

The Citation Eleven

**Professional Solid State
Stereophonic Preamplifier/Audio Equalizer**

Technical Manual

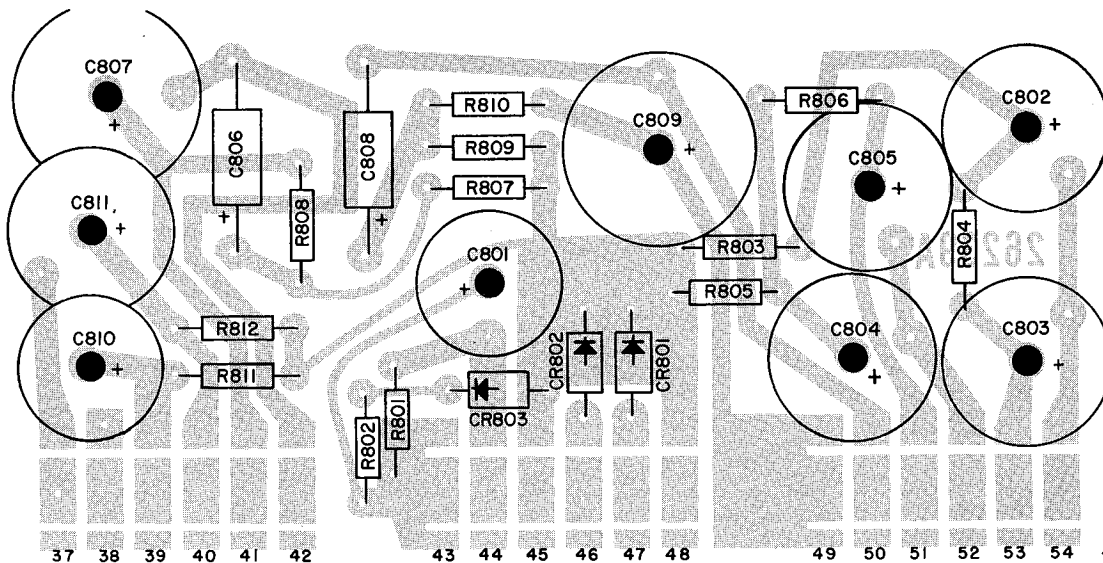
9700924

harman/kardon

REPLACEMENT PARTS

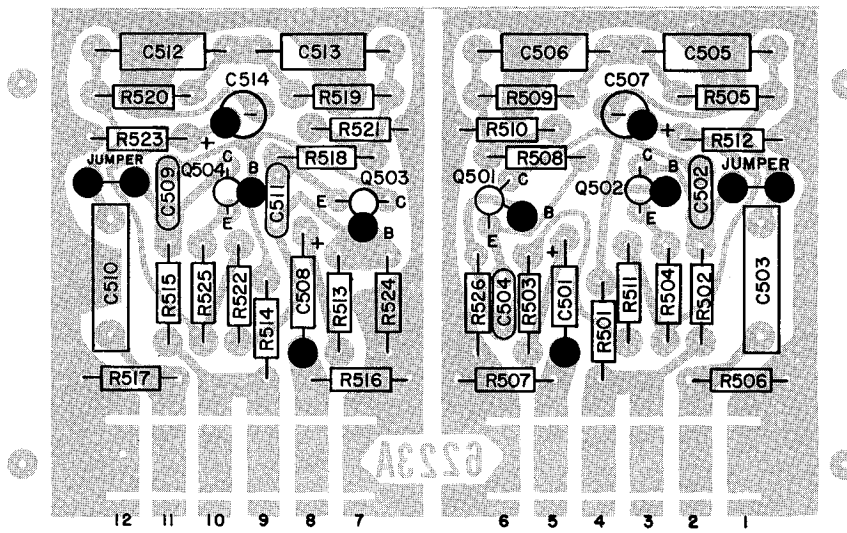
CIRCUIT REF.	DESCRIPTION	HK PART NO.	CIRCUIT REF.	DESCRIPTION	HK PART NO.
CAPACITORS			TRANSISTORS		
C1, C2	Disc, 600 PF $\pm 10\%$, 500V	30418336	Q1-Q500	Not Used	
C3, C4, C5	Disc, 0.01 UF, 1400V	30418307	Q501	BC239C Seimens	43027872
C6	Lytic, 1000 UF, 100V	31126416	Q502	2N3417 Motorola EL-238 Series	43025972
C7	Mylar, 0.1 UF $\pm 10\%$, 100V	30222073	Q503	BC239C Seimens	43027872
C8	Poly, 0.01 UF $\pm 5\%$, 63V	30618929	Q504, Q505	2N3417 Motorola EL-238 Series	43025972
C9, C10	Mylar, 0.1 UF $\pm 10\%$, 100V	30222073	Q506	FET P-CHAN AMELCO	43022956
C11	Poly, 0.01 UF $\pm 5\%$, 63V	30618929	Q507	2N3417 Motorola EL-238 Series	43025972
C12-C500	Not Used		Q508	FET P-CHAN AMELCO	43022956
C501	Mylar, 1 UFD, $\pm 10\%$, 100V	31918839	Q509	2N3417 Motorola EL-238 Series	43025972
C502	Disc, 150 PF $\pm 10\%$, 100V	31718873	Q510	FET P-CHAN AMELCO	43022956
C503	Mylar, 1 UF, 100V	31918839	Q511	2N3417 Motorola EL-238 Series	43025972
C504	Disc, 47 PF $\pm 20\%$, 100V	31718776	Q512-Q600	Not Used	
C505	Mylar, 2700 PF $\pm 5\%$, 100V	31918939	Q601	2N3417 Motorola EL-238 Series	43025972
C506	Poly, .01 UF $\pm 5\%$, 63V	30618929	RESISTORS		
C507	Lytic, 100 UF, 16V	31818880	R1, R2	15K $\pm 10\%$, $\frac{1}{4}$ W	33211531
C508	Mylar, 1 UFD $\pm 10\%$, 100V	31918839	R3	3.3K $\pm 10\%$, 3W Wire Wound	36613321
C509	Disc, 150 PF $\pm 10\%$, 100V	31718873	R4, R5	3.3K $\pm 10\%$, $\frac{1}{4}$ W	33213321
C510	Mylar, 1 UF, 100V	31918839	R6, R7	330 $\pm 10\%$, 5W Wire Wound	36713311
C511	Disc, 47 PF $\pm 20\%$, 100V	31718776	R8-R500	Not Used	
C512	Mylar, 2700 PF $\pm 5\%$, 100V	31918939	R501	1 meg $\pm 10\%$, $\frac{1}{4}$ W	33211051
C513	Poly, .01 UF $\pm 5\%$, 63V	30618929	R502	12K $\pm 10\%$, $\frac{1}{4}$ W	33211231
C514	Lytic, 100 UF, 16V	31818880	R503	1K $\pm 10\%$, $\frac{1}{4}$ W	33211021
C515, C516	Lytic, 10 UF, 35V	31518805	R504	100 $\pm 5\%$, $\frac{1}{4}$ W	33211015
C517	Lytic, 50 UF, 25V	31518919	R505	24K $\pm 1\%$, $\frac{1}{4}$ W	33212433
C518	Mylar, 1 UF, 100V	31918839	R506	150K $\pm 10\%$, $\frac{1}{4}$ W	33211541
C519	Disc, 47 PF $\pm 20\%$, 100V	31718776	R507	470K $\pm 10\%$, $\frac{1}{4}$ W	33214741
C520	Lytic, 200 UF, 15V	31518802	R508	180 $\pm 5\%$, $\frac{1}{4}$ W	33211815
C521	Disc, 22 PF $\pm 10\%$, 500V	31718798	R509	390K $\pm 1\%$, $\frac{1}{4}$ W	33213943
C522	Mylar, 1 UF, 100V	31918839	R510	560 $\pm 5\%$, $\frac{1}{4}$ W	33215615
C523, C524	Lytic, 10 UF, 35V	31518805	R511	470K $\pm 10\%$, $\frac{1}{4}$ W	33214741
C525	Disc, 47 PF $\pm 20\%$, 100V	31718776	R512	2.0K $\pm 5\%$, $\frac{1}{4}$ W	33212025
C526	Lytic, 200 UF, 15V	31518802	R513	1K $\pm 10\%$, $\frac{1}{4}$ W	33211021
C527	Disc, 22 PF $\pm 10\%$, 500V	31718798	R514	1 meg $\pm 10\%$, $\frac{1}{4}$ W	33211051
C528, C529	Disc, 47PF $\pm 20\%$, 100V	31718776	R515	12K $\pm 10\%$, $\frac{1}{4}$ W	33211231
C530-C600	Not Used		R516	470K $\pm 10\%$, $\frac{1}{4}$ W	33214741
C601	Mylar, 1 UF, 100V	31918839	R517	150K $\pm 10\%$, $\frac{1}{4}$ W	33211541
C602	Lytic, 10 UF, 35V	31518805	R518	180 $\pm 5\%$, $\frac{1}{4}$ W	33211815
C603	Mylar, 1 UF, 100V	31918839	R519	390K $\pm 10\%$, $\frac{1}{4}$ W	33213943
C604	Disc, 470 PF $\pm 10\%$, 500V	31718825	R520	24K $\pm 1\%$, $\frac{1}{4}$ W	33212433
C605	Disc, 47 PF $\pm 20\%$, 100V	31718776	R521	560 $\pm 5\%$, $\frac{1}{4}$ W	33215615
C606	Lytic, 10 UF, 35V	31518805	R522	470K $\pm 10\%$, $\frac{1}{4}$ W	33214741
C607	Lytic, 5 UF, 25V	31818905	R523	2.0K $\pm 5\%$, $\frac{1}{4}$ W	33212025
C608	Mylar, .39 UF $\pm 10\%$, 100V	31919089	R524	68K $\pm 10\%$, $\frac{1}{4}$ W	33216831
C609	Mylar, 0.22 UF $\pm 10\%$, 100V	31918791	R525, R526	68K $\pm 10\%$, $\frac{1}{4}$ W	33216831
C610	Mylar, .047 UF $\pm 10\%$, 100V	31918808	R527	2.2M $\pm 10\%$, $\frac{1}{4}$ W	33212251
C611	Mylar, .015 UF $\pm 10\%$, 100V	31918803	R528	1M $\pm 10\%$, $\frac{1}{4}$ W	33211051
C612-C800	Not Used		R529	470K $\pm 10\%$, $\frac{1}{4}$ W	33214741
C801-C805	Lytic, 50 UF, 100V	31818897	R530	1K $\pm 10\%$, $\frac{1}{4}$ W	33211021
C806	Lytic, 47 UF, 63V	31518899	R531	47K $\pm 10\%$, $\frac{1}{4}$ W	33214731
C807	Lytic, 500 UF, 50 V	31827095	R532	2.2M $\pm 10\%$, $\frac{1}{4}$ W	33212251
C808	Lytic, 47 UF, 63V	31518899	R533	150K $\pm 10\%$, $\frac{1}{4}$ W	33211541
C809	Lytic, 500 UF, 50 V	31827095	R534	390 Ω $\pm 10\%$, $\frac{1}{4}$ W	33213911
C810, C811	Lytic, 50 UF, 100V	31818897	R535	220 $\pm 5\%$, $\frac{1}{4}$ W	33212215
DIODES			R536	5.6K $\pm 5\%$, $\frac{1}{4}$ W	33215625
CR1-CR800	Not Used		R537	1.5M $\pm 10\%$, $\frac{1}{4}$ W	33211551
CR801-CR803	200 PIV	41022464	R538	5.6 $\pm 10\%$, $\frac{1}{4}$ W	33215621
COILS			R539	68K $\pm 10\%$, $\frac{1}{4}$ W	33216831
L1-L600	Not Used		R540	1K $\pm 10\%$, $\frac{1}{4}$ W	33211021
L601	Choke, 1H $\pm 10\%$	12027623	R541	470K $\pm 10\%$, $\frac{1}{4}$ W	33214741
L602	Choke, 0.6H $\pm 10\%$	12027624	R542	47K $\pm 10\%$, $\frac{1}{4}$ W	33214731
L603	Choke, 102MH $\pm 10\%$	12025894	R543	150K $\pm 10\%$, $\frac{1}{4}$ W	33211541
L604	Choke, 22 MH $\pm 10\%$	12025896	R544	390 Ω $\pm 10\%$, $\frac{1}{4}$ W	33213911
L605	Choke, 10 MH $\pm 10\%$	12025895	R545	220 $\pm 5\%$, $\frac{1}{4}$ W	33212215
			R546	5.6K $\pm 5\%$, $\frac{1}{4}$ W	33215625
			R547	5.6K $\pm 10\%$, $\frac{1}{4}$ W	33215621

CIRCUIT REF.	DESCRIPTION	HK PART NO.	DESCRIPTION	HK PART NO.
RESISTORS				
R548	100 ±10%, ¼ W	33211011	Light Shield, Fishpaper,	
R549-R600	Not Used		Slide Control	61426352
R601	470 ±10%, ¼ W	33214741	Function Switch	24025502
R602	3.3K ±10%, ¼ W	33213321	Mode Switch	24025430
R603	2.2M ±10%, ¼ W	33212251	Pushbutton Switch, Power	25026153
R604	1K ±10%, ¼ W	33211021	Pushbutton Switch, DPDT	25026151
R605	1.5M ±10%, ¼ W	33211551	Headphone Jack W/Hardware	65426283
R606	3.3K ±10%, ¼ W	33213321	Speaker Selector Switch	24025431
R607	1M ±10%, ¼ W	33211051	Speaker Selector Switch Shaft	60426231
R608	270 ±10%, ¼ W	33212711	Speaker Switch Shaft Coupler	60426216
R609-R612	470 ±10%, ¼ W	33214711	Speaker Switch Shaft Bushing	61613253
R613-R800	Not Used		Pilot Light Jewel	61626346
R801	15K ±10%, ½ W	33311531	Pilot Lamp	46527153
R802	10K ±10%, ½ W	33311031	Fuse Holder W/Hardware	65410901
R803-R806	3.9K ±10%, ½ W	33313921	Fuse, 0.25A-3AG	45026404
R807-R810	15K ±10%, ½ W	33311531	Line Cord	53021115
R811, R812	3.3K ±10%, ½ W	33313321	Strain Relief	65421116
TRANSFORMER				
T1	Power	10125602	AC Receptacle, Black	65416751
CONTROLS				
VR1	Volume, 50K, Rotary	22026162	AC Receptacle, White	65427146
VR2	Balance, 50K, Rotary	22026161	Ground Terminal	65426317
VR3-VR7	Audio Equalizers, 50K, Slide	22125397	Speaker Connection Strip	65426351
MISCELLANEOUS				
	Knob, Rotary	63228028	Power Amp. Input Conn., Female	65426341
	Knob, Slide	63228033	Power Amp. Input Conn., Male	65426340
	Knob, Pushbutton	00228324	RCA Jack Ass'y	65426318
	Escutcheon	63028247	Tone Control PC Board	
	Top Cover	60125936	W/Components	00126143
	Bottom Plate	60125937	Phono Preamp PC Board	
	Rubber Foot	62011692	W/Components	00126344
			Preamp Output PC Board	
			W/Components	00126345
			Power Supply PC Board	
			W/Components	00126346
			PC Board Connector Strip	65425278
			PC Board Guide, Edge Mounting	61626248
			PC Board Guide, Free Standing	61626267
			Owner Manual	90726401
			Technical Manual	90728859
			Speaker Patch Cable	57526338

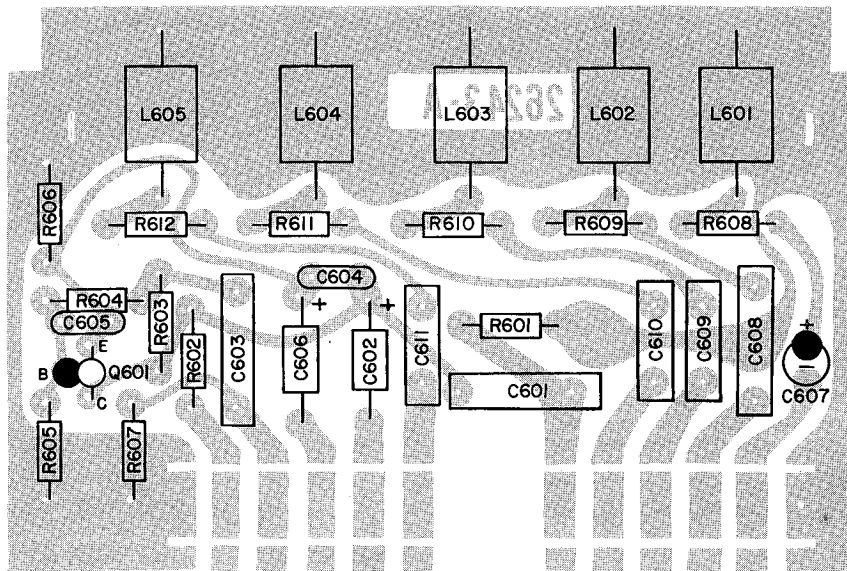


POWER SUPPLY PC BOARD

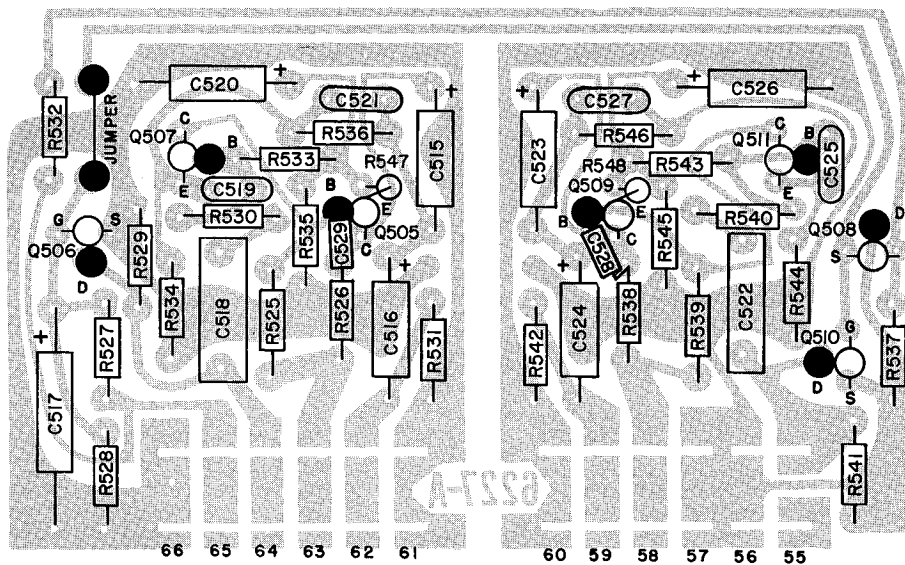
2 H



PHONO PREAMP PC BOARD

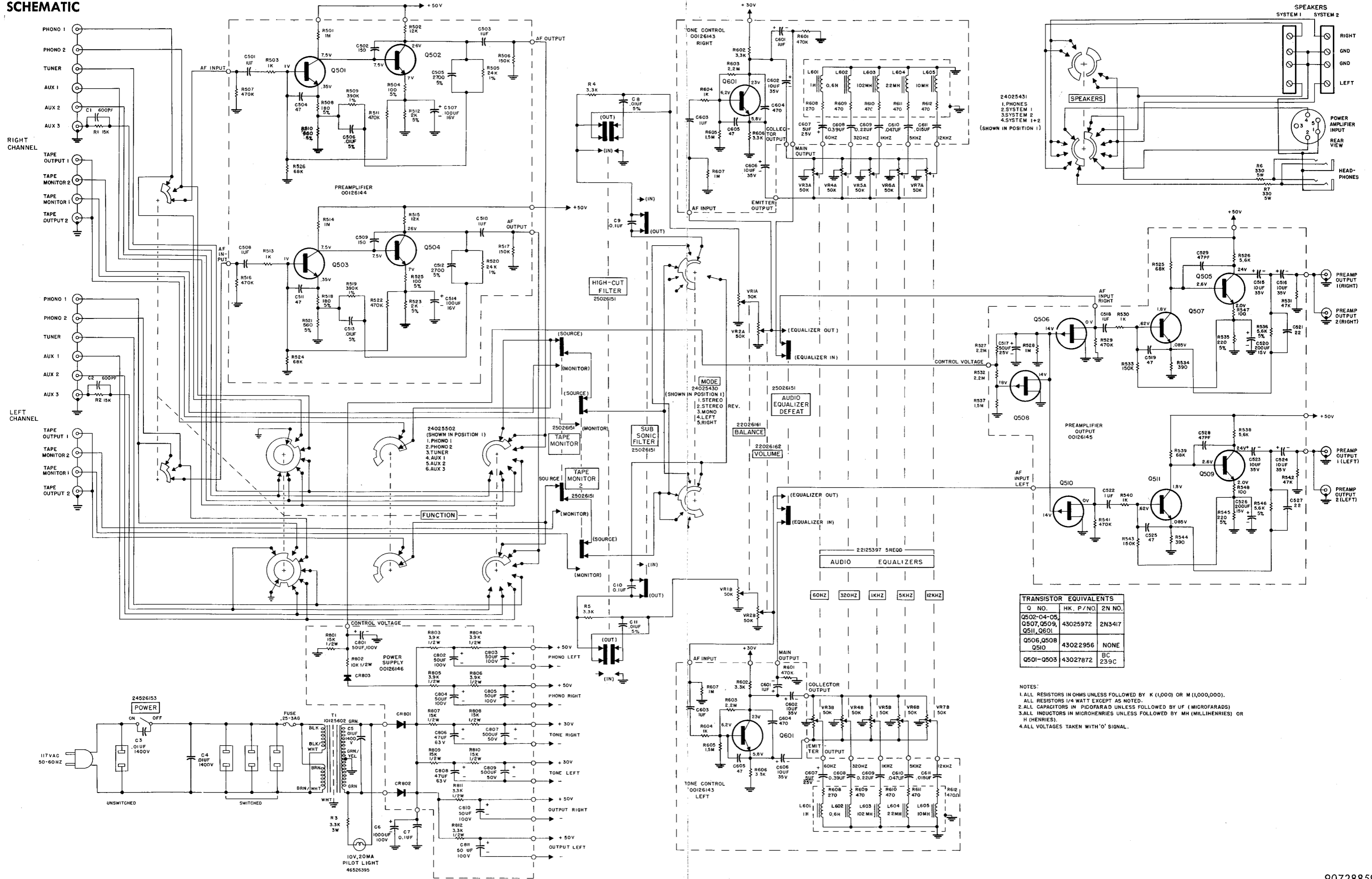


TONE CONTROL PC BOARD



PREAMP OUTPUT PC BOARD

SCHEMATIC

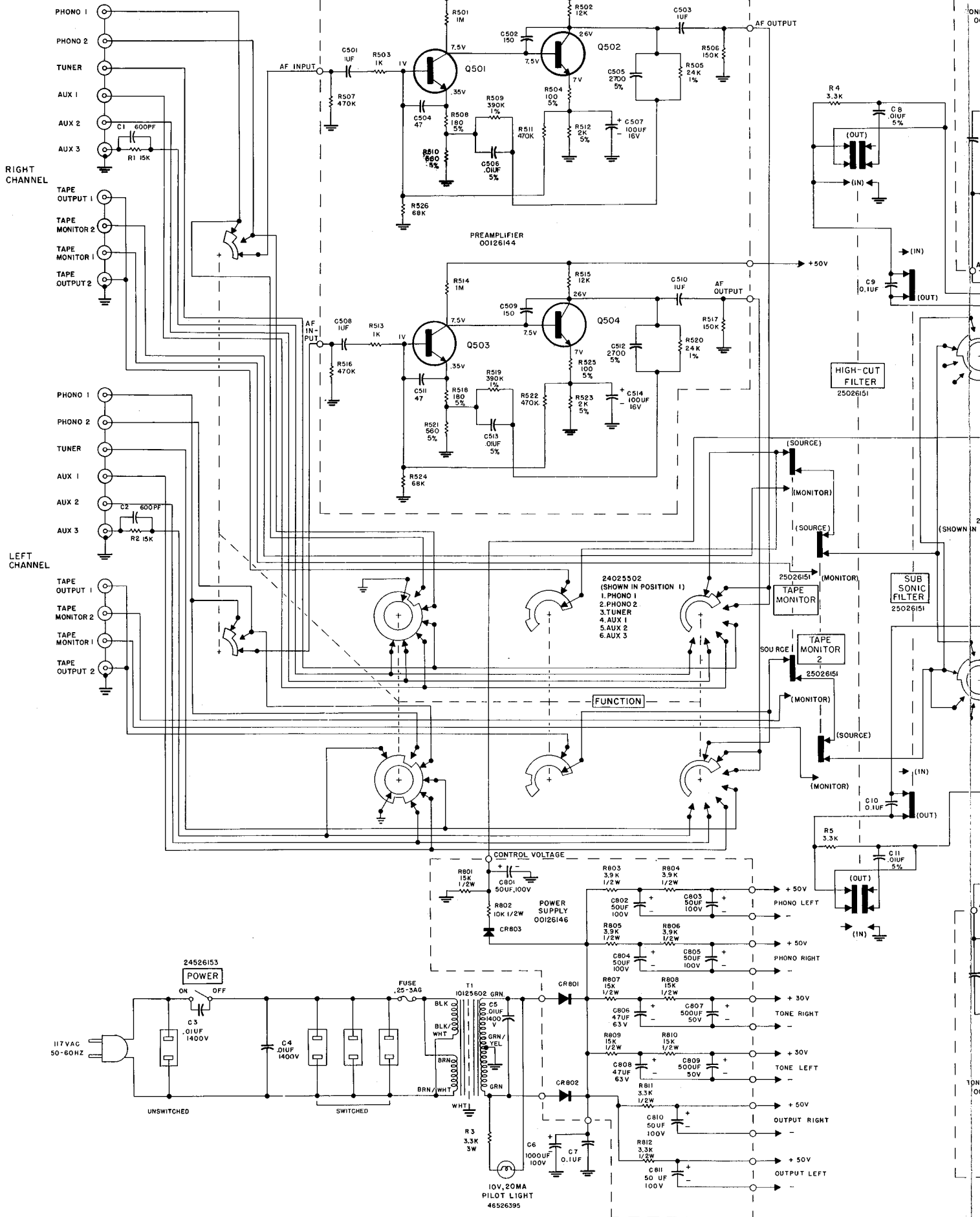


TRANSISTOR EQUIVALENTS

Q NO.	HK. P/NO.	2N NO.
Q502-Q504, Q507, Q509, Q511, Q601	43025972	2N3417
Q506, Q508	43022956	NONE
Q510	43027872	BC 239C

- NOTES:**
1. ALL RESISTORS IN OHMS UNLESS FOLLOWED BY K (1,000) OR M (1,000,000). ALL RESISTORS 1/4 WATT EXCEPT AS NOTED.
 2. ALL CAPACITORS IN PICOFARAD UNLESS FOLLOWED BY UF (MICROFARADS)
 3. ALL INDUCTORS IN MICROHENRIES UNLESS FOLLOWED BY MH (MILLIHENRIES) OR H (HENRIES).
 4. ALL VOLTAGES TAKEN WITH '0' SIGNAL.

SCHEMATIC



The Citation S/11/S

Remote Switching Control

Introduction

The Citation S/11/S was developed for use with the Citation 11 to allow operation of its speaker switch with amplifiers of high power output. The S/11/S, using high current, long life silver/cadmium oxide contacts, utilizes the switching logic of the Citation 11 to remotely control speakers during switching when high power amplifiers are used.

The instructions within this manual describe the use of the Citation S/11/S with the Citation 11 preamplifier and the Citation 16 power amplifier rated at 150 watts RMS per channel. The S/11/S can of course be used with any other high power amplifier capable of developing up to 800 watts per channel into an 8 ohm load, or 400 watts per channel into a 4 ohm load.

Read each section of this manual and the manuals of your Citation 11 and associated power amplifier before you proceed. This will insure that you make the right connections the first time, thus shortening the time required for installation.

Before proceeding with the connection of the S/11/S, there is one other item that you should take care of. Since you have just purchased the unit, you should still have the **bill of sale**. Make sure it is clearly marked showing the date of purchase. Now look on the bottom panel of the S/11/S and locate the serial number. Record this number on the bill of sale and then put it away in a safe place for future reference. This number will be important if your unit requires warranty service. It may also prove a useful identification if your unit becomes subject to theft. Also remember to fill out and mail in your registration card.

Warning: To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

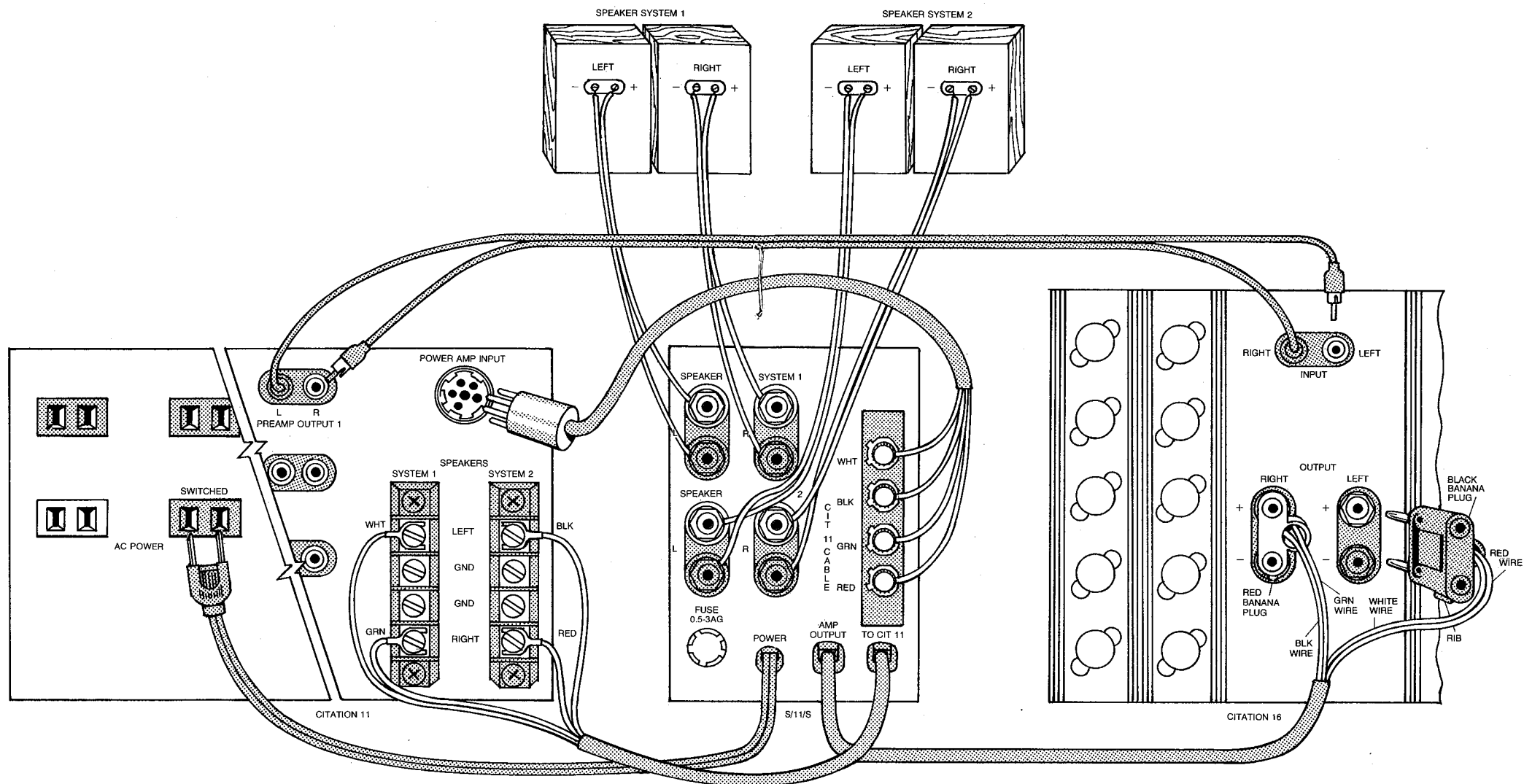
Connecting the S/11/S

Before proceeding, make certain that the S/11/S, the Citation 11 and the Citation 16 are **disconnected** from AC or mains power.

The instructions preceding the paragraph marked **Cable Connection** are **only** for those who have purchased the S/11/S after their Citation system was originally installed. If you purchased the S/11/S together with the Citation 11 and Citation 16 and are proceeding with your initial installation, disregard this information and proceed to the paragraph headed **Cable Connection**.

The cable originally supplied with the Citation 11 has a 5-pin male connector at one end, four free wires at the other, and should now be connected between the mating receptacle on the Citation 11 and the speaker output terminals of your power amplifier. Disconnect the four ends of this cable from your power amplifier leaving the 5-pin male connector in the receptacle on the rear of the Citation 11.

Remove **all** speaker wires connected to the speaker terminal barrier strips on the rear of the Citation 11.



Cable Connection

There are two cables and a power cord on the rear of the Citation S/11/S. Identify the cable marked **TO CIT 11** with four spade lug connectors at its end. Connect these four wires as shown in the figure to the speaker terminal barrier strips on the rear of the Citation 11.

Green System 1 Right
 Red System 2 Right
 White System 1 Left
 Black System 2 Left

Note that there are no connections to the four (GND) terminal screws on the barrier strips of the Citation 11.

The cable marked **AMP OUTPUT** has two dual "banana plugs" at its end. Note that these "banana plugs" have a "rib" on one edge. This is the "gnd" or - terminal. On the red "banana plug" this is the black

wire, while on the black "banana plug" this is the white wire.

Connect the red "banana plug" to the right speaker terminals of your amplifier and the black "banana plug" to the left speaker terminals. Be careful to observe the positive ("+" and negative ("-" or (gnd) polarity.

If the speaker terminals of your amplifier will not accept dual "banana plugs", they may be removed and the bare wires connected as follows:

Red to Left Channel (+) speaker terminal
 White to Left Channel (-) or (gnd) terminal
 Green to Right Channel (+) speaker terminal
 Black to Right Channel (-) or (gnd) terminal

The Citation 11 is supplied with a cable having a 5-pin male connector at one end

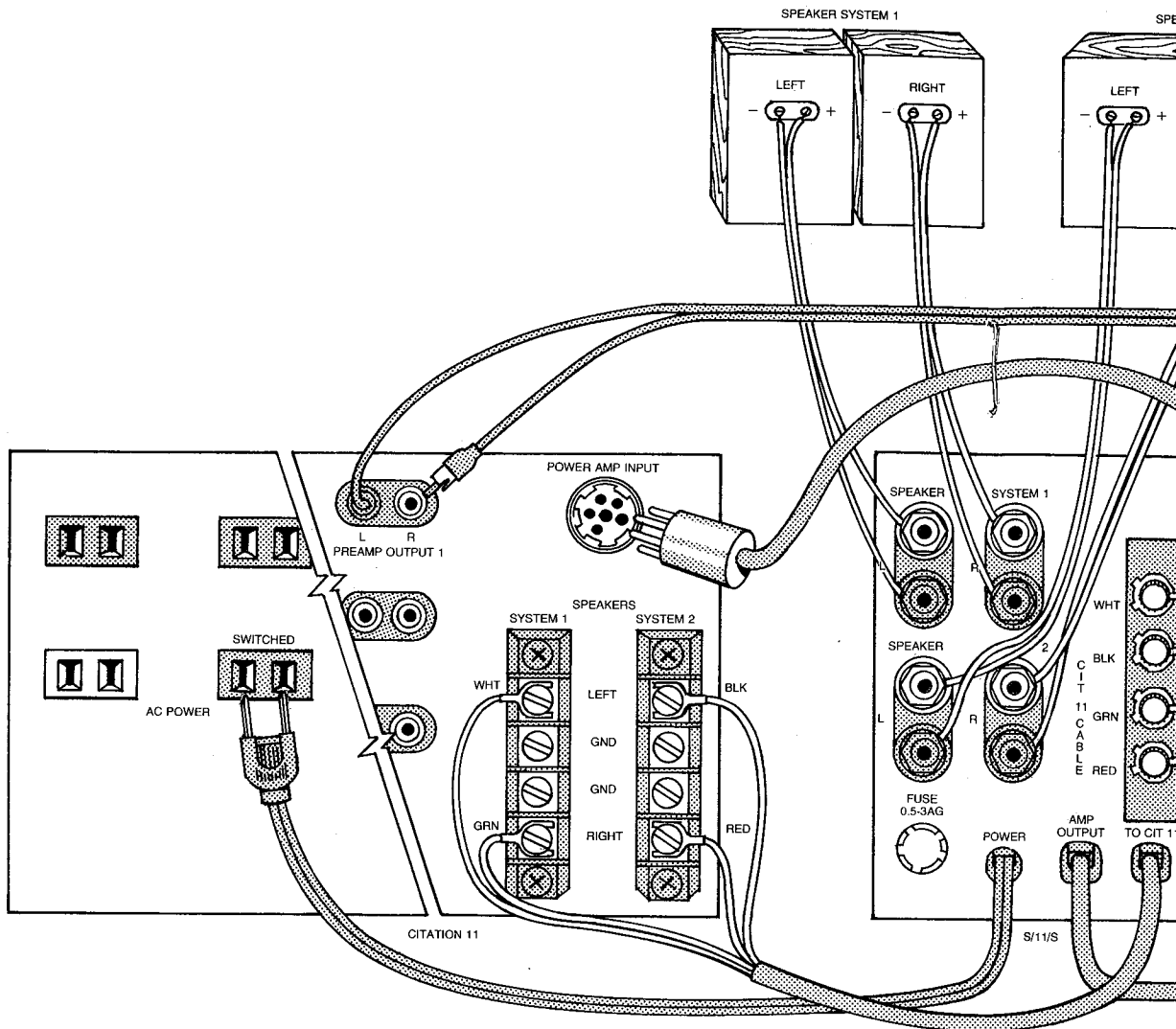
and four free wires at the other. Connect the 5-pin male connector into the mating receptacle on the rear of the Citation 11. Connect the wires at the other end of this cable to the four screw terminals labeled **CIT 11 CABLE** on the rear of the Citation S/11/S. Carefully dress each wire around its corresponding screw and tighten with a flat blade screwdriver. Check to make sure that each wire is separated and not touching its adjacent wire. The correct color code for connections are marked on the rear of the S/11/S.

Connect your first pair of speakers to the System 1 (L and R) and the second pair of speakers to System 2 (L and R) speaker terminal posts on the rear of the Citation S/11/S, making certain you observe the correct polarity.

Connect the power cord from the S/11/S into a "switched" AC receptacle on the rear of the Citation 11.

Complete all other signal and power connections by reading the owner manuals of your preamplifier and power amplifier. **[NOTE: The power cord of the Citation 16 or any other high power amplifier should not be connected to a "switched" outlet on the Citation 11.]**

This completes the connection of the S/11/S into your system. It may now be placed in the space reserved for it. Since its operation is controlled entirely by the Citation 11, frequent access to the S/11/S is not required. Power to the S/11/S is provided by the on/off switch of the Citation 11 and, when activated, an indicator light is illuminated on the front panel. The S/11/S is controlled completely by the speaker selector switch on the Citation 11. The function of the headphone receptacle on the Citation 11 is operative in the **PHONES** position of the Citation 11 Speaker Selector.



Cable Connection

There are two cables and a power cord on the rear of the Citation S/11/S. Identify the cable marked **TO CIT 11** with four spade lug connectors at its end. Connect these four wires as shown in the figure to the speaker terminal barrier strips on the rear of the Citation 11.

Green System 1 Right
 Red System 2 Right
 White System 1 Left
 Black System 2 Left

Note that there are no connections to the four (GND) terminal screws on the barrier strips of the Citation 11.

The cable marked **AMP OUTPUT** has two dual "banana plugs" at its end. Note that these "banana plugs" have a "rib" on one edge. This is the "gnd" or - terminal. On the red "banana plug" this is the black

wire, while on the black "banana plug" this is the white wire.

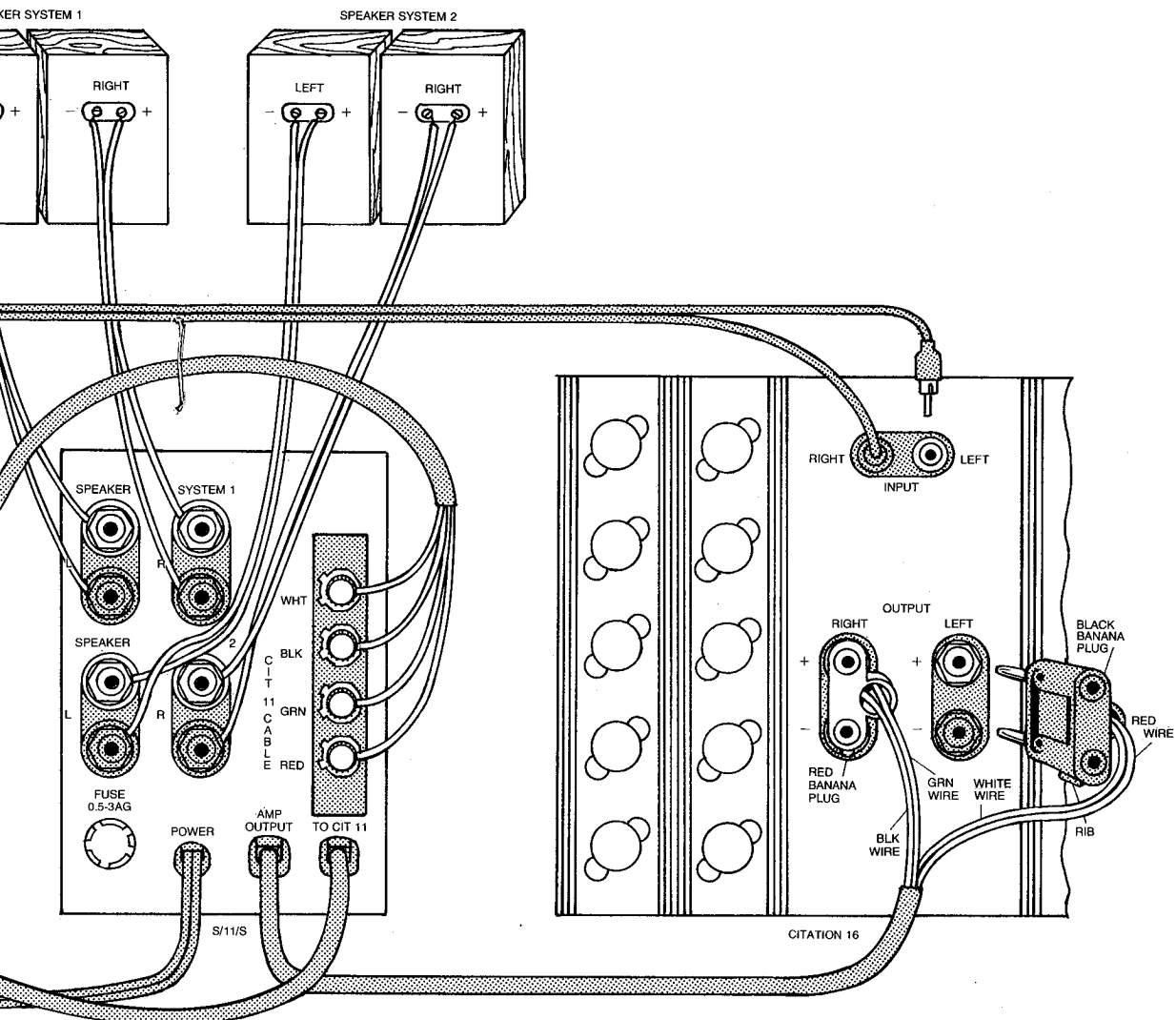
Connect the red "banana plug" to the right speaker terminals of your amplifier and the black "banana plug" to the left speaker terminals. Be careful to observe the positive ("+") and negative ("-") or (gnd) polarity.

If the speaker terminals of your amplifier will not accept dual "banana plugs", they may be removed and the bare wires connected as follows:

Red to Left Channel (+) speaker terminal
 White to Left Channel (-) or (gnd) terminal
 Green to Right Channel (+) speaker terminal
 Black to Right Channel (-) or (gnd) terminal

The Citation 11 is supplied with a cable having a 5-pin male connector at one end

and four
 the 5-pin
 receptac
 Connect
 cable to t
CIT 11 C
 S/11/S. C
 its corres
 flat blade
 sure that
 touching
 color cod
 the rear o
 Connect
 the System
 pair of sp
 speaker t
 Citation S
 observe
 Connect
 S/11/S int
 the rear o



and four free wires at the other. Connect the 5-pin male connector into the mating receptacle on the rear of the Citation 11. Connect the wires at the other end of this cable to the four screw terminals labeled **CIT 11 CABLE** on the rear of the Citation S/11/S. Carefully dress each wire around its corresponding screw and tighten with a flat blade screwdriver. Check to make sure that each wire is separated and not touching its adjacent wire. The correct color code for connections are marked on the rear of the S/11/S.

Connect your first pair of speakers to the System 1 (L and R) and the second pair of speakers to System 2 (L and R) speaker terminal posts on the rear of the Citation S/11/S, making certain you observe the correct polarity.

Connect the power cord from the S/11/S into a "switched" AC receptacle on the rear of the Citation 11.

Complete all other signal and power connections by reading the owner manuals of your preamplifier and power amplifier. **[NOTE:** The power cord of the Citation 16 or any other high power amplifier **should not** be connected to a "switched" outlet on the Citation 11.]

This completes the connection of the S/11/S into your system. It may now be placed in the space reserved for it. Since its operation is controlled entirely by the Citation 11, frequent access to the S/11/S is not required. Power to the S/11/S is provided by the on/off switch of the Citation 11 and, when activated, an indicator light is illuminated on the front panel. The S/11/S is controlled completely by the speaker selector switch on the Citation 11. The function of the headphone receptacle on the Citation 11 is operative in the **PHONES** position of the Citation 11 Speaker Selector.

Specifications

Switching Capacity:	Up to 800 watts per channel at 8 ohms or more each.
Number of Stereo Systems Switched:	2
Power requirements:	100-120 VAC, 50/60 Hz or 220-250 VAC, 50/60 Hz (Export)
Dimensions:	4"W x 10½"D x 5½"H (10.2 cm W x 26.7 cm D x 14 cm H)
Weight:	4 pounds, 12 ounces (2.16 kg)

Limited Two (2) Year Warranty and Service Policy

Policy

We warrant this product to be free from defects in material and workmanship under normal use and service, and in accordance with conditions set forth below. Should a defect occur within the period specified, and provided that the unit is returned to either Harman/Kardon or an authorized Harman/Kardon warranty station, transportation prepaid, and which our examination shall disclose to our satisfaction to be defective, we will, for a period of **two (2) years** from date of purchase, either replace or repair and install any defective parts of this product free of charge.

Exceptions

This warranty does not include any obligation as to: transportation charges to and from the factory or an authorized warranty station.

Registration

To obtain service under the terms of this policy, it is necessary for you to retain your **original bill of sale**. The enclosed registration card will **not** be considered proof of purchase.

In the event your equipment requires service during the warranty period, only presentation of your original bill of sale to either a factory-authorized repair agency or the factory itself will insure your rights under the policy, as outlined in this manual.

This warranty is not applicable to any instrument which shall have been repaired or altered in any way so as, in our judgment, to affect its stability or reliability or which has been subject to neglect, misuse, abuse, negligence, or accident; or which has had the serial number altered, effaced or removed. Neither shall this warranty apply to any instrument which has been connected other than in accordance with instructions furnished by us.

Service

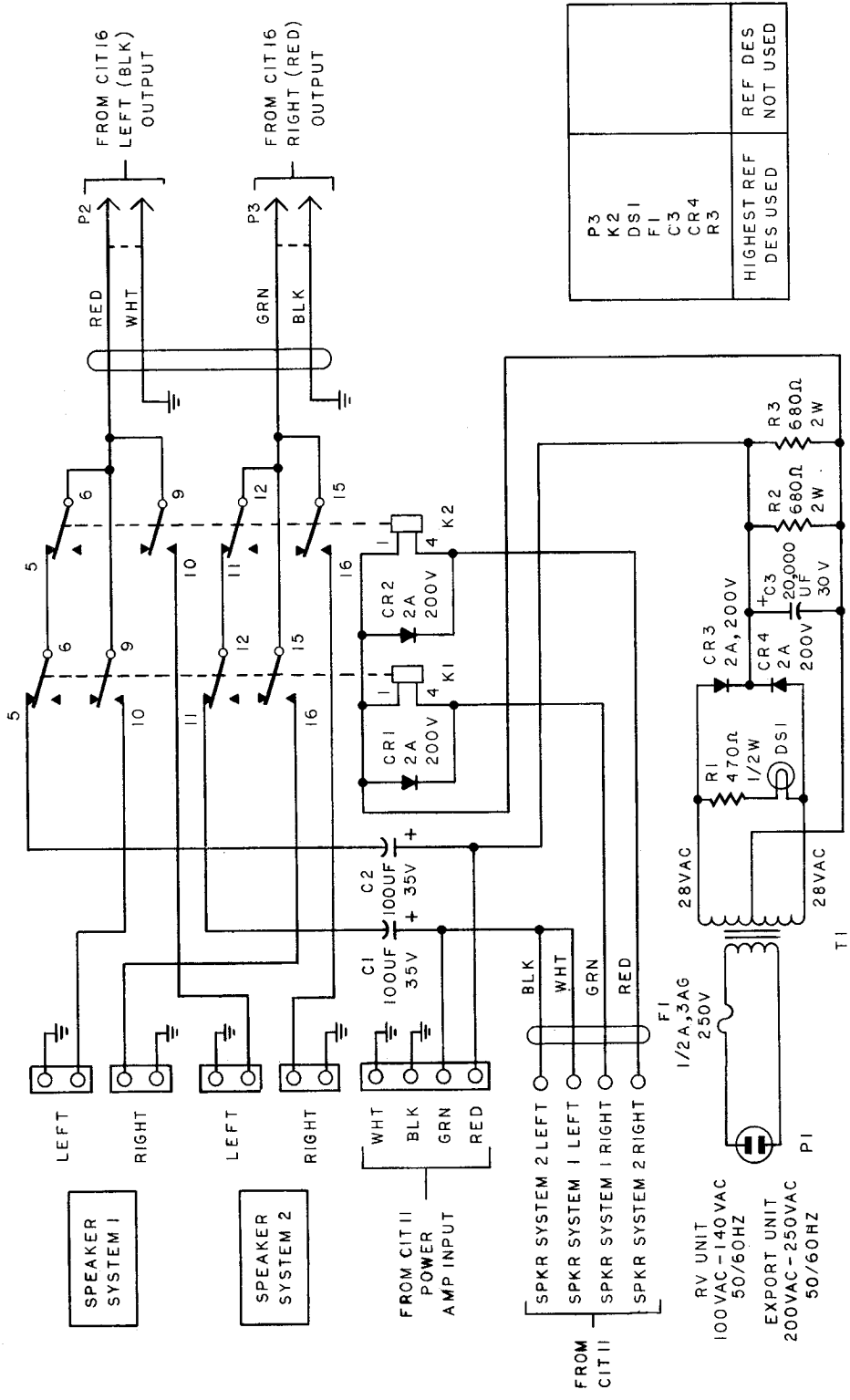
Harman/Kardon has a special customer service division to answer all questions pertinent to the installation and operation of your unit. Please feel free to write to us at any time and we shall endeavor to offer prompt and complete advice.

If your problem cannot be resolved through our combined efforts, we may wish to refer you to a local authorized repair agency or we may prefer to authorize the return of your unit to the factory. In the event it must be returned, an authorization form and proper packing instructions will be forwarded to you. This authorization form **must be returned** with your unit.

Under no circumstances should your unit be shipped to the factory without prior authorization.

The duration of implied warranties is **two (2) years**. Our obligation under any warranty, express or implied, is limited to repair or replacement of any unit found to be defective. Under no circumstances shall we be liable for incidental or consequential damages.

SCHEMATIC DIAGRAM



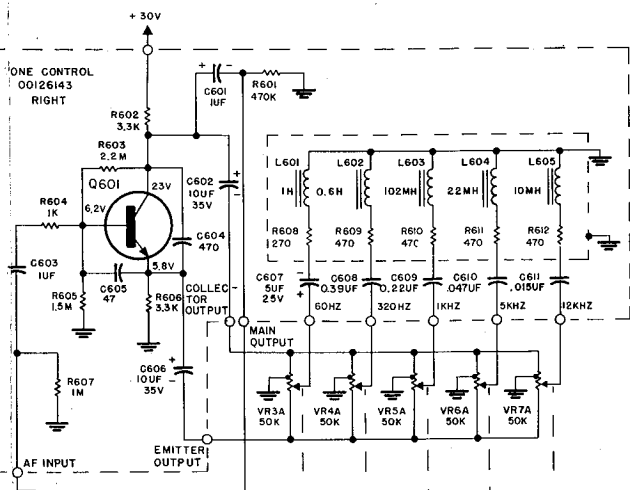
P3	HIGHEST REF DES USED	REF DES NOT USED
K2		
DS1		
F1		
C3		
CR4		
R3		

CHASSIS PARTS LIST

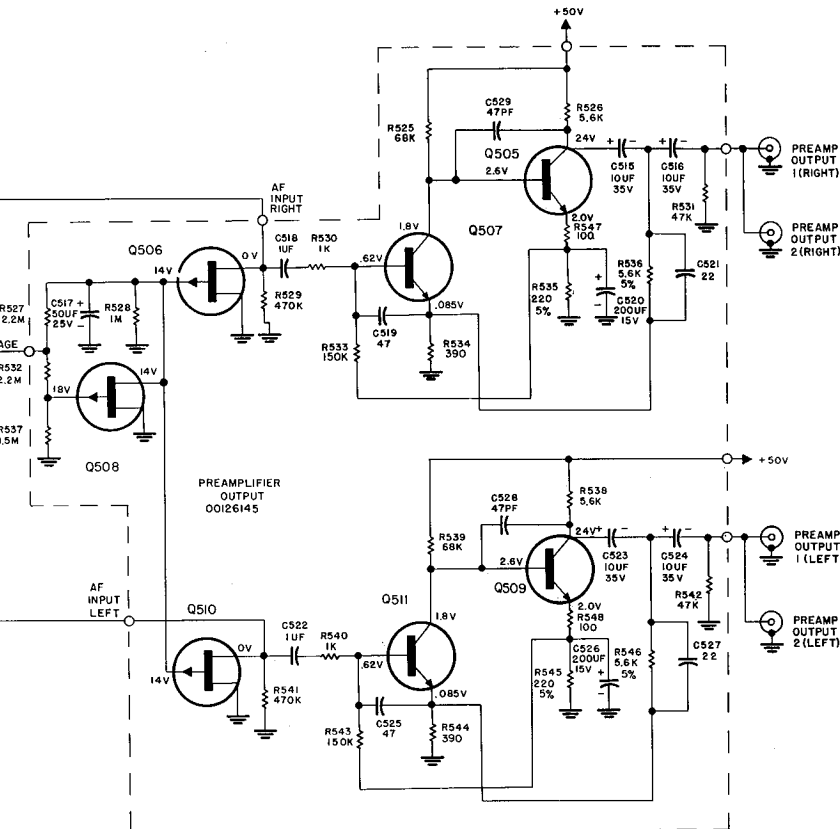
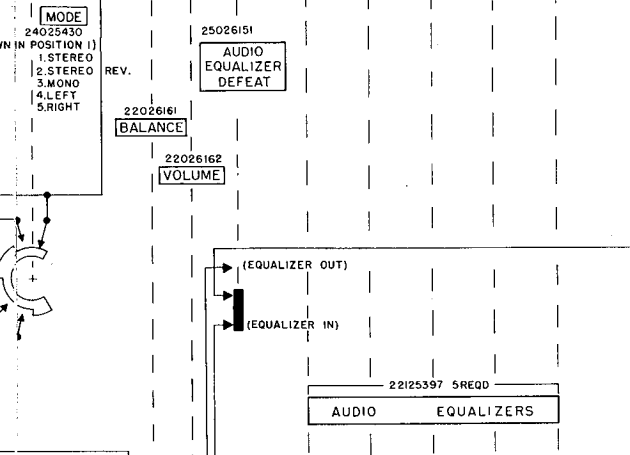
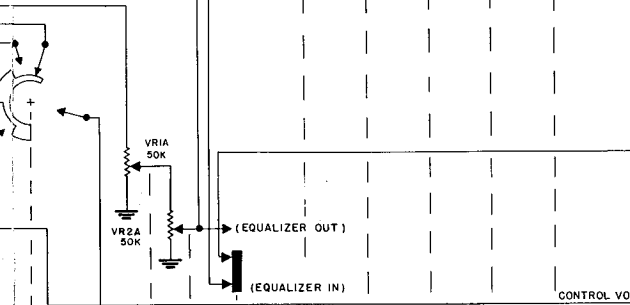
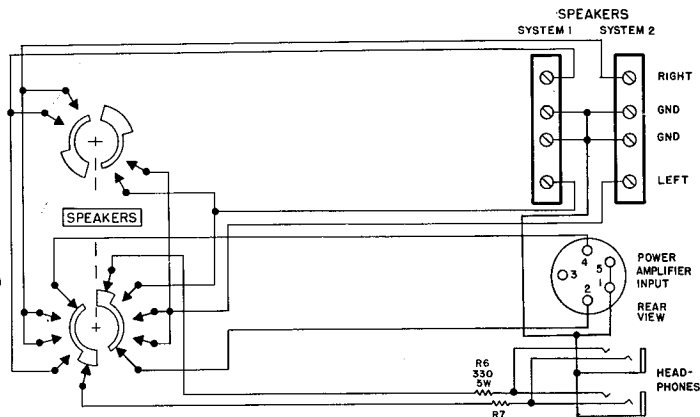
CIRCUIT REF. NO.	H/K PART NO.	DESCRIPTION
CAPACITOR, LYTIC		
C1, 2	31818792	100UF, 35V
C3	31129074	20,000UF, 30V
RELAY		
K1, 2	13031130	Potter Brumfield R10-E3612-1
DIODE		
CR1, 2, 3, 4	41029089	2A, 200V
TRANSFORMER		
T1	10131122	Transformer, Pwr.
MISCELLANEOUS		
F1	45031348	Fuse, 1/2A, 3AG, 250V MDL Slo-Blo
	53031409	Cable, 4 Cond.
P2	65431064	Plug, Male, Banana, 2 Term, Blk.
P3	65431103	Plug, Male, Banana, 2 Term, Red
	65631124	Spade Lug #6
	61626346	Lamp Holder, Molded, Red
DS1	46528051	Lamp 12V/60MA
	65427001	Fuse Holder
	53029083	Line Cord
	62029686	Foot, Mounting
EXPORT		
TRANSFORMER		
T1	10131123	Transformer, Pwr.

NOTE: To speed handling of your order be sure to include both the model and serial numbers, in addition to the quantity, part number and part description of the items ordered. Orders from independent dealers, independent servicemen, and retail customers will be shipped on a cash in advance basis. Harman/Kardon reserves the right to substitute equivalent parts for those originally installed in this chassis. All parts should be ordered from Harman/Kardon, 55 Ames Court, Plainview, L.I., N.Y. 11803, Att: Parts Department.

CITATION S/11/S



24025431
1. PHONES
2. SYSTEM 1
3. SYSTEM 2
4. SYSTEM 1+2
(SHOWN IN POSITION 1)



TRANSISTOR EQUIVALENTS		
Q. NO.	HK. P/NO.	2N NO.
Q502-Q4-Q5, Q507, Q509, Q511, Q601	43025972	2N3417
Q506, Q508 Q510	43022956	NONE
Q501-Q503	43027872	BC 239C

- NOTES:
1. ALL RESISTORS IN OHMS UNLESS FOLLOWED BY K (1,000) OR M (1,000,000).
ALL RESISTORS 1/4 WATT EXCEPT AS NOTED.
2. ALL CAPACITORS IN PICOFARAD UNLESS FOLLOWED BY UF (MICROFARADS)
3. ALL INDUCTORS IN MICROHENRIES UNLESS FOLLOWED BY MH (MILLIHENRIES) OR H (HENRIES).
4. ALL VOLTAGES TAKEN WITH '0' SIGNAL.

