

## ANALOG IC

REF.NO.	DESCRIPTION	MODE	PIN No.1	PIN No.2	PIN No.3	PIN No.4	PIN No.5	PIN No.6	PIN No.7	PIN No.8	PIN No.9	PIN No.10	PIN No.11	PIN No.12	FUNCTION
IC 101	DH 1048	TX	--	3.8	4.5	3.8	0	--	4.5	8	--	--	4.5	--	IDC
IC 104	DH 2501	TX	0	0	0	7.5	7.5	0	0	7.5	7.5	0	0	0	BUFFER
IC 108	DH 2503	TX	0	0	7.5	0	7.5	0	7.5	1.4	--	--	--	--	BUFFER
IC 251	MC3357P	SQUELCH													
		CLSD. RX OPEN RX	7.1 7.1	7.1 7.1	7.9 7.9	7.6 7.6	1.0 1.0	1.0 1.0	1.0 1.0	7.7 7.7	4.2 4.2	1.9 1.9	1.9 1.9	1.4 0.2	
IC 252	MB 3712	RX	7.0	13.8	13.0	0	--	--	0.6	--	--	--	--	--	AF PWR AMP
IC 303	uPC7808H	TX	13.8	8.0	0	--	--	--	--	--	--	--	--	--	POWER REGULATOR
		RX	13.8	8.0	0	--	--	--	--	--	--	--	--	--	
IC 401	MB 3756	TX	8.0	13.6	8.0	0	0	0	0	8	--	--	--	--	POWER REGULATOR
		RX	8.0	13.6	8.0	0	1.7	8	0	0	--	--	--	--	
IC 402	uPC7805H		13.8	5.0	0										POWER REGULATOR
IC 704	DH2502	RX	0	0	5.1	5.1	0	0	0	5.1	5.1	0	0	0	BUFFER

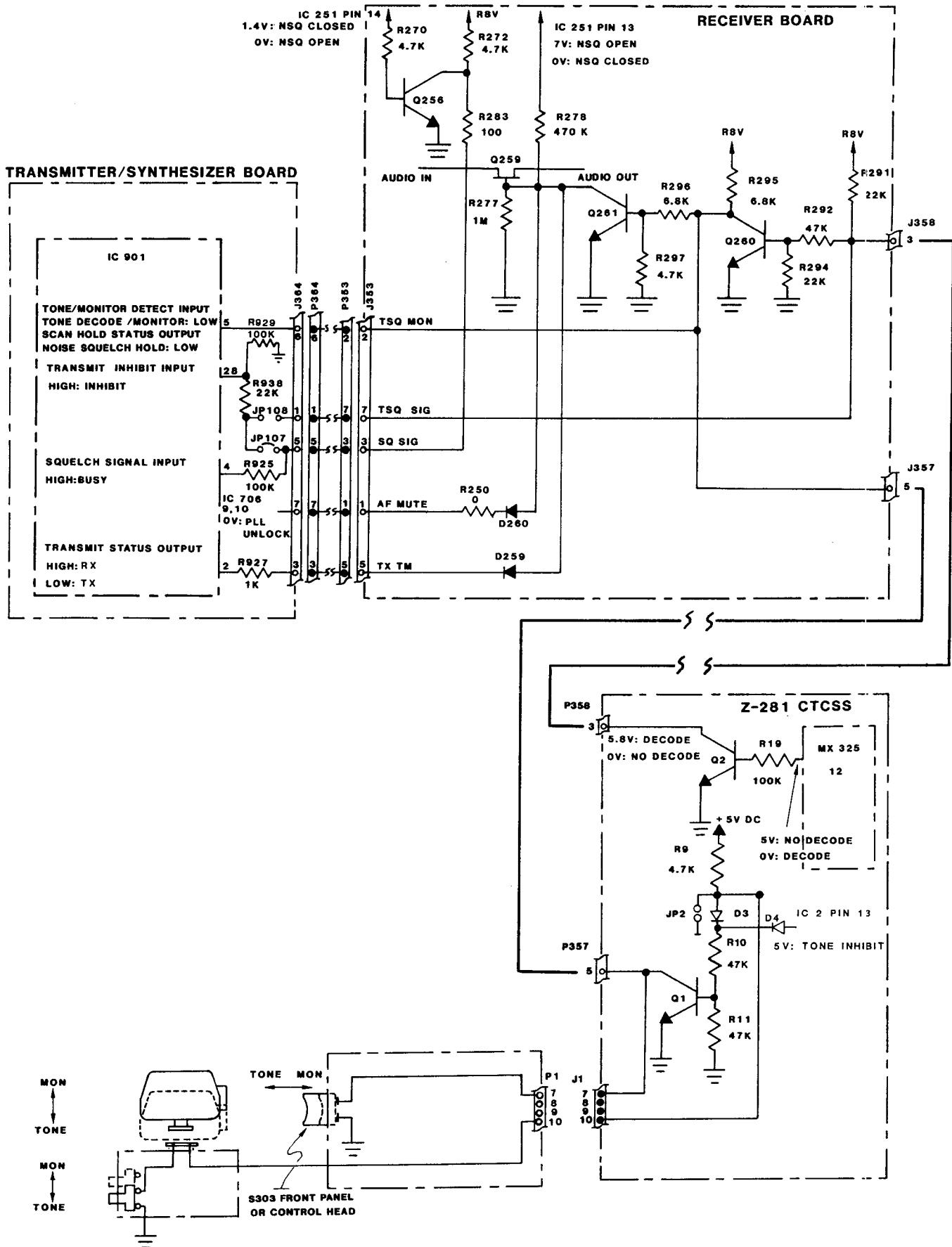
## MICROCOMPUTER (IC 901)

## PIN OUT DESCRIPTION

PIN NO.	PIN NAME	INPUT OUTPUT	SIGNAL NAME	FUNCTION
1	D3	OUT	DSTB+	Strobe for serial data to synthesizer
2	D4	OUT	TXTM-	Signalling option control (TX: LOW, RX: HIGH)
3	D5	OUT	ALM-	Alert (2KHz Tone)
4	D6	IN	SQSIG+	Squelch Signal (Busy; High)
5	D7	IN	TSQMON-	Tone/Monitor detect (low)
6	D8	OUT	TSQMON-	Scan hold status (NSQ Hold; Low)
		IN	PLCL-	Synthesizer Unlock: LOW (input)
7	D9	OUT	PLCL-	Audiomute & TX Inhibit: LOW (output)
8	D10	IN	VCOCNT	VCO Band Switch High Frequency Range: LOW
9	D11	IN	SCN-	Scan Switch (on: LOW)
10	D12	IN	PRI-	Pri Switch (on: LOW)
11	D13	OUT	DSPSTL-	Display Data Ones Digit Strobe
12	D14	OUT	DSPSTH-	Display Data Tens Digit Strobe
13	D15	IN	ALBH-	Band Select (A: LOW, B: HIGH)
14	NC	-	TXDL	TX/RX Control (Tx: LOW Rx: HIGH)
15	RESET	-	- - -	No Connection
16	GND	-	- - -	General Reset (Reset: HIGH)
17	OSC1	-	- - -	Ground
18	OSC2	-	- - -	Clock Oscillator (800 KHZ +5%)
19	HLT	-	- - -	Clock Oscillator (800 KHZ ±5%)
20	TEST	-	- - -	Standby Mode Control (Standby: LOW)
21	Vcc	-	- - -	Not Used (HIGH)
22	R00	OUT	- - -	Power Supply (+5V±10%)
23	R01	OUT	DSPO+	LED Display Data (HIGH: 6 to 8V, LOW: 0 to 2V)
24	R02	OUT	DSP1+	LED Display Data (HIGH: 6 to 8V, LOW: 0 to 2V)
25	R03	OUT	DSP2+	LED Display Data (HIGH: 6 to 8V, LOW: 0 to 2V)
26	R10	OUT	DSP3+	LED Display Data (HIGH: 6 to 8V, LOW: 0 to 2V)
27	R11	IN	UP-	Channel Up Switch (ON: LOW)
28	R12	IN	DWN-	Channel Down Switch (ON: LOW)
29	R13	IN	INH+	PTT Inhibit (Inhibit: HIGH)
30	INTO	IN	TA-	Wideband/Standard Select (WIDE: LOW)
31	INT1	IN	PTT INT+	PTT Switch (PTT: HIGH)
32	R20	OUT	- - -	Not Used
33	R21	OUT	RMA0+	E/PROM ADDRESS DATA
34	R22	OUT	RMA1+	RMA5+ is also used as the E/PROM ENABLE SIGNAL
35	R23	OUT	RMA2+	" " " " " " " " " "
36	R30	OUT	RMA3+	" " " " " " " " " "
37	R31	OUT	RMA4+	" " " " " " " " " "
38	R32	OUT	RMA5+	" " " " " " " " " "
39	R33	OUT	ASTB+	Strobe for E/PROM address data latch
40	D0	OUT	AUXSTB+	Strobe for AUX.DATA (Signalling Option Board)
41	D1	OUT	PSST+	Strobe for E/PROM DATA OUTPUT TO SHIFT REGISTER
42	D2	IN	CHDT+	Serial data from Shift Register
		OUT	DCLK	Clock for CHDT+

HIGH: 3.5 to 5V, LOW: 0 to 1.5V

Measure with high input impedance meter or oscilloscope



## CHIP COMPONENT IDENTIFICATION

Chip components used in Midland SYN-TECH transceivers can be identified as follows:

<u>COLOR</u>	<u>COMPONENT TYPE</u>
Black	Metal Film Resistor
White with value marking	Metal Film Resistor
Light Brown	Ceramic Capacitor
Green	Ceramic Capacitor
White (no marking)	Ceramic Capacitor

Resistor value marking is as follows:

1st two digits - significant digits  
 3rd digit - number of added zeros

Example: 105 = 10 00000 = 1M Ohm

## CHIP COMPONENT REMOVAL/REPLACEMENT

NOTE: Temperature of soldering iron must be maintained at 600-700°F.

### COMPONENT REMOVAL

1. Place solder iron tip directly on component in order to melt solder and glue as shown in figure #1 & #2. Remove component with tweezers or long nose pliers.

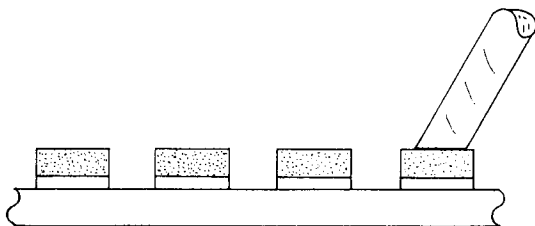


FIG. #1

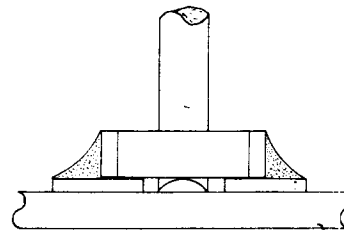


FIG. #2

2. Completely remove old solder from PC board, using a desoldering tool. Application of a small amount of flux will greatly aid in the removal of old solder.

### CHIP COMPONENT REPLACEMENT

3. After component has been removed and PC pattern cleaned, apply a small amount of solder on PC pattern and let cool, as shown in figure #3.

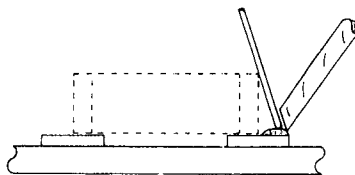
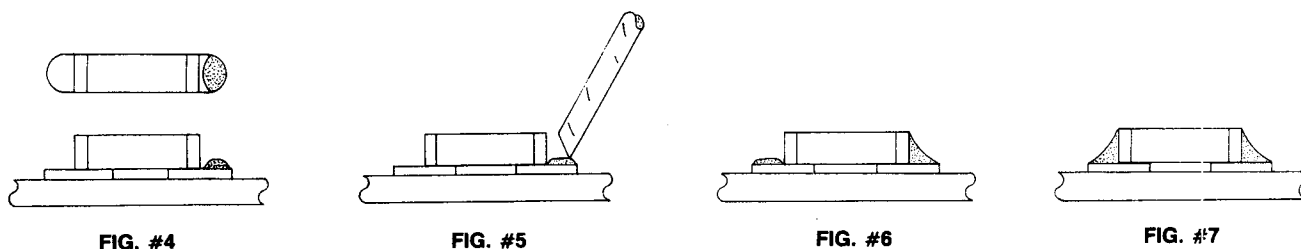


FIG. #3

CHIP COMPONENT REPLACEMENT (CONTINUED)

4. Insert new component and apply soldering iron tip to PC pattern as shown in figures 4, 5, 6 and 7.



CAUTION: As patterns and components are close to each other, extreme care must be exercised when soldering, as not to damage components or bridge PC pattern paths. High soldering iron temperatures can cause component damage. DO NOT apply the soldering iron tip to a new component during installation.

IC COMPONENT REMOVAL/REPLACEMENTCOMPONENT REMOVAL:

Extreme care must be exercised when removing and replacing defective transistors and IC's. Keep in mind that copper foil is employed on both sides of the printed circuit board. IC's and transistors may be removed from the circuit for testing. If IC's are to be removed from the circuit intact and unharmed, an IC desoldering tip attached to a soldering iron should be used. This tip will melt solder on all pin connections simultaneously and the IC may be pulled from the PC board.

A solder suction tool or braided desoldering wick may be used to remove the solder, freeing one pin at a time. Carefully and thoroughly remove solder from all IC pins until the IC can be removed without resistance. When removing transistors for testing, use needle nose or clamping type seizing pliers that will act as a heatsink on the transistor leads. If a transistor or IC is defective, it may be cut from the leads and removed. The leads may be unsoldered and removed one at a time.

REPLACEMENT:

If it is necessary to bend IC leads, firmly hold and bend the lead with needle nose pliers. Make sure the leads are free from solder and are parallel to the IC body. Remove all solder from the holes in the PC board before attempting replacement. When replacing an IC or transistor on the PC board, make sure the component is properly orientated. Before soldering an IC, verify there is no AC voltage between the solder iron tip and common ground.

PC BOARD REMOVALTX/SYNTHESIZER PC BOARD

To remove the Tx/Synthesizer PC board, remove the 8 Phillips head PC board mounting screws. Disconnect the 4 multi pin connectors at J363, J361, J362 and J364, located at the front of the board. Next disconnect the 2 Coaxial connectors at J365 and J366, located at the rear of the board. Slide the PC board to the rear of the radio to clear the front retaining tab, then pull up.

RX PC BOARD

To remove RX PC board, remove the 5 Phillips head PC board mounting screws. Next disconnect the 5 multi pin connectors at J351, J354, J353, J352 and J358 located at the middle and front of the board. Next disconnect the 2 Coaxial connectors at J356 and J355 located near the rear of the board. Slide PC board to the rear of the radio to clear front retaining tab and then pull up. Board will still be retained by power wiring but can be laid over.

PA PC BOARD

To remove PA PC board, loosen the 4 Phillips head screws (2 on each side) located to the outside rear of the unit. Tilt PA/heatsink downwards and remove the 2 Phillips head screws holding the PA cover and remove the cover. Remove the 10 Phillips head mounting screws holding the PC board and output transistors. Next unsolder the antenna connector which protrudes through the PC board on the left hand side. The antenna connector is soldered to the board at 3 connections. All solder must be removed from these connections before attempting to remove the board. Next disconnect the 2 coaxial connectors at J372 and J371 and pull up on board. The board will still be retained by power wiring but access to the rear of the PCB is possible.



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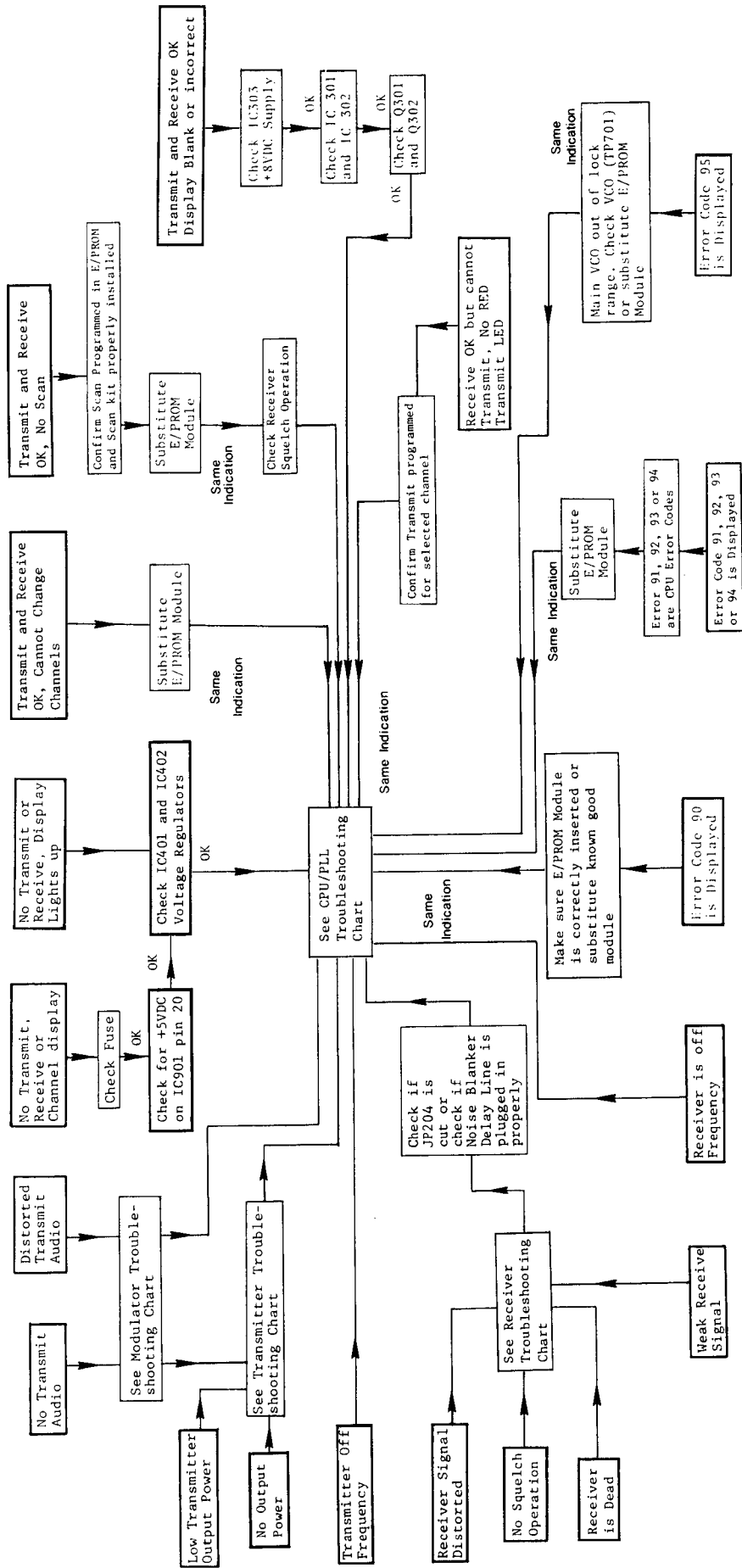
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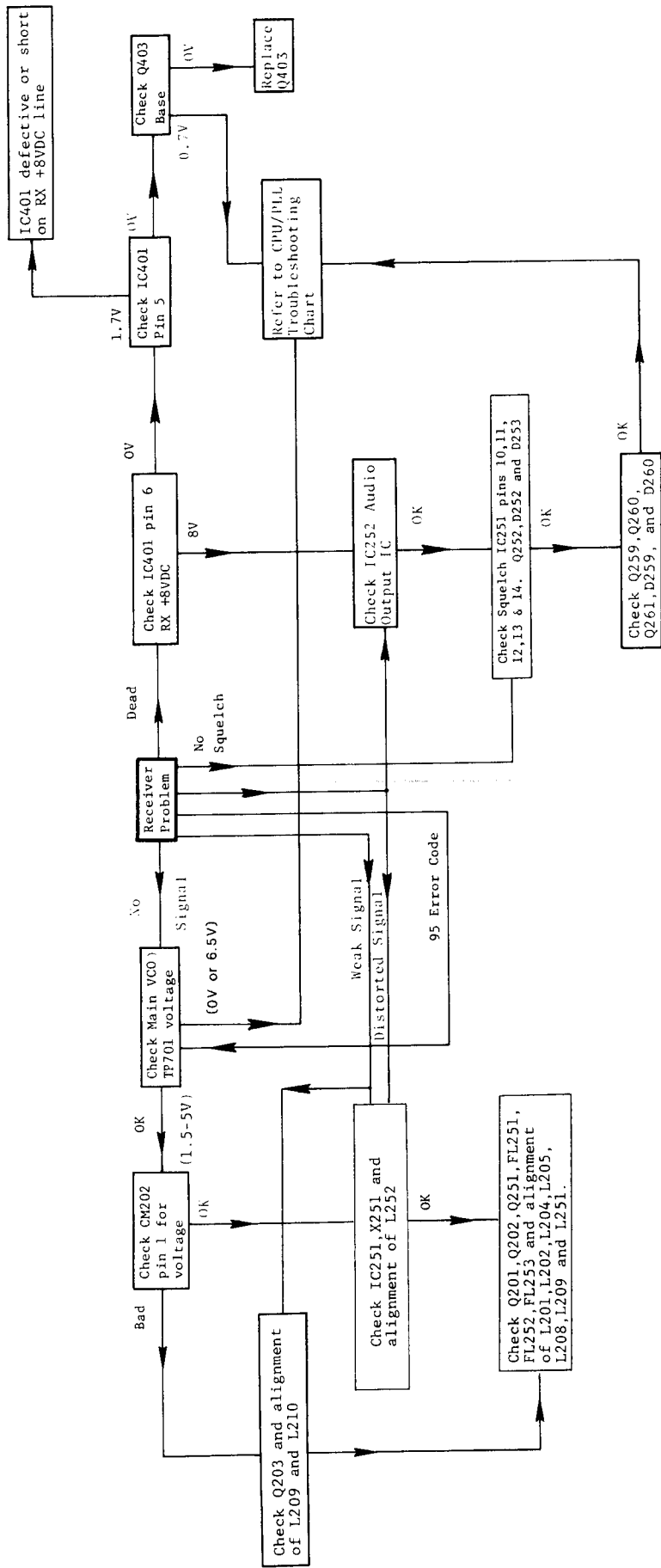


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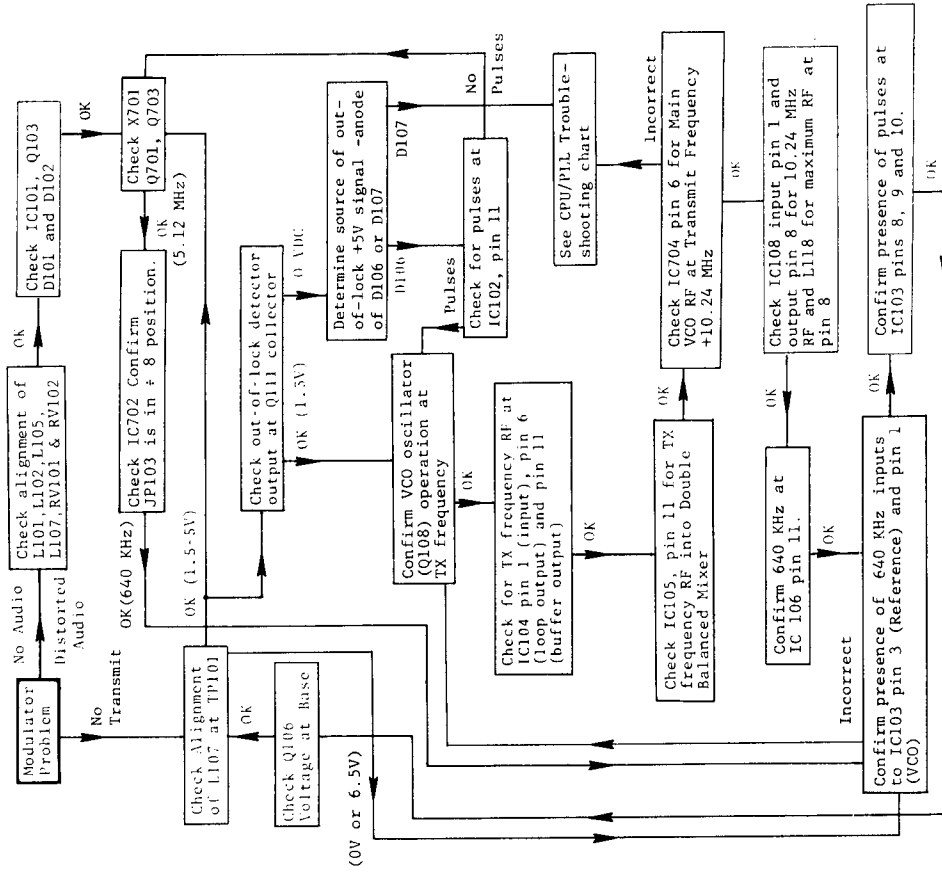
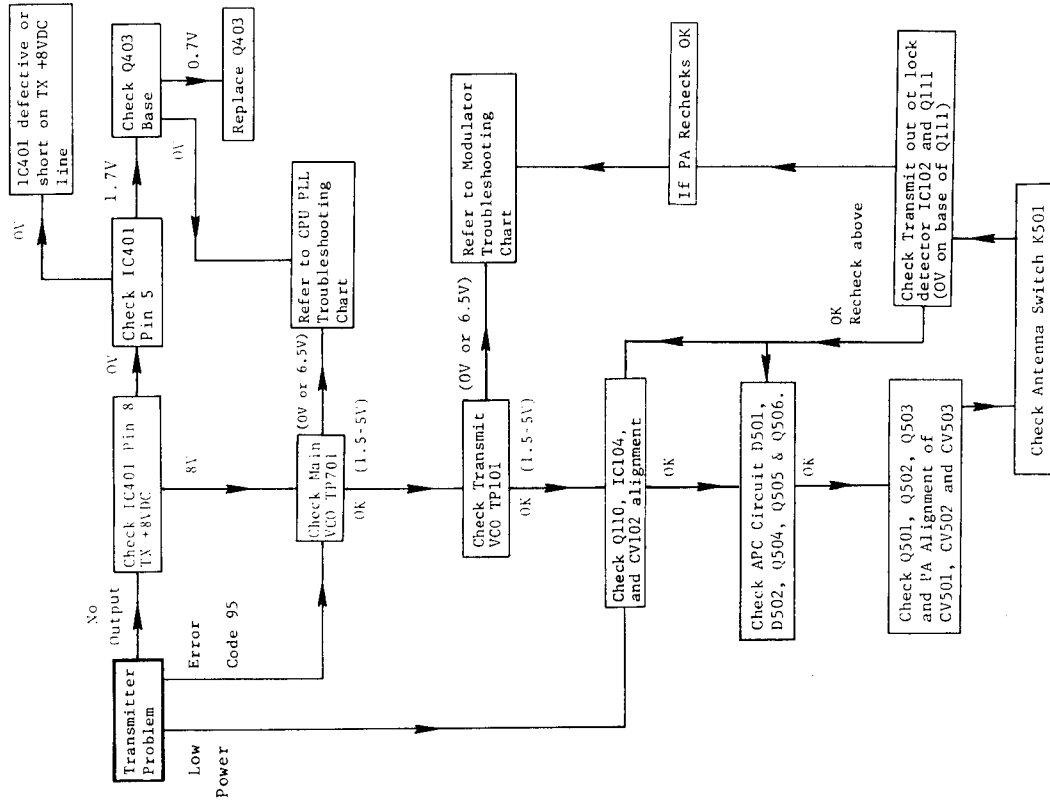


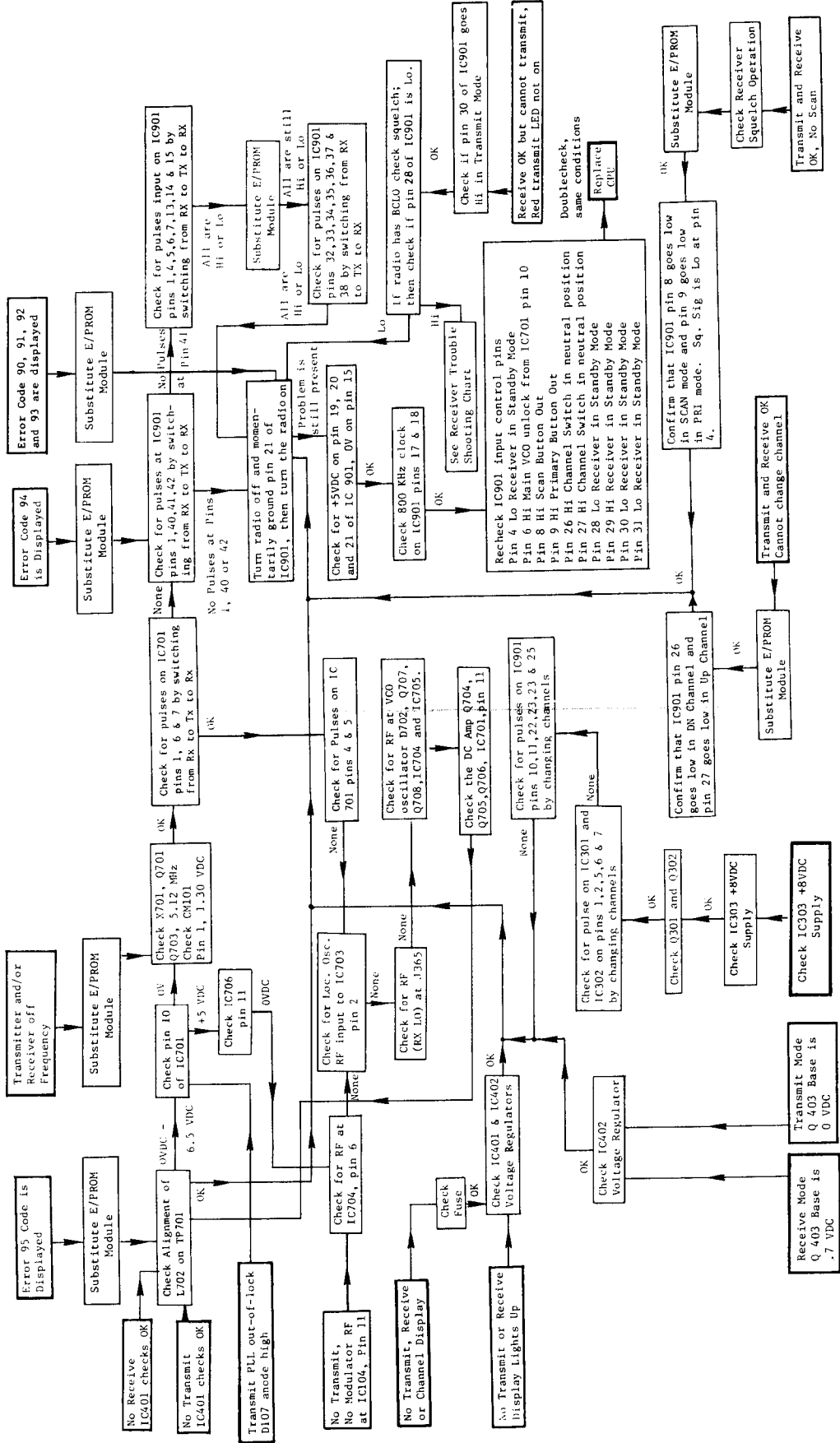


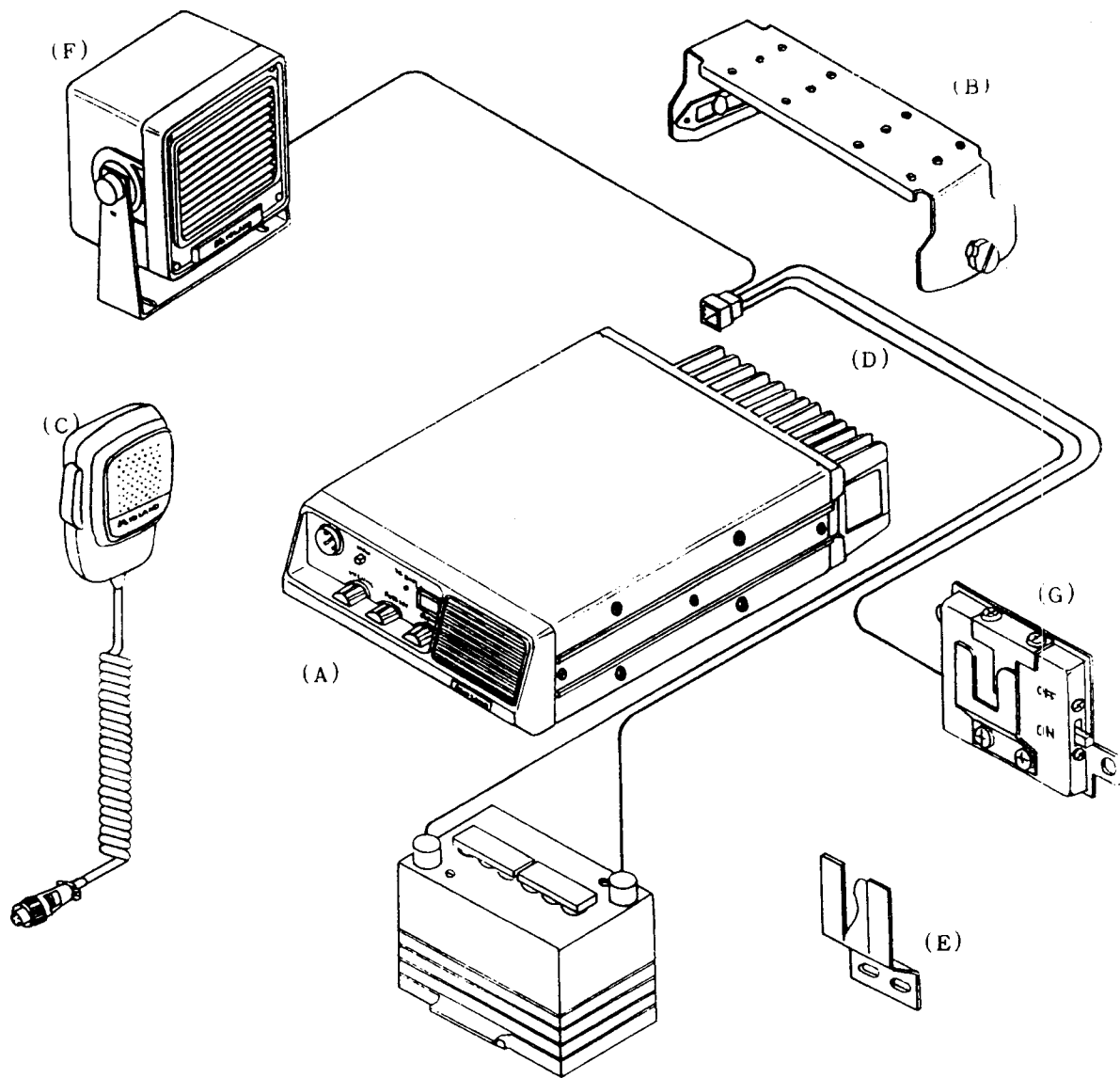


Fold Out →









UNIT AND INCLUDED ACCESSORIES:

- (A) Under Dash Type Land Mobile Radio
- (B) Mobile Mounting Bracket
- (C) Dynamic Microphone
- (D) DC Power Cord
- (E) Microphone Clip

MODEL NO.

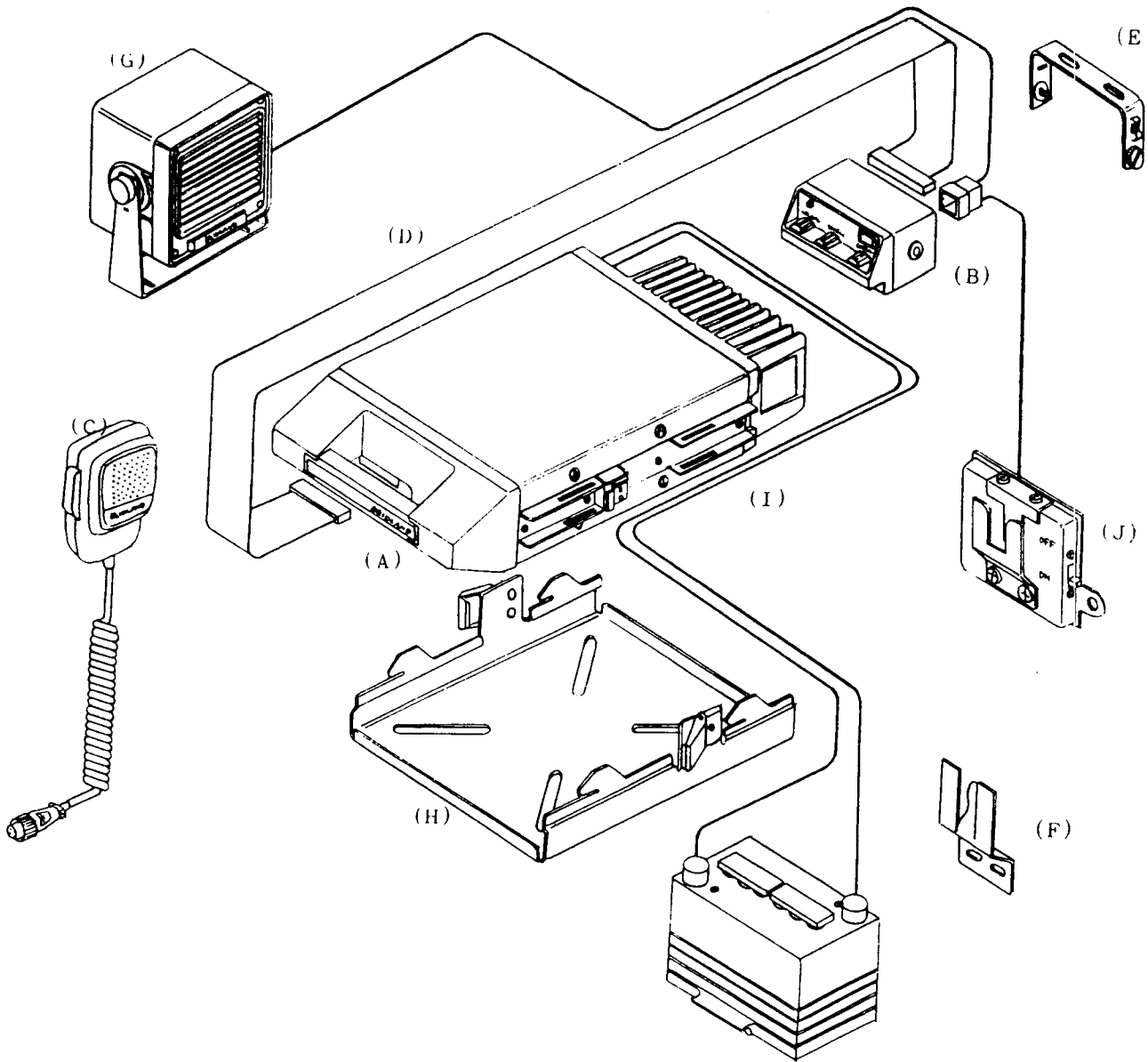
PART NUMBER

70-2201	
70-2301	70-038013
70-2211	70-034031
	70-158015

OPTIONAL ACCESSORIES:

- (F) Mobile Trunk Mount External Speaker
- (G) Microphone Hang Up Box

70-2351
70-2195



UNIT AND INCLUDED ACCESSORIES:

- (A) Trunk Mount Type Remote Unit
- (B) Trunk Mount Type Control Head
- (C) Dynamic Microphone
- (D) Trunk Mount Control Cable
- (E) Bracket, Control Head
- (F) Microphone Clip
- (G) External Speaker
- (H) Mounting Tray, Remote Unit, W/Keys
- (I) DC Power Cord

MODEL NUMBER

PART NUMBER

70-2206	70-033013
70-2301	70-034061
70-2222	70-158069
	70-158015
70-2351	
70-2205	70-158068
70-2212	70-034032

OPTIONAL ACCESSORIES:

- (J) Microphone Hang Up Box

70-2195

## LOCATION

### UNDER DASH UNIT:

Where you place the transceiver in the vehicle is not critical to its performance; convenience and accessibility are the key factors when installing the transceiver. The mobile mounting bracket will provide you with some guide as to placement. Locations where it can be mounted with metal screws, bolts or pop-rivets generally will work.

### REMOTE UNIT:

The remote unit may be mounted up to 4 meters away from the control head utilizing the flat cable assembly supplied with the unit. In larger vehicles, longer control cables available from Midland or assembled in the field may be used. Refer to the accessory list for part numbers of bulk cable, connectors and assembly tooling. The flat cable allows routing under vehicle carpeting if desired. When installing, route the connecting cables away from locations where they will be exposed to heat, sharp edges or mechanical damage and where it will be out of the way of the driver and passengers. Wherever possible, existing holes in the trunk wall, door channels and window columns should be utilized. The remote unit may be mounted horizontally, vertically or on it's side. Select a location with sufficient room for the unit to be unlocked and removed from the mounting tray. The mounting tray can be attached using the sheet metal screws and washers provided with the unit.

### CONTROL HEAD:

Control head mounting location is not critical to it's performance. Convenience and accessibility are the key factors when installing. Refer to the Mobile Installation Diagram for the control head mount bracket. The mount bracket may be installed with metal screws, bolts or pop rivets.

### POWER REQUIREMENTS:

This transceiver is designed to operate from any 13.8 V DC, 10 amp negative ground source. A standard automotive, 12 volt negative ground system generally is adequate. Inspection of the vehicle's electrical system is recommended prior to installation of the transceiver. A low battery, worn generator/alternator or poor voltage regulator can impair the operation of the transceiver. Noise interference or low voltage output can sometimes be traced to these problems. If an external AC power supply is used with the transceiver, it must be adequately regulated for voltage and current. Low voltage output will produce unsatisfactory results from the transceiver. Receiver sensitivity and transmitter output will be greatly impaired.

CAUTION: EXCESSIVE VOLTAGE OUTPUT ABOVE 16 V DC CAN CAUSE DAMAGE TO THE TRANSCEIVER. CHECK THE VOLTAGE SOURCE BEFORE CONNECTING THE POWER CABLE.

Included with the transceiver is a DC power cable. The red wire is positive (+) and the black wire is negative (-). If at all possible, make direct connection to the battery terminals to prevent random noise and transient spikes from being fed back into the transceiver and also insure adequate operating voltage. If this type of installation cannot be made, a convenient voltage lead or terminal and

chassis ground in the vehicle may be used. This transceiver operates on a negative ground system only, do not attempt to operate in a positive ground vehicle.

## ANTENNA:

The most important single factor that can influence the performance of any communications system is the antenna. A good quality antenna of 50 ohm impedance, designed for VHF applications in the 29-54 MHz range is recommended. When adjusting the antenna, whether mobile or fixed, be sure to follow the manufacturers suggested instructions. When adjusting the antenna for VSWR, a high quality SWR meter must be used. The transceiver equipped with an Automatic Protection Circuit (APC) which will disable the transmitter should a high SWR or short circuit in the antenna system occur.

## MICROPHONE HANG-UP BOX:

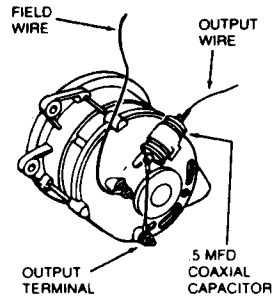
The optional accessory microphone hang-up box (Model 70-2195) is intended to be used in conjunction with the CTCSS option board Model 70-2102. This unit may be installed in place of the microphone clip or any other location convenient to the operator. The hang-up box may be mounted on a metal or non-metalic surface with the two screws provided. Wiring instructions are shown in the accessory jacks diagrams.

## EXTERNAL SPEAKER:

The 70-055 is supplied with an external speaker (Model 70-2351). The 70-2351 can also be attached to the 70-050 in applications requiring higher audio levels. Consult the installation wiring diagrams for hook up instructions. The external speaker impedance is rated at 4 ohms.

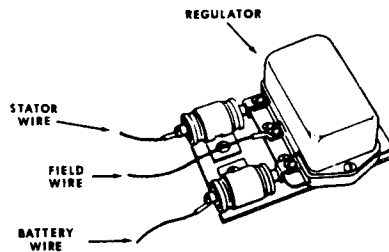
## 1. ALTERNATOR:

The alternator slip rings should be clean and the brushes should make good contact. A .5uf coaxial capacitor may be installed at the alternator output terminal. Verify that the current rating of the capacitor is sufficient to handle the alternator output current.



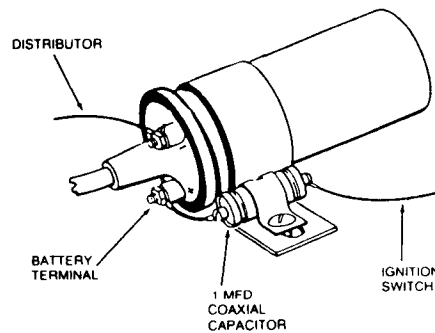
## 2. VOLTAGE REGULATOR INTERFERENCE:

Vibrating breaker contacts in the voltage regulator can cause arcing which results in interference. This interference can be noted as popping in the receiver which will change in frequency as engine speed is varied. To reduce voltage regulator noise, place two .5 uf coaxial capacitors as shown.



## 3. IGNITION COIL INTERFERENCE:

A .1uf coaxial capacitor placed at the battery side of the ignition coil, will eliminate pulses from the low voltage leads. Refer to diagram.



#### 4. DISTRIBUTOR INTERFERENCE:

Should sparking in the distributor cause radio interference, replace wire connecting the ignition coil to the distributor cap with a piece of radio ignition wire. Some vehicles are factory equipped with radio ignition wire.

#### 5. BATTERY CONNECTION:

Connecting the leads of the power cable directly to the vehicle battery will greatly help reduce noise by preventing random noise and transient spikes from being fed back into the transceiver.



<u>USE DESIGNATION</u>	<u>PART APPLICATION</u>
UD	70-050A, 70-050B, 70-050C
TM	70-055A, 70-055B, 70-055C
NO DESIGNATION	70-050A, 70-050B, 70-050C 70-055A, 70-055B, 70-055C

### ACCESSORIES INCLUDED WITH UNIT

<u>USE</u>	<u>DESCRIPTION</u>	<u>MODEL NO.</u>	<u>PART NO.</u>
	Microphone	70-2301	70-038013
	Microphone Clip		70-158015
UD	Slide Mounting Bracket	70-2201	70-158066
TM	Mounting Tray, W/Keys	70-2205	70-158068
UD	Nut, Mounting Bracket		70-151354
TM	Mounting Bracket, Cont. Head		70-158069
TM	Screw, Mounting Bracket		70-151362
TM	Washer (outside) Mtng. Brkt.		70-151363
TM	Washer (inside) Mtng. Brkt.		70-151364
TM	Clamp, Cable, Mtng. Brkt.		70-158079
TM	Screw, Cable Clamp, Mtng. Brkt.		70-151366
UD	DC Power Cable, 2M	70-2211	70-034031
TM	DC Power Cable, 6M	70-2212	70-034032
TM	Remote Cable Assy. 4M	70-2222	70-034061
TM	Remote Speaker, 5W Fuse 10A	70-2351	70-204026

### OPTIONAL ACCESSORIES

	CTCSS Assy.	70-2102A	
	2PPM Freq. Stability Kit	70-2124	
	2.5 Freq. Stability Kit	70-2125	
UD	Scan Kit	70-2141	
TM	Scan Kit	70-2142	
	12.5KHz Channel Spacing Kit	70-2132	
UD	Two Tone Sequential Decoder	70-2151	
TM	Two Tone Sequential Decoder	70-2152	
	Noise Blanker Kit	70-2191	
	CPU Keep Alive Kit	70-2215	
UD	6 Pin Mic Adaptor Kit	70-K33	
	Desk Microphone	70-2305	
	Handset Microphone	70-2311	
	Microphone Hang-Up Box	70-2195	
	External Speaker, 5W All Weather	70-S05	
	15W Power Speaker	70-2352	
TM	Remote Cable Assy. 2M Flat	70-2223	
TM	Remote Cable Assy. 2M Round	70-2227	
TM	Remote Cable Assy. 4M Round	70-2226	
UD	Slidemount Lock (W/Keys) Kit	70-7080	
UD	Tray, Mounting W/Lock Kit	70-2257	
TM	Slide Bracket Mounting Kit	70-2258	
TM	Cable, 34 Cond. Flat (Bulk)		70-034068
TM	Connector, Remote Cable	70-2228	
TM	Conversion Kit (Trunk Mt. to Dash)	70-2251	
UD	Conversion Kit (Dash Mt. to Trunk)	70-2252	

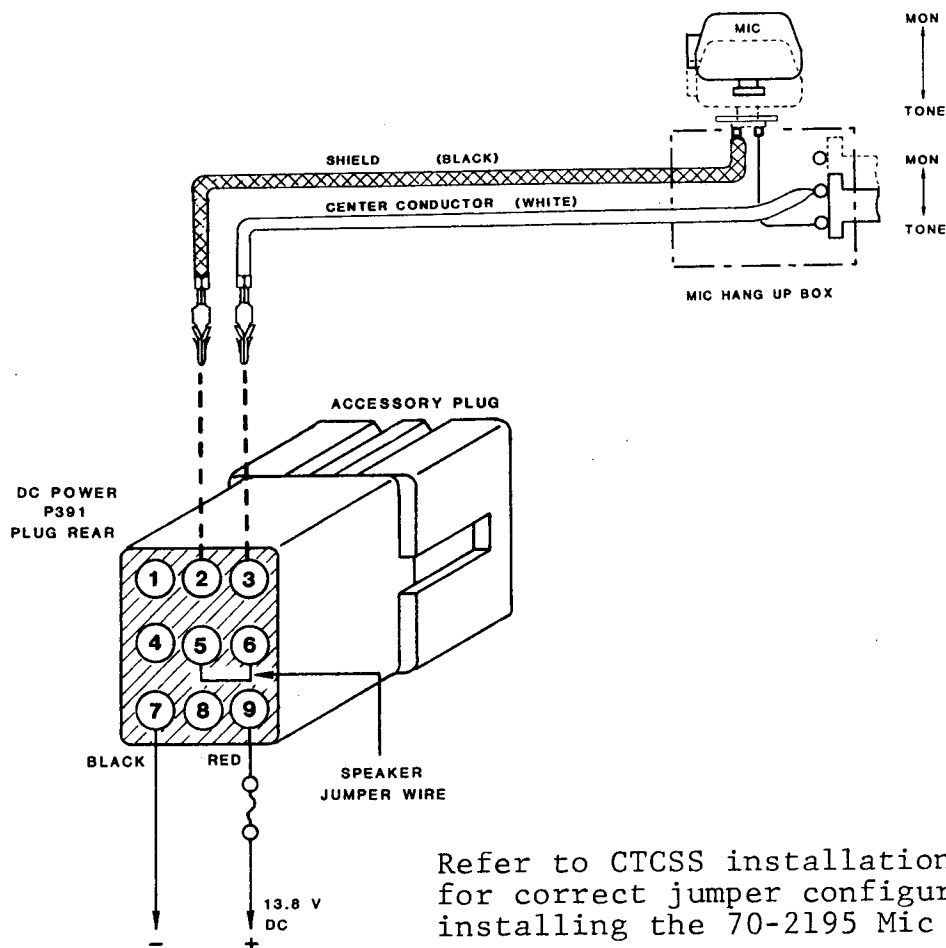
### OPTIONAL ACCESSORY EQUIPMENT

	E/Prom Programmer (110/220V)	70-1000
	E/Prom Eraser (110V)	70-1100
	E/Prom Eraser (220V)	70-1101
	E/Prom Printer (110V)	70-1300A
	LMR Test Set	70-E10
	High Power Interface Cable F/70-E10	70-2217
	DC Power Supply (110/220V)	70-2281

### ACCESSORY TOOLS

TM	Hand Press	70-2229	70-156077
TM	Hand Shear	70-2230	70-150078
	Tuning Tool, Single Metal Blade		70-156019
	Tuning Tool, Double Metal Blade		70-156020
	Mic Jack Removal Tool		70-156018
	Tuning Tool, UHF		70-156087
	Molex Crimp Tool	70-2231	
	Molex Extractor Tool	70-2232	

The accessory jack J391 is designed to accept the 9 pin plug supplied with the unit for DC power. Connections to the plug are shown in the following diagram.



Refer to CTCSS installation instructions for correct jumper configuration when installing the 70-2195 Mic Hang-up Box.

- A. For internal speaker operation, pins 5 and 6 are connected as shown.
- B. For external speaker (Models 70-2351/2352/2353) connections, remove pins 5 and 6 and the connected jumper wire. Insert the speaker lead Molex pins in positions 4 and 6 of the P391. Be careful to insert the 70-2352 WHITE lead in position 6 and the BLACK lead in position 4. The Models 70-2351/2353 leads may be inserted without regard to polarity.
- C. For CTCSS operation, insert the 70-2195 microphone hang-up box pins in positions 2 and 3 as shown above. NOTE: The 70-2102A jumper JP2 must be removed when the 70-2195 is installed.
- D. Pins 1 and 8 (AUX 1 and AUX 2) are reserved for connecting external signalling devices, if desired.

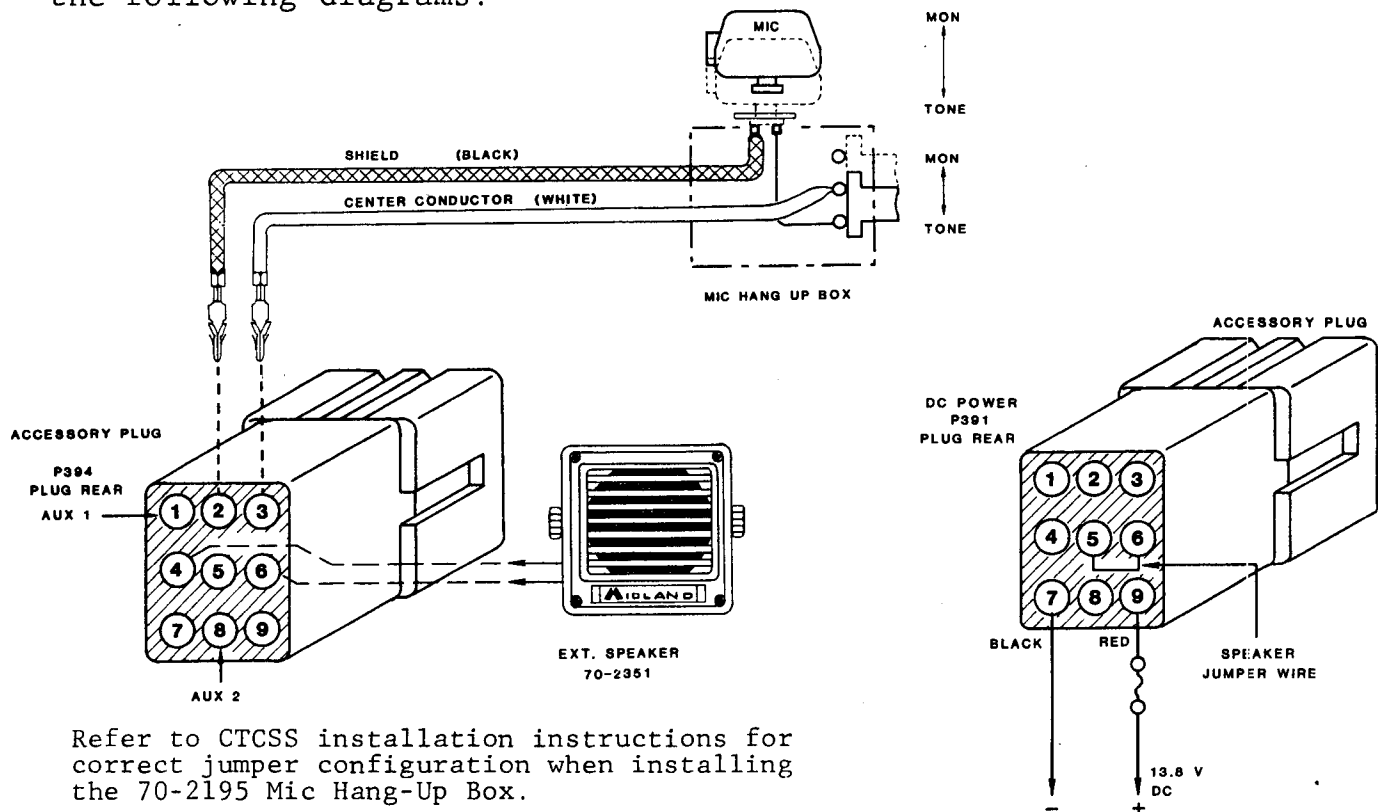
ACCESSORY PLUG/JACK PIN AND TOOLING PART NUMBER CHART

Gauge	P394 Male Pin (Pwr/Acc Plug)	J394 Female Pin (Radio)
14-18	70-151187 (Molex 02-09-2103)	70-151186 (Molex 02-09-1103)
18-24	70-151188 (Molex 02-09-2118)	70-151189 (Molex 02-09-1118)
22-30	70-151190 (Molex 02-09-2143)	70-151183 (Molex 02-09-1143)
P391(Plug W/O Pins) 70-159112		Crimp Tool 70-2231(Molex 11-01-0014)
J391(Jack W/O Pins) 70-159108		Extractor Tool 70-2232(Molex 11-03-0006)

# TRUNK MOUNT DC POWER/ACCESSORY PLUGS INSTRUCTIONS

70-055

The DC power jack 391 is designed to accept the 9 pin plug supplied with the unit for DC power. The control head accepts the 9 pin accessory plug supplied with the unit for connection of the external speaker and MIC hang up box. Connections to the plugs are shown in the following diagrams.



Refer to CTCSS installation instructions for correct jumper configuration when installing the 70-2195 Mic Hang-Up Box.

A. The external speaker is normally connected to P394, the accessory plug as shown above. Insert the male Molex pin connected to the striped wire in pin position #4 (ground), and the other wire in pin position #6. Do not remove the jumper wire between pins 5 and 6 of the DC Power plug P391.

B. For subaudible tone (CTCSS) operation, the Mic hang up box 70-2195 is connected as shown above to pin positions 2 and 3 of the accessory plug.

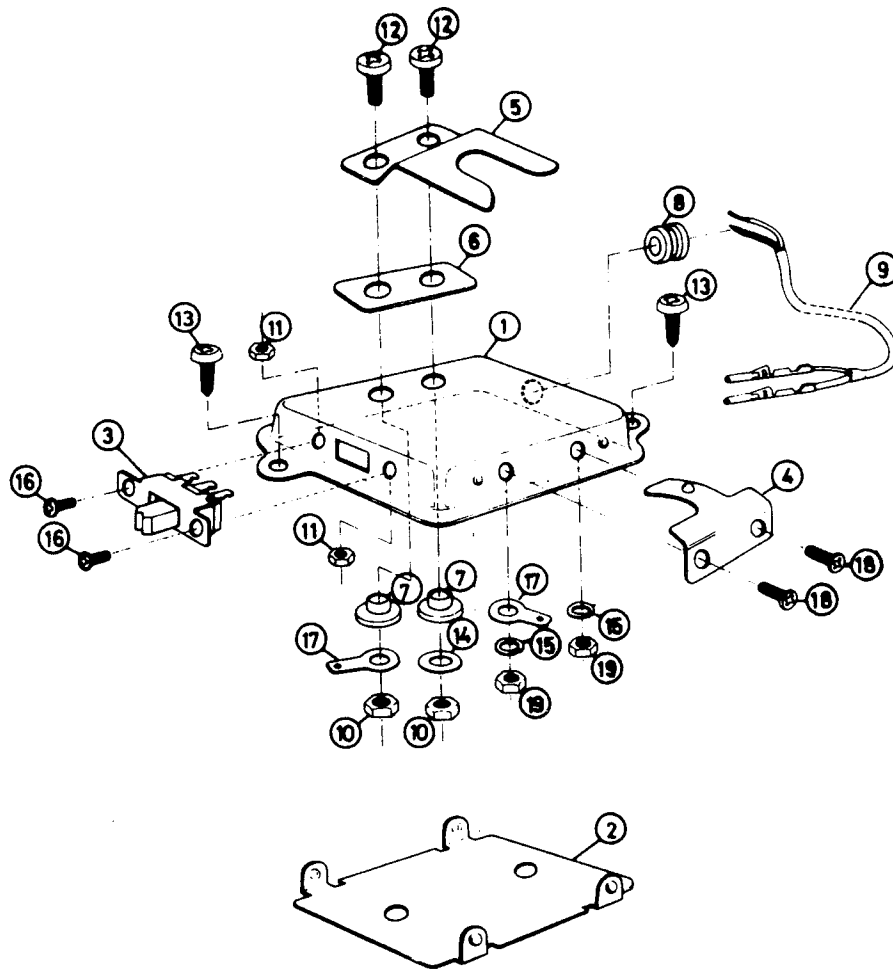
C. Depending on the user's preference, the external speaker may be connected directly to the remote DC power plug P391 instead of at the control head. If this is desirable the Molex pins and connecting jumper wire between positions 5 and 6 of the DC power plug P391 should be removed. The external speaker (Model 70-2351) Molex pins must be installed in P391, the striped wire in position 4 and the plain wire in pin position 6. If it becomes desirable to relocate the external speaker and connect it to the control head plug as outlined in (A) above, the jumper between pins 5 and 6 of P391 must be reinstated.

## ACCESSORY PLUG/JACK PIN AND TOOLING PART NUMBER CHART

Gauge	P391/P394 Male Pins Accessory Plugs	J391/J394 Female Pins Main Chassis/Control Head
14-18	70-151187 (Molex 02-09-2103)	70-151186 (Molex 02-09-1103)
18-24	70-151188 (Molex 02-09-2118)	70-151189 (Molex 02-09-1118)
22-30	70-151190 (Molex 02-09-2143)	70-151183 (Molex 02-09-1143)
P391(Plug W/O Pins) 70-159112		Crimp Tool 70-2231(Molex 11-01-0014)
J391(Jack W/O Pins) 70-159108		Extractor Tool 70-2232(Molex 11-03-0006)

# MICROPHONE HANG-UP BOX — EXPLODED VIEW

70-050/055

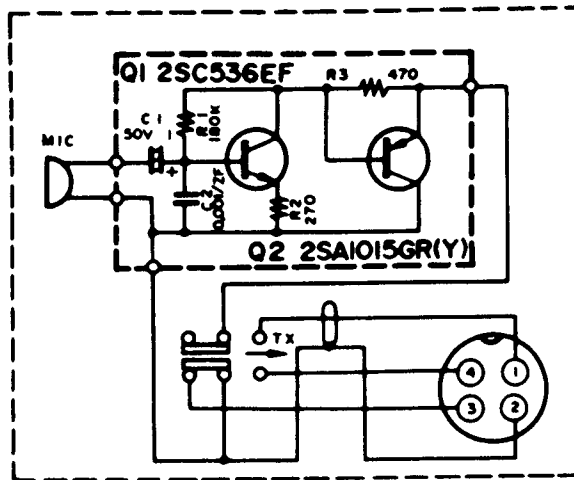


REF. NO.

DESCRIPTION

PART NO.

<u>REF. NO.</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>
	<u>MICROPHONE HANG-UP BOX</u>	
1	Cover, Top	70-010068
2	Cover, Bottom	70-010069
3	Switch, Slide	70-183003
4	Hanger, A	70-158022
5	Hanger, B	70-158023
6	Spacer	70-151062
7	Washer, Insulation	70-151063
8	Rubber Bushing, Cord	70-156006
9	Shielded Wire Assy.	70-151064
10	Hex Nut, M3	70-151065
11	Hex Nut, M2	70-151066
12	Bind Head Screw 3 x 8	70-151067
13	Tapping Screw 3 x 8	70-151068
14	Washer 3.2	70-151069
15	Spring Washer 2.6	70-151070
16	Bind Head Screw 2 x 6	70-151071
17	Terminal	70-151072
18	Bind Head Screw 2.6 x 8	70-151073
19	Hex Nut, M2.6	70-161074



MICROPHONE PARTS LIST

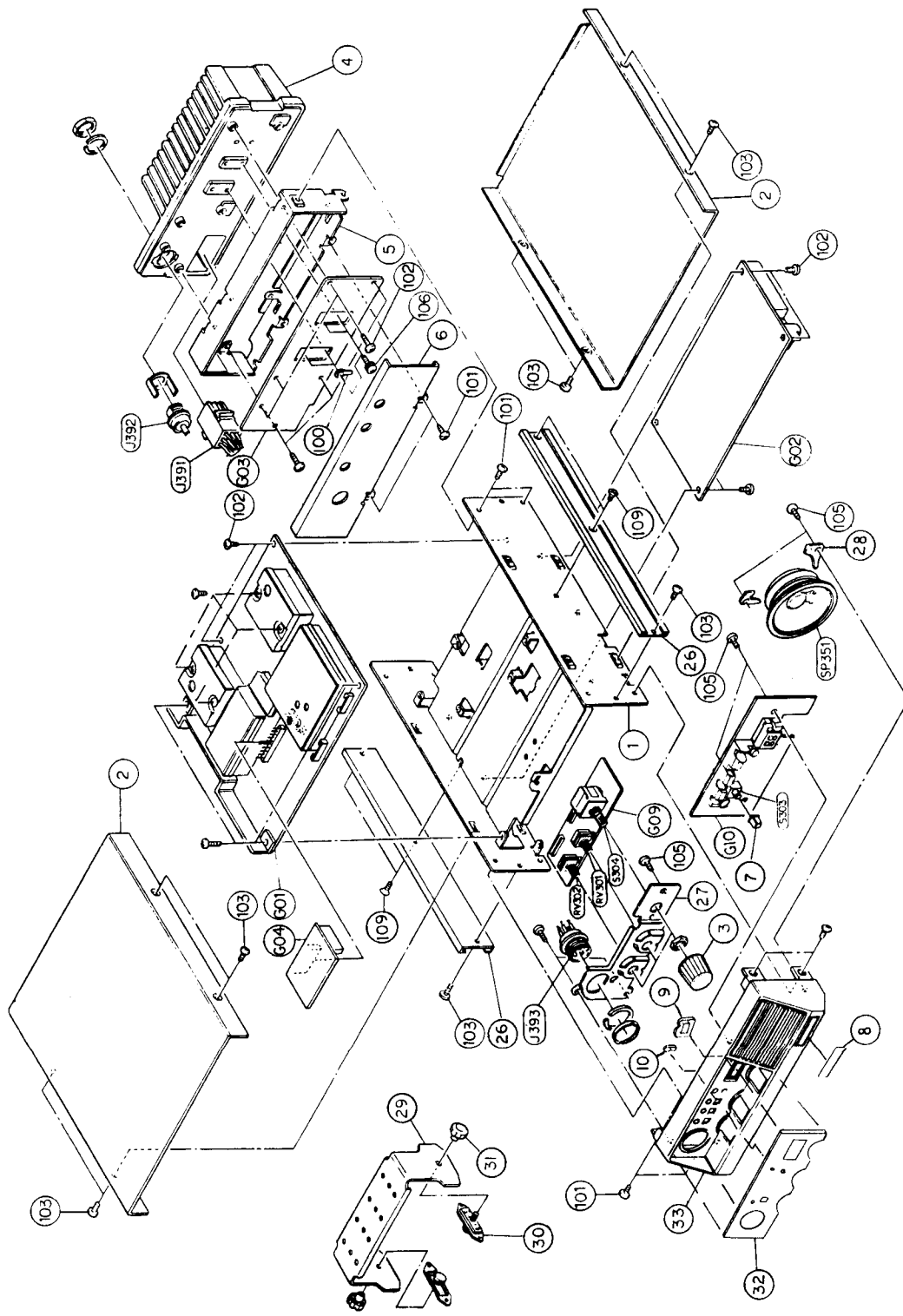
DESCRIPTION:

PART NUMBER:

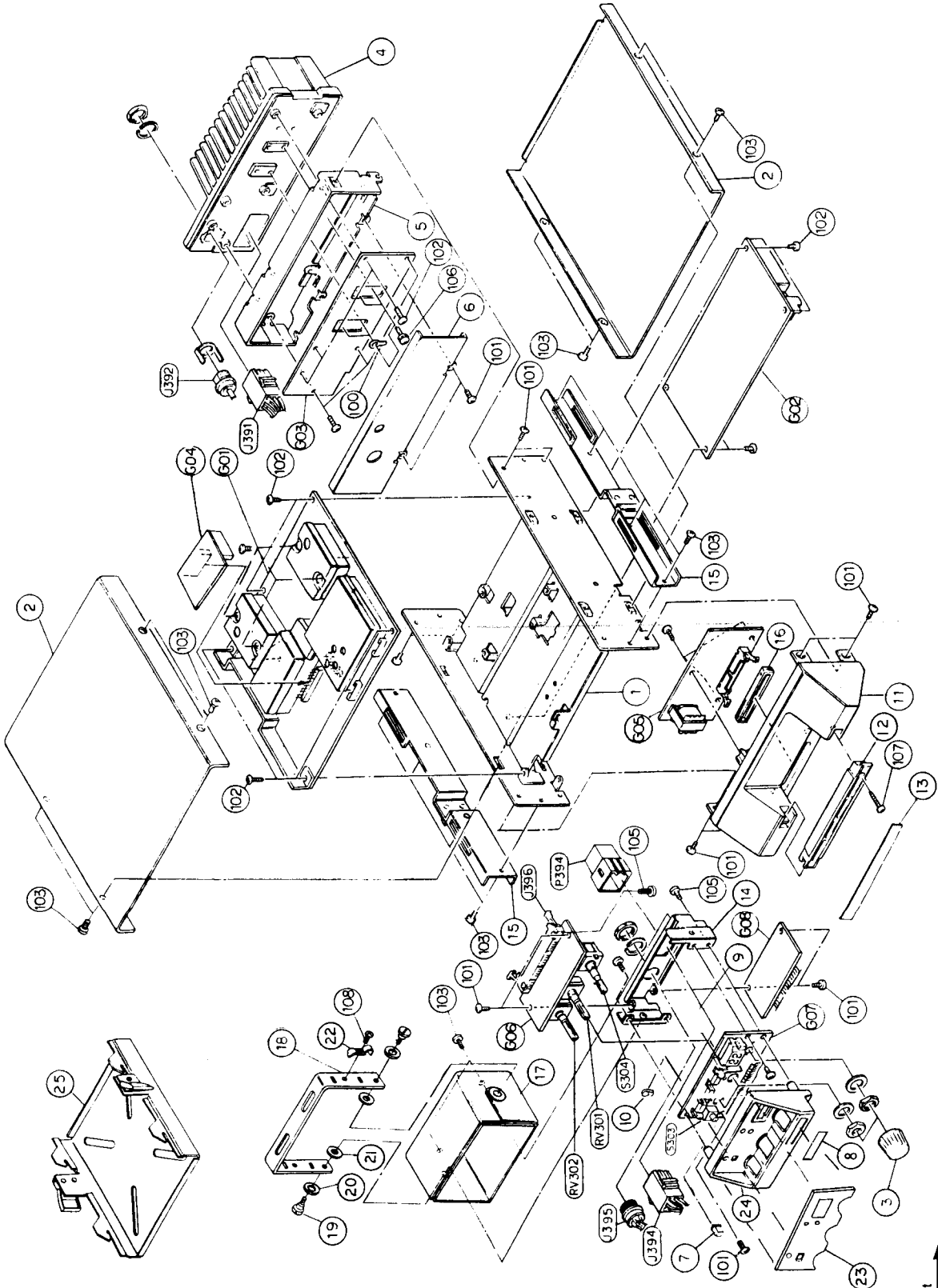
L.M.R. Dynamic Mic	70-038013
Panel, Case Front Mic	70-010072
Plate, Name Front Panel	70-020022
Case Front	70-010073
Element, Dynamic	70-038004
P/T Switch	70-183004
P/T Knob	70-118007
P.C.B. W/Comp.	70-075014
P.C.B. W/O Comp.	70-070008
2SA 1015	70-080025
2SC536	70-080026
Elect Cap 10F 50 WV	70-135002
Ceramic Cap (102)	70-132005
Cushion, P/T Switch	70-157015
Resistor 270 ohm 1/4 W	70-141010
Resistor 470 ohm 1/4 W	70-141016
Resistor 170K 1/4 W	70-141037
Cord, Mic W/O Cont.	70-034074
Cord, Mic W/Cont.	70-034075
Plug Mic 4 Pin	70-159015
Case Mic Rear	70-013017
Rubber, Mic Case Rear	70-157016
Screw, Case	70-151076
Screw, Mic Button	70-151078
Screw, Front Panel	70-151077
Mic Button	70-118008
Washer Special Mic Button	70-151079
Plate, Case Rear	70-020024
Weight, Ballast	70-151369

EXPLODED MECHANICAL VIEW

70-050



EXPLODED MECHANICAL VIEW



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Fold Out →

The following parts list is a composite listing for the 70-050A, 70-050B, 70-050C, 70-055A, 70-055B, 70-055C. For the application of each individual part, refer to the "USE" column as follows:

<u>"USE" DESIGNATION</u>	<u>PART APPLICATION</u>
A	70-050A, 70-055A
B	70-050B, 70-055B
C	70-050C, 70-055C
UD	70-050A, 70-050B, 70-050C
TM	70-055A, 70-055B, 70-055C
NO DESIGNATION	70-050A, 70-050B, 70-050C 70-055A, 70-055B, 70-055C

Refer to the separate exploded mechanical views for mechanical parts unique to trunk-mount or under-dash models. Mechanical parts common to both trunk-mount and under-dash versions are shown with the same reference number on both drawings and in the parts list.

REF. NO.	USE	DESCRIPTION	PART NO.	REF. NO.	USE	DESCRIPTION	PART NO.
CASE MATERIALS EXPLODED MECHANICAL VIEW				30	UD	Plate, Side	70-158075
1		Chassis	70-015021	31	UD	Nut, Mntg. Brkt.	70-151354
2		Cover	70-010040	32	UD	Face Plate, Std.	70-020068
3		Knob, Volume	70-110012	33	UD	Panel Front	70-010039
4		Heat Sink	70-089061	100		Grounding Lug	70-151109
5		Case, PA	70-010064	101		Screw Bind Hd.	70-151355
6		Cover, PA	70-010065	102		Screw Bind Hd.	70-151356
7		Button, Switch	70-110013	103		Screw Bind Hd.	70-151357
8		Plate, Brand	70-020070	105		Screw Tap Bnd.Hd.	70-151359
9		Lens, Chnl	70-020071	106		Screw Pan Hd.	70-151361
10		Lens, CDS	70-020072	107	TM	Screw Tap Bnd.Hd.	70-151365
11	TM	Panel, Front	70-010041	108	TM	Screw Bnd.Hd.	70-151366
12	TM	Grip	70-158077	109	UD	Screw Flat Hd.	70-151360
13	TM	Plate, Grip	70-158078	<u>PCB ASSEMBLIES</u>			
14	TM	Chassis, Contrl.	70-015023	G01		TX-051 PCB Assy.	
15	TM	Side Rail	70-158076	G02		RX-051 PCB Assy.	
16	TM	Rubber Spacer	70-157056	G03		PA-051 PCB Assy.	
17	TM	Cover, Ctrl.Hd.	70-010066	G04		Z-273 PCB Assy.	
18	TM	Mtng. Bracket	70-158069	G05	TM	CX-08 PCB Assy.	
19	TM	Screw Mounting	70-151362	G06	TM	CX-05 PCB Assy.	
20	TM	Washer	70-151363	G07	TM	CX-07 PCB Assy.	
21	TM	Washer	70-151364	G08	TM	CX-06 PCB Assy.	
22	TM	Clamp	70-158079	G09	UD	CX-04 PCB Assy.	
23	TM	Face Plate, Std.	70-020069	G10	UD	CX-03 PCB Assy.	
24	TM	Panel, Front	70-010067	<u>JACKS AND CONNECTORS</u>			
25	TM	Mtng. Brkt. Assy.	70-158068	J391		Pwr/Acssy. Conn.	70-159108
26	UD	Rail, Side	70-158067	J392		RF Connector	70-159090
27	UD	Holder, Volume	70-158073	J393	UD	Mic Jack	70-159100
28	UD	Bracket, Spkr.	70-158074	J394	TM	Molex Conn.	70-159108
29	UD	Mntg. Bracket	70-158066				



# PARTS LIST

70-050/055

REF. NO.	USE	DESCRIPTION	PART NO.	REF. NO.	USE	DESCRIPTION	PART NO.
<u>JACKS &amp; CONNECTORS CONT.</u>				<u>TRANSMIT/SYNTHESIZER PCB</u>			
				TX - 051			
				TOP SIDE COMPONENTS			
J395	TM	Mic Jack	70-159100	Q101,106		2SC460B	70-080083
J396	TM	Conn.Rem.Cbl.	70-159107	Q102,701		2SC535B	70-080095
P394	TM	Conn.Cont. Hd	70-159112	Q103,105, 107,111, 402,403, 405,703, 705,706, 709		2SC458C	70-080082
<u>CONTROLS</u>				Q108,707		2SK192ABL	70-080087
RV301	TM	Squelch, 10K	70-164030	Q109,708		2SK241GR	70-080110
RV302	TM	Vol.W/Sw. 10K	70-164027	Q110,112, 710		2SC1906	70-080086
RV301	UD	Squelch, 10K	70-164031	Q404		2SC1213C	70-080096
RV302	UD	Vol.W/Sw. 10K	70-164026	Q704		2SK117BL	70-080088
<u>SWITCHES</u>				<u>INTEGRATED CIRCUIT</u>			
S303		Monitor	70-180012	IC101		DH1048F	70-076141
S304	TM	Chnl. Select	70-180014	IC102		HD74LS02P	70-076099
S304	UD	Chnl. Select	70-180013	IC103		MC4344	70-076086
<u>SPEAKER</u>				IC104,704		DH2501	70-076140
SP351	UD	Speaker	70-060011	IC106,702		HD74LS93P	70-076084
<u>CABLE ASSEMBLIES</u>				IC108		DH2503	70-076101
CA351		J355 to J365	70-034059	IC401		MB3756	70-076008
CA352		J366 to J371	70-034059	IC402		UPC 7805H	70-076087
CA353		J356 to J365	70-034060	IC701		UPD3805C-003	70-076090
CA354		J391 to J351	70-034052	IC703		UPB555C	70-076135
CA355		J353 to J364	70-034055	IC706		HD14069UBP	70-076097
CA358		J352 to J363	70-034056	IC901		HD44840A27	70-076175
CA362	TM	CX-04 to CX-06	70-034071	IC902		HD14021BP	70-076079
CA363	TM	CX-06 to CX-07	70-034072	<u>COILS</u>			
CA364	TM	CX-05 to CX-07	70-034073	L101,102		Trnsfmr, 42L052	70-090145
	TM	Remote Cbl.Assy.	70-034061	L103,104		Inductor, LPF	70-178055
<u>MISCELLANEOUS</u>				L106,701, 703		Coil,Choke 4.7uH	70-178054
SP352	TM	Remote Speaker	70-060014	L107	A	Coil, 8.5T	70-090146
C391,392		270pf, 50V	70-131033	L107	B	Coil, 7.5T	70-090147
F391	UD	Fuse, 10A	70-204026	L107	C	Coil, 6.5T	70-090148
	UD	Pwr. Cord 2M	70-034031	L108	A,B	Coil,Choke 10uH	70-178056
	TM	Pwr. Cord 6M	70-023032	L108	C	Coil,Choke 4.7uH	70-178054
		Mic Dynamic	70-038013	L110,111, 707,708, 709		Trnsfmr, Tx	70-090140
		Mic Hanger	70-158015				

# PARTS LIST

70-050/055

REF. NO.	USE	DESCRIPTION	PART NO.	REF. NO.	USE	DESCRIPTION	PART NO.
L112		Trnsfmr, Tx	70-090150			<u>DIODES CONT.</u>	
L114		Coil, 10.5T	70-090100				
L116,117	A	Coil, LPF	70-090153	D103,105,			
L116,117	B	Coil, LPF	70-090152	106,107,			
L116,117	C	Coil, LPF	70-090151	403,404,			
L118		Trnsfmr, Tx	70-090149	406,703,			
L119,120		Trnsfmr, Mixer	70-090114	709,901,		1S2075K	70-085001
L702	A	Coil, 7.5T	70-090147	D104,702		1SV50	70-085078
L702	B	Coil, 6.5T	70-090148	D108		ND487C1-3R	70-085050
L702	C	Coil, 5.5T	70-090139	D402		HZ5C1	70-085046
L705,706	A	Coil, 10.5T	70-090100	D405		HZ9A	70-085076
L705,706	B	Coil, 9.5T	70-090151	D902		1S2075K	70-085001
L705,706	C	Coil, 7.5T	70-090154				
		<u>MYLAR CAPACITORS</u>				<u>TRIMMER CAPACITORS</u>	
C116,170,				CV102		Trimmer Cap.	70-123024
702,716		0.01uf 50V	70-137037	CV701		Trimmer Cap.	70-123023
C125,416		0.047uf 50V	70-137038			<u>VARIABLE RESISTORS</u>	
C113,129,				RV101,102		Trim. Pot	70-144045
714		0.1uf 50V	70-137039			<u>CRYSTALS</u>	
C132,133		1500pf 50V	70-137035				
C712,730		6800pf 50V	70-137036			Crystal, 5.12MHz	70-128019
C713		0.22uf 50V	70-137040	X701			
		<u>ELECTROLYTIC CAPACITORS</u>				<u>CERAMIC OSCILLATOR</u>	
C101		22uf, 50V	70-135060	CL901		CSB800A	70-179028
C111,127,						<u>JACKS, PLUGS &amp; SOCKETS</u>	
409,410,				J361		Jack, 13 pin	70-159098
411		47uf, 25V	70-135055	J362,364		Jack, 7 pin	70-159095
C114		1uf, 50V	70-135057	J363		Jack, 6 pin	70-159094
C117		10uf, 16V (BP)	70-135083	J365,366		Jack, Coax	70-159089
C141,413		4.7uf 50V	70-135058	P368,(CM101)		Plug, 3 Pin	70-159092
C403,405,		10uf, 50V	70-135059	P901		Plug, 11 pin	70-159103
C412,415,				P902		Plug, 10 pin	70-159104
905		100uf, 50V	70-135053	TP101,701		Test Point	70-151368
C727,728,						<u>MISCELLANEOUS</u>	
901		47uf, 10V	70-135052	Oven 701		Posistor	70-086010
C743		220uf, 16V	70-135081			TX-051 PCB	70-070091
		<u>CERAMIC DISC CAPACITOR</u>				Htsnk IC401/402	70-089075
C921		220pf	70-131095			Shield Mixer	70-089077
		<u>DIODES</u>				Shield Mix Cover	70-089078
D101,102		1SV134	70-085045				

# PARTS LIST

70-050/055

REF. NO.	USE	DESCRIPTION	PART NO.	REF. NO.	USE	DESCRIPTION	PART NO.
<u>MISCELLANEOUS CONT.</u>				<u>CERAMIC CHIP CAPACITORS CONT.</u>			
		Shield Synth	70-089079	C148,723		22pf CH 50V	70-131188
		Shield Synth Cvr.	70-089080	C181	A	22pf CH 50V	70-131188
		Shield VCO	70-089081	C181	B	18pf CH 50V	70-131186
		Cover VCO Main	70-089082	C181	C	15pf CH 50V	70-131185
		Cover, VCO TX	70-089087	C149,150, 151,166, 706,717, 726,729, 731,732, 733,734, 738,739, 741			
<u>TRANSMIT/SYNTHESIZER PCB</u> <u>TX-051</u> BOTTOM SIDE COMPONENTS							
<u>CERAMIC CHIP CAPACITORS</u>							
C100,104, 106,109, 110,119, 124,171		0.047uf W5R 50V	70-132034	C152,725 C154,155, 156,159, 406,407, 408,933		4700pf W5R 50V 47pf CH 50V	70-131207 70-131196
C102,118, 121,126, 128,142, 164,167, 710,711		0.022uf W5R 50V	70-132033	C158,176, 177,178, 179,414, 902,904, 913			
C103,108, 709		33pf CH 50V	70-131192	C160,162	A	0.01uf W5R 50V 82pf CH 50V	70-132032 70-132038
C157	A	33pf CH 50V	70-131192	C160,162	B	68pf CH 50V	70-131198
C157	B	27pf CH 50V	70-131190	C160,162	C	56pf Ch 50V	70-131197
C157	C	22pf CH 50V	70-131188	C161	A,B	150pf CH 50V	70-132055
C182	A	33pf CH 50V	70-131192	C161	C	120pf CH 50V	70-132057
C182	B	10pf CH 50V	70-131182	C163		68pf CH 50V	70-131198
C182	C	NONE	NONE	C165		2200pf W5R 50V	70-131206
C105,168, 707		220pf CH 50V	70-131199	C701	A	39pf CH 50V	70-131194
C107		15pf CH 50V	70-131185	C701	B	33pf CH 50V	70-131192
C134	A	47pf CH 50V	70-131196	C701	C	27pf CH 50V	70-131190
C134	B	39pf CH 50V	70-131194	C703		27pf CH 50V	70-131190
C134	C	27pf CH 50V	70-131190	C704,914, 915,922		470pf SL 50V	70-131204
C137	A	56pf CH 50V	70-131197	C705		330pf SL 50V	70-131203
C137	B,C	39pf CH 50V	70-131194	C721,722		10pf CH 50V	70-131182
C143	A	22pf CH 50V	70-131188	C735,737		56pf CH 50V	70-131197
C143	B	15pf CH 50V	70-131185	C735,737	C	47pf CH 50V	70-131196
C143	C	12pf CH 50V	70-131183	C736	A	120pf Ch 50V	70-132057
C144	A	18pf CH 50V	70-131186	C736,906, 907			
C144	B,C	22pf CH 50V	70-131188	C740	B,C	100pf Ch 50V	70-132051
C146		8pf CH 50V	70-131180	C742		5pf Ch 50V	70-131177
C720	A,C	8pf CH 50V	70-131180	C908,911, 920		6800pf W5R 50V	70-131208
C720	B	9pf CH 50V	70-131181			100pf SL 50V	70-132040

# PARTS LIST

REF. NO.	USE	DESCRIPTION	PART NO.	REF. NO.	USE	DESCRIPTION	PART NO.
<u>CERAMIC CHIP CAPACITORS CONT.</u>				<u>METAL CHIP RESISTORS CONT.</u>			
C923, 924, 925, 926, 927		150pf SL 50V	70-131201	R126, 918, 919, 936, 937		47K 1/8 W	70-144034
		<u>METAL CHIP RESISTORS</u>		R128, 714		2.2K 1/8 W	70-144067
				R137, 156, 175, 719, 741, 745		47 ohm 1/8 W	70-144006
R101, 108, 124, 127, 131, 162, 166, 407, 704, 715, 901, 915, 927, 954		1K 1/8 W	70-144019	R138, 174, 177, 708, 711		680 ohm 1/8 W	70-144017
R102, 104, 112, 703, 924		10K 1/8 W	70-144029	R139, 142, 720, 722, 907, 912, 925, 926, 929		100K 1/8 W	70-144037
R103, 154, 171		68 ohm 1/8 W	70-144008	R141, 738, 744		330 ohm 1/8 W	70-144065
R106, 114, 136, 176, 179, 746, 747, 909, 910, 916, 917, 920, 921, 922, 923, 928, 930, 931, 932, 933, 934, 935, 938, 939, 942, 943, 944, 945				R144, 146, 403, 404, 718, 721		33 ohm 1/8 W	70-144005
R107		22K 1/8 W	70-144032	R145, 148, 724		820 ohm 1/8 W	70-144018
R109, 116, 129		15K 1/8 W	70-144031	R147, 149		56 ohm 1/8 W	70-144007
R110, 401, 405, 706		1.5K 1/8 W	70-144021	R150, 709, 734		8.2K 1/8 W	70-144028
R113, 133, 151, 172, 735, 216				R152, 736		180 ohm 1/8 W	70-144012
R120, 173		3.3K 1/8 W	70-144023	R153, 155, 701, 743		100 ohm 1/8 W	70-144009
R123, 132, 134, 161, 408, 410, 712		68K 1/8 W	70-144035	R164		2.7K 1/8 W	70-144046
				R167, 168, 191, 192, 193, 726, 742, 950		0 ohm	70-144001
				R406		33K 1/8 W	70-144033
				R409, 904, 946		6.8K 1/8 W	70-144027
				R702		5.6K 1/8 W	70-144026
				R713	A, B	5.6K 1/8 W	70-144026
				R713	C	6.8K 1/8 W	70-144027
				R707		150K 1/8 W	70-144038
				R710		1.2K 1/8 W	70-144020
				R716		150 ohm 1/8 W	70-144011
				R725		220 ohm 1/8 W	70-144013
				R728, 902		1M ohm 1/8 W	70-144042
				R739		120 ohm 1/8 W	70-144010

# PARTS LIST

70-050/055

REF. NO.	USE	DESCRIPTION	PART NO.	REF. NO.	USE	DESCRIPTION	PART NO.
		<u>MISCELLANEOUS</u>				<u>TRANSISTORS CONT.</u>	
		Shield VCO (TX)	70-089088	Q203		2SC1906	70-080086
		Insltr.Mylar	70-089091	Q204		2SA673C	70-080079
		Shield Pre Amp	70-089089	Q205,252,			
		Insltr. Pre Amp	70-089090	255,256,			
				257,260,			
				261		2SC458C	70-080082
				Q251		2SC535B	70-080095
				Q259		2SK117BL	70-080088
		<u>RECEIVER PCB</u>				<u>DIODES</u>	
		<u>RX - 051</u>				1SS106	70-085043
		<u>TOPSIDE COMPONENTS</u>		D204			
		<u>COILS &amp; TRANSFORMERS</u>		D251,252,			
L201,202,		Coil, RX, 7.5T	70-090157	253,254,			
204,205		Coil, RX	70-090121	259,260,			
L203		Trnsfmr.10.7MHz	70-090158	263		1S2075K	70-085001
L208		Trnsfmr.Loc.Osc.	70-090142	D262		U05C	70-085048
L209		Trnsfmr.Loc.Osc.	70-090143				
L210		Coil, RX	70-090143	C227,277		10uf, 50V	70-135059
L211		Trnsfmr.10.7MHz	70-090159	C273,285		100uf, 10V	70-135053
L251		Coil, Quad	70-090112	C287		470uf, 16V	70-135062
L252		Coil, Choke	70-090125	C289,292		220uf, 25V	70-135063
L253		Coil, Choke	70-090124	C295		100uf, 25V	70-135056
L254,255		Coil 1.5 MH	70-090126	C299		470uf, 25V	70-135082
L256	UD	Coil 1 MH	70-178057				
L256	TM					<u>ELECTROLYTIC CAPACITORS</u>	
		<u>JACKS, PLUGS &amp; SOCKETS</u>		C257		0.1uf, 35V	70-138086
P251		Plug, 3 Pin	70-159091	C268		1uf, 35V	70-138087
P252,253		Plug, 2 Pin	70-159114	C266,278,			
J351		Jack, 5 Pin	70-159093	279		2.2uf, 16V	70-138103
J352		Jack, 6 Pin	70-159094	C280,282		.22uf, 35V	70-138102
J353		Jack, 7 Pin	70-159095	C286		47uf, 25V	70-135055
J354		Jack, 12 Pin	70-159097				
J355,356		Jack, Coax	70-159089			<u>MYLAR CAPACITORS</u>	
J357,358		Jack, 8 Pin	70-159096	C288,256		0.1uf, 50V	70-137039
		<u>INTEGRATED CIRCUITS</u>					
IC251		MC3357P	70-076005				
IC252		MB3712	70-076085			<u>MISCELLANEOUS</u>	
		<u>TRANSISTORS</u>		X251		Xtal,10.245 MHz	70-128025
Q201,202		2SK125	70-080089	FL251		Crystal Filter	70-179024
				FL252		Fltr,CFU 455E2	70-179019
				FL253		Fltr,CFU 455D2	70-179018
				RV251,252		Trim Pot, 10K	70-144045

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REF. NO.	USE	DESCRIPTION	PART NO.	REF. NO.	USE	DESCRIPTION	PART NO.
<u>MISCELLANEOUS CONT.</u>				<u>METAL CHIP RESISTORS CONT.</u>			
K201 C296 CL201,202, 204,205	TM	Relay 1000pf, 500V	70-105009 70-132043	R276,280 R277,288 R278,289 R282,295, 296		15K 1/8 W 1M ohm 1/8 W 470K 1/8 W 6.8K 1/8 W	70-144031 70-144042 70-144041 70-144027
Coil Case, 15F Heatsink, IC252 RX-PCB RX-051				70-090115 70-089076 70-070090			
<u>RECEIVER PCB</u>				<u>CERAMIC CHIP CAPACITORS</u>			
<u>RX-051</u>				C201,206, 208	A	68pf CH 50V	70-131198
<u>BOTTOMSIDE COMPONENTS</u>				C201,206, 208	B	47pf CH 50V	70-131196
<u>METAL CHIP RESISTORS</u>				C201,206	C	43pf CH 50V	70-131195
R201		220 ohm 1/8 W	70-144013	C202,205	A	270pf SL 50V	70-131226
R202,204, 268,283		100 ohm 1/8 W	70-144009	C202,205	B,C	22pf SL 50V	70-131202
R203,273		470 ohm 1/8 W	70-144015	C203	A	5pf CK 50V	70-131177
R205,256, 258,292		47K 1/8 W	70-144034	C203	B	3pf CJ 50V	70-131175
R206		680 ohm 1/8 W	70-144017	C203	C	2pf CK 50V	70-131174
R207,257, 274,287, 291,294		22K 1/8 W	70-144032	C207,209, 217,218, 219,225, 226,228, 230,252, 260,265, 269,272, 274,276, 281,290, 291,297		.01uf W5R 50V	70-132032
R208,260		2.7K 1/8 W	70-144046	C208	C	33pf CH 50V	70-131192
R209,270, 271,272, 281,285, 286,297		4.7K 1/8 W	70-144025	C211	A	3pf CJ 50V	70-131175
R211,263, 279,298, 299,247		10K 1/8 W	70-144029	C211	B,C	1.5pf CK 50V	70-131223
R214	A,B	0 ohm	70-144001	C212	A	56pf CH 50V	70-131197
R214	C	none	none	C212	B	39pf CH 50V	70-131194
R241,245, 250		0 ohm	70-144001	C212	C	22pf CH 50V	70-131188
R243	TM	0 ohm	70-144001	C212	A	27pf CH 50V	70-131190
R251,259, 293		220K 1/8 W	70-144039	C213	B,C	15pf CH 50V	70-131185
R252,261, 275,216		3.3K 1/8 W	70-144023	C213	A,B	none	none
R253,262, 290		82K 1/8 W	70-144036	C215	C	33pf CH 50V	70-131192
R254,255		1.5K 1/8 W	70-144021	C215	A	39pf CH 50V	70-131194
R269		1K 1/8 W	70-144019	C220,223	B	27pf CH 50V	70-131190
				C220,223	C	22pf CH 50V	70-131188
				C220,223	A,B	100pf Ch 50V	70-132051
				C221	C	47pf CH 50V	70-131196
				C221		2pf CK 50V	70-131174
				C222,224		2pf CK 50V	70-131174
				C231	A,B	2pf CK 50V	70-131174
				C231	C	none	none
				C232,246		22pf CH 50V	70-131188

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REF. NO.	USE	DESCRIPTION	PART NO.	REF. NO.	USE	DESCRIPTION	PART NO.
<u>CERAMIC CHIP CAPACITORS CONT.</u>				<u>DIODES</u>			
C233,234	C	NONE	NONE	D501		1SS106	70-085043
C235		1.5pf CK 50V	70-131223	D502		1S2075K	70-085001
C245,251, 253,262, 267,275, 293,294		1000pf W5R 50V	70-131205	<u>COILS</u>			
C254		47pf CH 50V	70-131196	L501	A	Coil, RF Choke	70-090098
C255		100pf SL 50V	70-132040	L501	B	Coil, RF Choke	70-090097
C258		10pf CH 50V	70-131182	L501	C	Coil, RF Choke	70-090155
C259,261		.022uf W5R 50V	70-132033	L503		Ferrite Bead	70-090122
C263		.047uf W5R 50V	70-132034	L504		Coil, RF Choke	70-090154
C283		4700pf W5R 50V	70-131207	L505	A	Coil, RF Cplg.	70-090098
<u>MISCELLANEOUS</u>				L505	B	Coil, RF Cplg.	70-090097
		Shield, RX	70-089085	L505	C	Coil, RF Cplg.	70-090155
		Insulator, RX	70-089086	L507		Coil, RF Choke	70-090100
<u>TRANSMIT POWER AMPLIFIER</u>				L508		Coil, RF Choke	70-090129
<u>PA - 051</u>				L509	A,B	Coil, RF Cplg.	70-090133
<u>TOP SIDE COMPONENTS</u>				L509	C	Coil, RF Cplg.	70-090132
<u>RESISTORS</u>				L511,512		Coil, RF Cplg.	70-090132
R504		10 ohm 1/2 W	70-144023	L513	A	Coil, RF Cplg.	70-090131
R505,506		68 ohm 1/2 W	70-144008	L513	B	Coil, RF Cplg.	70-090130
R507		3.3 ohm 1 W	70-144048	L513	C	Coil, RF Cplg.	70-090129
<u>VARIABLE CAPACITORS</u>				L514	A	Coil, RF Cplg.	70-090156
CV501,502, 503		Var. Cap. 360pf	70-123032	L514	B	Coil, RF Cplg.	70-090154
<u>VARIABLE RESISTORS</u>				L514	C	Coil, RF Cplg.	70-090131
RV502		Var. Res., 1K	70-144044	L515	A	Coil, RF Cplg.	70-090151
<u>TRANSISTORS</u>				L515	B	Coil, RF Cplg.	70-090156
Q501		2SC2538	70-080108	L515	C	Coil, RF Cplg.	70-090154
Q502		2SC1945	70-080111	<u>CERAMIC DISC CAPACITORS</u>			
Q503		2SC2097	70-080109	C513		0.01uf 50V	70-132041
Q504		2SB834Y	70-080081	<u>ELECTROLYTIC CAPACITORS</u>			
Q505,506		2SC458C	70-080082	C503		100uf 25V	70-135056
				C512		10uf 50V	70-135059
<u>JACKS</u>				J371,372 J392		Connector, Jack V	70-159089
						Antenna Jack	70-159090
<u>MISCELLANEOUS</u>				K501		Mini Relay	70-105010
						PA PCB PA-051	70-070092

REF. NO.	USE	DESCRIPTION	PART NO.	REF. NO.	USE	DESCRIPTION	PART NO.
<u>TRANSMIT POWER AMPLIFIER</u>				<u>MICA CHIP CAPACITORS CONT.</u>			
<u>PA - 051</u>				C521	C	39pf 500V	70-138099
<u>BOTTOM SIDE COMPONENTS</u>				C522	A	39pf 500V	70-138099
<u>METAL CHIP RESISTORS</u>				C522	B	47pf 500V	70-138114
R501,512		3.3K 1/8 W	70-144023	C522	C	33pf 500V	70-138098
R502		150 ohm 1/8 W	70-144011	C523	A	120pf 100V	70-138116
R508		220 ohm 1/8 W	70-144013	C523	B	100pf 100V	70-138115
R509		47K 1/8 W	70-144034	C523	C	82pf 500V	70-138109
R511,514		470 ohm 1/8 W	70-144015	C524	A	27pf 500V	70-138097
R513,515		100 ohm 1/8 W	70-144009	C524	B	22pf 500V	70-138107
R516,517		68 ohm 1/8 W	70-144008	C524	C	18pf 500V	70-138096
<u>CERAMIC CHIP CAPACITORS</u>				C525	A,B	120pf 100V	70-138116
C501,502, 507,519, 528,529, 531,532		0.01uf W5R 50V	70-132032	C525	C	100pf, 100V	70-138115
C504	A	47pf CH 50V	70-131196	C526	A	8pf 500V	70-138118
C504	B,C	100pf CH 50V	70-132051	C526	B	7pf 500V	70-138119
C506		220pf CH 50V	70-131199	C526	C	6pf 600V	70-138120
C508	A,B	220pf CH 50V	70-131199	C527	A	82pf 500V	70-138109
C508	C	150pf CH 50V	70-131201	C527	B	75pf 500V	70-138108
C509	A	100pf CH 50V	70-132051	C527	C	62pf 500V	70-138121
C509	B,C	220pf CH 50V	70-131199				
C511	A,B	NONE	NONE				
C511	C	47pf CH 50V	70-131196				
C518		1000pf CH 50V	70-131222				
C520	A	1pf CK	70-131173				
C520	B,C	NONE	NONE				
<u>MICA CHIP CAPACITORS</u>							
C510		220pf 100V	70-138112				
C514	A,C	180pf 100V	70-138113				
C514	B	220pf 100V	70-138112				
C515	A	47pf 500V	70-138114				
C515	B,C	NONE	NONE				
C516	A	100pf 100V	70-138115				
C516	B	47pf 500V	70-138114				
C516	C	150pf 100V	70-138111				
C517	A	150pf 100V	70-138111				
C517	B	120pf 100V	70-138116				
C517	C	100pf 100V	70-138115				
C521	A	56pf 50V	70-138117				
C521	B	47pf 50V	70-138114				



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REF. NO.	USE	DESCRIPTION	PART NO.	REF. NO.	USE	DESCRIPTION	PART NO.
<u>EPROM PCB</u>				<u>TRANSISTORS</u>			
Z-273				Q301	UD	2SC458C	70-080082
				Q302	UD	2SB649C	70-080080
				<u>CAPACITORS</u>			
C951		0.01 uf 50V	70-132032	D301	UD	GL-6N202	70-085051
C952-957		47pf 50V	70-131200	D302,303, 304	UD	SLP436B	70-085052
<u>INTEGRATED CIRCUITS</u>				D305	UD	SLP530D	70-085053
IC 951		uPD 2716D	70-076089	CDS301	UD	CDS CELL	70-085054
IC 952		HD 14174BP	70-076081	<u>PC BOARD</u>			
<u>CONNECTORS</u>				CX 03A	UD	PCB	70-070081
J901		Jack, 11 Pin	70-159101	<u>CABLE ASSEMBLY</u>			
J902		Jack, 10 Pin	70-159102	J1	UD	Jack 13 Pin	70-034063
J903		Jack, 8 Pin	70-159099	CA356	UD	Cable J384,J385	70-034058
<u>PC BOARD</u>				CA357	UD	Cable W/J381	70-034057
Z273		PCB	70-070070	CA359	UD	Cable W/J383	70-034051
<u>DISPLAY PCB</u>				CA360	UD	Cable W/J386	70-034050
CX - 03				<u>MISCELLANEOUS</u>			
				<u>CONTROL PCB</u>			
				<u>SWITCHES</u>			
S301	UD	Scan	70-180012				
S302	UD	PRI	70-180012				
S303	UD	MON	70-180012	<u>SWITCHES</u>			
<u>RESISTORS:</u>				S 304	UD	SW, Rotary	70-180013
R332	UD	270 ohm 1/8 W	70-144047	<u>CONTROLS</u>			
R311-324	UD	470 ohm 1/8 W	70-145004	RV 301	UD	Squelch	70-164031
R310,325, 328-330	UD	560 ohm 1/8 W	70-145003	RV 302	UD	Volume	70-164026
R331	UD	1.2K ohm 1/8 W	70-145007	<u>RESISTORS</u>			
R326	UD	3.3K ohm 1/8 W	70-145005	R 333	UD	1W 4.7 ohm	70-144043
R327	UD	12K ohm 1/8 W	70-145006	<u>CAPACITORS</u>			
R303-308	UD	22K ohm 1/8 W	70-145002	C301,302	UD	10uf 50V	70-135059
R301,302, 309	UD	220K ohm 1/8 W	70-145001				
<u>INTEGRATED CIRCUITS</u>							
IC301,302	UD	HD 14511BP	70-076082				