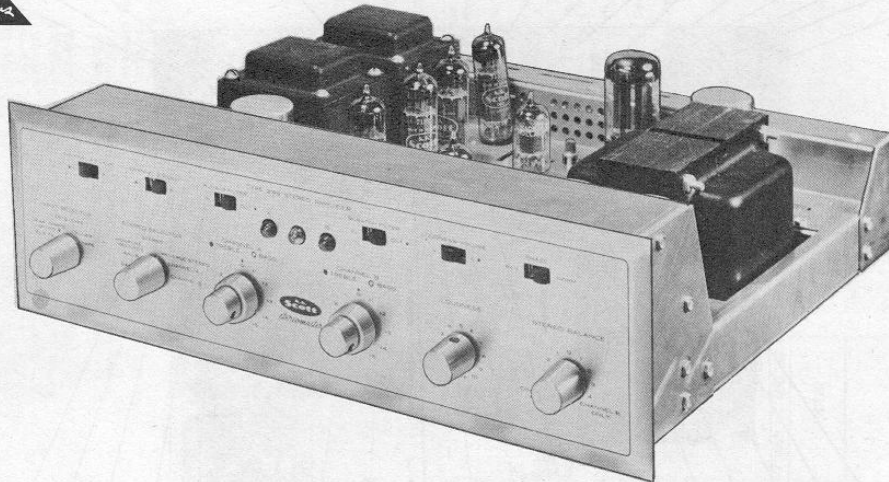


FOLDER 12
SET 445

PHOTOFACT* Folder



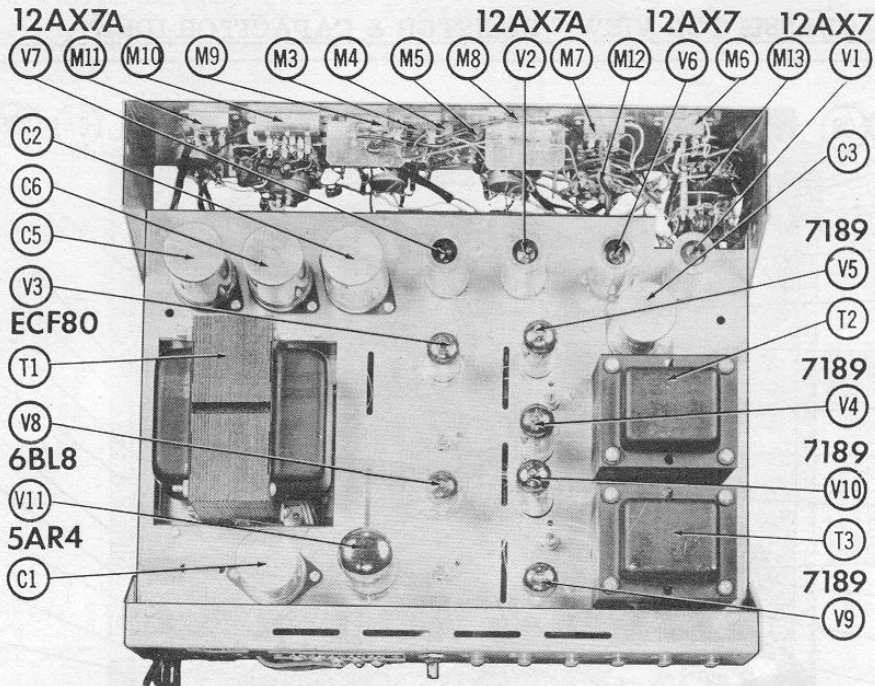
H. H. SCOTT
MODEL 299



H. H. SCOTT
MODEL 299

TRADE NAME	H. H. Scott Model 299
MANUFACTURER	Hermon Hosmer Scott, Inc., 111 Powder Mill Road, Maynard, Mass.
TYPE SET	AC Operated 11 Tube Stereo Audio Amplifier
POWER SUPPLY	105 - 125 Volts AC, 50-60 Cycles RATING 140 Watts, 1.3 Amp. @117 Volts AC

H. H. SCOTT
MODEL 299



HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of

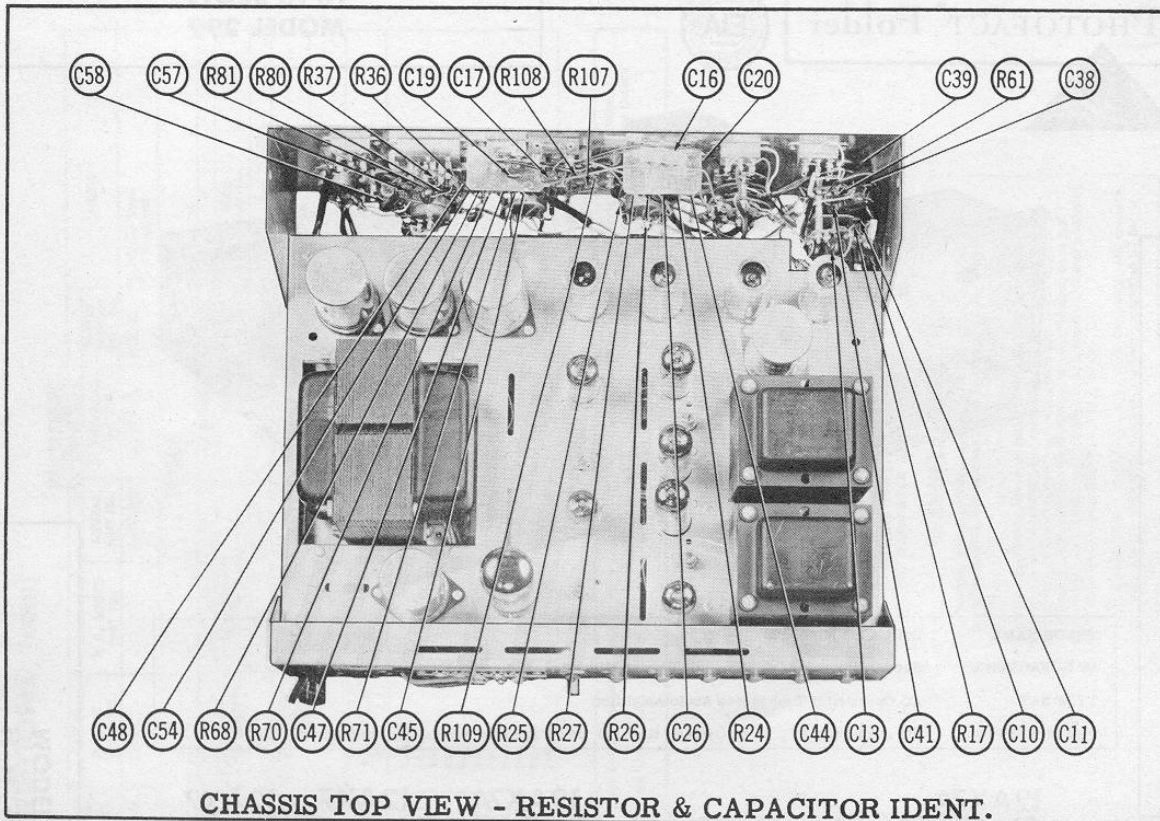
the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1959 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America

DATE 6-59

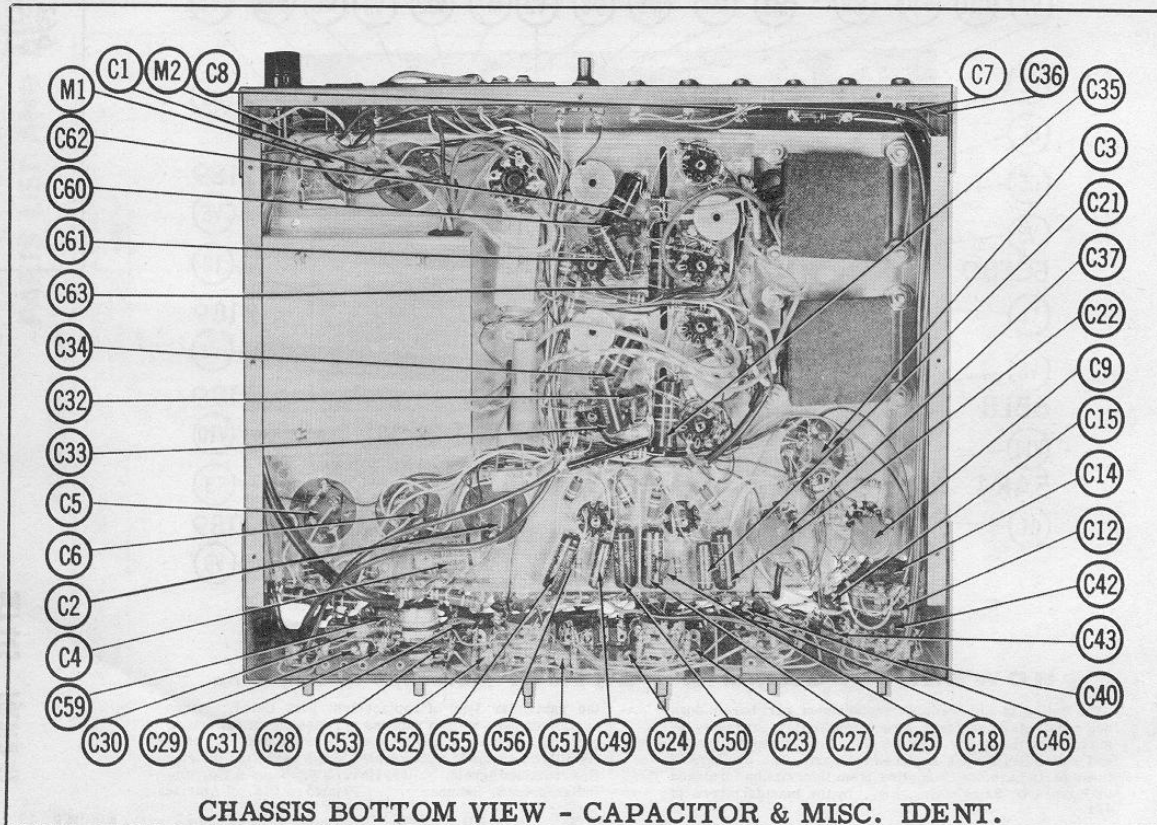
SET 445

FOLDER 12

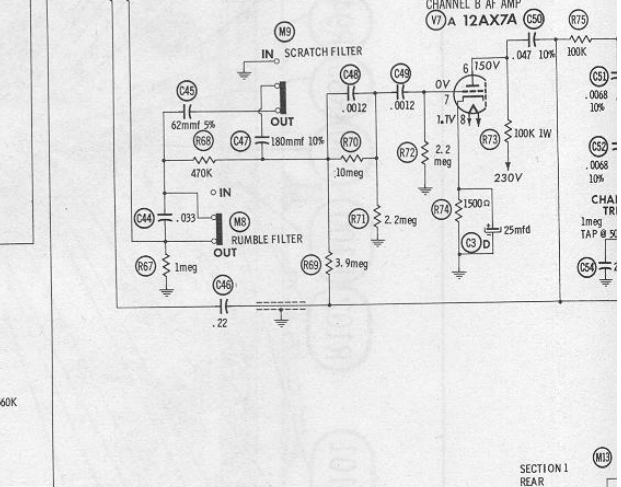
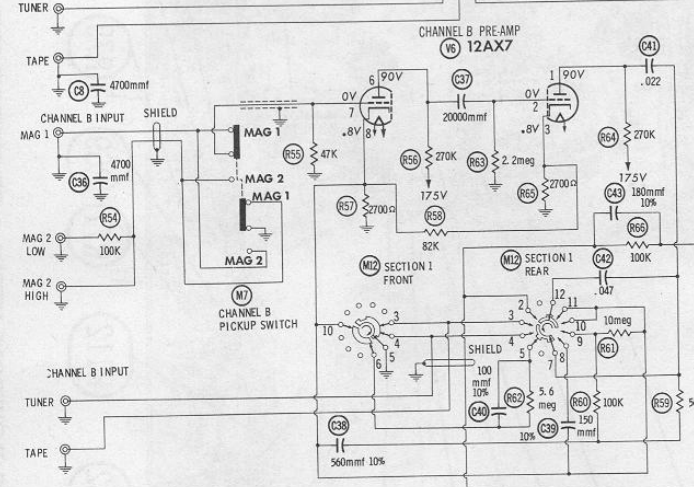
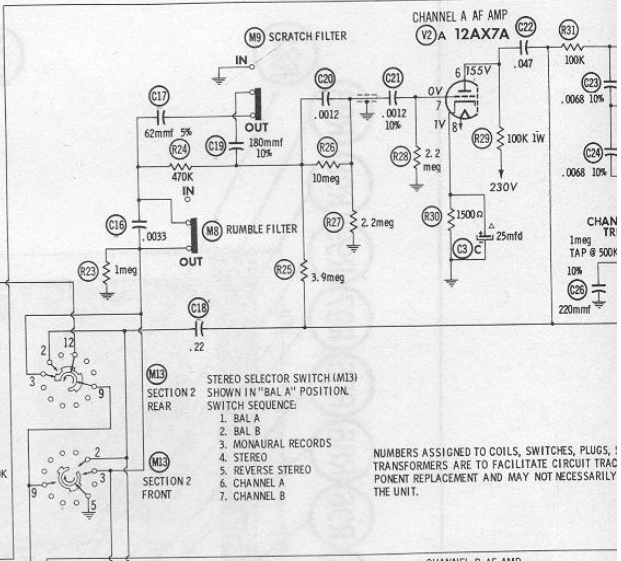
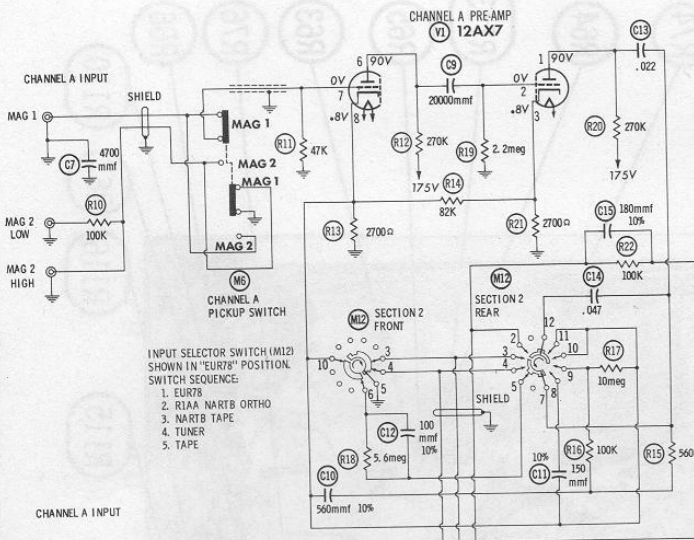
SET 445
FOLDER 12



CHASSIS TOP VIEW - RESISTOR & CAPACITOR IDENT.



CHASSIS BOTTOM VIEW - CAPACITOR & MISC. IDENT.



INPUT SELECTOR SWITCH (M12) SHOWN IN "EUR78" POSITION. SWITCH SEQUENCE:
 1. EUR78
 2. R1AA NARTB ORTHO
 3. NARTB TAPE
 4. TUNER
 5. TAPE

STEREO SELECTOR SWITCH (M13) SHOWN IN "BAL A" POSITION. SWITCH SEQUENCE:
 1. BAL A
 2. BAL B
 3. MONAURAL RECORDS
 4. STEREO
 5. REVERSE STEREO
 6. CHANNEL A
 7. CHANNEL B

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING. COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE THE UNIT.

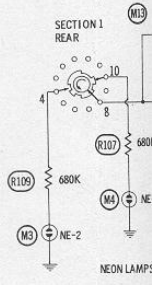
- DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
- Socket connections are shown as bottom views.
- Measured values are from socket pin to common negative.
- Line voltage maintained at 117 volts for voltage readings.
- Nominal tolerance of component values makes possible a variation of 15% in voltage and resistance readings.
- All controls at minimum, proper output load connected.

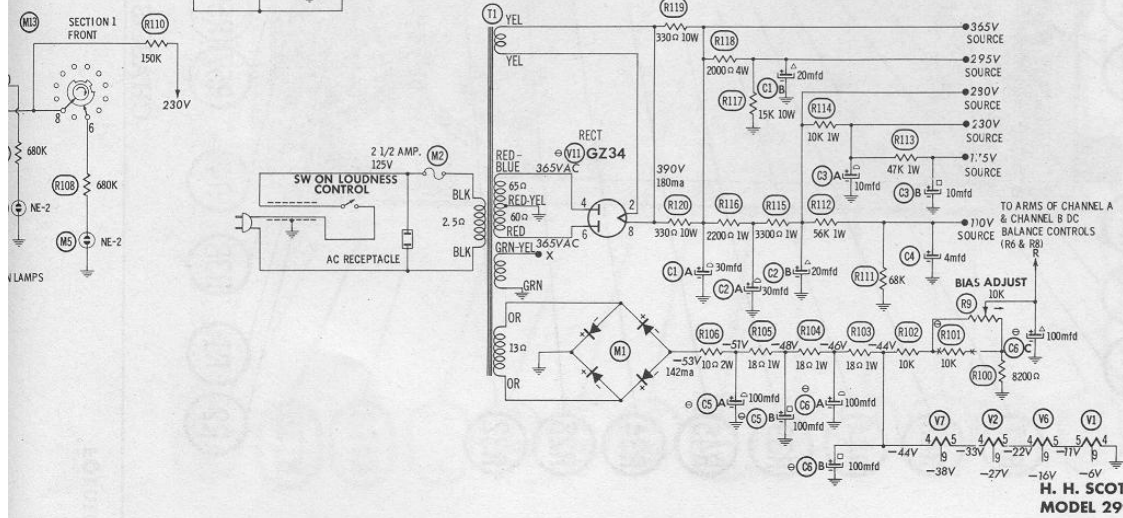
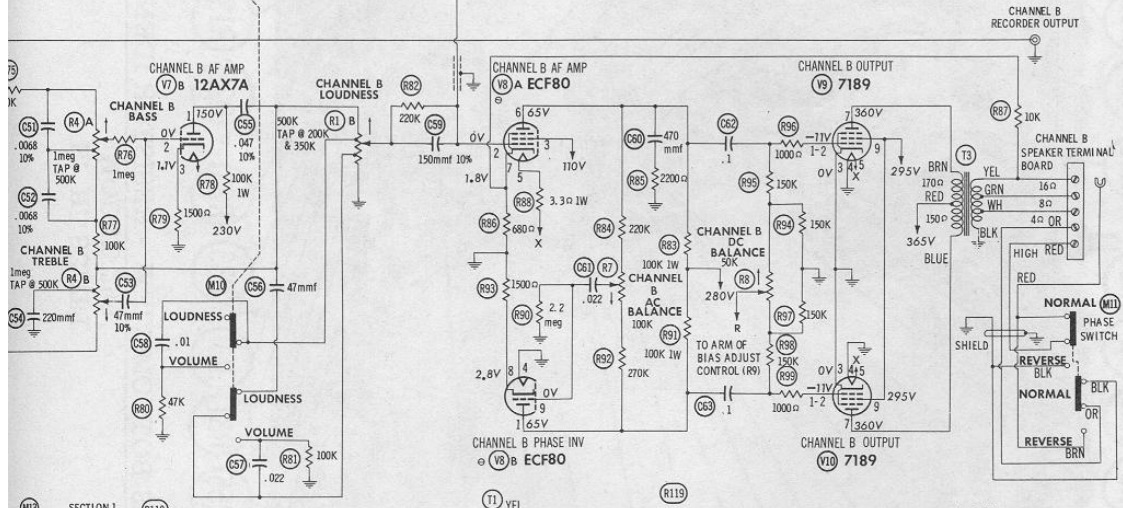
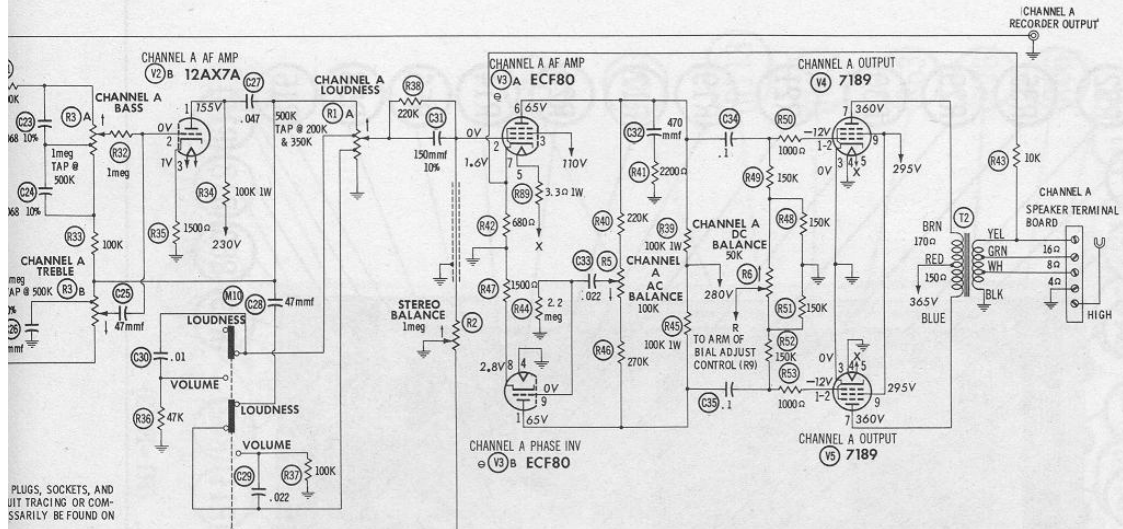
SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
 DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM
 ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

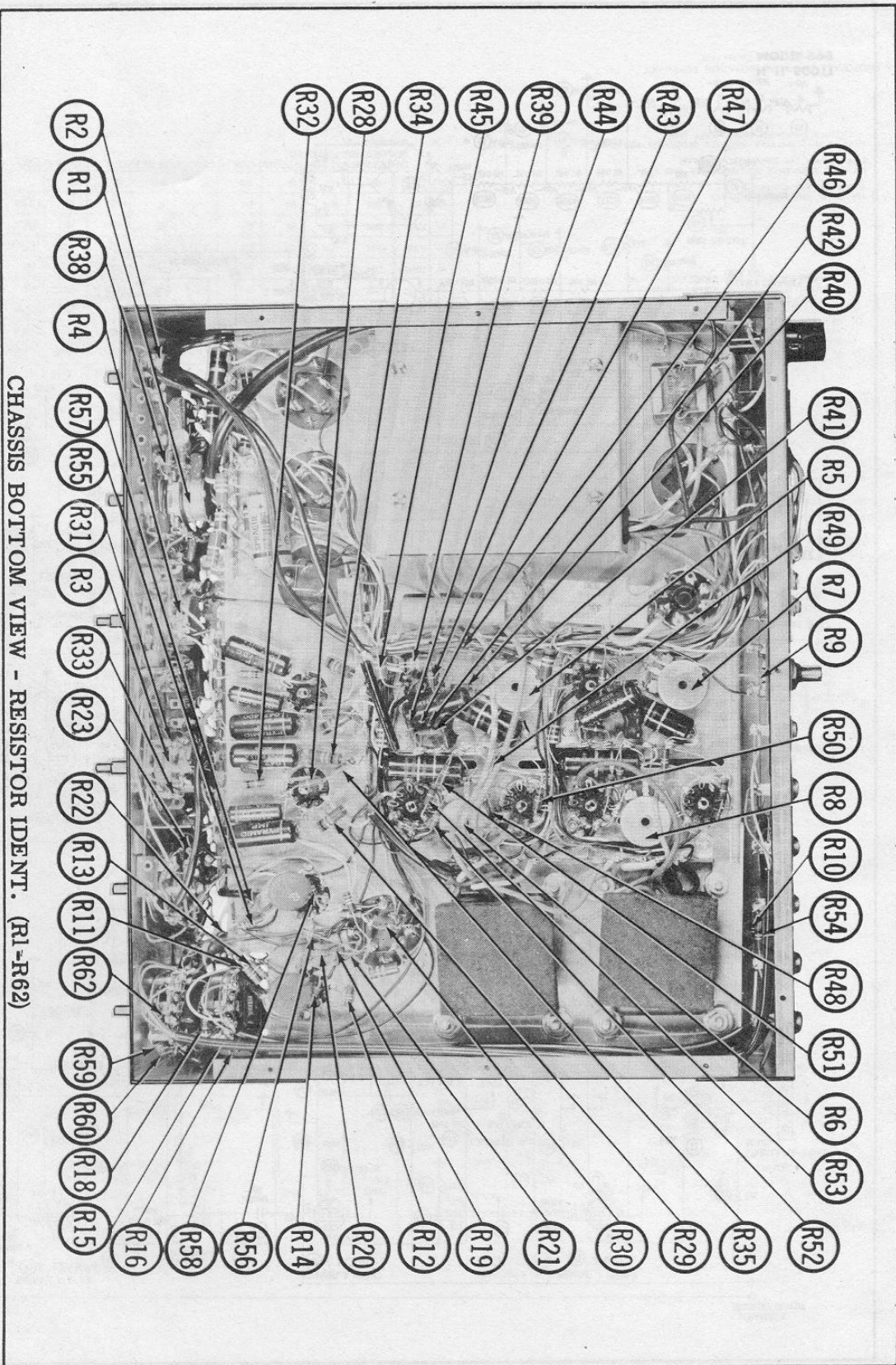
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AX7	†330K	2.2meg	2500Ω	0Ω	12Ω	†330K	47K	2900Ω	6Ω
V2	12AX7A	†115K	1.5meg	1500Ω	36Ω	24Ω	†115K	2.2meg	1500Ω	30Ω
V3	ECF80	†105K	175K	†40K	0Ω	1.6Ω	†105K	680Ω	1500Ω	2.2meg
V4	7189	180K	180K	0Ω	0Ω	.1Ω	NC	†500Ω	NC	†2300Ω
V5	7189	180K	180K	0Ω	0Ω	.1Ω	NC	†480Ω	NC	†2300Ω
V6	12AX7	†330K	2.2meg	2900Ω	24Ω	12Ω	†330K	47K	2900Ω	18Ω
V7	12AX7A	†115K	1.5meg	1500Ω	48Ω	36Ω	†115K	2.2meg	1500Ω	40Ω
V8	ECF80	†105K	175K	†40K	0Ω	1.6Ω	†105K	680Ω	1500Ω	2.2meg
V9	7189	180K	180K	0Ω	0Ω	.1Ω	NC	†500Ω	NC	†2300Ω
V10	7189	180K	180K	0Ω	0Ω	.1Ω	NC	†480Ω	NC	†2300Ω
V11	CZ34 5AR4	NC	†	NC	65Ω	NC	60Ω	NC	†	†

† THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
 † MEASURED FROM PIN 8 OF V11.
 NC NO CONNECTION



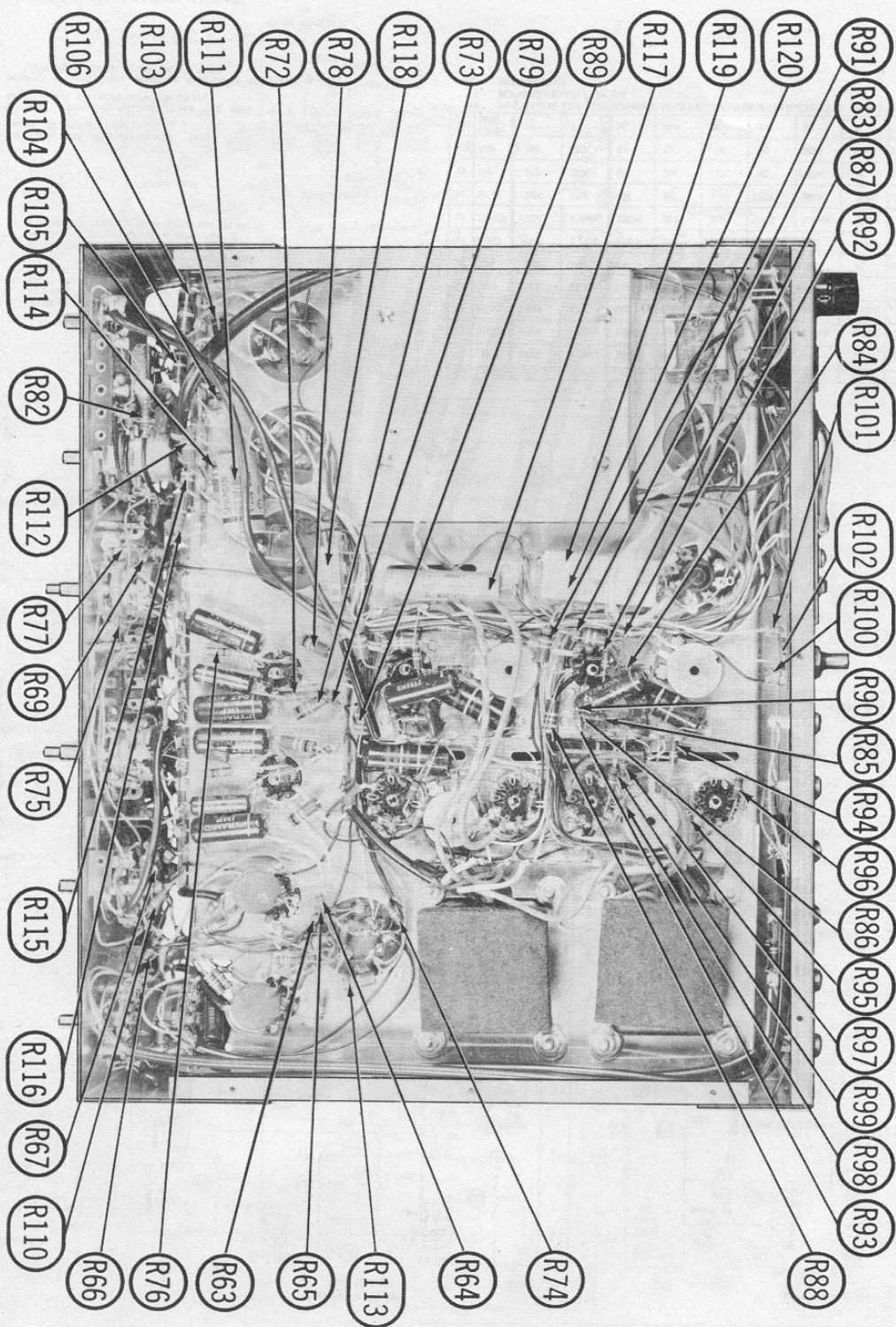




CHASSIS BOTTOM VIEW - RESISTOR IDENT. (R1-R62)

FOLDER 12

662 TEGOM
L SCOTT H. H.



CHASSIS BOTTOM VIEW - RESISTOR IDENT. (R63-R120)

PARTS LIST AND DESCRIPTIONS TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES	ITEM No.	USE	TYPE	NOTES
V1	Channel A Preamp.	12AX7		V7	Channel B A.F. Amp.	12AX7A	
V2	Channel A A.F. Amp.	12AX7A		V8	Channel B A.F. Amp.	ECF80/	
V3	Channel A A.F. Amp. -	6BL8		V9	Channel B Output	7188	
V4	Channel A Output	7188		V10	Channel B Output	7188	
V5	Channel A Output	7188		V11	Rectifier	GZ34/	
V6	Channel B Preamp.	12AX7				5AR4	

ELECTROLYTIC CAPACITORS

RATING			REPLACEMENT DATA	
ITEM No.	VOLT.	CAP.	H. H. SCOTT PART No.	ALLOY PART No.
C1A	475	30	H. H. SCOTT PART No. AEROVOX	CONNEIL DUBILIER PART No. MALLOY PART No. PYRAMID PART No. SPRACUE PART No. NOTES
C1B	475	475	CEC-30-20-475	BP486-65
C2	475	20	CEC-30-20-475	ATH2-65
C2A	475	20	CEC-2X10-2X25	ATH4-63
C3A	450	10	CEC-2X10-10CP1	
C3B	450	10	CEC-2X10-10CP1	
C4	25	25	CEC-2X100-10CP1	
C5	25	25	CEC-2X100-10CP1	
C6	25	25	CEC-2X100-10CP1	
C7	25	25	CEC-2X100-10CP1	
C8	75	10	CEC-2X100-10CP1	
C9	75	10	CEC-2X100-10CP1	
C10	75	10	CEC-2X100-10CP1	
C	75	10	CEC-2X100-10CP1	

① Common Positive Unit ② CEC is not used

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmd. for Mica and Ceramic Capacitors.

RATING			REPLACEMENT DATA	
ITEM No.	VOLT.	CAP.	H. H. SCOTT PART No.	AEROVOX PART No.
C7	4700	4700	EYPD-0047	DD-472
C8	4700	4700	EYPD-0047	DD-472
C9	2000	2000	EYPD-02	DD-203
C10	560	560	1469-00018	BVYAD047M B-247
C11	100	100	1469-00018	BVYAD047M B-247
C12	100	100	1469-00018	BVYAD047M B-247
C13	100	100	1469-00018	BVYAD047M B-247
C14	400	400	1469-00018	BVYAD047M B-247
C15	180	180	1469-00018	BVYAD047M B-247
C16	180	180	1469-00018	BVYAD047M B-247
C17	62	62	1469-000062	DD-332
C18	22	22	1469-000062	DD-332
C19	180	180	1469-00018	DD-122
C20	180	180	1469-00018	DD-122
C21	100	100	1469-00018	DD-122
C22	100	100	1469-00018	DD-122
C23	100	100	1469-00018	DD-122
C24	100	100	1469-00018	DD-122
C25	47	47	1469-00022	DD-470
C26	220	220	1469-00022	DD-203
C27	0.47	0.47	1469-00022	DD-203
C28	47	47	1469-00022	DD-203
C29	0.22	0.22	1469-00022	DD-203
C30	10	10	1469-00022	DD-203
C31	10	10	1469-00022	DD-203
C32	470	470	1469-00047	DD-470
C33	470	470	1469-00047	DD-470
C34	0.1	0.1	1469-00047	DD-470
C35	400	400	1469-00047	DD-470
C36	400	400	1469-00047	DD-470
C37	20000	20000	1469-00047	DD-470
C38	150	150	1469-00047	DD-470
C39	150	150	1469-00047	DD-470
C40	100	100	1469-00047	DD-470

CAPACITORS (cont)

RATING			REPLACEMENT DATA	
ITEM No.	VOLT.	CAP.	H. H. SCOTT PART No.	AEROVOX PART No.
C41	0.22	400	P488N-022	DE-203
C42	0.07	400	P488N-047	DE-503
C43	180	180	1469-00018	CUB4847
C44	0.33	400	P488N-033	DE-303
C45	62	400	1469-00062	CUB4847
C46	122	400	1469-00018	CUB4847
C47	100	400	1469-00018	CUB4847
C48	100	400	1469-00018	CUB4847
C49	0.02	400	P488N-047	DE-503
C50	0.07	400	P488N-047	DE-503
C51	0.068	400	P488N-047	DE-503
C52	0.068	400	P488N-047	DE-503
C53	400	400	P488N-047	DE-503
C54	200	400	P488N-047	DE-503
C55	0.07	400	P488N-047	DE-503
C56	0.07	400	P488N-047	DE-503
C57	0.02	400	P488N-047	DE-503
C58	10	400	P488N-047	DE-503
C59	150	400	1469-00018	CUB4847
C60	180	400	1469-00018	CUB4847
C61	0.22	400	P488N-047	DE-503
C62	1	400	P488N-047	DE-503
C63	1	400	P488N-047	DE-503

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

CONTROLS

RATING			REPLACEMENT DATA	
ITEM No.	WATTS	RESISTANCE	H. H. SCOTT PART No.	AEROVOX PART No.
R1A	500K	B	RCDV-500K	BT-71
R1B	500K	B	TT-3F-SW	F1-56
R2A	100K	B	RCVC-100K	R1-56
R2B	100K	B	RCVC-100K	R2-56
R3A	100K	B	RCVC-100K	R3-56
R3B	100K	B	RCVC-100K	R4-56
R4A	100K	B	RCVC-100K	R5-56
R4B	100K	B	RCVC-100K	R6-56
R5A	100K	B	RCVC-100K	R7-56
R5B	100K	B	RCVC-100K	R8-56
R6A	100K	B	RCVC-100K	R9-56
R6B	100K	B	RCVC-100K	R10-56
R7A	100K	B	RCVC-100K	R11-56
R7B	100K	B	RCVC-100K	R12-56
R8A	100K	B	RCVC-100K	R13-56
R8B	100K	B	RCVC-100K	R14-56
R9A	100K	B	RCVC-100K	R15-56
R9B	100K	B	RCVC-100K	R16-56

† "STV-100" Equivalent: P48755, R48755, CS-3500

All wattages 1/2 watt, or less, unless otherwise listed.

PARTS LIST AND DESCRIPTIONS (cont)

RESISTORS (cont)

ITEM No.	RATING		H. H. SCOTT PART No.	NOTES	ITEM No.	RATING		H. H. SCOTT PART No.	NOTES
	OHMS	WATT				OHMS	WATT		
R36	47K				R79	1500Ω			
R37	100K				R80	47K			
R38	220K				R81	100K			
R39	100K				R82	220K			
R40	220K				R83	100K			
R41	2200Ω				R84	220K			
R42	680Ω				R85	2200Ω			
R43	10K				R86	680Ω			
R44	2.2meg				R87	10K			
R45	100K				R88	3.3Ω			
R46	270K				R89	3.3Ω			
R47	1500Ω				R90	2.2meg			
R48	150K				R91	100K			
R49	150K				R92	270K			
R50	1000Ω				R93	1500Ω			
R51	150K				R94	150K			
R52	150K				R95	150K			
R53	1000Ω				R96	1000Ω			
R54	100K				R97	150K			
R55	47K				R98	150K			
R56	270K				R99	1000Ω			
R57	2700Ω				R100	8200Ω			
R58	82K				R101	10K			Note 1
R59	500K				R102	10K			
R60	100K				R103	18Ω			
R61	10meg				R104	18Ω			
R62	5.9meg				R105	18Ω			
R63	2.2meg				R106	10Ω			
R64	270K				R107	680K			
R65	2700Ω				R108	680K			
R66	100K				R109	680K			
R67	1meg				R110	150K			
R68	470K				R111	68K			
R69	3.9meg				R112	56K			
R70	10meg				R113	47K			
R71	2.2meg				R114	10K			
R72	2.2meg				R115	3300Ω			
R73	100K				R116	2200Ω			
R74	1500Ω				R117	15K			
R75	100K				R118	2000Ω			
R76	1meg				R119	330Ω			
R77	100K				R120	330Ω			
R78	100K								

① Not used in some versions.

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA						
	PRI	SEC. 1	SEC. 2	H. H. SCOTT PART No.	Hallidorsen PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordarson PART No.	Triod PART No.
T1	117V @ 1.3V	130 VCT @ .180A	5V @ 3A							
	SEC. 3	SEC. 4	SEC. 5							
	51V @ .142A	6.3V @ 3.5A								

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI	SEC	H. H. SCOTT PART No.	Hallidorsen PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordarson PART No.	Triod PART No.	
T2	7000Ω CT	16Ω Tap @ 8Ω, 4Ω	TRA-8-3							
T3	7000Ω CT	16Ω Tap @ 8Ω, 4Ω	TRA-8-3							

RECTIFIERS

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	CURRENT (Measured)	H. H. SCOTT PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	SARKIS TAZIAN PART No.	
M1	.142A		RA151①②	SD-92①②	F2①②	① Silicon Type ② 4 Required

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			H. H. SCOTT PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M2	3AG	2½A 125V S/B			31302.5 [2½A 125V S/B]	342012	MDL 2½	HKP-CC

MISCELLANEOUS

ITEM No.	PART NAME	H. H. SCOTT PART No.	NOTES
M3	Lamp		NE-2
M4	Lamp		NE-2
M5	Lamp		NE-2
M6	Switch		Pickup A (DPDT, Slide Type)
M7	Switch		Pickup B (DPDT, Slide Type)
M8	Switch		Rumble Filter In-Out (DPDT, Slide Type)
M9	Switch		Scratch Filter (DPDT Slide Type)
M10	Switch		Loudness-Volume, Ganged (DPDT, Slide Type)
M11	Switch		Phase Normal-Reverse (DPDT, Slide Type)
M12	Switch		Input Selector (5 Position, Rotary Wafer Type)
M13	Switch		Stereo Selector (7 Position, Rotary Wafer Type)

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in Ten Colors
 8524 (Stranded) Available in Ten Colors
 Power Cord Use BELDEN No. 1765-B (6 Ft. Length)
 1725-K (7½ Ft. Length)

BIAS ADJUSTMENT (R9)

Connect D. C. VTVM across R120. Adjust Bias control (R9) for 24.5 volts on VTVM.

D. C. BALANCE ADJUSTMENTS (R6) (R8)

Connect DC voltmeter (with a MINIMUM 1 volt scale) from pin 7 (plate) of 7189 (V4) to pin 7 (plate) of 7189 (V5).
 Adjust D. C. Balance control (R6) for MINIMUM deflection. Connect the voltmeter from pin 7 (plate) of 7189 (V9) to pin 7 (plate) of 7189 (V10). Adjust R8 for MINIMUM deflection.

AC BALANCE ADJUSTMENTS (R5) (R7)

Turn function switch to Stereo position, set tone controls to Flat, Rumble and Scratch Filters to Off, and Loudness-Volume control to Volume.

Connect a 16Ω, 40 watt resistor between "0" and "16Ω" terminals of Channel A output transformer secondary. Connect a scope across the resistor. Connect a sine-wave audio oscillator to the Mag 1 jack of Channel A. Increase the oscillator output until the sine-wave just begins to clip. Adjust R5 until clipping is symmetrical. (Equal amounts are clipped from top and bottom of wave peaks).

Remove the oscillator, resistor and scope from Channel A, and connect to similar points on Channel B. Repeat procedure, adjusting R7 for symmetrical clipping.