OWNER'S MANUAL

SERVICE DATA
and
REPAIR PARTS LIST
for
SEARS | *Silvertone*

MUSICAL INSTRUMENT AMPLIFIER

MODEL NO. 1464

GUARANTEE

We guarantee the Silvertone musical instrument amplifier to be free from defects in material and workmanship for a period of one (1) year from date of sale.

Should a defect occur, return the part or amplifier to us and we will:

1. during the first ninety (90) days from date of sale at our option either repair or replace and install any defective parts or transistors free of charge.
2. after ninety (90) days and for the balance of the year at our option either repair or replace all defective parts and transistors, charging only for labor.

This guarantee does not provide free labor for service rendered in the home, nor does it include service necessitated by damage due to misuse, abuse, improper line voltage, fire or flood, lightning or other acts of God.

This guarantee applies to Silvertone Musical Instrument Amplifier purchased and used in the United States of America.

We reserve the right to make modifications in this product, and to add or delete, accessory items without incurring an obligation to prior purchasers.

SEARS, ROEBUCK and CO., U.S.A.
and SIMPSONS-SEARS LIMITED

SILVERTONE ELECTRIC MUSICAL INSTRUMENT AMPLIFIER

OPERATING INSTRUCTIONS:

NESTING CABINETS . . . The amplifier nests within the speaker cabinet for convenience in storage and transportation. Always remove the amplifier from the speaker cabinet before turning it on. Otherwise, severe damage from lack of ventilation may result.

PLACEMENT . . . The amplifier may be placed within easy reach of the controls, with the speaker cabinet located anywhere up to 25 feet away. If preferred, the amplifier may be set on top of the speaker cabinet. Any excess wire should be folded by doubling and redoubling into a small hank and tucked into the elastic retainer on the inside wall of the speaker cabinet.

POWER SUPPLY . . . CAUTION: This amplifier is designed for operation from 105 - 120 volt, 60 cycle A.C. source. Never connect to a power supply having a different voltage or frequency.

SWITCHES . . . The switch on the panel turns the amplifier on and off. The two "on" positions permit selection of the position with minimum line hum. A separate two-button foot switch to be plugged into the appropriate panel jack provides "on-off" control of the Reverb and Tremolo.

CHANNEL ONE . . . Two inputs and three controls are provided. Set the tone controls as desired. If the instrument to be used with this amplifier provides its own volume control, set it at or near maximum and adjust the amplifier volume control to the lowest setting which provides adequate loudness. When Channel One is not used, turn volume control to zero.

CHANNEL TWO . . . This channel is similar to Channel One except that it also includes Reverberation and Tremolo effects. Adjust the Reverb "drive" control clockwise until a maximum is reached where there is no further increase in reverberation output. The correct setting will generally be between 5 and 10 depending on the particular guitar and your playing style. Adjust the "depth" control for the desired amount of reverberation. When reverberation is not required, turn both controls to zero. Tremolo is regulated by adjusting the "strength" and "speed" controls as desired. When tremolo is not required, turn the "strength" control to zero. NOTE: The reverberation unit contains microphone elements that are sensitive to vibration. Avoid accidental bumping of the amplifier while Reverb is in use since it may cause loud noises.

CONVENIENCE OUTLET . . . A convenience outlet is provided on the back panel of the amplifier for use with other electrical equipment. This outlet is independent of the "on-off" switch of the amplifier.

NORMAL CARE AND MAINTENANCE

SPEAKERS . . . The useful life of loudspeakers depends on the style of musical input. A smooth style that avoids rattling the speakers will preserve their life and be more effective musically. A forced style will cut speaker life very short. CAUTION: Do not shortcircuit speaker terminals or serious damage to solid state elements may result.

FUSE . . . A protective 3 ampere safety fuse is located on the back panel. Disconnect the amplifier from the power source before removing the fuse for examination or replacement. A blown fuse may be a warning of trouble in the amplifier requiring a careful checkup. Use only a 3 ampere Type 3 AG fuse for replacement.

FEEDBACK . . . A musical instrument or microphone used too close to the loudspeaker cabinet may cause loudspeaker howl. This is the acoustical effect of vibrations from the loudspeakers reflecting back into the instrument or microphone. Therefore, the speaker cabinet should be placed well to the right or left of the performer's position, as far as reasonably possible.

SEARS | Silvertone CHASSIS NO. 185.12030

MUSICAL INSTRUMENT AMPLIFIER

HOW TO ORDER PARTS:

WHERE TO PLACE ORDER:
Replacement parts may be ordered through any Sears, Roebuck and Co. U.S.A., or in Canada, Simpsons-Sears Limited Retail or Mail Order Store. Prices available upon application.

LOCATION OF CHASSIS AND MODEL NUMBERS:
The chassis number will be found on the back rail of the chassis.
The model number will be found on the back rail of the chassis.

ORDER MUST STATE:
1. The Part Number
2. The Part Description
3. The Chassis Number
4. The Model Number

USED IN MODEL 1464

CHASSIS PARTS

CAPACITORS

SCHEMATIC LOCATION	PART NO.	DESCRIPTION
C1,C6,C12,C18,C23	20-101	Mylar,.1 mfd., 100v.
C2,C3,C8,C11,C19,C20, C31	25-2525	Electrolytic, 25 mfd., 25v.
C4,C7,C10,C21,C24,C29, C33,C34	20-47-200	Mylar, .47 mfd., 200v
C5,C22	20-1-200	Mylar, 1 mfd., 200v
C9	20-0472	Mylar, .047 mfd., 200v.
C13,C16,C25	25-250-40	Electrolytic, 250 mfd., 40v.
C14	20-0022-2	Mylar,2200 pf.,200v
C15, C15A	25-4000-2	Electrolytic, 4000 mfd.,2.5v.
C17	20-680	680 pf.
C35	20-22-200	Mylar, .22 mfd., 200v.
C26,C27	25-5500-25	Electrolytic, 5500 mfd., 26v.
C28	20-0476	Mylar, .047 mfd., 600v.
C30,C36	20-0047-6	Mylar, 4700 pf., 600v
C32	25-250-16	Electrolytic, 250 mfd., 16v.

RESISTORS (All Resistors are ½ Watt 10%, unless otherwise noted)

Schematic Location	Part No.	Description
R1,R2,R20,R35,R36,R67	18-15301	15k ohm
R3,R6,R37,R40,R51	18-10301	10k ohm
R4,R16,R17,R38,R56	18-10401	100k ohm
R5,R27,R39,R62,R65	18-39301	39k ohm
R7,R12,R24,R41,R46,R54	18-10201	1k ohm
R8,R10,R13,R42,R44, R47,R50,R60	22-15312	15k ohm,control, circuit board type
R9,R43,R53	18-15201	1.5k ohm
R11,R45	18-68001	68 ohm
R14,R15,R19	18-22201	2.2k ohm
R18,R52	18-22301	22k ohm
R21,R25	18-68201	6.8k ohm
R22,R49,R57,R59	18-47201	4.7k ohm
R23,R26	18-33001	33 ohm
R28,R48,R58	18-10101	100 ohm
R29,R31,R55	18-02701	2.7 ohm
R30,R32	18-615-51	615 ohm, 5w
R33,R34	18-002751	.27 ohm, 5w
R61,R66	22-10601	1 megohm,control, circuit board type
R63	18-10601	1 megohm
R64	18-15101	150 ohm

MISCELLANEOUS PARTS

Schematic Location	Part No.	Description
T1	PTR-51	Power Transformer
T2	DR-51	Drive Transformer
F1	68	Fuse Holder
SW1	72P	Switch, toggle,dpdt.,3 pos.
	RU-MC2	Reverberation Unit
S1,S2	SO-1	Socket Transistor
	TU-X2	Tremolo Unit,light operated
	CP-64	Control panel
	MEW	Metal end (wired side)
	MEB	Metal end (blank side)
	CPR	Control panel rail
	PCBR	Printed circuit board rail
	PBM	Bracket, panel mtg.(3)
HS1,HS2	HS-51	Heat sink (less transistor & socket)
	S 5464	Nylon spacer, heat sink mtg. (6)
	W 5437	Nylon shoulder washer, panel mtg. (3)
	FBR	Fiber washer,panel mtg. (3)
	CO 1	Convenience outlet
J1,J2,J3,J4	B-11	Jack
J5	B-12	Jack
	PC-1000	Printed circuit board(less components)
	PC-1000-1	Printed circuit board(inc.all components)
	PL 1	Pilot lamp assy.
	FS2-2	Dual foot switch
	RBR-1	Bracket,reverb mtg., right
	RBL-1	Bracket,reverb mtg., left
	1170	Knob
	1464M	Owner's Manual

SEMICONDUCTORS

Schematic Location	Part No.	Description
Q1	41-6068	Transistor
Q2	42-6068	Transistor
Q3	43-7296	Transistor
Q4	44-7296	Transistor
Q5	45-5981	Transistor
Q6	46-3155	Transistor,
Q7	47-3155	Matched pair *(see note)*
Q8	48-3923	Transistor
Q9	49-5981	Transistor
Q10	410-3923	Transistor
Q11	411-3923	Transistor
Q12	412-3923	Transistor
D1,D2,D3,D4	4-4397	Diode with heat sink

TRANSISTOR ORDERING AND MOUNTING INFORMATION

Transistors Q6 and Q7 are factory matched pairs. When either transistor is replaced, a matched pair **MUST** *be installed. To aid heat transfer, a coating of silicone compound (G.C. No. 8101), or equivalent, must be applied between transistor case and heat sink.*

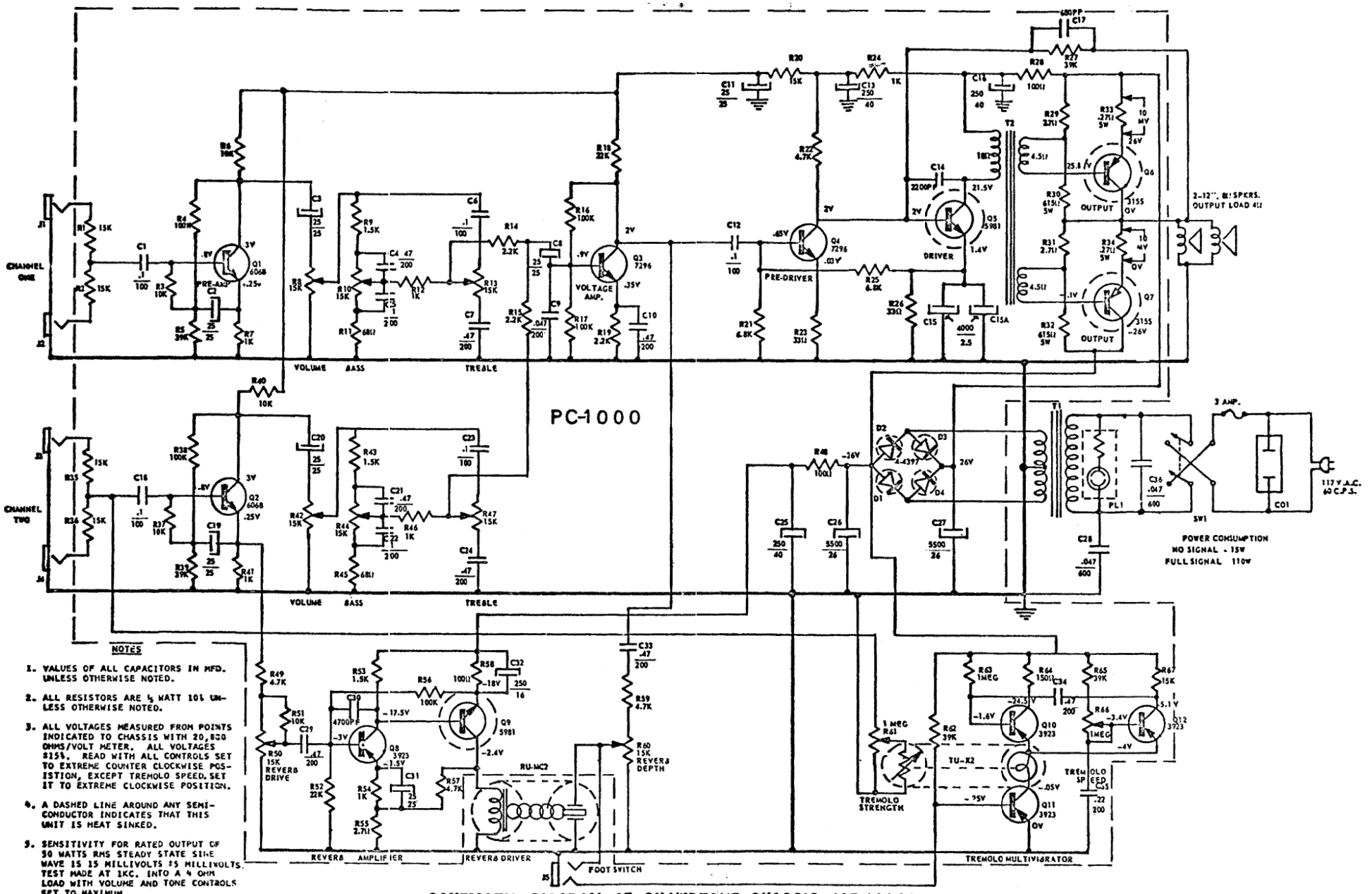
Also note that power supply voltages appear on Heat Sinks HS-1 and HS-2, Care should be exercised to avoid shorting the heat sinks to the chassis or to each other.

CABINET PARTS

Part No.	Description
1464 CS	Speaker Cabinet with Speaker Baffle, Grille and Back
1464 CA	Amplifier Cabinet
7840	Handle and Hardware for Speaker Cabinet
7835	Handle and Hardware for Amplifier Cabinet
12-H8	Speaker, 12 inch, 8 ohm voice coil (2 used)

FILING INSTRUCTIONS

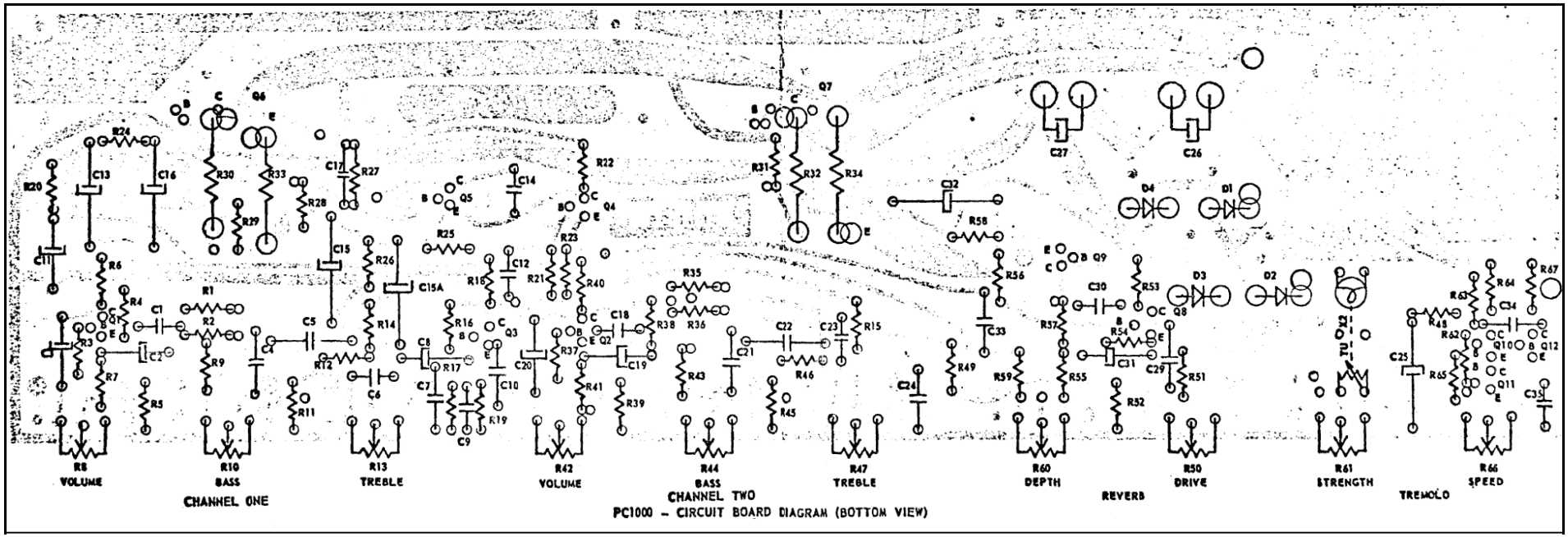
File this page in numerical order in the Division 57 Radio Technical Manual. For current selling prices, availability and ordering information refer to Division 57 Authorized Price List 185.00.



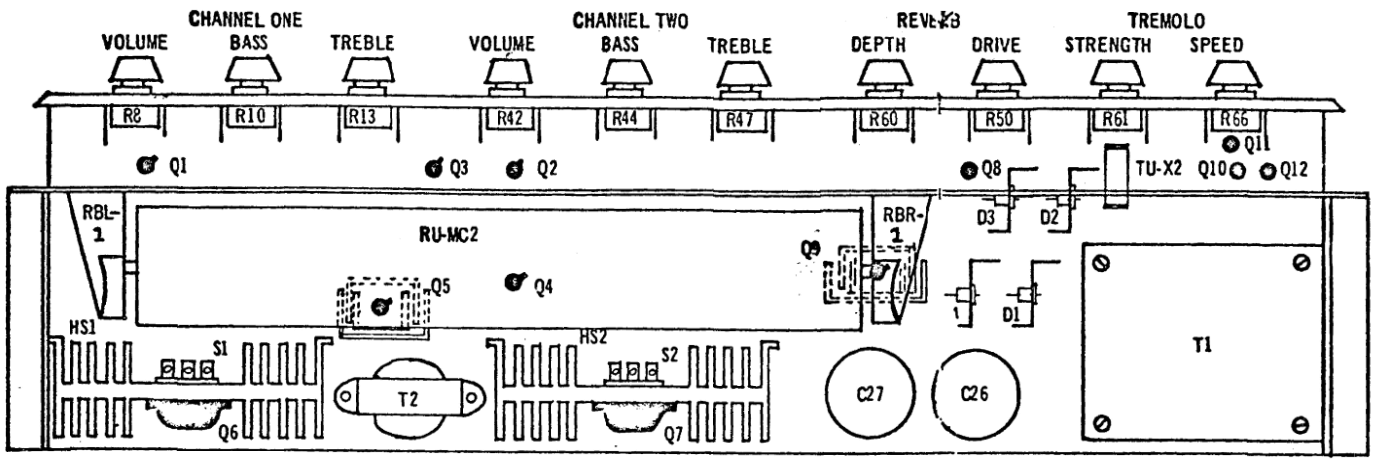
NOTES

1. VALUES OF ALL CAPACITORS IN MFD. UNLESS OTHERWISE NOTED.
2. ALL RESISTORS ARE ½ WATT 10% UNLESS OTHERWISE NOTED.
3. ALL VOLTAGES MEASURED FROM POINTS INDICATED TO CHASSIS WITH 20,000 OHMS/VOLT METER. ALL VOLTAGES ±15%, READ WITH ALL CONTROLS SET TO EXTREME COUNTER CLOCKWISE POSITION, EXCEPT TREMOLO SPEED, SET IT TO EXTREME CLOCKWISE POSITION.
4. A DASHED LINE AROUND ANY SEMICONDUCTOR INDICATES THAT THIS UNIT IS HEAT SINKED.
5. SENSITIVITY FOR RATED OUTPUT OF 50 WATTS RMS STEADY STATE SINE WAVE IS 15 MILLIVOLTS ±5 MILLIVOLTS. TEST MADE AT 1KC. INTO A 4 OHM LOAD WITH VOLUME AND TONE CONTROLS SET TO MAXIMUM.

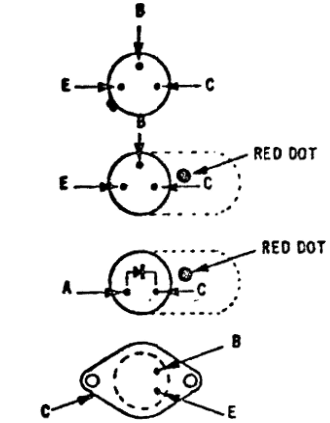
SCHEMATIC DIAGRAM OF SILVERTONE CHASSIS 185.12030



PC1000 – CIRCUIT BOARD DIAGRAM (BOTTOM VIEW)



BOTTOM VIEW CHASSIS 185.12030



BOTTOM VIEW OF SEMICONDUCTORS