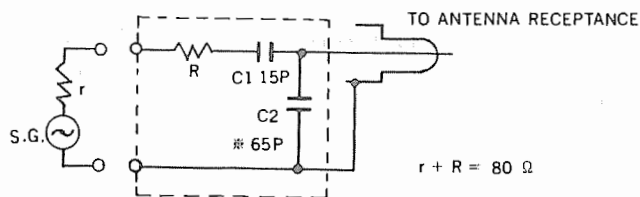


ALIGNMENT PROCEDURES

AM ALIGNMENT

EQUIPMENT REQUIRED

- 1) AM signal generator: 450~1700 kHz
- 2) Dummy antenna: Refer to Fig. 2
- 3) Output meter: AC voltmeter
- 4) Power voltage: DC 13.2V



* Including the feeder capacity

Fig. 2 AM DUMMY ANTENNA

PROCEDURE

- 1) Connect output meter.
- 2) Set volume control to maximum, and tone control to treble.
- 3) Connect signal generator to antenna receptacle through dummy antenna.
- 4) Keep signal generator output low enough to prevent A.G.C. overload.
- 5) Move slide switch to right for AM band reception.
- 6) Refer to Fig. 1.

•AM IF & RF ALIGNMENT USING AM SIGNAL GENERATOR

STEP	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	ADJUST.	REMARKS
1	455 kHz (400 Hz, 30% Mod.)	Point of non-interference	CF401 T402	Adjust for maximum output
2	520 kHz (400 Hz, 30% Mod.)	Tune for min.	T401	Adjust for maximum output
3	1650 kHz (400 Hz, 30% Mod.)	Tune for max.	TC402	Adjust for maximum output
4	1400 kHz (400 Hz, 30% Mod.)	Tune to signal	TC001 TC401	Adjust for maximum output
5	Repeat step 2, 3 and 4 until no further increase. Step 4 should be last step.			

When radio is installed in car adjust trimmer capacitor TC001 for maximum output while receiving a weak station near 1400 kHz.

•AM IF ALIGNMENT USING AM SWEEP GENERATOR

High side of sweep generator through 0.01 mfd to point \diamond (Antenna receptacle A.J.), low side to ground.

STEP	DIAL SETTING	INDICATOR CONNECTION	ADJUST	REMARKS
6	Point of non-interference	Vert amp. of scope to point \diamond (VR Terminal) low side to ground	CF401 T402	Adjust CF401, T402 for maximum gain as shown in Fig 3.

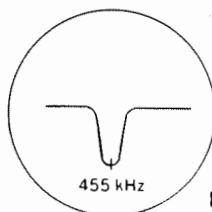


Fig. 3

FM ALIGNMENT

EQUIPMENT REQUIRED

- 1) FM signal generator: 80 ~130 MHz
- 2) Dummy antenna: Refer to Fig.4
- 3) Output meter: AC voltmeter
- 4) Power voltage: DC 13.2V

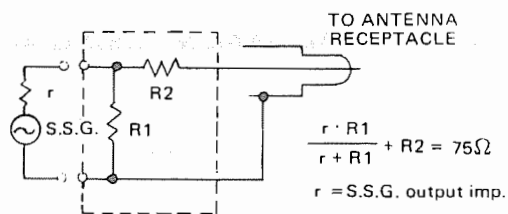





Fig. 4 FM DUMMY ANTENNA

PROCEDURE

- 1) Connect output meter across speaker terminals.
- 2) Set volume control to maximum and tone control to treble.
- 3) Connect signal generator to antenna receptacle through dummy antenna.
- 4) Slide the AM/FM switch marked "FM" to set the radio for FM reception
- 5) Refer to Fig. 1

•FM IF ALIGNMENT USING FM SWEEP GENERATOR

High side of sweep generator through 0.01 mfd to point \diamond (the lead of 10.7 MHz trap coil), low side to ground.

STEP	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR CONNECTION	ADJUST	REMARKS
7	10.7 MHz	Point of non-interference	Vert. amp. of scope to point  (VR terminal), low side to ground	T203	Detune T203 until waveform similar to Fig. 5 is obtained
8	10.7 MHz	Point of non-interference	Vert. amp. of scope to point  (VR terminal), low side to ground.	T201 T202	Adjust T101, T201 and T203 for maximum
9	10.7 MHz	Point of non-interference	Vert. amp. of scope to point  (VR terminal), low side to ground.	T203	Adjust T203 to place marker at center of crossover lines as shown in Fig. 6

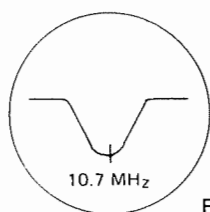


Fig. 5

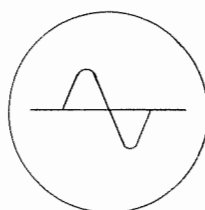


Fig. 6

FM ALIGNMENT USING FM SIGNAL GENERATOR

STEP	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR CONNECTION	ADJUST	REMARKS
10	87.0 MHz (400 Hz Mod.) (22.5 kHz dev.)	Tune for min.	Output meter across voice coil	TC103	Adjust TC103 for maximum output
11	98MHz (400 Hz Mod.) (22.5 kHz dev.)	Tune to signal	Output meter across voice coil	TC101 TC102	Adjust TC101, TC102 for maximum output
12	98 MHz (400 Hz Mod.) (22.5 kHz dev.)	Tune to signal	Output meter across voice coil	VR201	Adjust VR201 for limiting sensitivity at 15 dB.

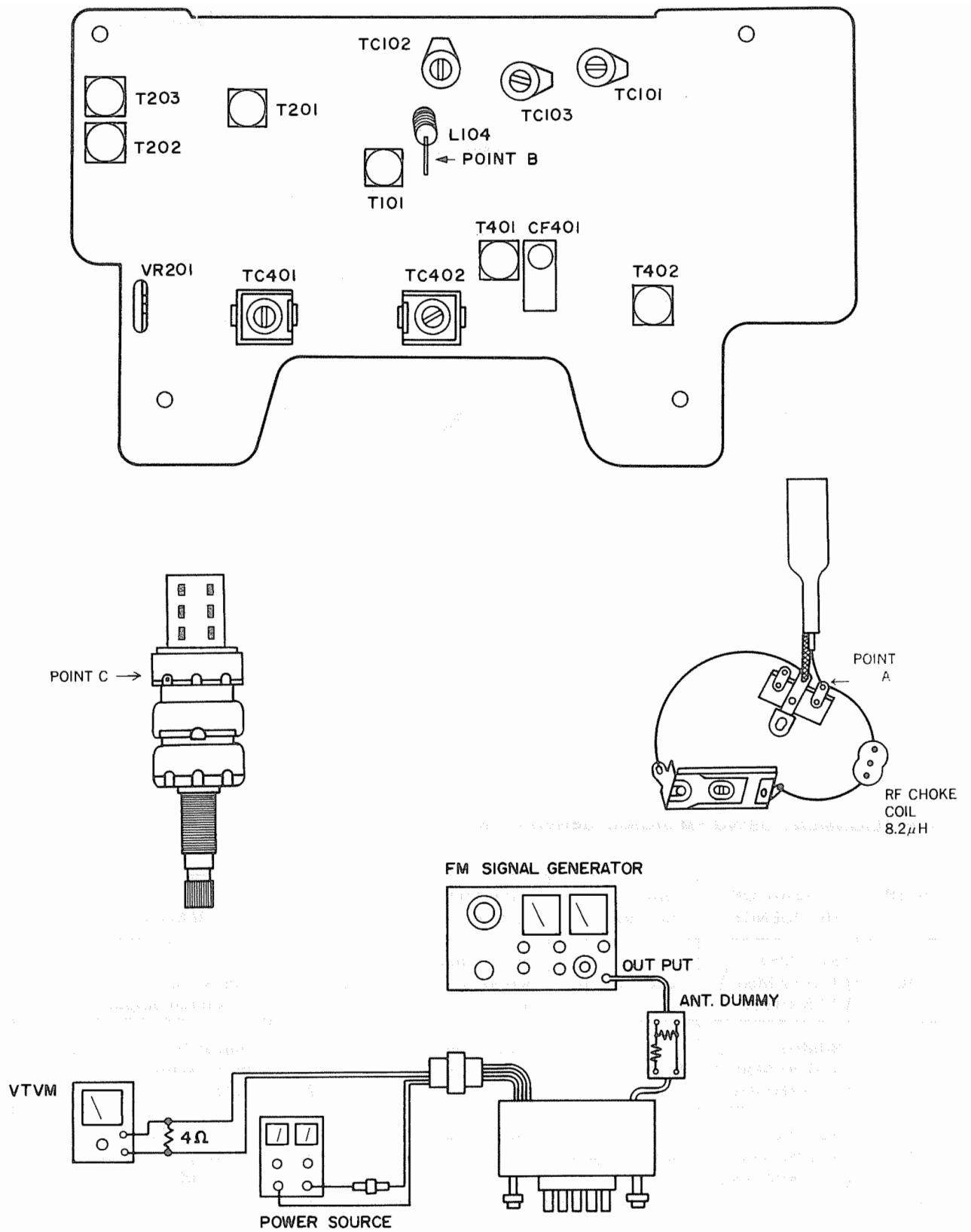
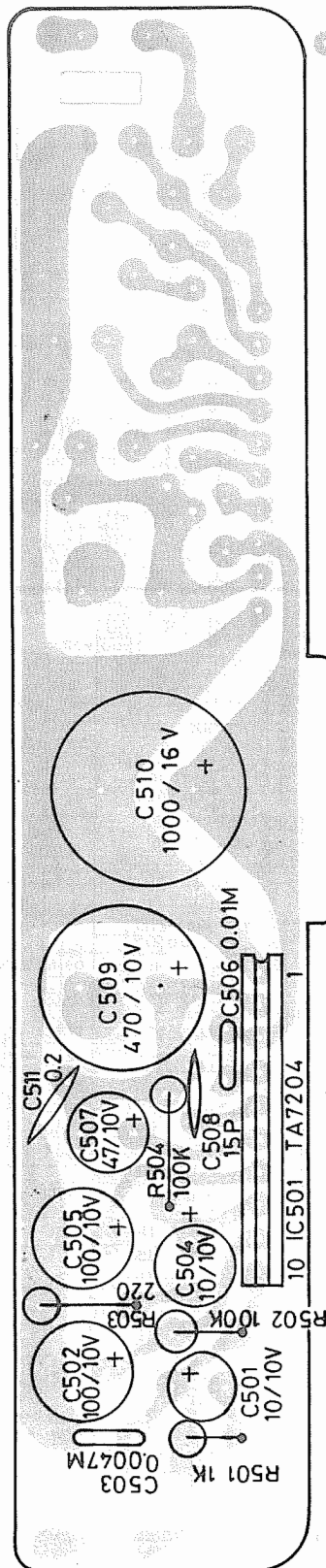


Fig. 1 Component View of Alignment Point



Audio Amp PCB (Component Side)



ALL RESISTORS AND CAPACITORS ARE IN Ω AND μF UNLESS OTHERWISE INDICATED.

2 CAPACITOR MARKED WITH A IS BUILT IN IF TRANSFORMER

3 R418 100K Ω ADJUSTABLE RESISTOR

4 R12 5.6K Ω ADJUSTABLE RESISTOR

F.E.T.

	TR101	TR102	TR103	TR201	TR401	TR402	TR403	TR701
BASE	G 0.1	1.1	1.2	0.8	(0.8)	(1.0)	(1.8)	7.7
EMITTER	S 0	0.5	0.6	0.2	(0)	(0.46)	(1.1)	7.0
COLLECTOR	D 4.8	6.6	6.7	6.4	(7.0)	(7.0)	(7.0)	13.8

IC201
(LA 1201)

PIN	VOLTAGE	PIN	VOLTAGE
1	—	8	3.0
2	3.0	9	—
3	0.7	10	2.0
4	1.28	11	0
5	1.26	12	2.0
6	0.58	13	5.8
7	0	14	5.8

IC501
(TA-7204P)

PIN	VOLTAGE	PIN	VOLTAGE
1	0	6	12.0
2	6.7	7	13.2
3	14.0	8	6.5
4	8.0	9	6.7
5	1.3	10	6.5

Voltage Chart

All Voltages Measured With a VTVM With No Signal Input in FM Position
 *() Voltages Taken in AM Position
 14.0 Volt D.C. Power Supply

ELECTRICAL PARTS

SYMBOL	DESCRIPTION	PART NO.	SYMBOL	DESCRIPTION	PART NO.
CAPACITORS					
C101	Ceramic 5pf	6701087	C404	Mylar 0.0015uf	6701171
C102	Ceramic 33pf	6701106	C405	Mylar 0.01uf	6701170
C103	Ceramic 5pf	6701087	C406	Mylar 0.001uf	6701154
C104	Ceramic 7pf	6701089	C407	Mylar 0.0047uf	6701156
C105	Ceramic 10pf	6701091	C408	Ceramic 200pf N-470	6701068
C106	Ceramic 0.01uf	6701117	C409	Mylar 0.047uf	6701179
C107	Ceramic 0.01uf	6701117	C410	Mylar 0.0047uf	6701156
C108	Ceramic 5pf	6701087	C411	Mylar 0.015uf	6701162
C109	Ceramic 6pf	6701088	C412	Electrolytic 10uf/10V	6701627
C110	Ceramic 15pf	6701095	C413	Mylar 0.047uf	6701179
C111	Ceramic 150pf	6701096	C414	Electrolytic 33uf/16V	6701304
C112	Ceramic 0.01uf	6701117	C415	Mylar 0.01uf	6701170
C113	Ceramic 2pf	6701084	C501	Electrolytic 10uf/10V	6701627
C114	Ceramic 0.01uf	6701117	C502	Electrolytic 100uf/10V	6701299
C115	Ceramic 3pf N-750	6701065	C503	Mylar 0.0047uf	6701156
C116	Ceramic 27pf	6701100	C504	Electrolytic 10uf/10V	
C117	Ceramic 0.01uf +5p	6701112	C505	Electrolytic 100uf/10V	
C118	Ceramic 0.01 +5p	6701112	C506	Mylar 0.01uf	6701170
C119	Ceramic 2pf N-750	6701069	C507	Electrolytic 47uf/10V	6701625
C120	Ceramic 1pf NP-0	6701108	C508	Ceramic 15pf	6701095
C121	Ceramic 4pf N-750	6701071	C509	Electrolytic 470uf/10V	6701303
C122	Electrolytic 1uf/6V	6701293	C510	Electrolytic 1000uf/16V	6701306
C123	Ceramic 0.01uf	6701117	C511	Ceramic 0.2uf	6701114
C124	Ceramic 0.01uf	6701117	C701	Electrolytic 47uf/16V	6701633
C125	Ceramic 0.01uf	6701117	C702	Electrolytic 47uf/16V	6701633
C201	Ceramic 0.01uf	6701117	C001	Ceramic 20pf	6701097
C202	Ceramic 33pf	6701106	C002	Ceramic 20pf	6701097
C203	Ceramic 0.02uf	6701116	C003, 4, 5, 6		
C204	Ceramic 0.04uf	6701663		Feed Through Assy.	6701358
C205	Ceramic 0.02uf	6701116	C010	Ceramic 0.1uf	6701113
C206	Ceramic 0.02uf	6701116	TC001	Trimmer 60pf	6701368
C207	Ceramic 0.01uf	6701117	TC101	Ceramic Trimmer 10pf	6701349
C208	Electrolytic 10uf/10V	6701627	TC102	Ceramic Trimmer 10pf	6701349
C209	Ceramic 0.02uf	6701116	TC103	Ceramic Trimmer 10pf	6701349
C210	Electrolytic 10uf/10V	6701627	TC401	Trimmer 70 pf	6702214
C211	Mylar 0.001uf	6701154	TC402	Trimmer 70pf	6702214
C212	Mylar 0.001uf	6701154	RESISTORS, ALL ARE 1/4 W 10% UNLESS OTHERWISE SPECIFIED		
C213	Electrolytic 10uf/10V	6701627	R001	2200 Ohm	6701033
C214	Mylar 0.015uf	6701162	R101	100K Ohm	6701019
C401	Mylar 0.0047uf	6701156			
C402	Mylar 0.047uf	6701179			
C403	Ceramic 100pf	6701092			

ELECTRICAL PARTS

SYMBOL	DESCRIPTION	PART NO.	SYMBOL	DESCRIPTION	PART NO.
RESISTORS, ALL ARE 1/4 W 10% UNLESS OTHERWISE SPECIFIED					
R102	22 Ohm	6701029	R406	56K Ohm	6701048
R103	470 Ohm	6701043	R407	1K Ohm	6701017
R104	3.9K Ohm	6701040	R408	47 Ohm	6701042
R105	18K Ohm	6701028	R409	100K Ohm	6701019
R106	1K Ohm	6701017	R410	47K Ohm	6701595
R107	470 Ohm	6701043	R411	10K Ohm	6701018
R108	100K Ohm	6701019	R412	470 Ohm	6701043
R109	1.8K Ohm	6701027	R413	100K Ohm	6701019
R110	15K Ohm	6701024	R414	10K Ohm	6701018
R111	3.3K Ohm	6701037	R415	1K Ohm	6701017
R112	5.6K Ohm 1/8W	6701047	R416	4.7K Ohm	6701044
R113	470 Ohm	6701043	R417	6.8K Ohm	6701052
R114	100K Ohm	6701019	R418	100K Ohm	6701019
R115	560K Ohm	6701049	R501	1K Ohm	6701017
R201	100 Ohm	6701016	R502	100K Ohm	6701019
R202	100 Ohm	6701016	R503	220 Ohm	6701030
R203	18K Ohm	6701028	R504	100K Ohm	6701019
R204	560 Ohm	6701600	R601	1K Ohm	6701017
R205	2.2K Ohm	6701031	R701	4.7K Ohm	6701044
R206	100 Ohm	6701016	R702	15K Ohm	6701597
R207	100 Ohm	6701016	VR201	5K Ohm Semi-Variable	6701602
R208	680 Ohm	6701051	VR001,2	Volume/Tone	
R209	2.2K Ohm	6701031		Control 10K Ohm X 2	6702208
R210	220 Ohm	6701030	VR004	Fader Control 40 Ohm	6702209
R211	1.5K Ohm	6701023			
R212	100 Ohm	6701016	SEMI-CONDUCTORS		
R213	100 Ohm	6701016			
R214	1K Ohm	6701017	TR101	FET 2SK19-Y	6701317
R215	1K Ohm	6701017	TR102	Transistor 2SC922	6701315
R216	10K Ohm	6701018	TR103	Transistor 2SC839	6701312
R217	10K Ohm	6701018	TR201	Transistor 2SC839	6701312
R218	100K Ohm	6701019	TR401	Transistor 2SC839	6701312
R219	100K Ohm	6701019	TR402	Transistor 2SC839	6701312
R220	33 Ohm	6701598	TR403	Transistor 2SC839	6701312
R221	1K Ohm	6701017	TR701	Transistor 2SC945	6701316
R401	10K Ohm	6701018	IC201	Integrated Circuit	
R402	470 Ohm	6701043		LA1201	6701311
R403	2.7K Ohm	6701034	D102	Diode 1N600	6701322
R404	18 Ohm	6701026	D103	Diode 1N60P	6701322
R405	10K Ohm	6701018	D104	Diode 1S2687 Varactor	6701327

**MODEL 6703007/3107
ELECTRICAL PARTS**

SYMBOL	DESCRIPTION	PART NO.	REF. NO.	DESCRIPTION	PART NO.
SEMI-CONDUCTORS					
D201	Diode IN60P	6701322		Knob, AM/FM Switch	6702196
D202	Diode IN60P	6701322		Label, Nose Cone	6702205
D401	Diode IN60P	6701322		Nose Cone	6701564
D701	Diode RD8.2EB Zener	6701329		Dial Scale	6702204
TRANSFORMERS, CHOKES & MISCELLANEOUS				Outer Knob	6701571
T101	FM IFT (orange core)	6701337		Inner Knob	6701570
T201	FM IFT (violet core)	6701338		Back Plate	6702198
T202	FM IFT (pink core)	6701011		Shaft Nut 9MM	6701417
T203	FM IFT (blue core)	6701010		Shaft Washer 9MM	6701393
T401	AM OSC (red core)	6701318		Dog Washer (L)	6702192
T402	AM IFT (black core)	6701319		Switch Bracket	6702194
L001	Antenna Loading Coil			AM/FM Switch	6702210
	8.2uH	6701006		Dog Washer (R)	6702193
L104	Choke Coil 1.5uH	6701332		Rear Panel, Chassis	6702189
L404	Choke Coil 4.7uH	6701005		Front Panel, Chassis	6702187
CF201	FM Ceramic Filter			Dial Pointer	6702199
	10.7 MHz	6701343		Special Washer	N/A
CF202	FM Ceramic Filter			Fader Control Assy.	6702209
	10.7 MHz	6701343		Volume Control Assy.	6702208
CF401	AM Ceramic Filter			Pushbutton Tuner	6702195
	(yellow core) 455KHz	6701340		6 Pin X 5 Connector	6701561
				Chassis Side	
				Cord Clamp	6701136
				Feed Through Cap.	6701358
				Assy. 4 Pole	
				PCB Bracket (R)	6702190
				PCB Bracket (L)	6702191
				Antenna Cord Clamp	6701272
				Antenna Jack w/	6701290
				Coaxial Lead	
				Trimmer Capacitor 60p	6701368
				Lug Terminal	6702211
				Nut 5MM	6701401
				Internal Tooth Washer	6701395
				5MM	
				Flat Washer 5MM	6701394
				Slotted Set Screw	6701386
				5X16MM	
				Chassis	6702186
				P.C. Board, Main	N/A
				Reflector, Pilot Lamp	N/A
				Pilot Lamp	6701123
				Lamp Holder	6702197
				Bracket, Power Choke	N/A
				Power Choke	6701371