



MATTES-MARTIN ELECTRONICS CORP.



SSA/200

**GREAT LISTENING—NOT MERE SKIN-DEEP BEAUTY!**

Big Sound — Big Power — Big Features  
We've compensated for the small size of this unit by putting more features and workmanship on the inside! **\$875.00**

The SSA/200 is a first in that it combines the unprecedented high power output of the Sharma circuit amplifier with a high-gain sophisticated preamplifier and control unit — all in one compact assembly. The result is a solid-state high fidelity electronic system that will drive present and future speaker systems of low or high efficiency up to full scale live reproduc-

tion levels, accommodate all input sources, and provide control of function and frequency response with precision and flexibility never before available. Power output is 200 watts at less than 0.1% IM distortion. Remarkably cool operation affords complete flexibility in mounting location. Front panel, 14 $\frac{3}{4}$ " by 4 $\frac{7}{8}$ ". Case depth 13". Rich gold finish.



SSD/1

**NO PRE-AMP GIMMICKS!**

Our circuits may cost a bit more, because we skip the colorful gadgets and gizmos, and give you unmatched flexibility, proper equalization and functional controls. **\$475.00**

Here in a remarkably compact unit is an all solid-state preamplifier providing unparalleled flexibility and precision as a stereo control center. Accepts all inputs, including microphone, tape head, magnetic phono, tuner, three auxiliaries, tape head and tape monitor, Front and rear input selector switch. Individual channel 9-position switches for Bass and Treble boost and cut with 24 dB upward and downward range at 20 Hz and 20,000 Hz. Stepped level control with vernier fine adjustment. Continuous Hearing Contour (loudness) and Balance Controls. 4-position HF Filter from flat to 14,

22 and 33 dB down at 20,000 Hz. LF Filter, 3 dB down at 45 Hz; 35 dB down at 10 Hz. Equalizations: RIAA and LP phono record; Tape Head 3 $\frac{3}{4}$  and 7 $\frac{1}{2}$  ips. All controls completely independent of all others. Magnetic phono sensitivity switch. Speaker mute switch. Head-phone amplifier permits listening without power amplifier. Rated output, 1 volt (2.5 volts max.). Extremely low noise and distortion. May be used with any suitable power amplifier. Front panel, 14 $\frac{3}{4}$ " by 4 $\frac{7}{8}$ ". Case depth, 12 $\frac{1}{4}$ ". Rich gold finish.



SSP/200

**HEAR IT LIKE IT REALLY IS!**

Don't be surprised if this unit makes your present equipment seem inadequate. When you hear it like it really is, you'll recognize the big difference in ours! **\$495.00**

This is the basic 200-watt Sharma circuit solid-state stereo amplifier for use with separate preamplifiers or other input systems. Provides two 100-watt channels with 1 volt sensitivity for full rated output. Has front and back inputs with individual potentiometer controls for each channel. Has 4, 8/16 ohm settings, plus reduced-power TEST position on rear switch. Draws only

25 watts from 50-60 cycle line at no signal input and 300 watts at moments of maximum power output due to the very high efficiency of the Sharma circuit, resulting in an ultracool, compact assembly. IM distortion less than 0.1% at rated output. New electronic protective circuit for extreme reliability. Overall dimensions: 14 $\frac{3}{4}$ " wide, 9 $\frac{3}{4}$ " deep, 5 $\frac{5}{8}$ " high.



## SSP/200 POWER Amplifier

### SPECIFICATIONS

**CONTINUOUS POWER OUTPUT:** 100 watts per channel, -0.5 dB at 20 Hz, -0.5 dB at 15,000 Hz, -1 dB at 20,000 Hz.

**FREQUENCY RESPONSE (IHF):** 20 to 20,000 Hz,  $\pm 0.5$  dB; 15 to 30,000 Hz,  $\pm 1$  dB.

**INTERMODULATION DISTORTION (SMPTE):** 0.1% at rated output; maximum 0.5% at 1 watt.

**HARMONIC DISTORTION:** 0.5% at rated output, 20 to 15,000 Hz.

**INPUT IMPEDANCE:** 100,000 ohms.

**SENSITIVITY:** 1 volt input for 100 watts output.

**HUM AND NOISE:** 90 dB below rated output (less than 1 mV across output terminals).

**SHORT-CIRCUIT LOAD TOLERANCE:** Absolute, short-circuit may be applied to output terminals, driven or not, without damage to components.

**DAMPING FACTOR:** Approximately 250; effective source impedance, approximately 0.04 ohm.

**MAXIMUM CAPACITIVE LOAD:** 0.5 microfarad; the amplifier is unaffected by loads which exceed 0.5 microfarad, but will not deliver its rated power to them.

**THERMAL OUTPUT:** Quiescent. 125 B.T.U./hour; at full output (continuous 200 watts) 275 B.T.U./hour.

**RISE TIME:** 5 microseconds, while delivering 200 watts to an 8-ohm resistive load from one channel continuously.

### TRANSISTOR COMPLEMENT (BOTH CHANNELS):

2—T1A02; 2—2N2148; 4—156-104/HST 9209; 2—2N3053; 5—2N3638; 9—2N3567.

**NET WEIGHT:** 27 lbs. (12.27 kg.)

**PRICE:** \$495.00.

**SIZE:** (Including knobs, binding posts and feet) 14 $\frac{3}{8}$ " wide, 10" deep and 5 $\frac{1}{2}$ " high.

**SHIPPING WEIGHT:** 33 lbs.

A relay-rack mounting kit, including 7" high 19" wide panel, brackets, handles and all necessary hardware, is available at \$39.50.

### ABOUT THE POWER RATING OF THE SSP/200

The SSP/200 will deliver 200 watts (rms) continuously to two 4- or 8-ohm loads, without exceeding rated distortion (see specifications). "IHF Music Power" has come into vogue as a specification recently, mainly because it permits a manufacturer to quote a larger number in his advertising; no useful information is really conveyed by this figure, as it tends to disguise the weaknesses of inexpensive equipment without accurately describing the capabilities of a good amplifier. Although it cannot therefore properly be used as a basis for comparison of amplifiers, the "IHF Music Power" of the SSP/200 is more than 160 watts per channel at rated distortion. The "peak power" which some manufacturers quote is this number multiplied by two, often given for two channels as one number; this would be about 650 watts for the SSP/200. Because of their ambiguity, these numbers are not listed in the SSP/200 specifications.

## from Mattes-Martin... the "not-for-everybody" stereo units

If we cared less, we'd produce more. Our solid state stereo units are no solution where price is a problem. Building these superlative stereo sound-makers is a state-of-the-art triumph. Precious time, lots of it, along with concerned craftsmanship, is essential for hand-wiring and hand-soldering the better, exclusively American-made components. This, plus innovative circuitry and rare electronics pioneering, combines to make Mattes-Martin a unique and unparalleled listening experience. Our reputation is built on performance quality rather than volume of production. We make a few units for the discriminating few. If sound — glorious, true, full, high-fidelity sound — is part of your world, then Mattes-Martin ought to be a part of your life. Start the miracle happening. Hear Mattes-Martin now!



## Model SSD/1 SOLID STATE PREAMPLIFIER

INPUTS	SENSITIVITY	IMPEDANCE	LOCATION
Microphone	3.5 millivolts;	100,000	rear/front
Tape head	3.5 millivolts;	100,000	rear/front
Phono 1	3.5 millivolts;	47,000	rear/front
Phono 2	3.5 millivolts;	47,000	rear/front
Tuner	350 millivolts;	200,000	rear/front
Aux. 1	350 millivolts;	200,000	rear/front
Tape monitor	350 millivolts;	10,000	rear only
Power Amp. Input	1 volt;	1.5K	front only

### MECHANICAL

**Size:** Front panel: 14 $\frac{3}{4}$ " wide by 4 $\frac{7}{8}$ " high. Panel Thickness:  $\frac{3}{16}$ ". Chassis: 14 $\frac{3}{8}$ " wide by 11" deep, by 4 $\frac{3}{8}$ " high. Rear connector projection:  $\frac{3}{4}$ ". Knob projection in front of the panel 1".

**Weight:** 15 lbs. net. 19 lbs. shipping.

**Finish:** Rich gold. Panel markings in two colors. Normal settings of most controls and switches are indicated by RED positions.

### ELECTRICAL

**FREQUENCY RESPONSE:** 20-20,000Hz  $\pm 0.2$ dB  
15-30,000Hz  $\pm 1.5$ dB  
10-50,000Hz  $\pm 1.0$ dB

**EQUALIZATIONS:** RIAA 20-20,000Hz  $\pm 0.5$ dB  
LP 20-20,000Hz  $\pm 0.5$ dB  
NAB(7.5) 20-15,000Hz  $\pm 0.5$ dB  
NAB(3.75) 20-15,000Hz  $\pm 0.5$ dB

**NOISE:** (Including hum with input shorted -80 dB for phono (10 and 35mv settings), tuner, and aux 1; -75 dB for microphone; -65 dB for tape.

**INTER MODULATION DISTORTION:** Not more than .05% typically .02%.

**TOTAL HARMONIC DISTORTION:** Not more than .05% typically .02%.

### tone control:

Nine position wide range stepped tone controls provide 24 dB of action. Bass control is a variable frequency type with 3 dB points at 50 Hz, 100 Hz, 200 Hz, & 400 Hz providing 6 dB, 12 dB, 18 dB, & 24 dB of tone action at 20 Hz. Treble control is a combination of variable slope and variable frequency type with 3 dB at 2.5 KHz, 2.5 KHz, 2.5 KHz, & 1.25 KHz providing 6 dB, 12 dB, 18 dB, & 24 dB cut and boost at 20 KHz. At normal settings, all frequency determining components are out of the signal path. Bass & Treble controls have separate high gain amplifiers. Ample of negative feedback at all tone control settings renders a precise frequency control with very low distortion even at maximum boost positions.

**H.F. FILTER:** 12 dB/octave type. Four positions from flat to 14, 22, & 33 dB of attenuation at 20 KHz.

**L.F. FILTER:** 12 dB/octave. 3 dB at 45 Hz; 22 dB at 20 Hz; 35 dB at 10 Hz. (No attenuation at 50 Hz).

### VOLUME CONTROL:

Two volume controls, one stepped and the other continuous vernier, gives additional flexibility to SSD/1. The calibrated stepped control is on the input side of the tone controls and the vernier control is on the output side. At low listening levels the vernier control can be used as a power amplifier level control.

The calibrated stepped control is made up of twenty-six precision resistors maintaining tracking of the two channel output levels within 1 dB of each other. The 0 dB position is the reference position. The calibration of the volume control is within 1 dB of the indicated positions.

### FRONT INPUT:

Is a convenience stereo input jack. The FRONT/REAR switch in the front position disconnects all inputs on the rear panel. Any kind of input can be connected through the front input. Use selector switch to choose the equalization.

### HEAD PHONE AMPLIFIER:

SSD/1 has a built-in 1 watt/channel low distortion amplifier with an output impedance of 5.6 ohms — damping factor of 1.4 for 8 ohm headphones as recommended by headphone manufacturer.

### TAPE RECORDING AND MONITORING:

Tape recorder can be connected to SSD/1 through R.C.A. jacks or a DIN connector both located on the rear panel. A second tape recorder can be connected to the inputs located on the front panel. Special set of jacks, also on the front panel permits recording through all the controls of the preamplifier.

### HEARING CONTOUR:

Boosts both the high and the low frequencies keeping the general volume level constant. Hearing contour control is a continuously variable type independent of volume control settings.

### EQUALIZATION:

Phono record for RIAA and LP and tape head for 3.75 and 7.5 inches per second are provided with an accuracy of  $\pm 0.5$  dB from 20 to 20,000 Hz.



## Model SSA/200 INTEGRATED AMPLIFIER 200 WATT SOLID STATE

INPUTS	SENSITIVITY	IMPEDANCE	LOCATION
Microphone	3.5 millivolts;	100,000 ohms;	rear/front
Tape Head	3.5 millivolts;	100,000 ohms;	rear/front
Phone	3.5 millivolts;	47,000 ohms;	rear/front
Tuner	350 millivolts;	200,000 ohms;	rear/front
Aux. 1	350 millivolts;	200,000 ohms;	rear/front
Aux. 2	1 volt;	1,000,000 ohms;	rear only
Tape Mon.	350 millivolts;	10,000 ohms;	rear only
Power Amp.	1 volt;	10,000 ohms;	front only

(where optional front/rear inputs are specified, front input impedance is 47,000 ohms.)

### MECHANICAL

**SIZE:** Front panel: 14 $\frac{3}{4}$ " wide by 4 $\frac{7}{8}$ " high. Panel thickness:  $\frac{3}{16}$ ". Chassis: 14 $\frac{1}{8}$ " wide by 13" deep by 4 $\frac{3}{8}$ " high. Rear connector projection:  $\frac{1}{16}$ ". Knob projection in front of panel:  $\frac{13}{16}$ ".

**WEIGHT:** 33 lbs. net; 38 lbs. shipping.

**FINISH:** Rich Gold. Panel etched in three colors. Normal settings of most controls and switches are indicated by RED positions.

### ELECTRICAL

#### FREQUENCY RESPONSE:

20-20,000 Hz; +0, -0.5 dB ( $\pm 0.25$  dB)

15-30,000 Hz; +0, -2.0 dB ( $\pm 1.00$  dB)

10-50,000 Hz; +0, -3.0 dB ( $\pm 1.5$  dB)

**RATED CONTINUOUS POWER OUTPUT:** Not less than 200 watts (100 watts per channel) at 1,000 Hz at 0.1% total harmonic distortion (THD). Not more than 0.75 dB down from 100 watts per channel at 20 Hz for 0.25% THD. Not more than 1.5 dB down from 100 watts per channel at 15,000 Hz for 0.5% THD. Not more than 1.75 dB down from 100 watts per channel at 20,000 Hz for 0.75% THD. (Ratings encompass both 8 and 4 ohm loads, are taken with both channels driven, with rated line voltage.)

**MAXIMUM CONTINUOUS POWER OUTPUT:** The following typical data indicates the substantial margin of power above the rated values which is available at frequencies from 200 to 2000 Hz which are of great importance in the reproduction of music. At 8 ohms: 128 watts at 200 Hz for 0.25% THD; 128 watts at 1000 Hz for 0.1% THD; 123 watts at 2000 Hz for 0.25% THD. At 4 ohms: 138 watts at 200 Hz for 0.25% THD; 116 watts at 1000 Hz for 0.1% THD; 110 watts at 2000 Hz for 0.25% THD. (Measurements are for both channels driven, with rated line voltage.)

**INTERMODULATION DISTORTION:** Not more than 0.1% at any power from 100 to 10 watts per channel. Not more than 0.5% at 1 watt.

**NOISE:** (including hum, taken with inputs shorted), -80 dB for Phono (10 and 35 mv settings), Tuner, AUX 1 and 2; -75 dB microphone; -65 dB Tape head.

**BASS and TREBLE CONTROLS:** Individual for each channel, each with 9-position switches for flat and 24 dB cut and boost in 6 dB steps at 20 Hz and 20,000 Hz. Accuracy  $\pm 2$  dB.

**EQUALIZATION:** Phono record for RIAA and LP and tape head for 3.75 and 7.5 inches per second are provided with an accuracy of  $\pm 1$  dB from 30 to 20,000 Hz.

**HF FILTER:** Four positions from flat to 14, 22, and 33 dB down at 20,000 Hz,  $\pm 3$  dB.

**LF FILTER:** 12 dB per octave type. 3 dB down at 45 Hz; 22 dB down at 20 Hz; 35 dB down at 10 Hz.

**DAMPING FACTOR:** 260 at transistor output, 20 Hz to 1000 Hz; 130 measured at amplifier output terminals (through internal loudspeaker switch leads). (Note: In any amplifier with high intrinsic damping factor, the apparent damping factor at the loudspeaker is dictated almost entirely by the lead resistance between the actual amplifier output and the speaker terminals. For example, a pair of #18 leads 25 feet long will result in a damping factor of about 25 at the loudspeaker if the damping factor of the amplifier is infinite (zero internal output impedance. With the SSA/200, the damping factor at the speaker will be about 23, indicating that the amplifier can be completely neglected as a factor in affecting speaker performance.)

The SSA/200 is believed to have by a wide margin the highest intrinsic damping factor of any medium to high power amplifier available. Low lead resistance from amplifier output to loudspeakers will insure maximum possible damping action obtainable as it affects speaker performance.

**LINE POWER:** 35 watts no signal. 300 watts at rated power output. Power line frequency, 50-60 cycles.



**MATTES-MARTIN ELECTRONICS CORP.**

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