5 providing for any combination of high level devices to be used through this channel including remote lines, tape machines, etc.

The turntable channels as well as all other channels have a cue position. This cue function is a mixed right and left audio which works in conjunction with the moni-

tor/cue amplifier system. The monitor audio of the ASC-305 system is also a monaural mixed right and left channel. However, facilities to feed stereo audio to a separate stereo amplifier speaker system are provided for on the console unit. A three-position selector switch with center "off" position is above each channel mixer control. The right position is program mixing, and audition is in the left position.

A monitor audio control and function switch is located in the upper left hand corner of the control panel. Audition, Program and Air are the three audio sources that may be selected through this monitor control and the ASC-305 Monitor Amplifier Speaker system.

The right and left channel master level control for the program amplifiers are located on the rear panel of the AS-30 Audio Console to avoid accidental changes in the balance settings. A front panel gain control and jack provides a high impedance stereo headphone output. Provision has been made to operate the ASC-305 unit in a monaural mode through a console rear panel selector switch. The combined right and left stereo inputs are mixed in the right program channel, providing a monaural output with the left program amplifier being disabled.

A power supply (PS-5) is provided within the ASC-305 cabinet. It is used to supply both the AS-30 Audio Console and the TEP-2S turntable preamplifiers as well as the monitor/cue amplifier and muting relay.

AUDIO MIXER: MODEL AS-30

INPUTS:.....1 Microphone; 2 turntable (external preamplifiers);
6 high-level auxiliary (*See Note on additional pre-amplifiers)

OUTPUTS:.....Program, Audition, Monitor, Cue, Headphones

IMPEDANCE:.....150/250 ohm Microphone; 600 ohm turntable and
auxiliary; 600 ohms Program Line

LEVEL:.....Input (minimums): -55dbm Microphone; -10 dbm
turntable & auxiliary; Output: +8dbm Program

FREQUENCY

RESPONSE:.....±2dbm 30 -25 K Hz

DISTORTION:.....Less than 1% @ +8dbm out

NOISE:.....Below 60db with -55dbm in and +8dbm out

POWER:.....117 v. 50/60 Hz or 27 v. DC using
battery power source.

*STANDARD EQUIPMENT: The AS-30 is supplied with right and left program amplifiers and two 150/250 ohm transformer balanced preamplifiers for one stereo microphone through Channel 1. At optional cost microphone preamplifiers may be installed in Channel 2 in place of the two high level transfer cards.

MONITOR/CUE AMPLIFIER: (Transistorized)

250 mw monaural output w/speaker

TURNTABLES: Model TC-12" Custom

Heavy duty, professional 3-speed. Front/center speed control lever with neutral position. Silent On/Off lever switch with indicator lamp.

TOPE ARMS: Model 232

12" professional stereo tone arms complete with M44C phono pickup and 1 mil diamond slide-istylus. The tone arms are precision balanced, and are so designed that a highly accurate adjustment of the tracking force can be made visually. The plug-in head is rigidly locked in place but very easily removed when necessary.

EQUALIZED TURNTABLE PREAMPLIFIERS: Model TEP-2S

Output:.....+4dbm (adjustable)

Impedance:.....output 600 ohm; input 47K ohm

Frequency response:.....within ±1db of standard RIAA

Harmonic distortion:.....Less than 1% at rated output

Noise:.....60db below ±4dbm output

ASC-305 CABINET:

Height: 28" to work surface; 34" overall (level adjusting feet); Width: 51½"; Depth: 23¾" (with 6¾" lift-leaf work surface extended); Shipping Weight: 185 pounds (crated) protective bench lid is optional.

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MODEL RA-5

REMOTE AMPLIFIER / MIXER



PRODUCT GUIDE

The SPARTA RA-5 is a compact, transistorized amplifier/mixer incorporating the latest electronic and operational design concepts to meet a variety of special audio assignments. Primary in its representative applications is the outstanding ability to handle almost any remote broadcast assignment. The light weight, handy carrying case, internal battery power, and wide choice of audio source input accommodations gives the RA-5 the instant and always ready ability to cover those frequent impromptu and cramped-for-space remote broadcasts. The versatility and full-facility features of the RA-5 may also be applied in the console requirement for a small Radio-TV station production studio, closed circuit and ETV, Recording Studio or Public Address System Mixer.

The RA-5 is ruggedly constructed for extended mechanical and electrical life. The base, sides and rear panel of heavy guage steel are finished in a brown Armorsol, baked enamel finish. The front control panel is of one-piece construction, finished in an attractive brushed anodized aluminum, which provides a pleasant contrast with the stylish black knobs and matching VU meter bezel. The shoulder-strap carrying case is of high impact, molded plastic with a shock absorbing inner lining. Room is provided for the optional AC power supply or accessories. Although miniature in size, the RA-5 reflects the same high quality and offers the same dependable performance that is characteristic of all SPARTA products. Careful consideration has been given to include more than adequate operational features in a unit of this size, and an attractive price range. A comparison review of these features will leave no doubt that the RA-5 represents a truly outstanding value.

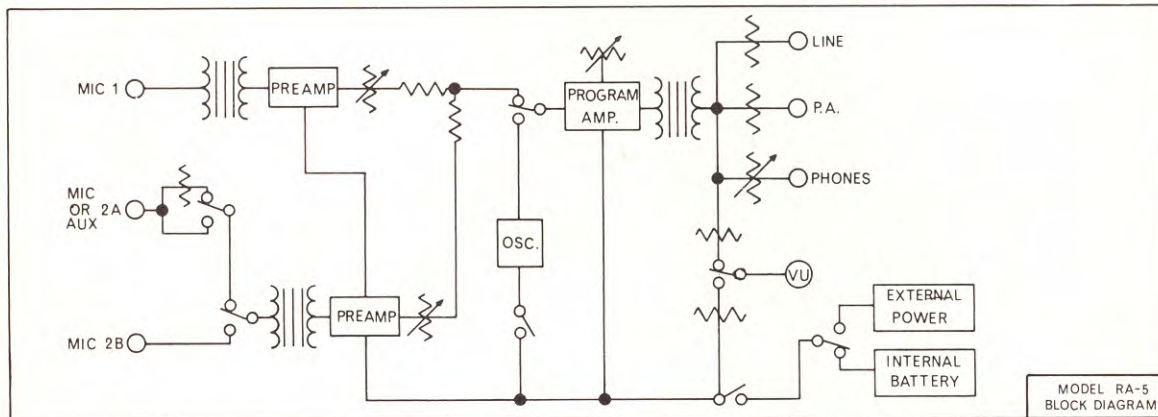
- BATTERY OR AC POWER
- ALL TRANSISTORIZED
- THREE INPUTS
- LINE TEST OSCILLATOR
- PUBLIC ADDRESS OUTPUT
- INPUTS AND OUTPUTS BALANCED
- RUGGED CONSTRUCTION
- PROTECTIVE CARRYING CASE

TECHNICAL INFORMATION

Operation of the SPARTA RA-5 Amplifier/Mixer is illustrated by the console block diagram. A total of 3 inputs are provided. Mixer A connects directly to a preamplifier which, in turn, connects to the mixer buss. Mixer B is switched to either of two inputs, 2A or 2B. Input 2B can be used for a High or Low level input source. A slide switch on the rear panel designates the input level desired. Consequently, two microphones and one high level source such as tape machine, or three microphones can be accommodated by the RA-5.

The built-in 1000Hz oscillator is also controlled by the Mixer 2 selector switch on the front panel. In the Oscillator position, the input of the program amplifier is connected to the output of the oscillator. This handy feature provides a quick tone test or audio level check of remote line facilities.

A master program gain control and power On/Off switch is provided on the front panel. The adjacent VU meter also serves as a battery condition indicator. In the Battery Check position, the VU meter indicates the voltage of the internal batteries. A total of three program outputs are present: a 600 ohm balanced line, a headphone output with level control and a public address output. The headphone output is well isolated from the program circuit, so either low or high impedance phones may be used. The P.A. output is also an isolated circuit (10,000 ohm) and is designed to feed a P.A. or monitor amplifier. A Power source slide switch is located on the rear panel. Should a power failure occur when using the optional A/C regulated Power Supply (PS-3), instant change over to internal battery power may be made.



TYPICAL REMOTE BROADCAST ARRANGEMENT

Operators' microphone through Channel 1; SPARTA-MATIC® Tape Cartridge playback unit through Channel 2A and roving microphone through Channel 2B.



REAR PANEL VIEW
with optional PS-3 Power Supply

- MIXER:**.....2 Mixers, one selectable by rotor switch to either of 2 inputs or oscillator
- INPUTS:**.....3 inputs; 3 low level; or 2 low level and 1 high level
- AMPLIFIERS:**.....2 transistor preamplifiers.
1 transistor program amplifier
- OSCILLATOR:**.....1 transistor oscillator
- POWER SOURCE:**.....117 volts A.C., 50-60 Hz. using PS-3 power supply.
22 volts D.C., @ 15 ma. using battery power source
- INPUT IMPEDANCE:**.....Microphone: Factory connected for 150/250 ohm balanced microphones. Transformers can be reconnected for 50 ohm microphone
High Level: 600 ohm Balanced
- OUTPUT IMPEDANCE:**.....Line . . . 600 ohm balanced.
P.A. . . . 10,000 ohm balanced.
Headphone High or Low impedance
- INPUT LEVEL:**.....Low . . . -55db.
High . . . 0db.
- OUTPUT LEVEL:**.....Program . . . +4db, after 4db line pad
P.A. . . . +8db
Oscillator at 0-VU, -4db after 4db line pad
- RESPONSE:**.....Overall program response at rated output is \pm 2db 30-20,000 Hz
- DISTORTION:**.....Less than 1% with +4db measured across program line
- HUM AND NOISE:**.....Greater than 60db below +4db program output level with -55db input level to preamplifier
- FINISH:**.....Base, side, rear panels—SPARTA Brown ARMORSOL, front panel—brushed anodized aluminum
- DIMENSIONS:**.....(Overall) 7 $\frac{1}{4}$ " wide; 7 $\frac{1}{2}$ " deep; 4 $\frac{1}{4}$ " high
- SHIPPING WEIGHT:**.....13 pounds

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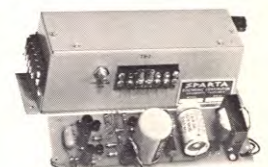
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BROADCAST TURNTABLES SYSTEMS AND ACCESSORIES



EQUALIZED PREAMPLIFIERS



TEP-2 MONO



TEP-2S STEREO

PRODUCT GUIDE

The SPARTA TC-12 CUSTOM turntable is patterned after a time-tested exclusive design principle representing many years of research and refinement. Instant acceleration from a dead stop is due to the simplicity of power transfer. An improved idler of special long wearing neoprene composition is used for the power transfer from motor capstan to the rim of the dynamically balanced table. At 33 RPM the TC-12 Custom Turntable attains full speed within 1/16 revolution.

The rugged one-piece cast aluminum alloy chassis of the TC-12 CUSTOM can easily withstand the rigorous strain of continuous 24 hour service demanded by commercial users. The main table and other vital points utilize oilite bearings for lasting durability. With only three rotating parts, the TC-12 CUSTOM eliminates tedious adjustments and troublesome maintenance. The speed selector and silent On/Off switch with indicator lamp is located on the anodized aluminum front control panel. This control panel is angled for sight and comfort convenience. Speed selection is positive and rapid with the selector sliding in and out of speed slots. A neutral position frees the turntable for easy cueing.

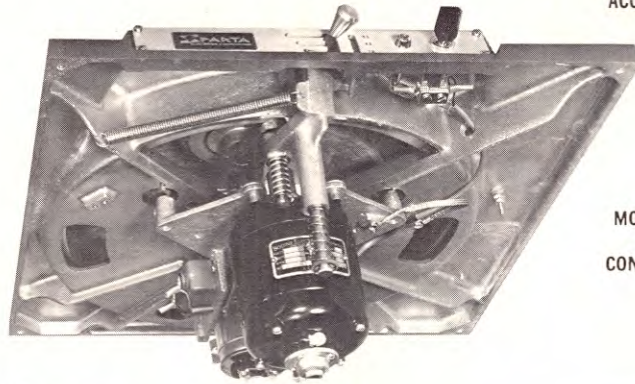
The TC-12 CUSTOM turntable plays 45's with no adapters needed. The inner recessed area of the table accommodates 45's by engaging the large center hub, while 10 and 12 inch records rest on the outer area, engaging the small center spindle. This feature and several others are also supplied in the SPARTA TT-12 and TT-16 STANDARD turntables. (See other side.)

- INSTANT ACCELERATION
- POSITIVE 3-SPEED LEVER CONTROL
- HEAVY-DUTY PROFESSIONAL QUALITY
- ONLY THREE ROTATING PARTS
- ONE PIECE RIB CAST FRAME
- PLAYS 45's WITHOUT ADAPTER
- OFF-SET DESIGN FOR TONE ARM MOUNTING

- Rugged cast aluminum ribbed frame
- Heavy duty Hysteresis Synchronous Motor (4-pole motor also available)
- 3 vibration isolators and Neoprene isolated idler arm
- Front controlled speed selector and silent on/off switch with indicator lamp.

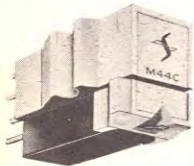
SPECIFICATIONS

TC-12 CUSTOM TURNTABLE



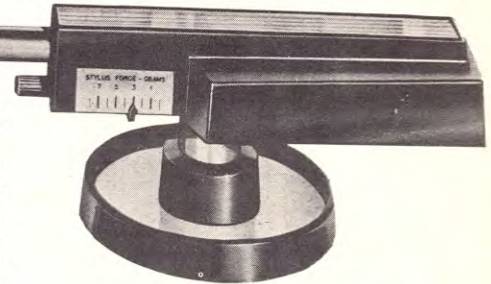
- BASE:.....15" wide, 15½" deep, ⅝" thick
- BOTTOM CLEARANCE:.....5½" w/4-pole motor; 6½" w/synchronous motor
- TOP CLEARANCE:.....2⅜" (without tone arm)
- PLATTER SIZE:.....12"
- ACCELERATION:.....@ 33⅓ RPM 1/16 turn;
@ 45 RPM 1/10 turn;
@ 78 RPM 1/6 turn
- RUMBLE:.....@ 33⅓ RPM —45 db;
@ 45 RPM —40 db;
@ 78 RPM —35 db maximums
- WOW:.....0.1% @ 33⅓ RPM
- FLUTTER:.....0.06 @ 33⅓ RPM
- MOTOR:.....TC-12-4P Shaded 4 pole
.....TC-12-Sync Heavy duty synchronous
- MOTOR START:.....Silent switch w/indicator lamp
- POWER:.....117 volt 60 cps (50 Hz available)
- CONSTRUCTION:.....Chassis—One piece cast aluminum alloy
.....Platter—machined aluminum alloy
- FINISH:.....Base—Brown Armorsol, baked enamel
.....Platter—Tan felt
.....Front Control—anodized, brushed aluminum (other paint & felt colors available on special order)
- SHIPPING WEIGHT:.....22 pounds

BOTTOM VIEW
TC-12



M44C plug-in cartridge with slide-in stylus

The SPARTA Models M232 and M236 "Professional" Tone Arms reflect the high quality and scientific design needed for superior reproduction of monophonic and stereophonic phonograph records. The M232 is capable of playing records up to 12 inches in diameter, and is intended for use with equipment where space is limited. The M236 is similar to the M232, but is designed to play records up to 16 inches in diameter. Both models permit the use of lower tracking forces for which the latest cartridges are designed. Both are precision balanced with a highly accurate adjustment of the tracking force that can be made visually. The plug-in head is rigidly locked in place, but very easily removed when necessary. The M232 and M236 have been designed to provide superior performance with the M44C stereo/mono cartridge, and to permit maximum performance from other types and makes. The arm can be completely installed from the top side of the motorboard. Precision ball bearings are used throughout on all pivot surfaces. A plug-in cable is supplied for convenient connections to the preamplifier.



MODEL 232 & 236
PROFESSIONAL TONE ARMS

MODEL TEP-2B TURNTABLE PREAMPLIFIER

A high quality, professional preamplifier equalized for the RIAA standard curve and designed for use with a wide variety of cartridges including the M44C. The transistorized construction uses low-noise, temperature compensated circuitry to achieve optimum performance under all conditions of normal use. An integrally mounted Zener diode, regulated, full-wave bridge rectifier, power supply is used. A premium quality output transformer assures accurate impedance match between the load and output stage.

SPECIFICATIONS:

- OUTPUT IMPEDANCE:.....600 or 150 ohms
- OUTPUT:.....-0 dbm
- FREQ. RESPONSE:.....Within ± 1 db of Std. RIAA
- HARMONIC DISTORTION:.....Less than .5% at rated output
- NOISE:.....60 db below rated output
- POWER:.....117 volts 50/60 Hz
- SIZE:.....9⅜" x 2⅞" x 2¾"

MODEL TEP-2S TURNTABLE PREAMPLIFIER

A professional stereo turntable preamplifier that employs the same high quality characteristics as the monaural model. The fully transistorized preamplifiers are contained on two separate printed circuit boards, securely mounted within a two-piece steel box. Power for the TEP-2S may be supplied by battery or the SPARTA Model PS-5 Zener regulated Power Supply. Up to four TEP-2S units may be used with the PS-5 which is the same power supply supplied with the AS-30 Stereo Audio Console.

SPECIFICATIONS:

- OUTPUT IMPEDANCE:.....600 ohms
- OUTPUT:.....+4 db (adjustable)
- FREQ. RESPONSE:.....Within ±1 db of Std. RIAA
- HARMONIC DISTORTION:.....Less than 1% at rated output
- NOISE:.....60 db below rated output
- POWER:.....27 volts @ 18 MA
- SIZE:.....7¼" x 5¾" x 2"



MODEL TT-12" & 16" STANDARD TURNTABLES

A professional 3-speed turntable at an economy price with an exclusive design and construction that has proven itself in hundreds of broadcast stations throughout the world. The TT-12" (14½" square) and TT-16" (19½" square) is available with four-pole or hysteresis synchronous motor. Same color scheme as the TC-12" CUSTOM turntable and incorporates several of the same quality features.



MODEL TTS-12" & 16" STANDARD TURNTABLE SYSTEMS

Available as complete 12 inch or 16 inch turntable systems including floor cabinet with STANDARD turntable, preamplifier, tone arm and cartridge. Cabinet features leveling screws for uneven floor adjustment and front door access to storage area. All surfaces are protected and finished in platinum walnut wood-grain plastic laminate to withstand extreme uses. Overall dimensions of the TTS-12 is 16½" square by 29" high. The TTS-16 is 21½" square and 29" high.

(Note: For turntable systems using the SPARTA TC-12" CUSTOM turntable, see the SPARTA Showcase series control room cabinetry.)

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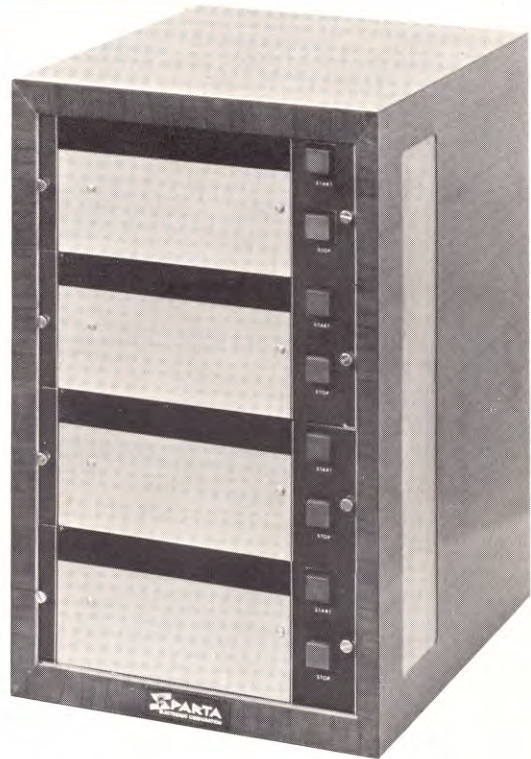
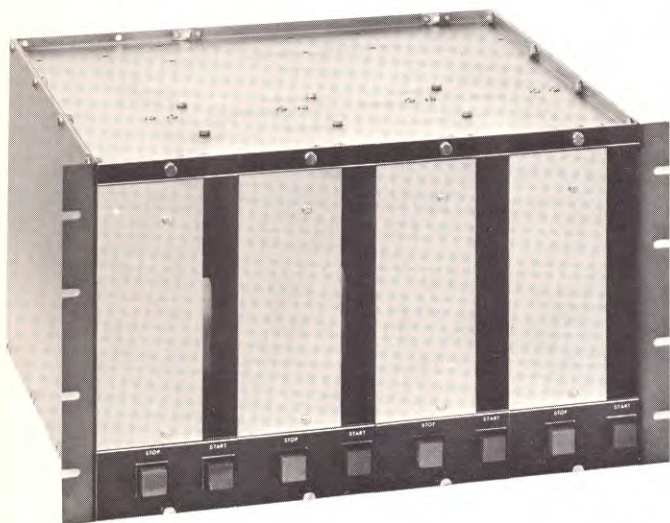
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MULTI-CARTRIDGE SYSTEMS

Model MC-104 Monaural Model MC-204 Stereo



Multi-Cartridge Systems are available for rack-mount (left) and for optional Custom Cabinet (right) installation.

PRODUCT GUIDE

SPARTA-MATIC Multi-Cartridge systems introduce a brand new and unique concept for the handling of audio material recorded on continuous loop tape cartridges. SPARTA precision engineering and design has taken into account the very important factor of providing a totally "fail-safe" operation. Each of the four deck modules is entirely independent of the other, incorporating its own exclusive SPARTA-MATIC CH-5 direct motor/capstan drive transport with individual program and cue amplifier playback electronics. This completely independent feature eliminates any concern of total system failure which is an inherent weakness of other multi-cartridge equipment employing single motor drive systems.

The MC Series will open up new and far more efficient audio broadcast techniques at a greater savings than ever before. As an indispensable part of any successful broadcast operation, many stations are finding the need for an increased complement of cartridge equipment to adequately handle their programming. The MC Series offers a great savings in installation space over that required for individual units and accepts all three NAB cartridge sizes. Both the monaural and stereo units are supplied for either horizontal 19 inch rack mounting or vertical operation using the optional custom cabinet. Most programming requirements are met with the standard MC Series units. In addition, accessory equipment is offered which greatly expands their convenience and function. These include: illuminated stop and start remote control units, and auxiliary cue tone amplifiers. A remote automatic sequencer control is also available which allows audio events to be sequenced automatically from one playback transport to the others.

The individual CH Series deck modules used in the MC Series are also available separately for special applications and custom installations by the end user. The CH-51 monaural and CH-52 stereo modules are complete with program and 1000Hz cue tone playback electronics. The 2nd and 3rd cue tone electronics as well as the 24 volt PS-4 DC power supply are available as options.

- FOUR INDEPENDENT TRANSPORTS
- INDIVIDUAL DIRECT DRIVE MOTOR/CAPSTAN SYSTEMS
- INDIVIDUAL PLAYBACK ELECTRONICS
- 19" RACK OR CUSTOM CABINET INSTALLATION
- STEREO & MONAURAL MODELS
- ACCEPTS ALL 3 NAB CARTRIDGE SIZES
- ALL TRANSISTORIZED ELECTRONICS
- 2ND & 3RD NAB AUXILIARY CUE TONES
- REMOTE CONTROL FACILITIES

TECHNICAL INFORMATION

The outstanding convenience, accessibility and application of the MC Multi-Cartridge Series are fully defined in these illustrations. Routine maintenance such as head adjustment and cleaning, pressure roller-capstan adjustment, etc., is a simple procedure (Fig. 1) because of the slide in-out design of the MC Series deck modules. The individual deck modules may be completely removed from the MC unit (Fig. 2) without interrupting the function of the other modules. Each deck module incorporates its own direct motor-capstan drive system and transistorized playback electronics. Optional auxiliary electronics such as stereo playback and NAB 2nd and 3rd cue tones can be added to each module. The 2nd cue function at 150Hz may be used as the "end of message" cue for automatic sequential operation. The 3rd cue function at 8000Hz may be used as a coding system for automatic program logging or as a random select cue system to operate TV slide projectors or other equipment in conjunction with the audio material that is being released. The optional SA-1 Automatic Sequencer Control is designed for this purpose whereby the operator may remotely set up the MC unit for manual or sequential operation. A remote start and remote stop function is provided for by the RC-4A and RC-4B Remote Control units. These modular units are identical except for different color illuminated switches which match the start and stop switches on the MC unit. The MC-SW four-channel Audio Switcher is also offered. This optional unit provides correct impedance

matching so that the output of the four playback units of the MC unit can be fed into one audio input channel of an audio console. It also serves as a safety device, whereby only one audio output of the MC Unit can be released at a time.

The basic configuration of the MC Series (Fig. 4) is such that the unit may be supplied for standard 19 inch equipment rack installation or supplied for use with the optional Custom Cabinet (Fig. 1). In the rack mount installation the MC unit is operated on a horizontal plane. All size Fidelity-pac cartridges may be used and are inserted as illustrated. The CH-5 transport mechanisms were designed to operate in this manner as well as vertically. All electronic connections of the four deck modules are terminated at individual 18 pin sockets (Fig. 3). Enough pin positions have been supplied to accommodate remote, audio switcher, and sequencing functions.

There are a total of six power supplies used. Each CH Series deck module has its individual motor and solenoid power supply. In addition there are two 24 volt DC power supplies used in the electronics. Each of these serves two CH Series playback modules which gives added strength against the possibility of total system failure. A silent fan with removable filter screen is used to provide an above safety margin for adequate cooling of the multi-motor unit.

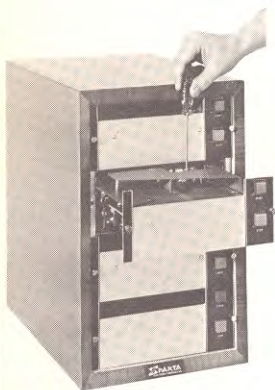


FIGURE 1

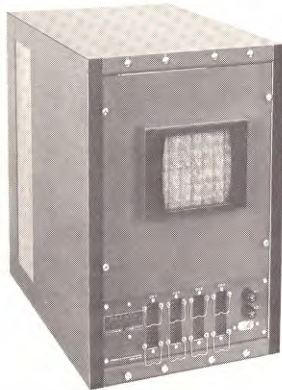


FIGURE 3

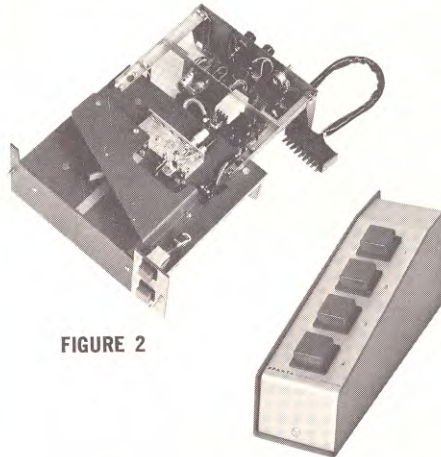
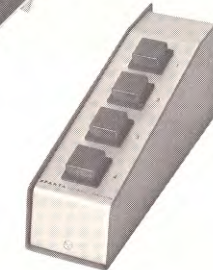


FIGURE 2



RC-4 REMOTE CONTROL UNIT

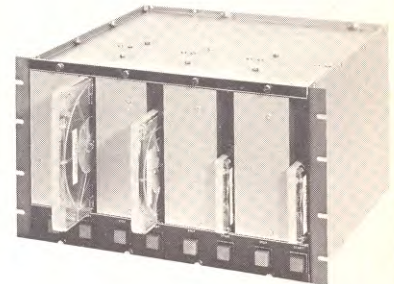


FIGURE 4

SPECIFICATIONS

TAPE SPEED:.....7.5 ips
FREQUENCY RESPONSE:.....50-15,000 Hz \pm 2db
NOISE:.....55db below saturation recording
DISTORTION:.....Total distortion less than 2% at rated output
WOW & FLUTTER:.....0.2% RMS max.
EQUALIZATION:.....NAB Standard
PLAYBACK OUTPUT:.....+4dbm into 600 ohms balanced (adjustable)
CUEING:.....NAB tone burst, 1000 Hz. (Optional 150 Hz and 8000 Hz)
POWER:.....117 volts 60 Hz standard (others available)
AUXILIARY:.....Remote start, stop, ready lamp, run lamp, audio switcher control voltage

WEIGHT:.....70 pounds

DIMENSIONS: (Vertical installation)	(Horizontal installation)
Height — 19 inches	10½ inches
Width — 10½ inches	19 inches (Standard Rack)
Depth — 19 inches	19 inches
(CH-51 & CH-52 Deck Modules)	
Height — 4½ inches	
Width — 10½ inches	
Depth — 15 inches	

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800C SERIES TAPE CARTRIDGE SYSTEM



800C-RP
RECORD/PLAYBACK



800C-P
PLAYBACK

PRODUCT GUIDE

The SPARTA-MATIC 800C Series is a compact "table-top" Tape Cartridge System of ultra-modern design including the most advanced transistorized circuitry. All areas of design and construction have been perfected to withstand the continuous duty operation required by the professional Broadcaster and other industrial users. Compact size provides freedom of use between multi studio operations and on remote broadcasts. The function of the Model 800C-RP is to both record and play back announcements, musical selections, sound effects, language laboratory exercises or other audio material. The Model 800C-P is for playback only. SPARTA-MATIC units accommodate any size endless loop tape cartridge that meets the NAB standards. Both models incorporate NAB Standard electronic tone-burst cueing for the benefit of modern, fast-paced Radio and Television programming. A 1000 Hz tone is automatically applied to the cue-track portion of the tape when the 800C-RP is in the record mode and the "start" button is pressed. During playback the tape runs until it again reaches this tone and then automatically stops. Consequently, the program material is "cued up" and is immediately ready to play again. Re-wind is not necessary. Should several program selections be recorded on the same cartridge, they would receive an automatic rotation when played. The benefits of tape cartridge are well known to the Radio and Television Broadcast industry and the use of SPARTA-MATIC Tape Cartridge Systems in other applications is almost unlimited.

- DIRECT MOTOR
CAPSTAN DRIVE
- SPACE SAVING
COMPACTNESS
- SUPER-SILENT OPERATION
- HYSTERESIS
SYNCHRONOUS MOTOR
- NAB APPROVED STANDARDS
- TRANSISTORIZED
MODULAR ELECTRONICS
- CONTINUOUS DUTY RATED
- ATTRACTIVE MODERN
STYLING

TECHNICAL INFORMATION

The 800C Series offers outstanding tape cartridge handling with the new, years ahead Sparta CH-5 Tape Cartridge Transport. Many exclusive features are incorporated for ease of operation and extended life. The uncompromising use of quality components, as well as the employment of the latest electronic design with individual assembly techniques provide superior record and playback performance. All specifications meet or exceed professional user standards. The all transistorized circuitry is constructed on individual glass-epoxy circuit board modules that are mounted on one central mounting frame for rapid inspection and quick replacement.

The hinged top cover allows immediate accessibility for deck adjustments, head cleaning and other routine maintenance. Plug-in tape heads are of the latest premium series, precision lapped, hyperbolic, metal-faced type. Quick and effortless azimuth alignment and vertical positioning of the tape heads is made possible by precision threaded adjustment points of the positive locking head mount.

The Model 800C-RP has separate record and playback heads which allows immediate A-B monitoring of the tape being recorded. In record mode, the record circuits automatically de-energize when the tape reaches the stop cue, thereby preventing accidental recordings. Illuminated start and stop push buttons with replaceable lamps are used with provision for remote start, stop and record pre-set.

SPECIFICATIONS

Tape Speed:	7.5 ips
Frequency Response:	50-15,000 Hz \pm 2db
Noise:	55 db below saturation recording
Distortion:	Total distortion less than 2%
Wow & Flutter:	0.2% RMS max
Equalization:	NAB record and playback
Playback Output:	+4 dbm into 600 ohms balanced (adjustable)
Metering:	Audio record level
Record Input:	-10 to +8 dbm 600 ohms balanced
Cueing:	NAB tone burst, 1000 Hz
Power:	117 volts 60 Hz standard (others available)
Auxiliary:	Remote start, stop, record
Shipping Weight:	800C-P 27 pounds 800C-RP 29 pounds
Height:	5 $\frac{1}{2}$ inches
Width:	10 $\frac{3}{4}$ inches
Depth:	14 inches
Installation:	Table-top (for rack mount see 300C Series)
Front Panel:	Anodized aluminum
Cabinet:	Heavy gauge steel finished in SPARTA brown ARMORSOL



TOP VIEW
800C-RP

- Hinged top cover for rapid access
- Heavy gauge steel deck plate and cabinet case
- Premium series, hyperbolic, metal-faced heads
- Replaceable lamp illuminated start/stop buttons
- Illuminated safety record pre-set button—prevents accidental recording
- VU meter mounted in anodized aluminum front panel
- Individual amplifier modules
- Remote control connector



CH-5 TAPE CARTRIDGE TRANSPORT

- All solenoid action gives smoother and faster cartridge handling performance with no operator effort required
- Exclusive Silicon and mechanical dampening provides super-silent operation
- Direct capstan drive system eliminates belt-driven flywheel assembly
- Hysteresis Synchronous motor has life-time lubricated ball bearings
- Regulation of pinch roller to capstan pressure is made by movement of the capstan shaft rather than angular variation of pinch roller. This assures uniform pressure across the width of the tape and eliminates the tendency of tape to "skew"
- Cartridge is guided on all sides making it impossible to hit, move or damage heads
- Other than occasional pinch roller cleaning and adjustment for wear, no other preventative maintenance is required or recommended.
- Triple tape guide assembly provides exact position of tape on heads, regardless of cartridge variations.

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300C SERIES TAPE CARTRIDGE SYSTEM



300C-RP RECORD/PLAYBACK



300C-P PLAYBACK

300C-RP IN CUSTOM
CABINET



PRODUCT GUIDE

It is easy to see from the illustrations why the SPARTA-MATIC 300C Series Tape Cartridge System is outstanding in its field. Extreme versatility is offered through a choice of installation methods which is an important consideration for maximum operator efficiency. The adaptors for standard 19-inch rack installation may be removed allowing each unit to be stacked on top of each other in a free-standing style. An outstanding, attractive display is made when the units are mounted into SPARTA Custom cabinets which are available in various sizes to accommodate any combination of units.

Careful consideration of electronic design is apparent in the 300C Series. Wide use is made of plug-in methods. The Model 300C-R Record Amplifier will plug into any Model 300C-P Playback unit (equipped with record head) to make both a record and playback combination unit. Solid-state amplifier modules, relays and bias stage are mounted in individual plug-in housings for quick inter-change or replacement. In addition to the standard 1000 Hz cue tone, a second and third cue tone operation option is available through the use of plug-in electronics which quickly extends the capabilities of the system. The addition of these auxiliary cue tones provides for the sequential and automated operation of another tape unit, television slide projector, etc. Consequently, entire radio and/or television station-breaks can be automatically broadcast with split second timing and flawless precision.

The 300C Series will accommodate any size endless loop tape cartridge that meets NAB standards and will be the choice of those who want supreme performance with outstanding versatility in a tape cartridge system.

- SUPER-SILENT OPERATION
- DIRECT MOTOR/
CAPSTAN DRIVE
- SEPARATE RECORD
AMPLIFIER
- NAB APPROVED STANDARDS
- 2ND AND 3RD TONE
CUE OPTION
- PLUG-IN TRANSISTORIZED
ELECTRONICS
- CONTINUOUS DUTY
RATED
- RACK, TABLE-TOP OR
CABINET MOUNTING

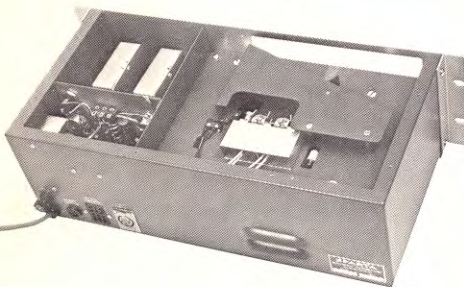
TECHNICAL INFORMATION

MODEL 300C-P PLAYBACK The mechanics and electronics have been thoughtfully designed and constructed to withstand the 24 hour continuous duty operation requirement of broadcasting. The 300C features the rugged new SPARTA CH-5 Tape Cartridge Transport with a host of exclusive design innovations. Superior performance is gained through the use of quality components; such as plug-in tape heads, which are of the latest premium series, precision lapped, hyperbolic, metal-faced type. A new improved head mount provides sensitive micro-adjustment and positive locking of tape head azimuth and vertical positioning. All amplifiers and sealed relays are plug-in for immediate trouble shooting diagnosis. These components are also inter-changeable with like components among other 300C-P units. Even though rack-mounted, maintenance can be quickly accomplished while the unit is in operation by simply removing the front panel, which provides access to much of the electronics and cartridge deck assembly.

MODEL 300C-R RECORD AMPLIFIER One plug-in connection is all that is required to transform a 300C-P unit into a Record-Playback combination unit. The 300C-R record amplifier can be used with any 300C-P transport that is equipped with a record head, and takes only 3½ inches of rack or cabinet space. Conforming to all NAB Standards, the 300C Series uses separate record and playback heads, thereby providing direct A-B tape monitoring while recording. Plug-in solid-state amplifier modules are also used in the 300C-R. During recording, the record amplifier automatically de-energizes when the tape reaches the stop cue, which prevents the possibility of accidental recording.

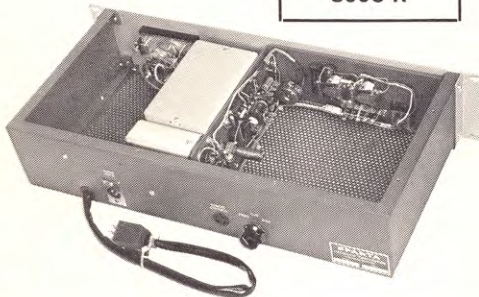
TAPE SPEED:	.....7.5 ips
FREQUENCY RESPONSE:	.....50-15,000 Hz ± 2db
NOISE:	.....55 db below saturation recording
DISTORTION:	.....Total distortion less than 2%
WOW & FLUTTER:	.....0.2% RMS max.
EQUALIZATION:	.....NAB record and playback
PLAYBACK OUTPUT:	.....+4 dbm into 600 ohms balanced (adjustable)
METERING:	.....Audio record level, cue record level and bias
RECORD INPUT:	.....-10 to +8 dbm 600 ohms balanced
CUEING:	.....NAB tone burst, 1000 Hz primary 150 Hz secondary (optional) 8000 Hz tertiary (optional)
POWER:	.....117 volts 60 Hz standard (others available)
AUXILIARY:	.....Remote, start, stop, record
HEIGHT:	.....300C-P 5¼ inches.....300C-R 3½ inches
WIDTH:	.....19 inch rack or 17 inches w/o rack brackets
DEPTH:	.....8½ inches
FRONT PANEL:	.....Anodized aluminum
CABINET:	.....Heavy gauge steel finished in SPARTA brown ARMORSOL. Removable top and bottom steel screens
SHIPPING WEIGHT:	.....300C-P — 25 pounds.....300C-R — 15 pounds

**INSIDE VIEW
300C-P**

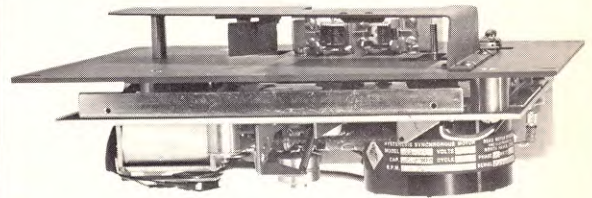


- Heavy gauge steel cabinet case
- Premium series, hyperbolic, metal-faced heads
- Quick-adjusting head mount for easy, exact head alignment
- Plug-in transistorized amplifier modules
- Replaceable lamp, illuminated start/stop buttons
- Anodized, brushed aluminum front panel
- XLR output connector
- Remote Control
- Rack adaptors may be removed

**INSIDE VIEW
300C-R**



- Separate Record Amplifier plugs into 300C-P
- Plug-in transistorized electronic modules
- 3-position record, cue and bias level switch
- Remote control
- Illuminated safety Record Pre-set button prevents accidental recording
- XLR input connector
- VU meter mounted in aluminum front panel
- Rack adaptors may be removed



CH-5 TAPE CARTRIDGE TRANSPORT

- All solenoid action gives smoother and faster cartridge handling performance with no operator effort required
- Exclusive Silicon and mechanical dampening provides super-silent operation
- Direct capstan drive system eliminates belt-driven flywheel assembly
- Hysteresis Synchronous motor
- Regulation of pinch roller to capstan pressure is made by movement of the capstan shaft rather than angular variation of pinch roller. This assures uniform pressure across the width of the tape and eliminates the tendency of tape to "skew"
- Cartridge is guided on all sides making it impossible to hit, move or damage heads
- Other than occasional pinch roller cleaning and adjustment for wear, no other preventative maintenance is required or recommended.
- Triple tape guide assembly provides exact position of tape on heads, regardless of cartridge variations.

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600C SERIES STEREO CARTRIDGE SYSTEM



600C-RP RECORD/PLAYBACK
(with accessory custom cabinet)



600C-P PLAYBACK

PRODUCT GUIDE

The SPARTA stereo 600C Series features the same proven mechanical and electronic quality and performance as the SPARTA monaural Tape Cartridge Systems. The versatility of installation is divided between the convenient rack or custom cabinet mounting of the 600C-RP, and the compact, space-saving 600C-P Playback unit. The complete system conforms to the latest NAB standards including three-track, separate record and playback heads with A-B monitoring. The 600C-RP Record/Playback stereo electronics have a variety of input options, plus the provision for "sound-with-sound" recording. There are two separate stereo audio inputs. Through the use of optional plug-in modules, these inputs may be high or low level, high or low impedance, balanced or unbalanced.

TECHNICAL SPECIFICATIONS

TAPE SPEED:.....7.5 ips
FREQUENCY RESPONSE:.....50—12,000 cps \pm 2db
SIGNAL TO NOISE:.....55db below saturation recording
DISTORTION:.....Total distortion less than 2%
WOW & FLUTTER:.....0.2% RMS Maximum
CROSSTALK REJECTION:.....55db or better at 1 KC
RECORD INPUT:.....Two per channel*
 1) Balanced bridging 10K ohm, transformer isolated for 150 to 600 ohm lines -20dbm to +10dbm
 2) Unbalanced bridging 150 K ohm, 100 MV sensitivity

EQUALIZATION:.....NAB record and playback
OUTPUT LEVEL:.....+4dbm (adjustable)
OUTPUT IMPEDENCE:.....Balanced 600 ohms
METERING:.....Audio record/playback level with A-B monitoring
STOP CUE:.....NAB tone burst, 1000 cps
POWER:.....117 volts 60 cps standard (others available)
SIZE:.....600C-RP—Width 19" w/ brackets, 17" w/o; Height 10 1/2"; Depth 8 3/4"
 600C-P—Width 10 3/4"; Height 5 1/2"; Depth 14"
AUXILIARY:.....Remote start and stop
SHIPPING WEIGHT:.....600C-RP—45 lbs.;
 600C-P—27 lbs.

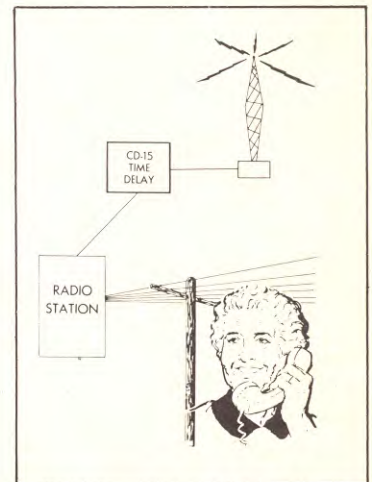
*Other options available.

- ALL TRANSISTOR MODULAR DESIGN
- DIRECT MOTOR CAPSTAN DRIVE
- CONTINUOUS DUTY CONSTRUCTION
- VERSATILE INSTALLATION
- SOUND-WITH-SOUND RECORDING
- NAB APPROVED STANDARDS
- WHISPER QUIET OPERATION



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 programming before it is broadcast. With this precision 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 principle 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.

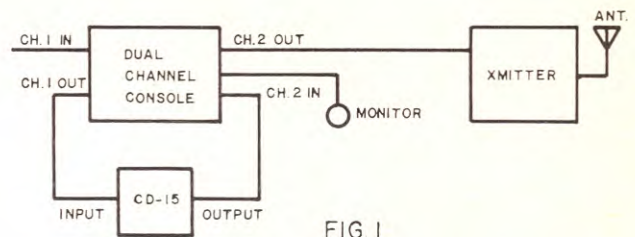


FIG. 1

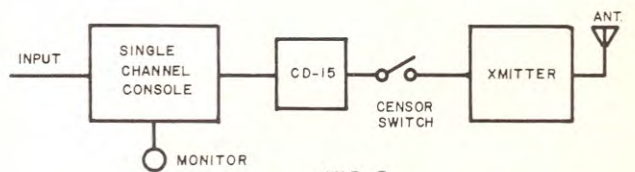


FIG. 2

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

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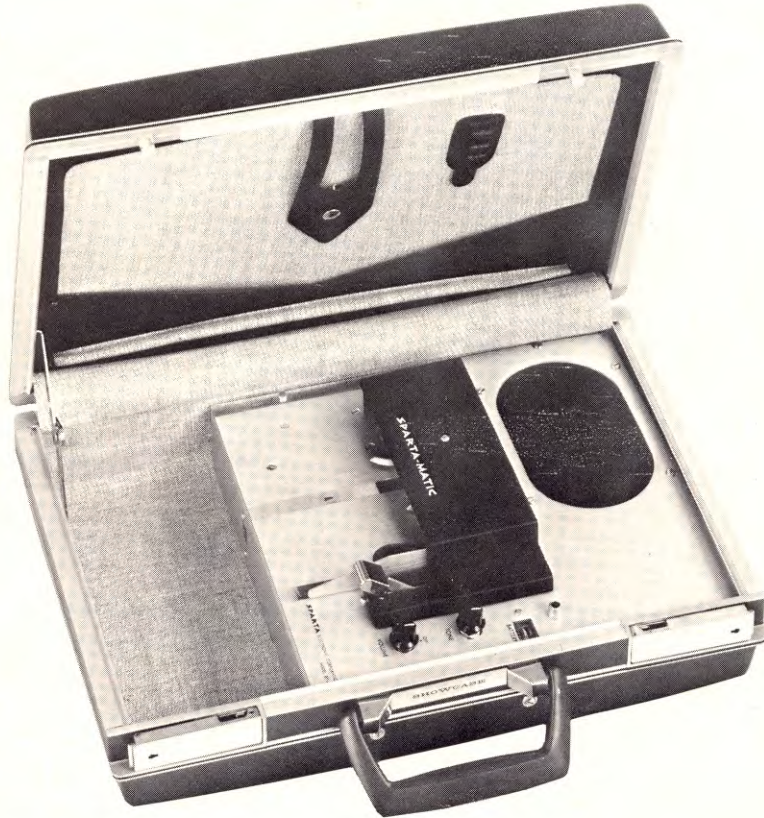
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MODEL BP-22 PORTABLE CARTRIDGE PLAYBACK

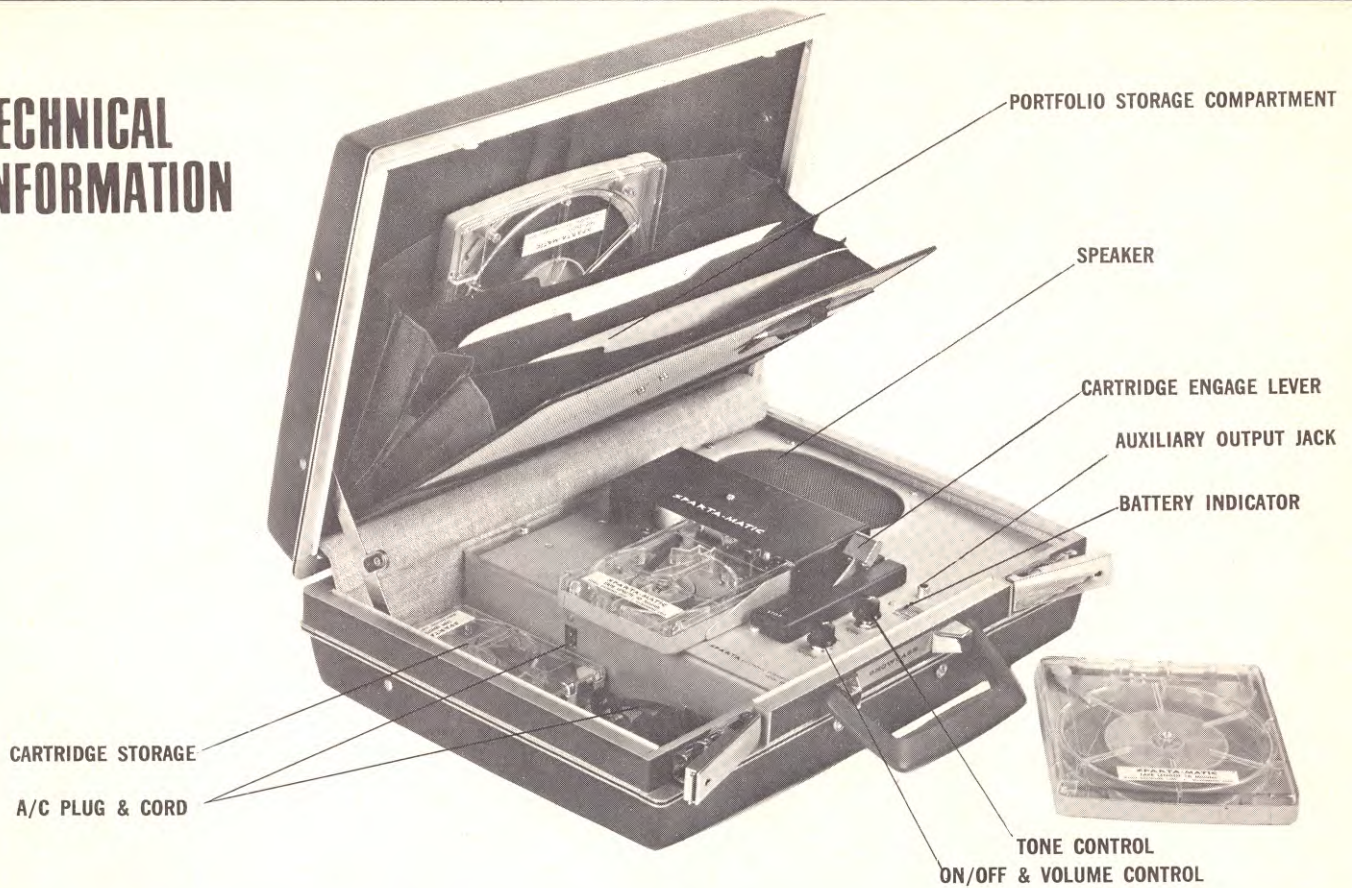


PRODUCT GUIDE

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

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:**.....17 $\frac{1}{2}$ " wide, 13" deep, 5" high

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ELECTRONIC CORPORATION

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SERIES R-310 PROFESSIONAL TAPE RECORDER



Portable Case Optional with all
Series R-310 Models



Model ER-350 optional full-facility
remote control unit.

PRODUCT GUIDE

The new SERIES R-310 represents another major SPARTA breakthrough in providing the finest quality audio tape devices for the price-conscious professional user. Designed for rugged reliability under continuous performance conditions, the Series R-310 meets exacting broadcast requirements as well as those for recording studios, industries and critical audiophiles. Three independent motors have been adopted to give smooth and faultless action to the tape transport for tape driving, rewind and fast forward, respectively. Push-button relay, solenoid operation and a heavy duty band type, self-energizing brake system are just a few of the outstanding features that provide the utmost in tape handling reliability. Separate gain controls for microphone and line input mixing, front panel equalization control, record indicator lights, large sized VU meters and a four-head system are just a few of the outstanding features incorporated in the record and playback electronic systems. The R-310 series is available in monaural full or half-track—stereo 2 or 4 track versions and may be ordered for rack, console or portable installation. Regardless of which configuration meets your requirement you can be assured that the TEAC Series R-310 brings you the ultimate in professional recorders.

- 3-MOTOR DRIVE SYSTEM
- 3-SPEEDS (Standard)
- MICROPHONE & LINE INPUT MIXING
- AUTOMATIC SHUT-OFF
- AUTOMATIC TAPE LIFTERS
- A-B MONITORING
- 4-HEAD POSITIONS
- UP TO 10½ NAB REELS
- PORTABLE, RACK OR CONSOLE MOUNTING
- FULL REMOTE CONTROL



Model R-311 Full-track mono record/reproduce

Model R-312 Half-track mono record/reproduce

Model R-313 Two-track stereo record/
playback w/extra 4 track playback.

Model R-314 Four-track stereo record/
playback w/extra 2-track playback.

Console Cabinet optional with all
Series R-310 models.

TECHNICAL INFORMATION

FLUTTER-FILTER SYSTEM. A unique advancement that virtually eliminates spurious vibrations and troublesome tape flutter. A dynamically balanced flywheel combined with a viscous dampened tape tension arm provides silken-smooth tape handling and recording virtually free from speed variations.

DYNAMIC NEW TAPE TRANSPORT. The three motor drive system features a heavy-duty hysteresis synchronous drive motor and two induction torque motors. Handles all reel sizes from 5" to 10½" with torque adjustment compensating for differences in reel diameter. All components precision mounted on ¼" aluminum alloy top plate to provide lifelong alignment and dependability. Simplified design permits easy accessibility for routine maintenance when required.

PUSH BUTTON OPERATION. In addition to an all relay-solenoid system the R-310 Series features an automatic tape lifter (*functions with head gate open or closed*) with a unique "cue button" to allow tape cueing in the rewind or fast forward mode. Automatic shut-off, index counter and tape tension switch plus full remote control facilities are other professional features.

FULL FACILITY FRONT CONTROL PANEL. Large size, professional VU meter with illuminated face and separate selector switch offers easy inspection of record and playback levels as well as bias value. There is a front panel equalization control and separate gain controls for microphone and line input allow for the mixing of the two sources. Playback monitoring (A-B) while recording is selected through the output gain control. Optional plug-in transformers provide flexibility in matching input impedances.

REEL SIZE	Up to 10½ inch NAB reels
TAPE SPEEDS	15, 7½ and 3¾ ips
FREQUENCY RESPONSE	40—15KHz ±2db @ 15 ips 40—12KHz ±2db @ 7½ ips 50—7500Hz ±2db @ 3¾ ips Equalization: NAB standard
SIGNAL TO NOISE RATIO	Full Track: 55db 2 and 4 Track: 50db Peak record level to unweighted noise
TOTAL HARMONIC DISTORTION	Less than 1% at 0 VU
FLUTTER AND WOW	Less than 0.1% rms @ 7½ and 15 ips Less than 0.3% rms @ 3¾ ips
REWIND AND FAST FORWARD	90 seconds for 2400 feet 0.5 second—Start and Stop time
INPUT Microphone:	High Impedance -50db, normal 150 to 60 Ohms -70dbm with optional plug-in transformer
Line:	High impedance -20db, normal 600 or 10K ohm balanced, -20dbm with optional plug-in transformer
OUTPUT Line:	+4dbm, 600 ohm balanced or unbalanced
POWER REQUIREMENTS	117 VAC 50/60 Hz
DIMENSIONS AND WEIGHT	Transport: 19" x 15¾" x 8" 48 lbs. Amplifier: 19" x 5¼" x 8¼" 12 lbs.

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www.SteamPoweredRadio.Com



5851 FLORIN-PERKINS ROAD SACRAMENTO, CALIFORNIA 95828

A DIVISION OF COMPUTER EQUIPMENT CORPORATION



The SPARTA-MATION Model 726, is a sophisticated electro-magnetic switching device designed for years of dependable service with virtually zero maintenance. It will accept and control up to seven tape equipment audio source inputs, capable of 0db audio level into 600 ohms balanced or unbalanced. By the insertion of program pins into a program board, these seven source inputs can be programmed in a progressive sequence of up to 26 events during the program time period. This time period can be 15, 30 or 60 minutes, depending on your format requirements and is governed by a clock which is supplied. This clock will automatically reset your format to "Event #1" when it reaches the time period you have previously selected and consequently, the same event sequence will be repeated.

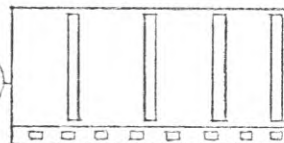
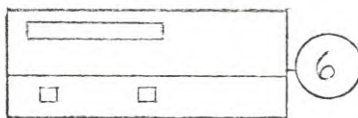
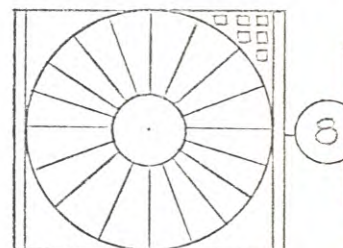
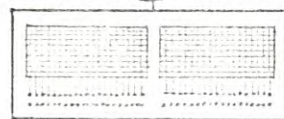
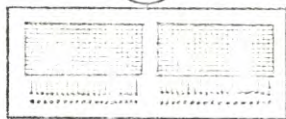
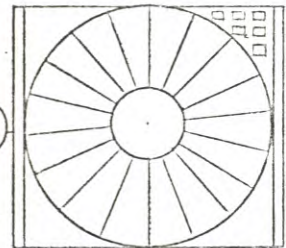
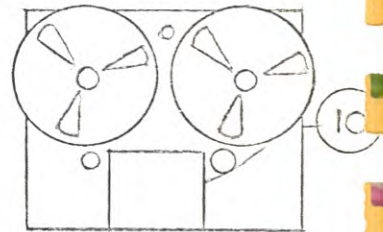
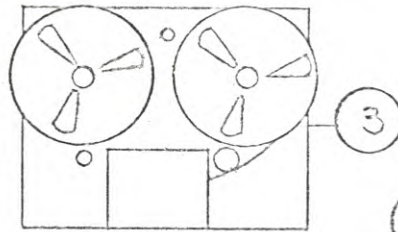
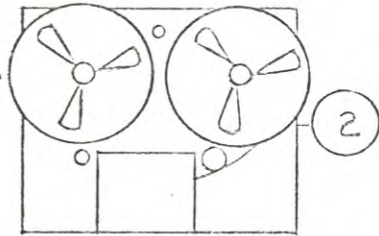
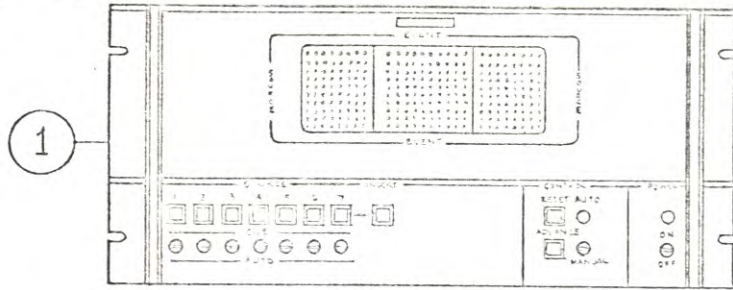
The controller can be sequenced by 25 Hz tone used on reel-to-reel musical and commercial tapes or by an external contact closure, such as from a cartridge system end of message (150 Hz) cue. Both cartridge and reel-to-reel equipment can be intermixed. The SPARTA-MATION program controller will work with any broadcast quality tape equipment and can be used with existing time announcers, network joining systems, random selecting spot players, etc. This makes it possible to use your existing equipment rather than having to purchase a complete automation system from the ground up.

Overlap cueing, previously available in only the most expensive automation systems, is incorporated so as to provide very tight transitions between the switching of audio sources. The SPARTA-MATION system can be interrupted at any time for live material insert such as newscasts or special programs. Manual control of audio sources is possible from the main or remote control panel. In addition, each of the seven audio channels has a cue switch function and separate audition output channel. Consequently, tapes may be auditioned and cued while the system is in an automated mode.

Optional accessories include silence-sensing failure alarm for re-start, remote control panel and a 24-hour clock to be used for time controlled program insertions in connection with audio source channel #7.

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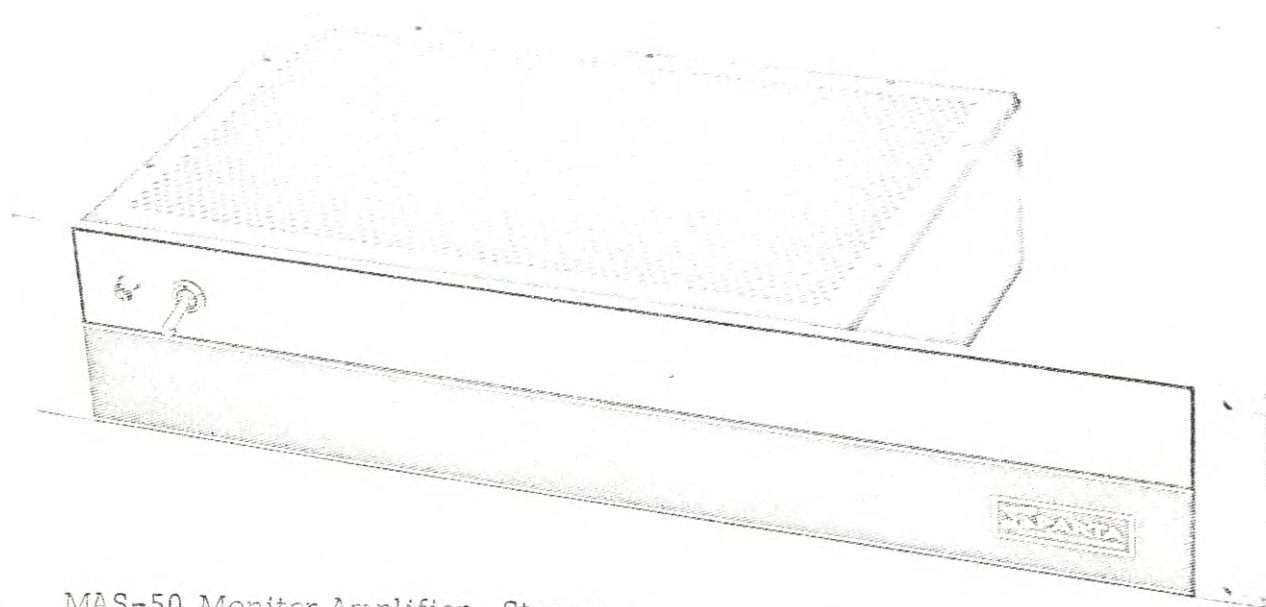
SPARTA-MATION SYSTEM



BUILD YOUR SPARTA-MATION SYSTEM.....by the number!

- ① MODEL 726 PROGRAM CONTROLLER. Complete with 60 minute Program Clock, 25 Hz Sensor and Filter, Power Supply. ONLY...\$ 1995.00
- ② MUSIC PLAYBACK tape deck.
- ③ MUSIC PLAYBACK tape deck.
- ④ 24 CARTRIDGE STORAGE PLAYBACK (W/Random Select option) *\$5400 - \$6400
- ⑤ AUTOMATIC RANDOM SELECTOR for ④ Up to 100 cartridge events can be pre-programmed through a program board containing 100 26-position sliding switches.
- ⑥ SINGLE CARTRIDGE PLAYBACK. (Sparta 300C-P mono with 150/8KHz Sensor).
- ⑦ CLOCK CONTROLLED INPUT for ⑥ or ⑪.
A 12/24-hour clock to control inserts at required times through audio source channel 7 of the Program Controller *\$6900 - \$7900
- ⑧ 24 CARTRIDGE STORAGE PLAYBACK (W/random select option). Same as ④
- ⑨ AUTOMATIC RANDOM SELECTOR for ⑧ Same as ⑤.
- ⑩ MUSIC PLAYBACK tape deck. Same as ② & ③
- ⑪ 4-CARTRIDGE PLAYBACK (Sparta MC-104R mono W/ 150/8KHz Sensor) ...\$11,000 - \$13,000

*Approximate Range



MAS-50 Monitor Amplifier, Stereo

The SPARTA MA Series of monitor amplifiers incorporates the latest solid state design and components to provide high-quality audio amplifiers to drive the wide-range, compact, "linear-excursion" type speakers which are so popular for studio monitoring. The Model MAS-50 is a stereo 50 watt amplifier housed on a compact rack mounted panel of anodized aluminum. The power amplifiers are individual plug-in modules constructed with integral heat-sinks. The Glass-Melamine circuit boards can be easily removed for maintenance or inspection. Careful design consideration of the power supply built into the MA Series allows the amplifier to provide instantaneous peak power far in excess of rated sine-wave power. In the case of the MAS-50 instantaneous program peaks approaching 70 watts per channel will be faithfully reproduced.

SPARTA-MATIC

TAPE CARTRIDGE ACCESSORIES



85.00



65.00
68.25
~~5.00~~
73.25



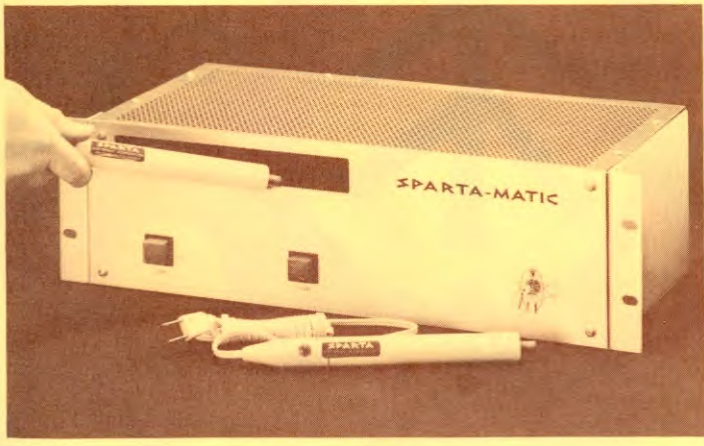
FOR

MODEL CR-100 For wall-mount storage of up to 100 M-300 size tape cartridges. Furniture grade cabinet construction with surfaces finished in a wood-grain laminate, mar-proof plastic. Width: 25" Height: 27½" Depth: 5". Other sizes and finishes available on custom order. **PRICE \$55.00**

MODEL CR-80 A revolving "lazy-susan" tape cartridge storage facility with a capacity of 80 M-300 size cartridges. Only requires an area 14" square to revolve. Height: 29" Width: 10½" mar-proof wood-grain finish. Other finishes available on custom order. **PRICE \$56.00**

MODEL CR-120 Gives a generous cartridge storage facility using a minimum amount of space. Holds 120 M-300 size cartridges. Requires only an 18" square area to revolve. Height: 29" Width: 15¼". Comes in standard finish with other colors available on custom order. **PRICE \$79.50**

MODEL DM - 200 DEMAGNETIZER



MAGNETISM CAN RUIN TAPES! The original sound quality of all cartridge tape can only be maintained by using a demagnetizer. The extra long wand of the DM-200 lets you reach the most inaccessible tape head areas of any tape machine.

PRICE \$6.95

MODEL CE - 2 BULK REEL & CARTRIDGE ERASER



A professional device for heavy-duty use in broadcast stations where the assurance of the best possible tape erasure is required. Handles all cartridge sizes and tape reels up to 10½". Line voltage: 90-135 VAC/50 or 60 Hz. Current: 8.9 AMPS (900 WATTS) Erasure Level: 68 db below saturated tape. Duty cycle: One minute On, three minutes Off. Weight: 9 pounds. Construction: Epoxy Fibreglass with plastic case. No scratch rubber pad bottom. Removable reel center pin. 6 foot cord. Add \$3.00 for 3 - wire.

PRICE \$39.50

SPARTA ELECTRONIC CORPORATION

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