

ALIGNMENT PROCEDURE

Alignment is performed at factory with laboratory equipment. Therefore before alignment is attempted, the unit should be thoroughly checked for circuit troubles.

NOTES:

1. Check specified source voltage —DC, 14.4 volts
2. Connect an AC voltmeter (VTVM) across speaker or dummy load (8 ohms, 10W, wire wound resistor) See fig. 3
3. Signal input must be kept as low as possible to avoid overload and clipping use output indicator of highest possible sensitivity.
4. Repeat adjustment to insure good results.
5. Non-metalic alignment tools must be used.
6. Alignment location details: See fig. 8, 9

AM IF & RF ALIGNMENT USING AM SIGNAL GENERATOR (See fig. 2, 3)

Set the radio for AM reception. AM signal generator should be coupled with antenna receptacle (J1) through dummy (See fig. 10). Set volume control to maximum and tone to treble.

Attenuate signal generator output to maintain 0.5 watts (2.0 volts across 8 ohms load) on AC volt meter.

STEP	GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT INDICATOR	ADJUST	REMARKS
1	455KHz 400Hz, 30% mod.	Around 1000KHz of non-interference.	AC VTVM across voice coil (L or R) or 8 ohms load.	T102 T103	Adjust for maximum.
2	1630KHz	High frequency end stop.	“	C135	“
3	1400KHz	Tune to signal	“	C127 C2	“
4	600KHz	“	“	L102	Adjust L102 for maximum output in rotating radio dial slightly back and forth.
5	Repeat Steps 2, 3 and 4 until no further increase. Step 3 should be last step.				
With radio installed in car and antenna extended to desired height, tune in a weak station around 1400KHz and adjust antenna trimmer (C2) for maximum output.					

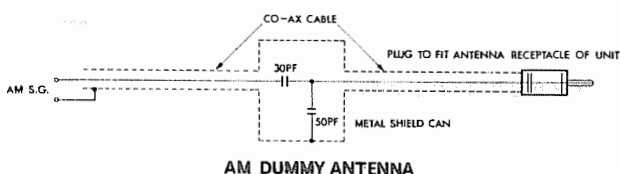


Fig. 2

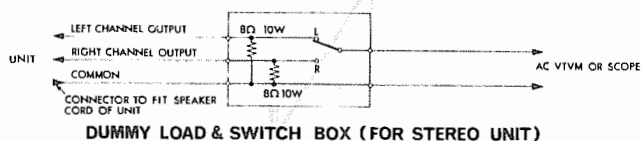


Fig. 3

FM IF ALIGNMENT USING FM SWEEP GENERATOR (See fig. 4, 5)

Set the radio for FM reception. High side of sweep generator through 0.01 mfd. to test point \diamond low side to ground. Use only enough marker signal for indication. Set volume control to minimum and tone to treble.

STEP	GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT INDICATOR	ADJUST	REMARKS
1	10.7MHz (sweep)	Point of non-interference	Vert. amp of scope to point \diamond low side to ground.	T101	Adjust T101 to obtain symmetry of response similar to fig. 4 according to the colour of Ceramic filter used.
2	"	"	"	T1	Adjust T1 for maximum amplitude and straightness of line.
3	Repeat above steps 1 and 2 for two or three times.				

NOTE:

1. FM SWEEP GENERATOR should be definitely required for FM IF alignment, because ceramic filters are used in IF circuit. Five kinds of ceramic filters are used and they are different in their center frequencies as shown below:
RED: 10.7MHz, BLUE: 10.67MHz, ORANGE: 10.73MHz, BLACK: 10.64MHz, WHITE: 10.76MHz.
2. If the ceramic filters except RED are used, 10.7MHz marker will not appear at the center of "S" curve (See fig. 4) in these cases disregard 10.7MHz marker.
3. The colour of ceramic filters used is different according to the production lots, but, the same colour-dotted ceramic filters should be replaced as one pair on the individual units.
4. Be carefull of static coupling between output lead of sweep generator and input lead of scope. The leads must be as short as possible and carefully shielded.

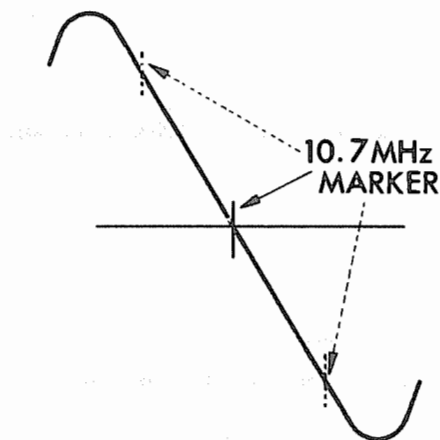


Fig. 4

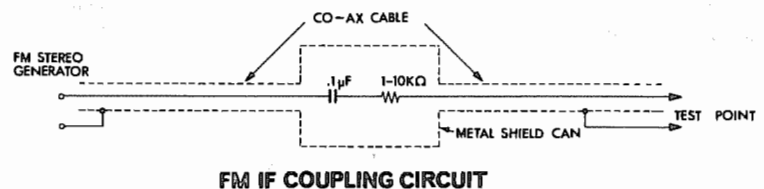
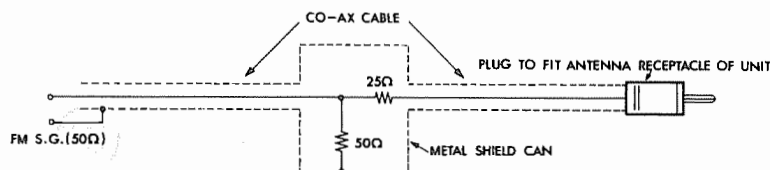


Fig. 5

FM RF ALIGNMENT USING FM SIGNAL GENERATOR (See fig. 6)

Set the radio for FM reception. Connect FM signal generator with antenna receptacle (J1) through FM dummy antenna. FM S.G. output level; 5–10 microvolts. Set volume control to 0.5 watts output (2.0 volts at 8 ohms load) and tone to treble.

STEP	GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT INDICATOR	ADJUST	REMARKS
1	108.5MHz (400Hz 22.5KHz dev)	Low frequency end stop	Output meter across 8 ohms load	OT	Adjust for maximum
2	98MHz (400Hz 22.5KHz dev)	Tune for Signal	"	AT RT	"



FM DUMMY ANTENNA

Fig. 6

FM MULTIPLEX ALIGNMENT USING FREQUENCY COUNTER

Set the radio for FM reception.

STEP	OUTPUT INDICATOR	ADJUST	REMARKS
1	Connect frequency counter to test point \diamond	R-117	Adjust to 19.000KHz (18.950–19.050KHz is permissible)

Note: Test point \diamond should be grounded while adjusting R-117.

FM MULTIPLEX ALIGNMENT WITHOUT USING FREQUENCY COUNTER

STEP	RADIO DIAL SETTING	ADJUST	REMARKS
1	Tune radio to strong FM STEREO station.	R-117	Rotate R-117 CW or CCW and mark the points where the STEREO INDICATOR LAMP is turned off. Then, fix R-117 at the center of the above marked points.

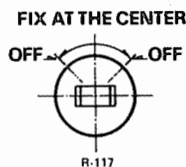


Fig. 7

CASSETTE PLAYER ALIGNMENT USING TEST CARTRIDGE

STEP	ITEM	ADJUSTMENT
1	Head Azimuth	Play a test cassette. monitor LEFT or RIGHT channel output and adjust Azimuth adjustment screw for maximum.

PROFESSIONAL SERVICE INFORMATION

All service and internal adjustment of this unit should be performed only by a qualified service technician equipped with the proper tools and instruments.

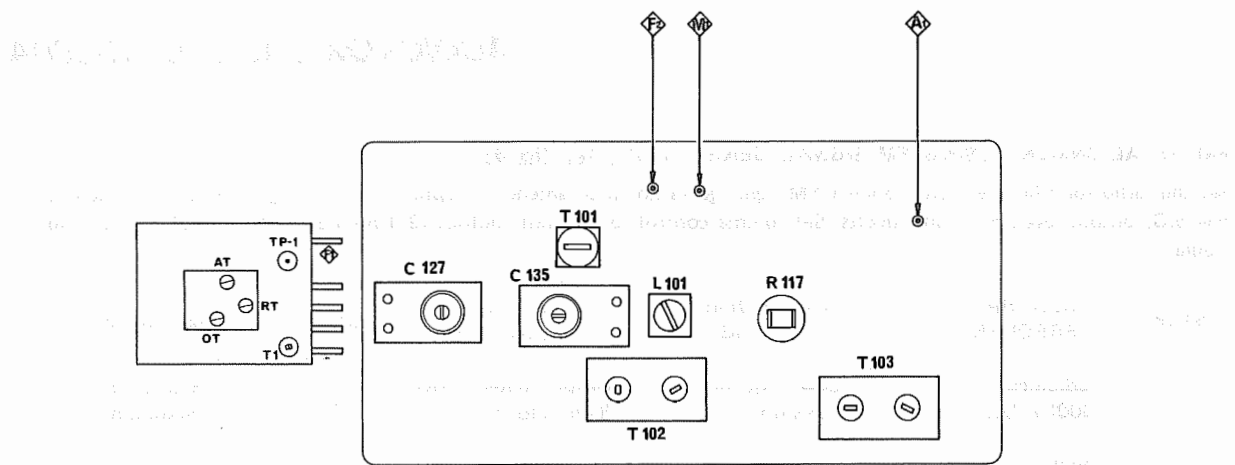


Fig. 8

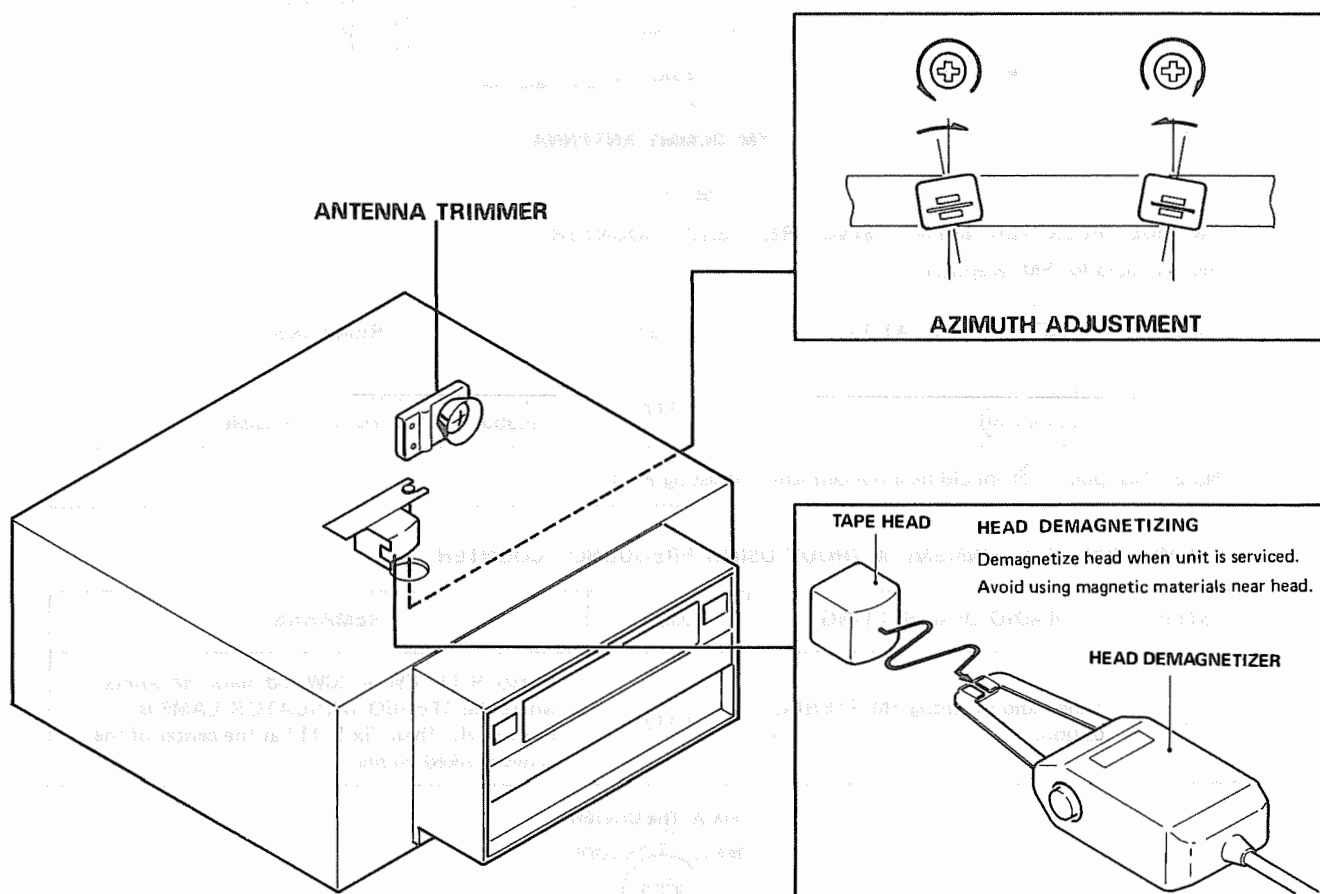


Fig. 9

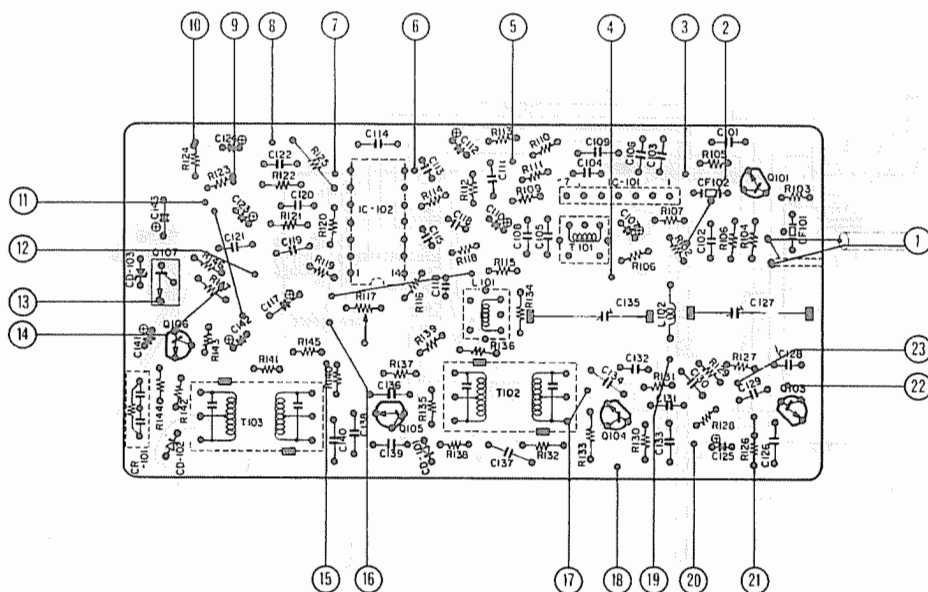


Fig. 10

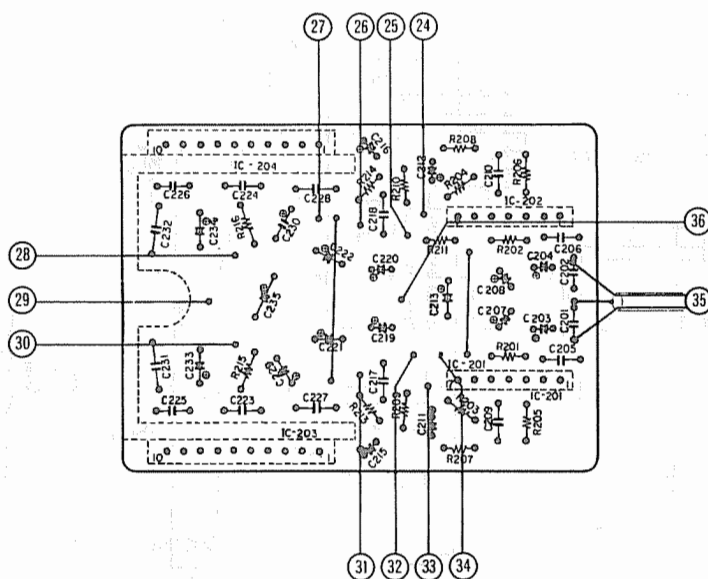


Fig. 11

PARTS ASSEMBLY LAYOUT

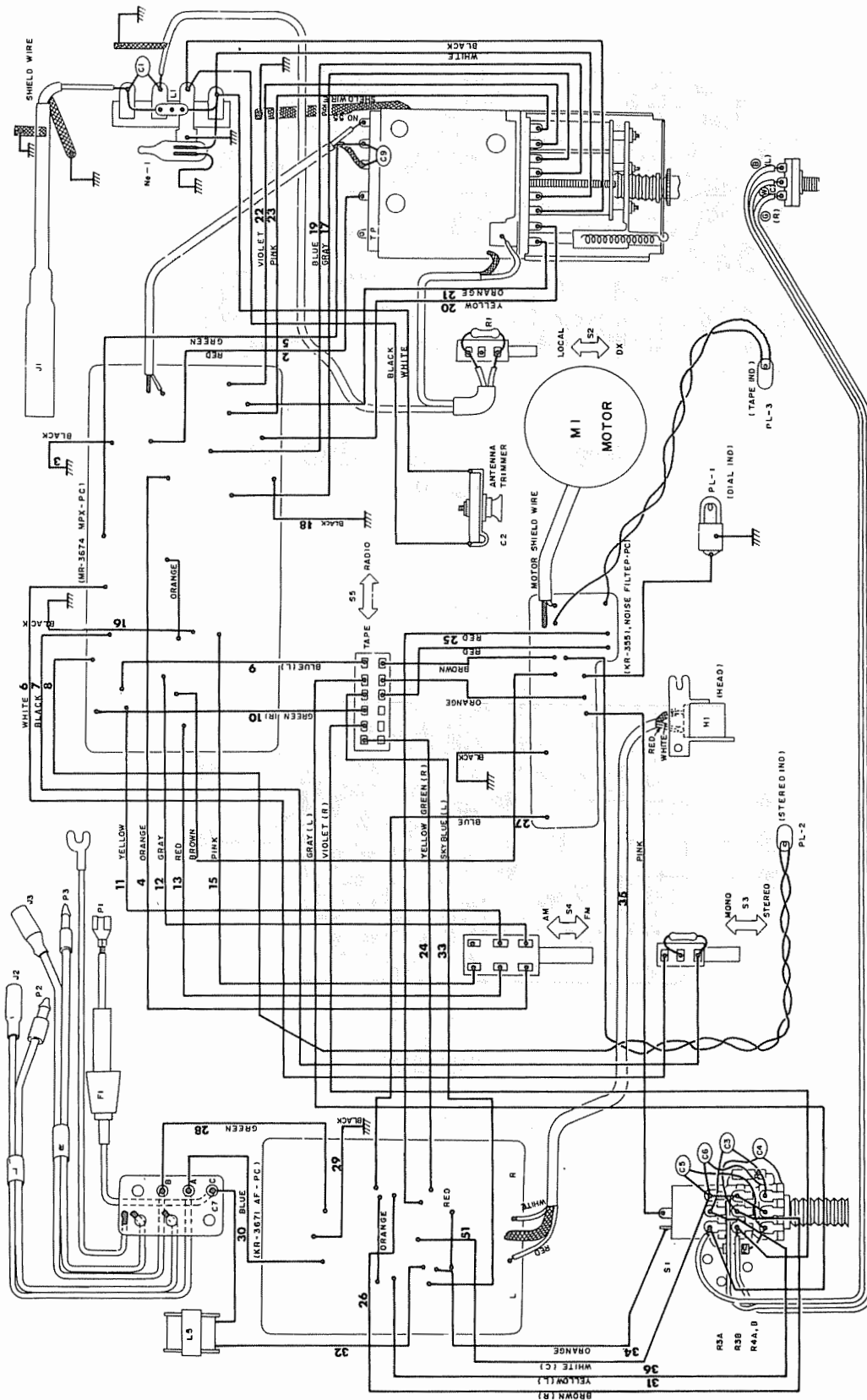


Fig. 12
WIRING DIAGRAM

BLUE (L)
WHITE (C)
GREEN (R)

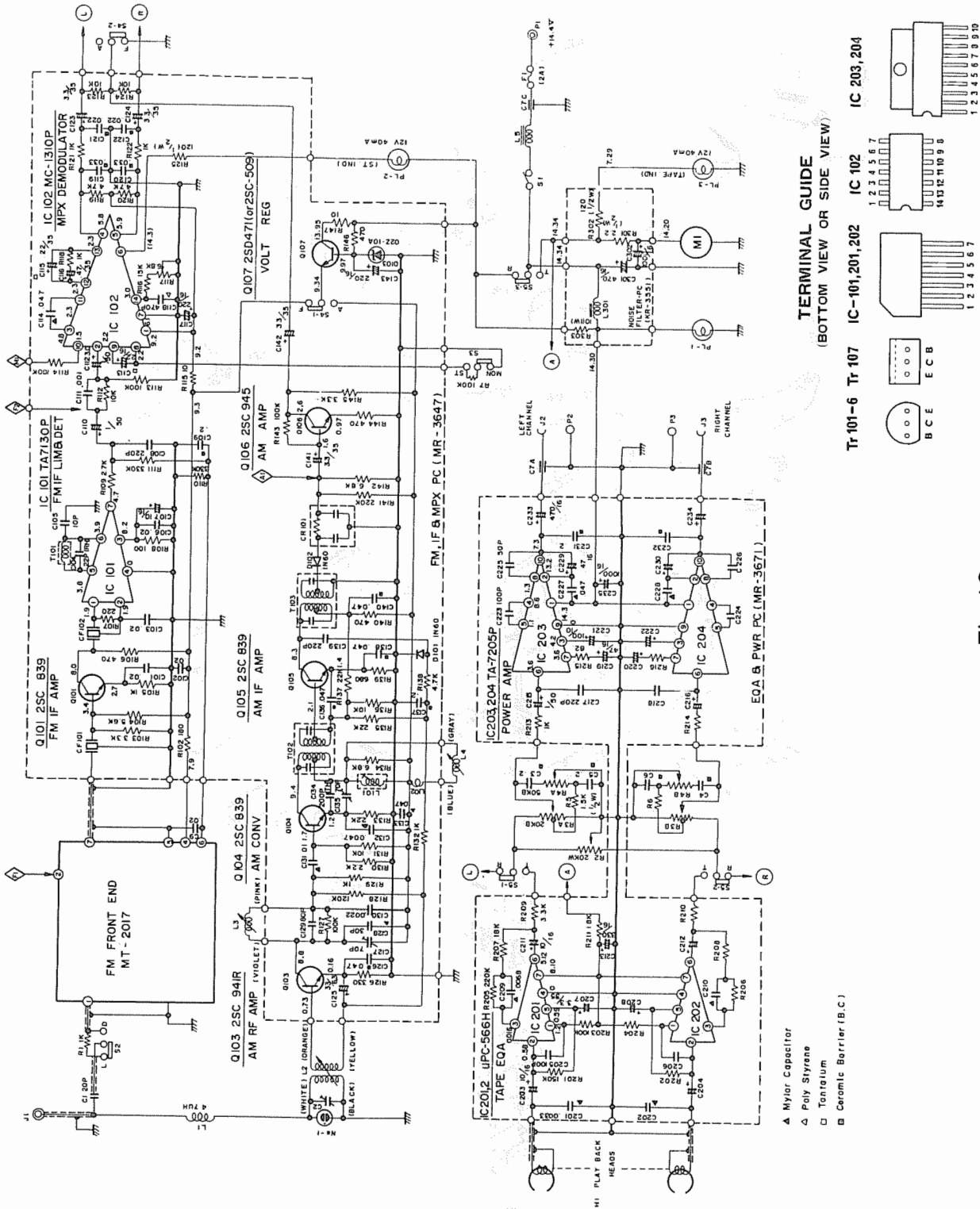


Fig. 13
SCHEMATIC DIAGRAM

AUDIOVOX CAS-300, ID-600A

Reference No.	Part No.	Description	Q'ty	Reference No.	Part No.	Description	Q'ty
ELECTRICAL PARTS				R-5, 6	37C-500-92	1,500, 10%, 1/2W, fixed composition	2
CAPACITORS				R-117	37C-500-93	6,800, semi-fixed, VR-134	1
C-1	37C-500-1	20 (22) PF, 50V, ceramic	1	R-125, 302	37C-500-94	120, 10%, 1/2W, fixed composition	2
C-2	37C-500-2	120PF, max., trimmer, TC-17	1	R-301	37C-500-95	22, 10%, 1/2W, fixed composition	1
C-3, 4, 5, 6, 109, 137, 231, 232	37C-500-3	0.2uF, 12V, ceramic	8	R-303	37C-500-96	10, 10%, 1W	1
C-7A, B, C	37C-500-4	1,000PF \times 3, feed-thru, KC-1203	1	SWITCHES			
C-9, 101, 102, 103, 106	37C-500-5	0.02uF, 50V, ceramic	5	S-2, 3	37C-500-101	Local/DX & Stereo/Mono SW-128	2
C-104	37C-500-6	22PF, 50V, N220, ceramic	1	S-4	37C-500-102	AM/FM SW-137	1
C-105	37C-500-7	10PF, 50V, ceramic	1	S-5	37C-500-103	Tape/Radio TD-108	1
C-107, 203, 204, 211, 212	37C-500-8	10uF, 16V, electrolytic	5	TRANSFORMERS			
C-108, 139, 217, 218	37C-500-9	220PF, 50V, ceramic	4	T-101	37C-500-111	FM IFT-IT-7130	1
C-110, 112, 215, 216	37C-500-10	1uF, 50V, electrolytic	4	T-102	37C-500-112	AM IFT-IT-501A	1
C-111	37C-500-11	0.001uF, 50V, ceramic	1	T-103	37C-500-113	AM IFT-IT-501B-1	1
C-113	37C-500-12	2.2uF, 16V, tantalum	1	TRANSISTORS & ICS			
C-114, 133, 227, 228	37C-500-13	0.047uF, 50V, mylar	4	Q-101, 104, 105	37C-500-121	AM IF, AM CONV & IF: 2SC-839	3
C-115	37C-500-14	0.22uF, 35V, tantalum	1	Q-103	37C-500-122	AM RF AMP: 2SC-941R	1
C-116	37C-500-15	0.47uF, 35V, tantalum	1	Q-106	37C-500-123	AM AMP: 2SC-945 (2SC-458)	1
C-117, 143	37C-500-16	220uF, 16V, electrolytic	2	Q-107	37C-500-124	Volt Regulator: 2SD-471	1
C-118	37C-500-17	470PF, 50V, polyethylene	1	IC-101	37C-500-125	FM IF, LIM & DET: TA-7130P	1
C-119, 120	37C-500-18	0.033uF, 25V, ceramic	2	IC-102	37C-500-126	MPX Demodulator: MC-1310P	1
C-121, 122	37C-500-19	0.022uF, 25V, ceramic	2	IC-203, 204	37C-500-127	Tape Equalizer: uPC-566H	2
C-123, 124, 141, 142, 207, 208	37C-500-20	3.3uF, 35V, electrolytic	6	IC-203, 204	37C-500-128	Power AMP: TA-7205P (TA-7205AP)	2
C-125	37C-500-21	33uF, 6.3V, electrolytic	1	MECHANICAL PARTS			
C-126, 136, 138, 140	37C-500-22	0.047uF, 25V, ceramic	4	37C-500-141	Arm, deck chassis joint: TD-108	2	
C-127, 135	37C-500-23	70PF, max., trimmer, TC-1	2	37C-500-142	Arm (L), eject: TD-108	1	
C-128	37C-500-24	30PF, 50V, ceramic	1	37C-500-143	Arm (R), eject: TD-108	1	
C-129	37C-500-25	80PF, 50V, ceramic	1	37C-500-144	Background Ass'y, KR-14752	1	
C-130	37C-500-26	0.0022uF, 50V, mylar	1	37C-500-145	Bearing, dial string shaft: KR-13583	1	
C-131	37C-500-27	0.01uF, 50V, mylar	1	37C-500-146	Bearing, flywheel: TD-108	1	
C-132	37C-500-28	0.0047uF, 50V, mylar	1	37C-500-147	Bell, flywheel drive: TD-108	1	
C-134	37C-500-29	200PF, 50V, N470, ceramic	1	37C-500-148	Bracket, AM/FM switch: KR-14676	1	
C-201, 202	37C-500-30	0.0033uF, 50V, mylar	2	37C-500-149	Bracket, antenna trimmer: KR-14615	1	
C-205, 206, 223, 224	37C-500-31	100PF, 50V, ceramic	4	37C-500-150	Bracket, flywheel: TD-108	1	
C-209, 210	37C-500-32	0.0068uF, 50V, mylar	2	37C-500-151	Bracket, heatsink: KR-13593	1	
C-213	37C-500-33	330uF, 16V, electrolytic	1	37C-500-152	Bracket, L/D switch: KR-14686	1	
C-219, 220, 229, 230	37C-500-34	47uF, 16V, electrolytic	4	37C-500-153	Bracket, p.c. board: KR-13553	1	
C-221, 222	37C-500-35	100uF, 10V, electrolytic	2	37C-500-154	Bracket, stereo/mono switch: KR-14674A	1	
C-225, 226	37C-500-36	50PF, 50V, ceramic	2	37C-500-155	Bracket, tape/radio switch: TD-108	1	
C-233, 234, 301	37C-500-37	470uF, 16V, electrolytic	3	37C-500-156	Bracket, tuner: KR-14679	1	
C-235, 302	37C-500-38	1,000uF, 16V, electrolytic	2	37C-500-157	Cable Ass'y, power & speaker: QS-833	1	
MISCELLANEOUS ELECTRICAL PARTS				37C-500-158	Chassis Ass'y, deck (sub): TD-108	1	
D-101, 102	37C-500-51	Diode, AGC & DET IN-60P	2	37C-500-159	Chassis Ass'y, deck: TD-108	1	
D-103	37C-500-52	Diode, zener: 022-10A	1	37C-500-160	Chassis, base: PR-14684	1	
CF-101, 102	37C-500-53	Ceramic Filter SFE-10 7MA-5	2	37C-500-161	Chassis, front: MR-13566	1	
CR-101	37C-500-54	CR Components SM-02	1	37C-500-162	Cover, bottom: KR-14800A	1	
F-1	37C-500-55	Fuse, 2A	1	37C-500-163	Cover, top: PR-13564	1	
H-1	37C-500-56	Playback Head TD-108	1	37C-500-164	Dog-Waher, tuning shaft: KR-14126	1	
M-1	37C-500-57	Motor: MHT-3RF2M	1	37C-500-165	Dog-Washer, volume shaft: KR-13591	1	
Ne-1	37C-500-58	Neon Bulb NE-2	1	37C-500-166	Escutcheon Ass'y, with dial plate, AM/FM knob: 37C-500	1	
PL-1	37C-500-59	Lamp, pilot PL-18	1	37C-500-167	Feed Reel Ass'y: TD-108	1	
PL-2, 3	37C-500-60	Lamp, stereo indicator PL-15	2	37C-500-168	Flywheel: TD-108	1	
COILS & CHOKES				37C-500-169	Guide (L), cartridge: TD-108	1	
L-1	37C-500-71	Coil, ANT Choke SL-47	1	37C-500-170	Guide (R), cartridge: TD-108	1	
L-2, 3, 4	37C-500-72	Tuner Assembly MT-2017	1	37C-500-171	Heatsink, power IC: KR-13548	1	
L-5	37C-500-73	Choke, DC, NL-1	1	37C-500-172	Holder, pilot lamp: PLH-25	1	
L-101	37C-500-74	Coil, OSC OL-2202	1	37C-500-173	Holder, stereo & tape indicator lamp: KR-30915	2	
L-102	37C-500-75	Coil, OSC LH-47	1	37C-500-174	Insulator, fiber: KR-2763	1	
L-301	37C-500-76	Choke, DC, NL-6	1	37C-500-175	Insulator, fiber: KR-30410	1	
CONTROLS				37C-500-176	Insulator, fiber (switch): KR-30080	1	
R-2	37C-500-81	Balance, L/R VR-211	1	37C-500-177	Knob, ff. rewind & eject: KN-228T	1	
R-3A, B, 4A, B, S-1	37C-500-82	Volume, Tone & On-Off SW VR-223	1	37C-500-178	Knob, L/D: KN-227T	1	
RESISTORS (All resistors are insulated carbon type unless otherwise specified)				37C-500-179	Knob, stereo/mono: KN-226T	1	
R-1	37C-500-91	1,000, 10%, 1/4W (small size)	1	37C-500-180	Lever, AM/FM switch: KR-14673	1	

Reference No.	Part No.	Description	Q'ty	Reference No.	Part No.	Description	Q'ty
	37C-500-181	Lever Ass'y, rewind : TD-108	1		37C-500-264	Knob, tone & balance : KN-61TCR	2
	37C-500-182	Lever, auto stop : TD-108	1		37C-500-265	Knob, volume & tuning : KN-54VCR	2
	37C-500-183	Lever, deck chassis lift : TD-108	1		37C-500-266	Owner's Guide : 37C-500C (01)	1
	37C-500-184	Lever, ff, eject, rewind : TD-108	1		37C-500-267	Rear Support Strap : KR-1011	1
	37C-500-185	Lever, L/D switch : KR-14672	1		37C-500-268	Screw Bag : 37C-500C (01)	1
	37C-500-186	Lever, lock : TD-108	1		37C-500-269	Speaker Cord (left) : QS-611	1
	37C-500-187	Lever, stereo/mono switch : KR-14688	1		37C-500-270	Speaker Cord (right) : QS-610	1
	37C-500-188	Lever, tape on/off switch : TD-108	1		37C-500-271	Trimplate : MR-13110	1
	37C-500-189	Lever, timing control : TD-108	1	INSTALLATION & ACCESSORIES MODEL NO.ID-600A			
	37C-500-190	Nut, volume & tuning shaft : KR-11508	2		37C-500-281	"A" Lead Adaptor Bag : QS-579	1
	37C-500-191	P.C. Board, EQA/Power : MR-3671	1		37C-500-282	Back up Plate : MR-12200A	1
	37C-500-192	P.C. Board, filter : KR-3551	1		37C-500-283	Fuse : 2A	2
	37C-500-193	P.C. Board, FM IF/MPX : MR-3674	1		37C-500-284	Insert : KR-13109	2
	37C-500-194	Pinch Roller Ass'y : TD-108	1		37C-500-285	Knob Bag (No.1) : KN-73T (Shallow)	1
	37C-500-195	Plate Ass'y, feed reel : TD-108	1		37C-500-286	Knob Bag (No.2) : KN-61T (Deep)	1
	37C-500-196	Plate, ff : TD-108	1		37C-500-287	Knob Bag (No.3) : KN-54V (Front)	1
	37C-500-197	Plate, head rest : TD-108	1		37C-500-288	Owner's Guide : 37C-500C (02)	1
	37C-500-198	Pointer, dial : KR-13574A	1		37C-500-289	Rear Support Strap : KR-1011	1
	37C-500-199	Pulley, dial string : 7001	4		37C-500-290	Rubber Collar : MR-30074	1
	37C-500-200	Pulley, dial string : KR-30439	1		37C-500-291	Screw Bag : 37C-500C (02)	1
	37C-500-201	Pulley, motor (with screw) : TD-108	1		37C-500-292	Spacer Bag : S-099	1
	37C-500-202	Receptacle, antenna : AJ-12	1		37C-500-293	Speaker Cord (left) : QS-611	1
	37C-500-203	Retainer, antenna receptacle : KR-12285	1		37C-500-294	Speaker Cord (right) : QS-610	1
	37C-500-204	Retainer, power & speaker cord : KR-13769	1		37C-500-295	Trimplate : MR-13110	1
	37C-500-205	Screw, machine : P.B. 3 × 4	7		37C-500-296	Wire Nut Bag : S-100	1
	37C-500-206	Screw, machine : P.B. 2 × 3	5				
	37C-500-207	Screw, machine : P.B. 3 × 6	6				
	37C-500-208	Screw, machine : P.B. 2.6 × 3	4				
	37C-500-209	Screw, machine : P.B. 3 × 6 (BS)	1				
	37C-500-210	Screw, tapping : hex. 3 × 5	1				
	37C-500-211	Screw, tapping : hex. 3 × 6	31				
	37C-500-212	Screw, tapping : P.P. 3 × 4	2				
	37C-500-213	Screw, tapping : P.B. 3 × 6	5				
	37C-500-214	Screw, tapping : P.B. 3 × 8	1				
	37C-500-215	Shaft Ass'y, tuning (with balance & tuning joint) : TSA-22	1				
	37C-500-216	Shaft, dial string : KR-14693	1				
	37C-500-217	Shaft, dial string pulley (long) : KR-13494	1				
	37C-500-218	Shaft, dial string pulley (short) : KR-13495	2				
	37C-500-219	Shaft, p.c. board (filter) : KR-14711	1				
	37C-500-220	Shaft, pinch roller : TD-108	1				
	37C-500-221	Spacer, auto stop lever : TD-108	1				
	37C-500-222	Spacer, feed reel plate : TD-108	1				
	37C-500-223	Spacer, ff plate : TD-108	1				
	37C-500-224	Spacer, head rest plate : TD-108	1				
	37C-500-225	Spacer, rewind lever : TD-108	1				
	37C-500-226	Spring, auto stop lever : TD-108	1				
	37C-500-227	Spring, cartridge retaining : TD-108	1				
	37C-500-228	Spring, deck chassis lift : TD-108	1				
	37C-500-229	Spring, feed/take up reel : TD-108	2				
	37C-500-230	Spring, ff plate : TD-108	1				
	37C-500-231	Spring, head rest plate retaining : TD-108	1				
	37C-500-232	Spring, head rest plate : TD-108	1				
	37C-500-233	Spring, head : TD-108	1				
	37C-500-234	Spring, pinch roller : TD-108	1				
	37C-500-235	Spring, lift lever : TD-108	1				
	37C-500-236	Spring, take up arm : TD-108	1				
	37C-500-237	Spring, with dial string : KR-12763	1				
	37C-500-238	Sticker, model no. : 37C-500C	1				
	37C-500-239	Take up Arm Ass'y : TD-108	1				
	37C-500-240	Take up Reel Ass'y : TD-108	1				
	37C-500-241	Terminal, wiring : 1L-3P (B)	1				
	37C-500-242	Washer, flywheel : TD-108	1				
	37C-500-243	Washer, reel retaining : TD-108	2				
INSTALLATION & ACCESSORIES MODEL NO.CAS-300							
	37C-500-261	Back up Plate : KR-12200A	1				
	37C-500-262	Fuse : 2A	1				
	37C-500-263	Insert : KR-13109	2				