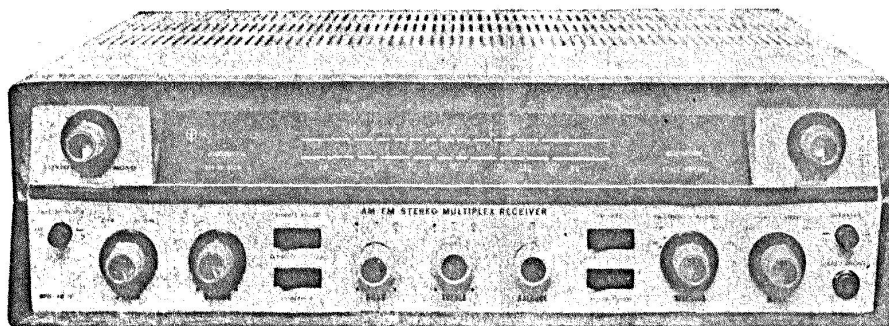




SERVICE MANUAL

KENWOOD

**AM-FM STEREO MULTIPLEX
RECEIVER**

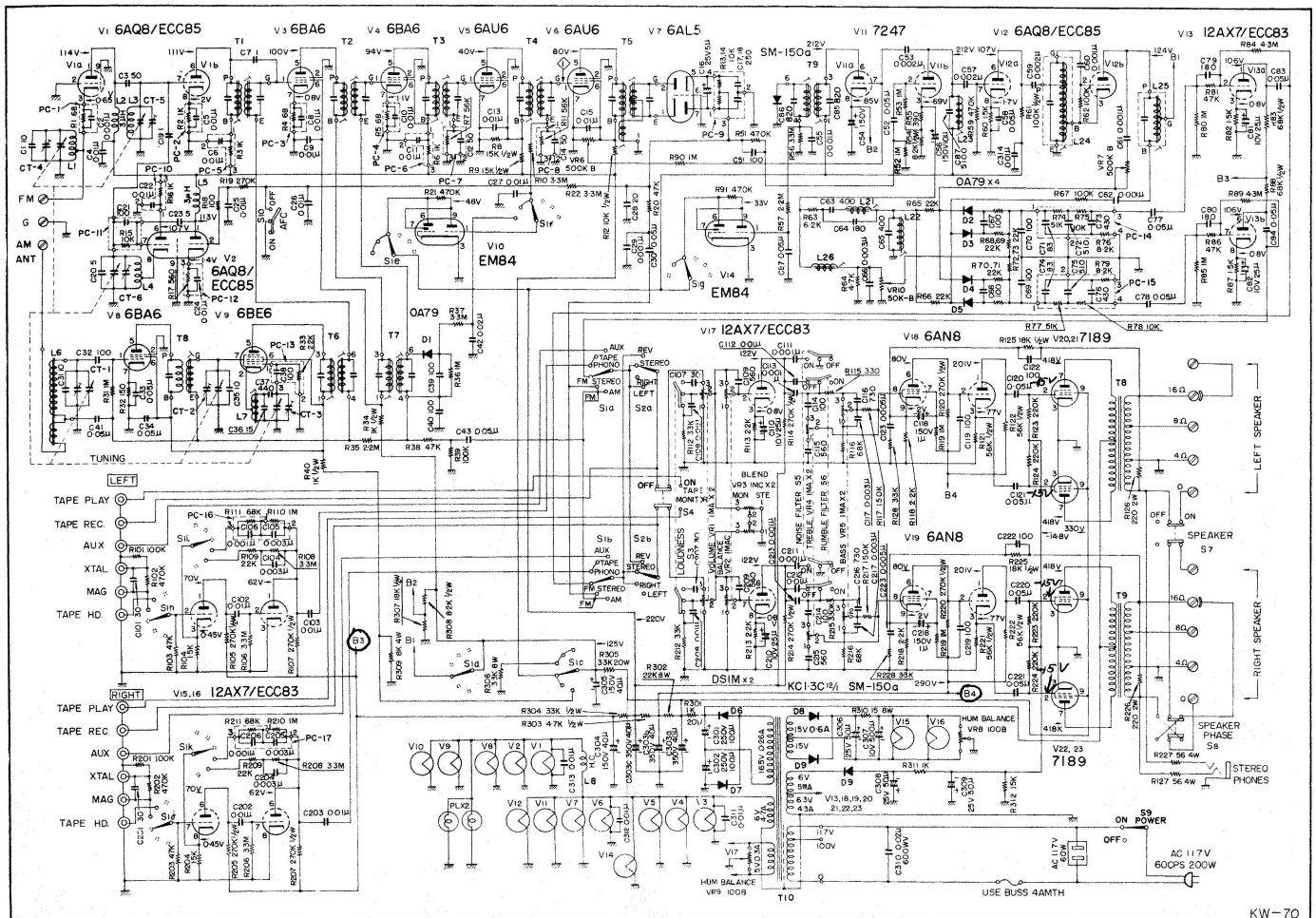
MODEL KW-70



KENWOOD ELECTRONICS, INC.

Subsidiary of American Commercial Inc.
212 Fifth Ave. New York, 10, New York
Murray Hill 6-1590

SCHEMATIC DIAGRAM



PARTS DESCRIPTION LIST

CAPACITORS

Symbol	Description	Rating	Symbol	Description	Rating
C1	Ceramic	10mmfd. $\pm 10\%$	C103	Paper Tubular	.01mfd. $\pm 20\%$
C3	Ceramic	50mmfd. $\pm 10\%$	C104	Ceramic	.003mfd. $\pm 20\%$
C4	Ceramic	.01mfd. $+100 - 0\%$	C107	Ceramic	30mmfd. $\pm 10\%$
C7	Ceramic	1mmfd. $\pm 10\%$	C108	Ceramic	.01mfd. $\pm 20\%$
C9	Ceramic	.01mfd. $+100 - 0\%$	C109	Ceramic	560mmfd. $\pm 20\%$
C13	Ceramic	.01mfd. $+100 - 0\%$	C110	Electrolytic	25mfd. 10V
C15	Ceramic	.01mfd. $+100 - 0\%$		Tubular	
C16	Electrolytic	5mfd. 25V	C111	Paper Tubular	.001mfd. $\pm 20\%$
	Tubular		C112	Paper Tubular	.01mfd. $\pm 20\%$
C19	Ceramic	1mmfd. $\pm 10\%$	C113	Paper Tubular	.001mfd. $\pm 20\%$
C20	Ceramic	5mmfd. $\pm 10\%$	C114	Ceramic	100mmfd. $\pm 10\%$
C23	Ceramic	5mmfd. $\pm 10\%$	C115	Ceramic	560mmfd. $\pm 20\%$
C25	Ceramic	.01mfd. $\pm 10\%$	C116	Ceramic	730mmfd. $\pm 20\%$
C26	Ceramic	.1mfd. $+100 - 0\%$	C117	Ceramic	.003mfd. $\pm 20\%$
C27	Ceramic	.01mfd. $+100 - 0\%$	C118	Electrolytic	1mfd. 150V
C28	Ceramic	20mmfd. $\pm 10\%$		Tubular	
C29	Paper Tubular	.001mfd. $\pm 20\%$	C119	Ceramic	100mfd. $\pm 10\%$
C30	Paper Tubular	.05mfd. $\pm 20\%$	C120	Paper Tubular	.05mfd. $\pm 20\%$
C31	Ceramic	10mmfd. $\pm 10\%$	C121	Paper Tubular	.05mfd. $\pm 20\%$
C32	Ceramic	100mmfd. $\pm 10\%$	C122	Ceramic	100mfd. $\pm 10\%$
C33	Paper Tubular	.05mfd. $\pm 20\%$	C123	Paper Tubular	.005mfd. $\pm 20\%$
C34	Paper Tubular	.05mfd. $\pm 20\%$	C201	Ceramic	30mfd. $\pm 10\%$
C35	Ceramic	10mmfd. $\pm 10\%$	C202	Ceramic	.01mfd. $+100 - 0\%$
C36	Ceramic	15mmfd. $\pm 10\%$	C203	Paper Tubular	.01mfd. $\pm 20\%$
C37	Mica	440mmfd. $\pm 5\%$	C204	Ceramic	.003mfd. $\pm 20\%$
C39	Ceramic	100mmfd. $\pm 10\%$	C207	Ceramic	30mmfd. $\pm 10\%$
C40	Ceramic	100mmfd. $\pm 10\%$	C208	Ceramic	.01mfd. $\pm 20\%$
C41	Paper Tubular	.05mfd. $\pm 20\%$	C209	Ceramic	560mmfd. $\pm 20\%$
C42	Paper Tubular	.02mfd. $\pm 20\%$	C210	Electrolytic	25mfd. 10V
C43	Paper Tubular	.05mfd. $\pm 20\%$		Tubular	
C51	Ceramic	100mmfd. $\pm 10\%$	C211	Paper Tubular	.001mfd. $\pm 20\%$
C52	Paper Tubular	.05mfd. $\pm 20\%$	C212	Paper Tubular	.01mfd. $\pm 20\%$
C53	Paper Tubular	.002mfd. $\pm 20\%$	C213	Paper Tubular	.001mfd. $\pm 20\%$
C54	Electrolytic	1mfd. 150V	C214	Ceramic	100mmfd. $\pm 10\%$
	Tubular		C215	Ceramic	560mmfd. $\pm 20\%$
C55	Ceramic	.001mfd. $\pm 20\%$	C216	Ceramic	730mmfd. $\pm 20\%$
C56	Electrolytic	10mfd. 150V	C217	Ceramic	.003mfd. $\pm 20\%$
	Tubular		C218	Electrolytic	1mfd. 150V
C57	Paper Tubular	.002mfd. $\pm 20\%$		Tubular	
C58	Paper Tubular	.05mfd. $\pm 20\%$	C219	Ceramic	100mmfd. $\pm 10\%$
C59	Ceramic	.002mfd. $\pm 20\%$	C220	Paper Tubular	.05mfd. $\pm 20\%$
C60	Paper Tubular	.001mfd. $\pm 20\%$	C221	Paper Tubular	.05mfd. $\pm 20\%$
C61	Ceramic	.001mfd. $\pm 20\%$	C222	Ceramic	100mmfd. $\pm 10\%$
C62	Ceramic	.001mfd. $\pm 20\%$	C223	Paper Tubular	.005mfd. $\pm 20\%$
C63	Ceramic	180mmfd. $\pm 10\%$	C301	Electrolytic	100mfd. 250V
C64	Ceramic	400mmfd. $\pm 10\%$		Tubular	
C65	Ceramic	400mmfd. $\pm 10\%$	C302	Electrolytic	100mfd. 250V
C66	Ceramic	.003mfd. $\pm 20\%$		Tubular	
C67	Ceramic	100mmfd. $\pm 10\%$	C303	Electrolytic	a) 40mfd. 350V
C68	Ceramic	100mmfd. $\pm 10\%$		3-Section	b) 40mfd. 350V
C69	Ceramic	100mmfd. $\pm 10\%$			c) 40mfd. 350V
C70	Ceramic	100mmfd. $\pm 10\%$	C304	Electrolytic	40mfd. 150V
C77	Paper Tubular	.05mfd. $\pm 20\%$		Tubular	
C78	Paper Tubular	.05mfd. $\pm 20\%$	C305	Electrolytic	40mfd. 150V
C79	Ceramic	180mmfd. $\pm 10\%$		Tubular	
C80	Ceramic	180mmfd. $\pm 10\%$	C306	Electrolytic	50mfd. 25V
C81	Electrolytic	25mfd. 10V		Tubular	
	Tubular		C307	Electrolytic	500mfd. 10V
C82	Electrolytic	25mfd. 10V		Tubular	
	Tubular		C308	Electrolytic	500mfd. 10V
C83	Paper Tubular	.05mfd. $\pm 20\%$		Tubular	50mfd. 25V
C84	Paper Tubular	.05mfd. $\pm 20\%$	C309	Electrolytic	50mfd. 25V
C85	Mica	820mmfd. $\pm 5\%$		Tubular	
C86	Mica	820mmfd. $\pm 5\%$	C310	Paper Tubular	.02mfd. 600WV
C87	Paper Tubular	.05mfd. $\pm 20\%$	C311	Ceramic	.01mfd. $+100 - 0\%$
CT-6	Cylinder TRIM	3 — 10mmfd.	C312	Ceramic	.01mfd. $+100 - 0\%$
C101	Ceramic	30mmfd. $\pm 10\%$	C313	Ceramic	.01mfd. $+100 - 0\%$
C102	Ceramic	.01mfd. $+100 - 0\%$	C314	Ceramic	.01mfd. $+100 - 0\%$

RESISTORS

Symbol	Description	Rating		Symbol	Description	Rating	
R8	Composition	15K	5% 1/2 W	R108	Dep. Carbon	3.3M	5% 1/3 W
R9	Composition	15K	5% 1/2 W	R109	Dep. Carbon	22K	5% 1/3 W
R10	Dep. Carbon	3.3M	5% 1/3 W	R112	Dep. Carbon	33K	5% 1/3 W
R12	Composition	10K	5% 1/2 W	R113	Dep. Carbon	2.2K	5% 1/3 W
R18	Composition	100 ohm	5% 1/3 W	R114	Composition	270K	5% 1/2 W
R19	Composition	270K	5% 1/3 W	R115	Dep. Carbon	330K	5% 1/3 W
R20	Composition	47K	5% 1/3 W	R116	Dep. Carbon	68K	5% 1/3 W
R21	Dep. Carbon	470K	5% 1/3 W	R117	Dep. Carbon	150K	5% 1/3 W
R22	Composition	3.3M	5% 1/3 W	R118	Dep. Carbon	2.2K	5% 1/3 W
R31	Dep. Carbon	1M	5% 1/3 W	R119	Dep. Carbon	1M	5% 1/3 W
R32	Dep. Carbon	150 ohm	5% 1/3 W	R120	Composition	270K	5% 1/2 W
R34	Dep. Carbon	1K	5% 1/2 W	R121	Composition	56K	5% 1/2 W
R35	Dep. Carbon	2.2M	5% 1/3 W	R122	Composition	56K	5% 1/2 W
R36	Dep. Carbon	1M	5% 1/3 W	R123	Dep. Carbon	220K	5% 1/3 W
R37	Dep. Carbon	3.3M	5% 1/3 W	R124	Dep. Carbon	220K	5% 1/3 W
R38	Dep. Carbon	47K	5% 1/3 W	R125	Dep. Carbon	18K	5% 1/2 W
R39	Dep. Carbon	100K	5% 1/3 W	R126	Wirewound	220 ohm	5% 2 W
R40	Dep. Carbon	1K	5% 1/2 W	R127	Wirewound	56 ohm	5% 4 W
R51	Dep. Carbon	470K	5% 1/3 W	R128	Dep. Carbon	3.3K	5% 1/3 W
R52	Dep. Carbon	1M	5% 1/3 W	R201	Dep. Carbon	100K	5% 1/3 W
R53	Dep. Carbon	1M	5% 1/3 W	R202	Dep. Carbon	470K	5% 1/3 W
R54	Dep. Carbon	8.2K	5% 1/2 W	R203	Dep. Carbon	47K	5% 1/3 W
R55	Dep. Carbon	390 ohm	5% 1/3 W	R204	Dep. Carbon	1.5K	5% 1/3 W
R56	Dep. Carbon	3.3M	5% 1/3 W	R205	Composition	270K	5% 1/2 W
R57	Dep. Carbon	2.2M	5% 1/3 W	R206	Dep. Carbon	3.3M	5% 1/3 W
R58				R207	Composition	270K	5% 1/2 W
R59	Dep. Carbon	470K	5% 1/3 W	R208	Dep. Carbon	3.3M	5% 1/3 W
R60	Dep. Carbon	1.5K	5% 1/3 W	R209	Dep. Carbon	22K	5% 1/3 W
R61	Composition	100K	5% 1/2 W	R212	Dep. Carbon	33K	5% 1/3 W
R62	Dep. Carbon	100K	5% 1/3 W	R213	Dep. Carbon	2.2K	5% 1/3 W
R63	Dep. Carbon	6.2K	5% 1/3 W	R214	Composition	270K	5% 1/2 W
R64	Dep. Carbon	4.7K	5% 1/3 W	R215	Dep. Carbon	330K	5% 1/3 W
R65	Dep. Carbon	22K	5% 1/3 W	R216	Dep. Carbon	68K	5% 1/3 W
R66	Dep. Carbon	22K	5% 1/3 W	R217	Dep. Carbon	150K	5% 1/3 W
R67	Dep. Carbon	100K	5% 1/3 W	R218	Dep. Carbon	2.2K	5% 1/3 W
R68	Dep. Carbon	22K	5% 1/3 W	R219	Dep. Carbon	1M	5% 1/3 W
R69	Dep. Carbon	22K	5% 1/3 W	R220	Composition	270K	5% 1/2 W
R70	Dep. Carbon	22K	5% 1/3 W	R221	Composition	56K	5% 1/2 W
R71	Dep. Carbon	22K	5% 1/3 W	R222	Composition	56K	5% 1/2 W
R72	Dep. Carbon	22K	5% 1/3 W	R223	Dep. Carbon	220K	5% 1/3 W
R73	Dep. Carbon	22K	5% 1/3 W	R224	Dep. Carbon	220K	5% 1/3 W
R90	Dep. Carbon	1M	5% 1/3 W	R225	Dep. Carbon	18K	5% 1/2 W
R81	Dep. Carbon	47K	5% 1/3 W	R226	Wirewound	220 ohm	5% 2 W
R82	Dep. Carbon	1.5K	5% 1/3 W	R227	Wirewound	56 ohm	5% 4 W
R83	Composition	68K	5% 1/2 W	R228	Dep. Carbon	3.3K	5% 1/3 W
R84	Dep. Carbon	4.3M	5% 1/3 W	R301	Wirewound	1K	5% 20W
R85	Dep. Carbon	1M	5% 1/3 W	R302	Wirewound	2.2K	5% 8 W
R86	Dep. Carbon	47K	5% 1/3 W	R303	Dep. Carbon	4.7K	5% 1/2 W
R87	Dep. Carbon	1.5K	5% 1/3 W	R304	Dep. Carbon	33K	5% 1/2 W
R88	Composition	68K	5% 1/2 W	R305	Wirewound	3.3K	5% 20W
R89	Dep. Carbon	4.3M	5% 1/3 W	R306	Wirewound	3.3K	5% 8 W
R90	Dep. Carbon	1M	5% 1/3 W	R307	Dep. Carbon	18K	5% 1/2 W
R91	Dep. Carbon	470K	5% 1/3 W	R308	Dep. Carbon	8.2K	5% 1/2 W
R101	Dep. Carbon	100K	5% 1/3 W	R309	Wirewound	8K	5% 4 W
R102	Dep. Carbon	470K	5% 1/3 W	R310	Wirewound	15 ohm	5% 8 W
R103	Dep. Carbon	47K	5% 1/3 W	R311	Dep. Carbon	1K	5% 1/3 W
R104	Dep. Carbon	1.5K	5% 1/3 W	R312	Dep. Carbon	15K	5% 1/3 W
R105	Composition	270K	5% 1/2 W	R110	Dep. Carbon	1M	5% 1/3 W
R106	Dep. Carbon	3.3M	5% 1/3 W	R210	Dep. Carbon	1M	5% 1/3 W
R107	Composition	270K	5% 1/2 W				

PRINTED CIRCUITS

Symbol	Description	USE	Symbol	Description	USE
PC-1	R1 68 ohm C2 .001mfd.	Bias circuit	PC-5	R3 1K C6 .01mfd.	Decoupling circuit
PC-2	R2 1K C5 .01mfd.	Bias circuit	PC-6	R6 1K C11 .01mfd.	Decoupling circuit
PC-3	R4 68 ohm C8 .01mfd.	Bias circuit	PC-7	R7 56K C12 50mmfd.	Bias circuit
PC-4	R5 68 ohm C10 .01mfd.	Bias circuit	PC-8	R11 56K C14 50mmfd.	Bias circuit

PRINTED CIRCUITS (CONT.)

Symbol	Description	USE	Symbol	Description	USE
PC-9	R13, 14 10K C17, 18 250mmfd.	FM detector	PC-15	R77 51K R78 10K R79 8.2K C74 83mmfd. C75 510mmfd. C76 430mmfd.	Twin T Filter
PC-10	R16 1K C22 .01mfd.	Decoupling circuit	PC-16	R111 68K C105 .003mfd. C106 .001mfd.	Equalization
PC-11	R15 10K C21 100mmfd.	FM OSC circuit	PC-17	R211 68K C205 .003mfd. C206 .001mfd.	Equalization
PC-12	R17 560 ohm C24 .01mfd.	Bias circuit			
PC-13	R33 22K C38 100mmfd.	AM OSC circuit			
PC-14	R74 51K R75 10K R76 8.2K C71 83mmfd. C72 510mmfd. C73 430mmfd.	Twin T Filter			

TUBES / DIODES

Symbol	Description	USE
V1	6AQ8/ECC85	FM RF Amp. FM Conv.
V2	6AQ8/ECC85	FM OSC. AFC.
V3	6BA6/EF93	1st FM IF Amp. 1st AM IF Amp.
V4	6BA6/EF93	2nd FM IF Amp.
V5	6AU6/EF94	1st Limiter, 3rd FM IF Amp.
V6	6AU6/EF94	2nd Limiter, 4th FM IF Amp.
V7	6AL5	FM Det.
V8	6BA6/EF93	AM RF Amp.
V9	6BE6/EK90	AM Conv.
V10	6FG6/EM84	Tuning Indicator
V11	7247	MPX Amp. Beam Signal Amp.
V12	6AQ8/ECC85	19KC Amp. OSC.
V13	12AX7/ECC83	AF Amp.
V14	6FG6/EM 84	Stereo Indicator.
V15	12AX7/ECC83	Channel L•R Phono EQ.
V16	12AX7/ECC83	Channel L•R Phono EQ.
V17	12AX7/ECC83	Channel L•R AF Amp.
V18	6AN8	Channel L AF Amp. Driver
V19	6AN8	Channel R AF Amp. Driver
V20	7189	Channel L Power Amp.
V21	7189	Channel L Power Amp.
V22	7189	Channel R Power Amp.
V23	7189	Channel R Power Amp.
D1	OA79	AM Det.
D2	OA79	MPX Det.
D3	OA79	MPX Det.
D4	OA79	MPX Det.
D5	OA79	MPX Det.
D6	DS-1M	Rect.
D7	DS-1M	Rect.
D8	KC 1.3C 12/1	Rect.
D9	SM-150S	Rect.
D10	SM-150S	Stereo Beam Signal Rect.

POTENTIOMETERS

Symbol	Description
VR1	Dual, 1M, (A) x 2 Volume
VR2	Dual, 1M, (A, C) Balance
VR3	Dual, 1M, (C) x 2 Blend
VR4	Dual, 1M, (A) x 2 Treble
VR5	Dual, 1M, (A) x 2 Bass
VR6	500K, (B) Bias Adj.
VR7	500K, (B) MPX SUB Balance
VR8	100 ohm (B) HUM Balance
VR9	100 ohm (B) HUM Balance
VR10	50, (A) MPX Separation Adj.

TRANSFORMERS

Symbol	USE
T9	Channel L OUTPUT
T10	Channel R OUTPUT
T11	Power

COILS (RF-IF)

Symbol	USE
T1	1st FM IFT.
T2	2nd FM IFT.
T3	3rd FM IFT.
T4	4th FM IFT.
T5	FM Det.
T6	1st AM IFT.
T7	2nd AM IFT.
T8	AM RF Coil
T9	19KC Resonance Coil
L1	FM Ant Coil
L2	Choke Coil 3mmH
L3	FM RF Coil
L4	FM OSC Coil
L5	Choke Coil 3mmH
L6	Ferrite loop stick AM Ant.
L7	AM OSC Coil
L8	Heater Choke Coil
L21	Filter Coil 44.3mH
L22	Filter Coil 44.3mH
L23	Filter Coil 13.5mH
L24	19KC OSC Coil
L25	38KC Doubler Coil
L26	Filter Coil 44.3mH

SWITCHES

Symbol	USE
S1	Rotary, "SELECTOR"
S2	Rotary, "MODE"
S3	See Saw, "LOUDNESS"
S4	Push, "TAPE MONITOR"
S5	See Saw, "NOISE FILTER"
S6	See Saw, "RUMBLE FILTER"
S7	Push, "SPEAKERS"
S8	Slide, "SPEAKER PHASE"
S9	Rotary, "POWER"
S10	See Saw, "AFC"

[illegible]

PHASE SWITCH SPEAKER ON-OFF

ALIGNMENT

ALIGNMENT PROCEDURE CHART

Please read the following notes carefully before making any alignment adjustments:

1. Generator Signal; Always work with the minimum generator signal sufficient to produce a satisfactory output indication.
2. Alignment tools; IF transformers require a plastic 0.102 in. hexagonal alignment tool. For FM RF coils, use a plastic screwdriver-type alignment tool.
3. FM AFC; Always place in OFF position before alignment.

AM ALIGNMENT

STEP	Dummy Antenna	Signal Generator Coupling	Signal Generator Frequency	Selector Switch	Mode Switch	Tuner Dial Setting	Indicating Meter	Adjust	Remarks
1	0.1 Mfd	High side to pin 7 (grid) of 6BE6 (V9). Low side to Chassis	455 KC (400 cps, 30% AM)	AM	RIGHT	Any non-interfering Setting	AC voltmeter at Right output jack of TAPE REC, or tuning indicator	T7 & T6 top & bottom	maximum deflection
2		Connect to short Loop of wire. Radiate signal into ferrite loopstick antenna of receiver	600 KC (400 cps, 30% AM)	"	"	Check pointer for alignment at Left hand start mark, then tune to 600 KC.	"	L7 L6(Ring) T8	"
3			1,400 KC	"	"	1,400 KC	"	CT3 CT1 CT2	"
4	Repeat steps 2 & 3 until no further improvement is possible.								

FM ALIGNMENT

STEP	Dummy Antenna	Signal Generator Coupling	Signal Generator Frequency	Selector Switch	Mode Switch	Radio Dial Setting	Indicating Meter	Adjust	Remarks
5	270 ohm Carbon Resistor	High side to FM antenna terminals. Low side to chassis	10.7 MC (Unmod.)	FM	LEFT	Any non-interfering Setting	Tuning Indicator	T4, T3, T2, T1, top & bottom	Maximum Deflection
6	"	"	98 MC 400 cps ± 75 KC FM 500~1000 μ V	"	"	Tune for maximum using tuning indicator	AC voltmeter at LEFT output jack of TAPE REC.	T5 top & bottom	"
7	"	"	90 MC 400 cps ± 75 KC FM	"	"	90 MC	AC voltmeter & crystal earphone at LEFT output jack of TAPE REC.	L4, L1, L3	(Confirm the presence of 400 cps signal with crystal earphone)
8	"	"	106 MC 400 cps ± 75 KC FM	"	"	106 MC	"	CT6, CT4, CT5	(Confirm the presence of 400 cps signal with crystal earphone)
9	Repeat steps 7 & 8 until no further improvement is possible.								

FM MULTIPLEX ALIGNMENT

(Refer to MPX circuit shown in Fig. 1 for test Points.)

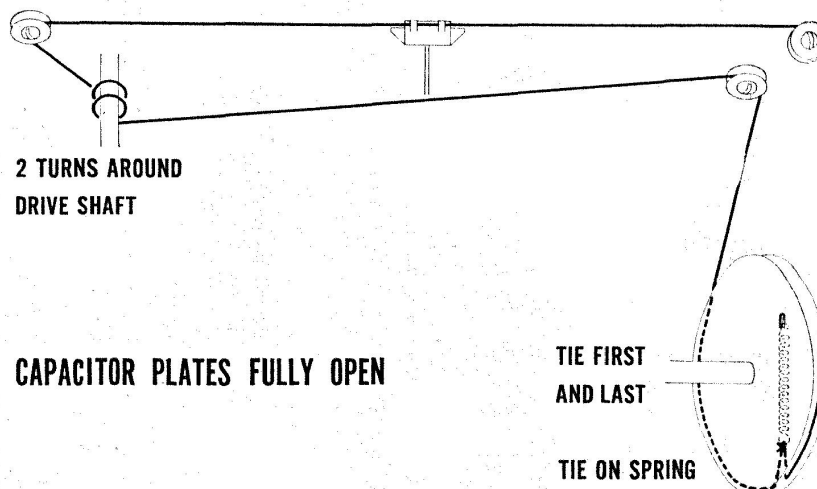
STEP	Audio Signal Generator	Audio Signal Generator Frequency	Selector Switch	Mode Switch	Connect VTVM & Oscilloscope	Horizontal Selector Switch position of Oscilloscope	Adjust	Remarks
67 KC & 38 KC Band Pass Filter Alignment (Remove Tube A before aligning)								
10	High side to ②. Low side to chassis	67 KC (0.5 V)	FM	STEREO	High side to ⑥. Low side to chassis	"INT" SWEEP	L21	Minimum Deflection
11	"	23 KC & 53 KC (0.5 V)	"	"	"	"	L22	Equalize the outputs obtained at 23 KC & 53 KC
19 KC Tuning Coil, 19 KC Oscillator Coil, and 38 KC Tuning Coil Alignment.								
12	"	19 KC	"	"	High side to ③. Low side to chassis	"	L23	Maximum Deflection
13	Remove High Side connection		FM STEREO	"	High side to ④. Low side to chassis	Horizontal "Amp"	L24	Align to obtain the stable wave response as shown in Fig. 3
14	High Side to ③. Low Side to chassis	19 KC	"	"	"	"	L25	Maximum Deflection
15	Repeat steps 13 & 14 until no further improvement is possible.							

FINAL ALIGNMENT (When using a Stereo Generator)

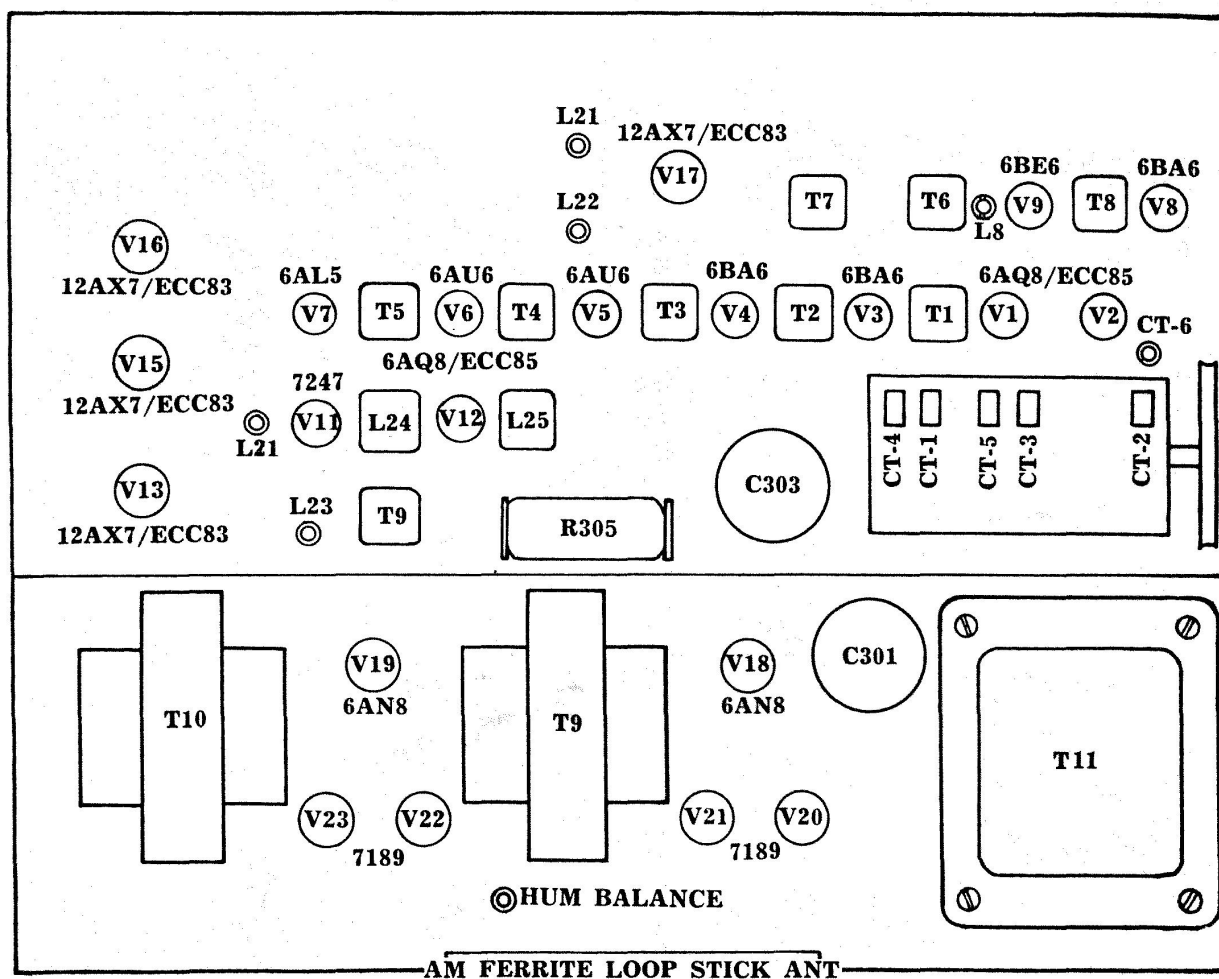
STEP	STEREO Generator							Horizontal Selector Switch position of Oscilloscope	Adjust	Remarks
	Coupling	Modulation Frequency	Input Selector	19KC Pilot Carrier Switch	Selector Switch	Mode Switch	Connect VTVM & Oscilloscope			
16	High side to ②. Low side to chassis	400 cps	A - B	OFF	FM STEREO	STEREO	LEFT or RIGHT output jack of 'TAPEREC'	"INT" SWEEP	L24	Maximum Deflection & Minimum Distortion
17	"	"	"	ON	"	"	"	"	L23	"
Repeat Steps 16 & 17 until no further improvement is possible.										
18	"	"	A	"	"	"	RIGHT output jack of 'TAPEREC'	"	Dimension control	Minimum Deflection
19	"	8 KC	"	"	"	"	"	"	L26	"
Repeat steps 18 & 19 until no further improvement is possible.										
Final Alignment (When a stereo Generator is unavailable.)										
STEP	Selector Switch	Mode Switch	Connect Oscilloscope		Horizontal Selector Switch Position of Oscilloscope		Radio Dial Setting	Adjust	Remarks	
			Vertical	Horizontal						
16	FM STEREO	FM STEREO	High side to ⑥ Low Side to chassis	High side to ④ Low side to chassis	"AMP"		Set a pointer at the exact frequency marking of Stereo-casting Station	L23	Align to obtain the scope pattern as shown in Fig. 5 ⑥	
17	While Listening to a stereocast, turn Dimension Control and adjust for maximum Separation between RIGHT and LEFT									

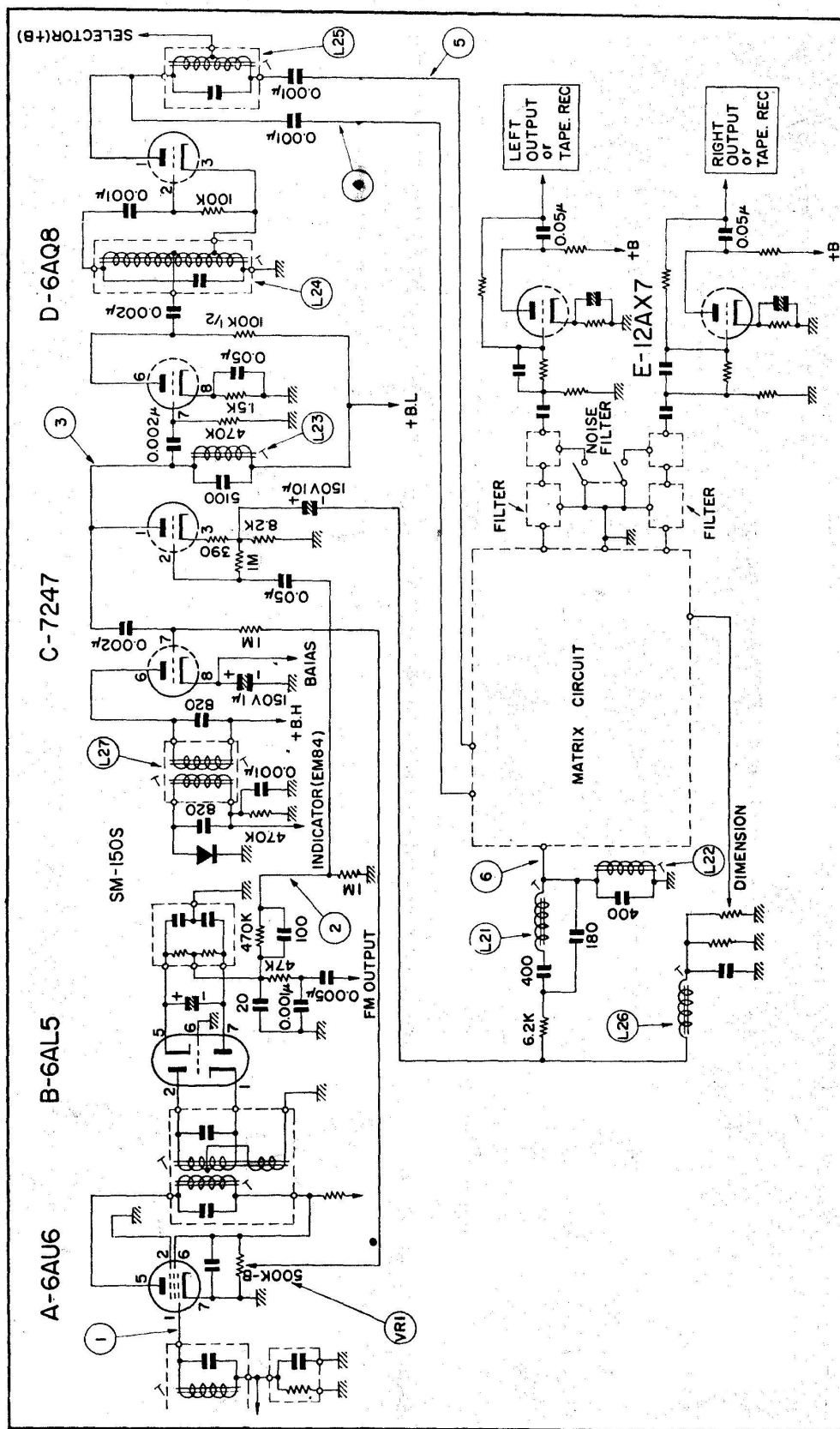
Adjustment of Stereo Beam Circuit					
STEP	Selector Switch	Mode Switch	Radio Dial Setting	Adjust	Remarks
21	FM Stereo	Stereo	Set a pointer at the Exact Frequency Marking of Stereo-casting Station. (Receive)	L27	The Maximum Sharpness of Stereo Beam
22	"	"	"	VR f	Adjust for the Maximum Sharpness of Stereo Beam

DIAL CORD STRINGING



TUBE LAYOUT



[illegible]

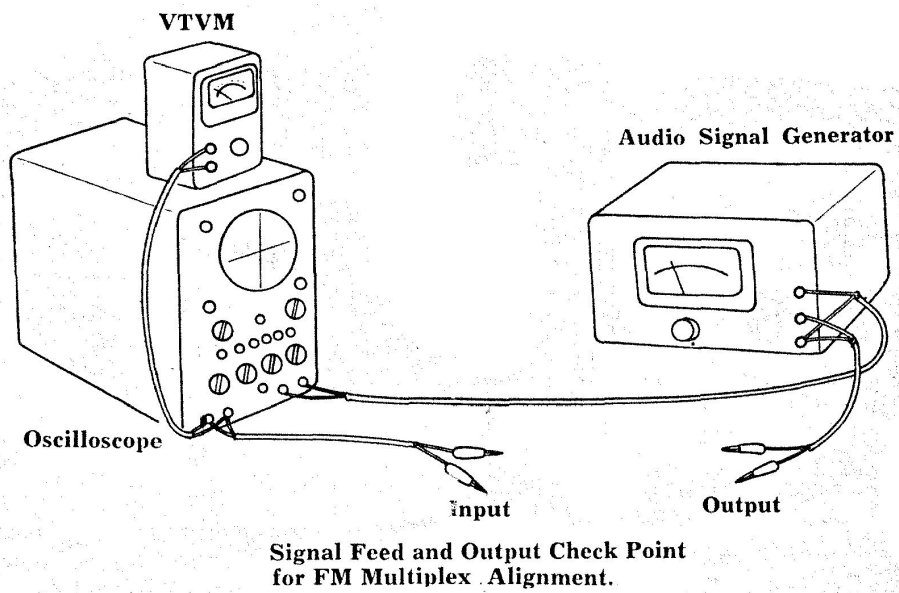


Fig 2.

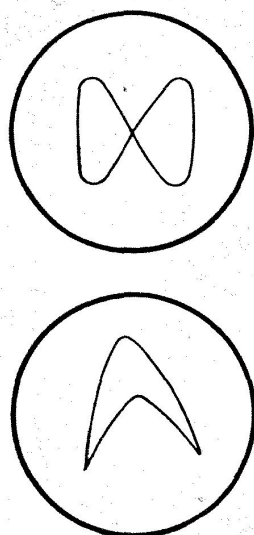


Fig 3.

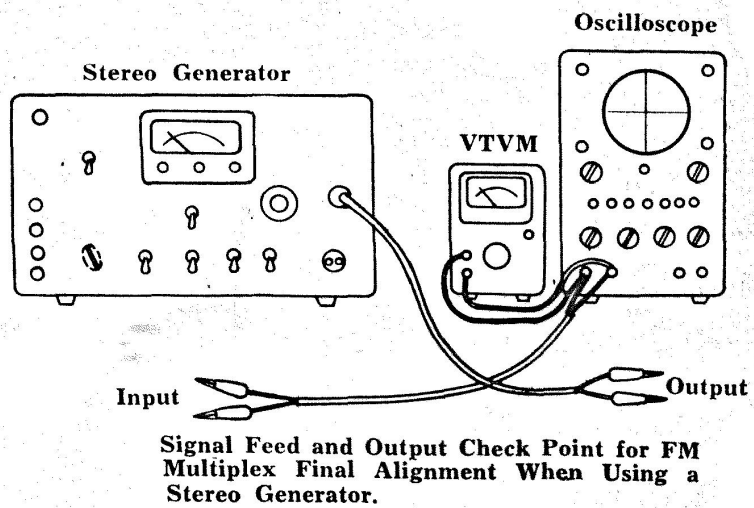
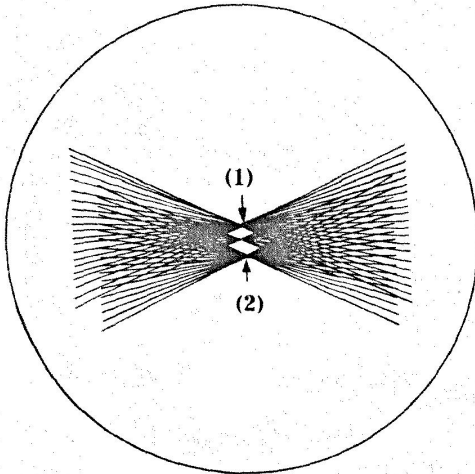
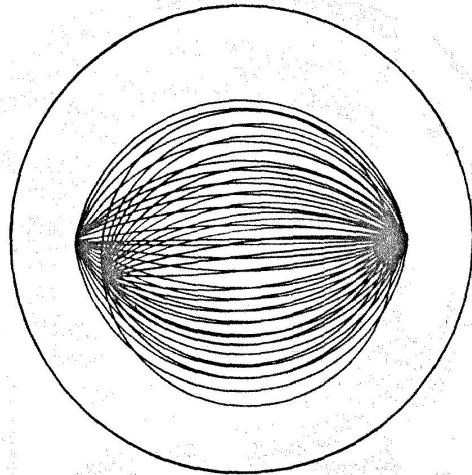


Fig 4

Adjust for Aligned State of (1)
and (2) on the Vertical Line.

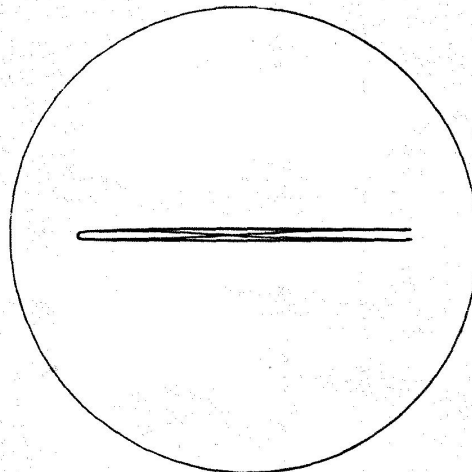


(a). Response Wave With Good
Adjustment of DIMENSION
Control.



(b). Response Wave With Poor
Adjustment of DIMENSION
Control.

Fig 5.



(c). Response Wave With Receiv-
ing Monaural Cast.