

INSTALLATION

CAUTION: The MC6700 will operate with a nominal 12 volt negative & positive ground battery system, but read carefully the Item 6 of the paragraph of ACTUAL INSTALLATION mentioned below.

CHOOSING A LOCATION

1. Select a location that is free from spray and splash.
2. Select a location that minimizes exposure to direct sunlight (including that coming through windows).
3. Select a location that allows free air flow around the heat sink on the rear of the radio.
4. Select a location well away from the ship's compass. Auxiliary speakers also should be located away from the compass.
5. Select a location as close to the battery as possible (in order to keep battery leads as short as possible). Direct connection to the battery is most desirable. If direct connection cannot be made with the supplied power lead, any extension should be made with at least 5.5mm² wire.

ENGINE NOISE SUPPRESSION

Interference from the impulse noise generated by the electrical systems of engines is sometimes a problem with radios. The MC6700 has been designed to be immune to ignition impulse noise and alternator noise. However, in some installations it may be necessary to take measures to further reduce the effect of noise interference. All DC battery wires, antenna leads and accessory cables should be routed away from the engine and engine compartments and from power cabling carrying particularly high currents.

ANTENNA CONSIDERATIONS

1. Keep the antenna lead as short as possible. Long antenna leads can cause substantial loss of performance for both receiving and transmitting.
2. Locate your antenna as high as possible and clear from metal objects. The reliable range of coverage is direct function of antenna height. The general rules for antennas are: The more gain the greater the range and, the higher above the water line the greater the range.

MOUNTING CONSIDERATIONS

Keep in mind the flexibility designed into the MC6700 so that you can most conveniently use your radio. The points which should be considered are:

1. Universal mounting bracket may be installed on either top or bottom for shelf bulkhead, or overhead mounting.
2. The microphone connector faces forward allowing convenient in-dash or "built-in" installations.

ACTUAL INSTALLATION

1. First of all, remove the mounting bracket from the unit in installing to your vessel.

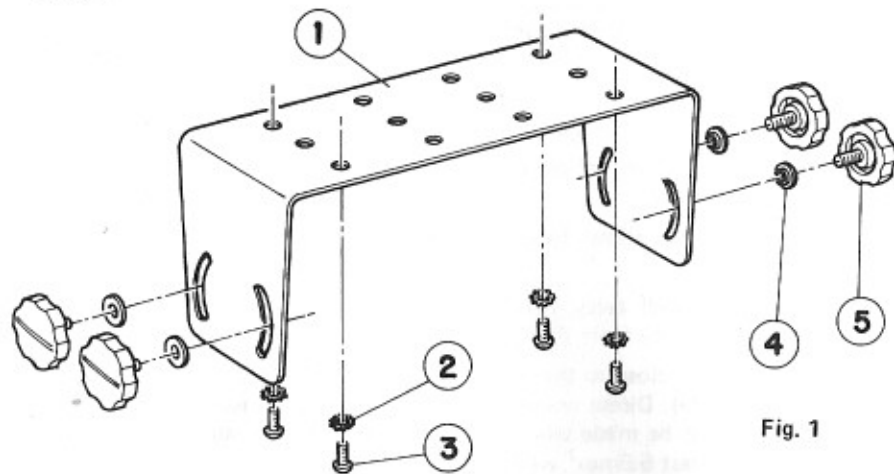


Fig. 1

- 1 Mounting Bracket
- 2 Star washer
- 3 Screw
- 4 Insulation Bush
- 5 Mounting Screw

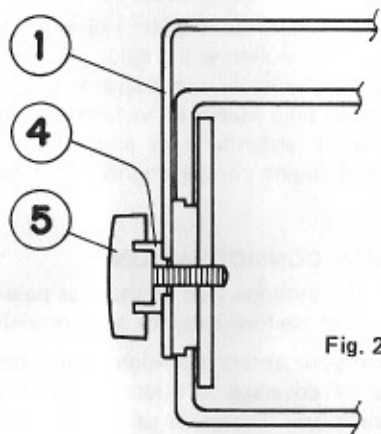


Fig. 2

2. Connect the power cord to the power receptacle of the unit. However, you mustn't connect the power cable to the battery unless the installation has been finished. Connect BP receptacle, which comes out from the cradle to the unit.
3. Install the unit to mounting bracket. At this time, insert the insulation bush into mounting screw correctly. In addition, make sure whether insulation bush is installed correctly. (See Fig. 2).
4. Install cradle to your vessel using three screws. Fixing the cradle, hang the handset up the cradle.

INSTALLATION OF CRADLE

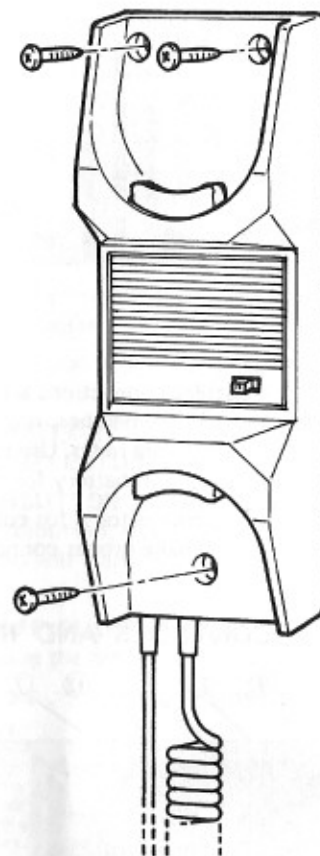


Fig. 3

5. Connect with 50 ohm impedance of antenna.
6. Under the conditions of OFF DC Power, connect DC power cable to battery. Red wire is plus, and minus for black. Standard voltage is between 12V and 13.2V and maximum operating voltage is between 11.2V and 15.2V. Please check the voltage carefully before connecting as unit will not only operate properly but will be damaged if you use over rating condition. This unit is designed for both plus and minus ground of hull, When you use with plus grounded hull, please refer to Fig. 1, 2 and be careful to be sure to install the insulation bush for short circuit as this unit is insulated by the point of the insulation bush of mounting bracket.

REAR PANEL CONNECTORS

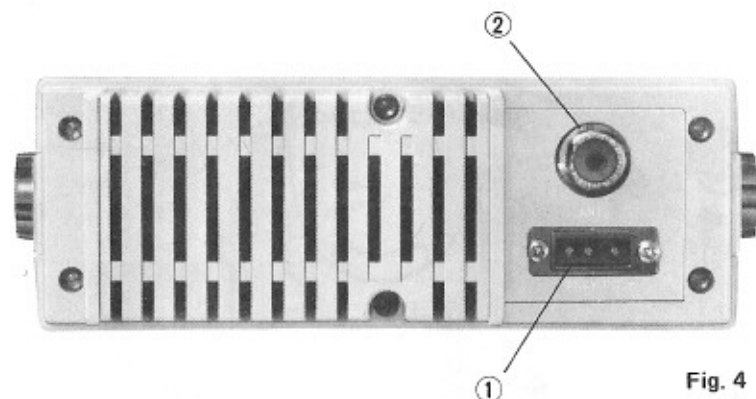


Fig. 4

1. **DC POWER CONNECTOR** . . . Battery connections are to be made with the cable supplied to mate with this connector. Remember, red is +, black is -. The power cord is equipped with a fuse to protect the radio. Use only a six (6) AMPERE fast blow fuse for replacement. Wire directly to battery for the best result.
2. **ANTENNA CONNECTOR** . . . This connector is for connection of the antenna. A type PL259 connector is required to make proper connection.

FRONT PANEL CONTROLS AND INDICATORS

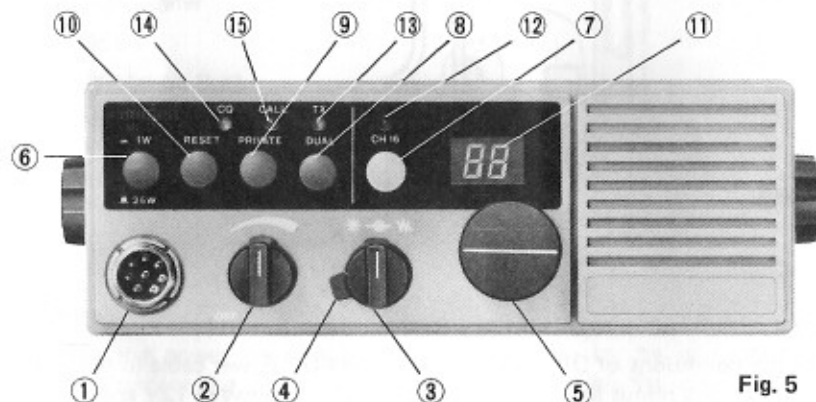


Fig. 5

1. **HANDSET CONNECTOR** . . . 8P receptacle for handset.
2. **ON/OFF-VOLUME** . . . Turns power on to radio and allows adjustment to the desired listening level with clockwise rotation.

3. **SQUELCH** . . . Used to quiet background noise when no signal is being received. Proper adjustment is such that the control is advanced only slightly beyond the point where the background noise is quieted.
4. **DIMMER CONTROL** . . . This control is used to adjust the brightness of the LED's.
5. **CHANNEL SELECTOR** . . . This is used to select the desired channel. The channel is displayed by the LED readout.
Note: The priority CH16 push switch can be used to override the main channel selector. When depressed once, the selection goes to the priority channel. When pushed back again, the unit returns to the channel originally selected by the rotary channel selector.
6. **1W/25W PUSHBUTTON** . . . Controls transmitter output power. The 1W(watt) position should be used whenever practical and should always be used for in-put or short range communication.
NOTE: According to local regulations, 25W position can be inoperative at certain channels.
7. **CHANNEL 16 PUSHBUTTON** . . . Provides instant channel 16 selection, overriding the CHANNEL SELECTOR.
8. **DUAL WATCH PUSHBUTTON** . . . Provides for automatic monitoring of CH16. By depressing this pushbutton, dual watch (scanning both of MAIN CHANNEL & CH16) operates and will start receiving of CH16 immediately when catching CH16 signal.
9. **PRIVATE CH ON/OFF PUSHBUTTON** . . . Provides PRIVATE CHANNEL MEMORY by depressing the button.
- *10. **RESET PUSHBUTTON** . . . This is momentary pushbutton to turn off CQ & CALL LED Indicators.
11. **CHANNEL NUMBER INDICATOR** . . . Indicates selected channel. This indicator will flash if an illegal channel is entered or at the private channels in which PRIVATE CHANNEL MEMORY frequencies are not registered.
12. **CH16 INDICATOR** . . . Operates in conjunction with the CH16 selector to draw attention to the fact that the CHANNEL SELECTOR has been overridden. In addition, operates in conjunction with WATCH SELECTOR and to flash until to catch signal of CH16 and to light brightly when signal of CH16 receives.
13. **TX INDICATOR** . . . Lights brightly when transmitting.
- *14. **CQ INDICATOR** . . . Lights brightly when receiving GROUP CALL SIGNAL.
- *15. **CALL INDICATOR** . . . Lights brightly when receiving PRIVATE CALL SIGNAL.
NOTE: The item 10, 14 & 15 marked * on the above operate only when the selective call system is installed in the unit.

HANDSET & CRADLE CONTROLS

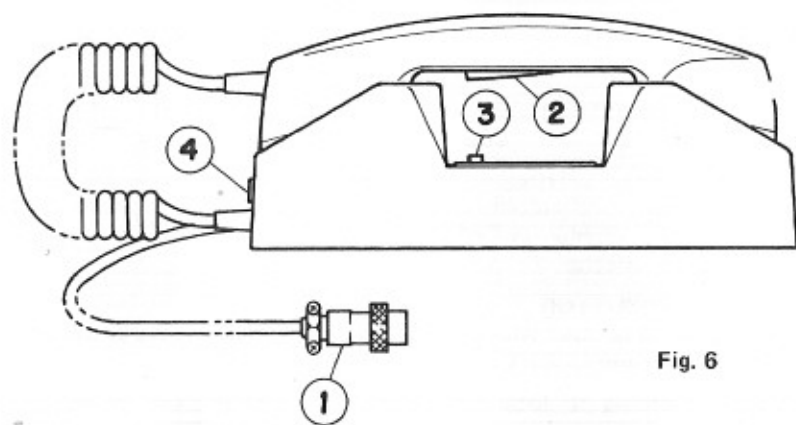


Fig. 6

1. **8P Receptacle plug** . . . This is connected with 8P receptacle on the Front Panel.
2. **Push-to-Talk Switch** . . . Press this switch when transmitting and release it when receiving.
3. **Loudspeaker ON/OFF Switch** . . . All speakers shall be turned off by this switch.
4. **External Speaker Jack** . . . If it is desired to use a speaker other than the one in the cradle, a four or eight ohm speaker equipped with a miniature phone plug may be connected to this jack. The internal speaker is disabled when an external speaker is used.

OPERATION

1. RECEIVING

- a) Set Dimmer Control to full clockwise position and ON/OFF volume control to OFF position, and turn Squelch Control fully counter clockwise. Also, set Dual Watch to OFF position.
- b) Turn on the Loudspeaker switch of the cradle and the Power Switch (ON/OFF VR Control) of the unit, too.
- c) Then, the channel LED display lights up and the channel number 16 appears.
- d) Turn the Volume Control slowly clockwise until you hear a comfortable level of sound.
- e) Turn the Squelch Control carefully clockwise until the sound just disappears.

- f) By chance, the signal exists on channel 16, and some communication can be heard on this channel.

Note: The sound level from handset is standardized and not changed by Volume Control on the unit.

- g) Rotate the Channel Selector to the desired channel, but note the unit must be under receiving condition.
- h) To receive Priority CH 16, depress CH16 Pushbutton.
- i) To receive private channels, depress Private CH ON/OFF Button and rotate Channel Selector to select the desired channel during P 0 through P 9. Simply push back the button to get normal channels.

2. TRANSMITTING

- a) Select the channel for transmitting and remove the handset from the cradle, first.
- b) Then, apply the receiver to ear and press the Push-to-Talk Switch of the handset. At that time, electric wave is radiated and it is modulated while talking.
- c) It turns to receiving condition when you release the Push-to-Talk Switch. Transmitting power of this unit becomes 1W automatically under regulated channels.
- d) Use 25 watts only when necessary to avoid interfering with other stations.
- e) During transmitting, TX indicator lights. It will not light when electric wave is not radiated even during transmitting.

3. DUAL WATCH

- a) Place the handset on the cradle properly and set Dual Watch Button to ON.
- b) Adjust squelch to close ground noise level and select your desired channel except CH 16. Then it receives CH 16 for 0.1 second in every one second, and CH 16 indicator turns on. However, note that time of dual watch may be changed when squelch is set around threshold position due to difficulty to distinguish between noise level and signal.
- c) If CH 16 receives signal at this stage, it will stay at CH 16. Also, when signal of CH 16 fades away, it starts dual watching again about two seconds later.
- d) CH 16 indicator is ON while receiving CH 16 continuously.
- e) In addition, when you pick the handset up from the cradle, dual watch stops automatically, and then, the unit operates at the channel indicated on channel display.
- f) If you want to transmit at CH 16, depress priority CH 16 Pushbutton and operate accordingly.

4. SELECTIVE CALL

If the unit is with selective call, it alerts and either CQ indicator or CALL indicator lights when receiving call signals. Alert sound will stop in four seconds automatically. But, the indicator is still ON unless you press Reset Button. Selective Call turns to stand-by position by pushing back Reset Button. CQ indicator lights in case of group call and CALL indicator does in case only you are called privately. The unit alerts at maximum volume regardless the position of volume control. Select tone of selective call according to the following instruction;

How to Connect Select Call

- Selective Call is composed with five continuous tones.
- Each tone is indicated by designated figure which is as follows:

frequency	1124Hz	TONE 1
	1197	2
	1275	3
	1358	4
	1446	5
	1540	6
	1640	7
	1747	8
	1860	9
	1981	0
	2110	W

- In order to code a number of five figures, you must connect code No. 1,2,3,4 and 5, to five points out of tone No. 1,2,3,4,5,6,7,8,9,0 and W which are connected to eleven terminals of coil respectively by soldering.
- Arrangement of coil terminal (Tone Nbr) to figure (Code Nbr) is as shown below.

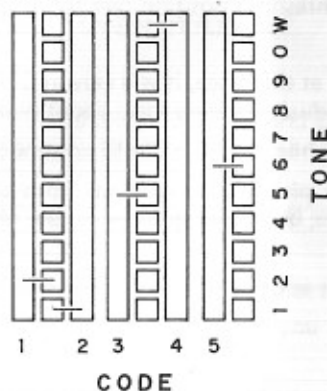


Fig. 7

Caution:

- * When same tone continues, we indicate the tone as "W" (e.g. 21556 = 215W6)
- * When soldering five codes and tone, please use approx. 2mm to 3mm long jumper wire.

SPECIFICATIONS

GENERAL

- Type Emission : F3
- Mode of Operation : Simplex or Semiduplex
- Number of Channels : 55 International Marine Channels
3 Fishing Boats Channels (Scandinavian)
2 Pleasure Boats Channels (Scandinavian)
10 Private Channels (Option)
- Operating Temperature Range : -15°C to +55°C
- Supply Voltage Range : 13.2V DC ±15%
- Transmitter Control : Push to Talk Switch within Handset
- Nominal Dimensions : H: 68mm
W: 188mm
D: 265mm
- Weight (kg) : 2.3 kg
- Operator Control Functions : ON-OFF Volume Control,
Squelch Control, Channel Selector,
Private Channel ON/OFF Switch,
1W/25W Change Switch, CH 16 Switch,
Dual Watch ON/OFF Switch, Dimmer Control,
Reset Switch (with Selective Call)
- Indicator : Channel Number Display (YELLOW GREEN LED)
Channel 16 LED (RED) (on Dual Watch Operation)
TX LED (YELLOW)
CALL LED (GREEN) (with Selective Call)
CQ LED (YELLOW) (with Selective Call)
- Accessories : DC Power Cable (with Fuse)
Mounting Bracket & Nuts
Handset & Cradle
- The Other Features are as follows : I.D.C. (Instantaneous Deviation Control)
A.P.C. (Automatic Power Control)
- Grounding : Both Negative and Positive

MEASUREMENT CONDITIONS

Temperature	: 25°C
DC Power Supply	: 13.2V
Antenna Impedance	: 50 ohm
Speaker Impedance	: 8 ohm (Int. & EXT)
Audio Output Power	: 500mW
Microphone Impedance	: 600 ohm

TRANSMITTER SECTION**ITEMS**

1. Frequency Range : 155.000 MHz to 159.225 MHz
2. Frequency Coverage : 4.225 MHz
3. Circuit Type : PLL System Direct Oscillator

UNITS

- | | | | |
|---|-------|-----|-------------|
| 4. Carrier Power Output: | High | W | 22 to 25 |
| | Low | W | 0.5 to 1 |
| 5. Frequency Deviation | : kHz | | ±5 |
| 6. Frequency Stability | | | |
| (-15°C to +55°C) | | Hz | ±1.5K |
| 7. Spurious Emissions | | dB | -70 |
| 8. AF Harmonic Distortion | | % | 8 |
| 9. Audio Frequency Response | | | |
| (300 to 3000Hz) | | dB | +1 to -3 |
| 10. Audio Filter | | | |
| (F=Audio Freq. in kHz) | | dB | -60 log F/3 |
| 11. FM Hum and Noise Ratio | | dB | -40 |
| 12. Microphone Sensitivity | | | |
| at 1kHz, 3mV Input | | | |
| or 94dB (0dB=2x10 ⁻⁵ Pascal) | | | |
| Sund Pressure Level | | kHz | 3 to 4.5 |
| 13. Source Current Drain: | High | A | 6.0 |
| | Low | A | 2.5 |

RECEIVER SECTION**ITEMS**

1. 0dBu=1uVemf Across Antenna Connector
2. Frequency Range : 155.000MHz to 159.225MHz
(159.6MHz to 163.825MHz (Duplex))
3. Frequency Coverage : 8.45MHz
4. Circuit Type : Dual Conversion Super Heterodyne.
Phase Locked Loop System for Local Oscillator
5. Intermediate Frequency : 1st 21.40 MHz
2nd 455KHz

UNIT

- | | | |
|--|----|------------|
| 6. Sensitivity: 20dB S/N | dB | 6 |
| 7. Local Osc. Frequency Stability | | |
| (-15 to +55°C) | Hz | ±1.5k |
| 8. Audio Power Output: Volume | | |
| Maximum | W | 1.5 to 3.5 |
| 9. Squelch Sensitivity Threshold | dB | 0 |
| Tight | dB | 6 |
| 10. Adjacent Channel Selectivity | | |
| ±25kHz | dB | 70 |
| 11. Intermodulation Attenuation | dB | 70 |
| 12. Spurious Response Attenuation | dB | 70 |
| 13. FM Hum and Noise Ratio SQed/
unSQed | dB | -46/40 |
| 14. Audio Freq. Response | | |
| (300 to 3000Hz) | dB | +1/-3 |
| 15. Source Current Drain Squelched | A | 1.0 |
| Max. Audio | A | 1.5 |

1. STANDARD INTERNATIONAL MARINE CHANNELS

Channel No.	Frequency (MHz)		Transmitter RF Power	Channel No.	Frequency (MHz)		Transmitter RF Power
	Transmitter	Receiver			Transmitter	Receiver	
—	—	—	—	60	156.025	160.625	25W & 1W
01	156.050	160.650	25W & 1W	61	156.075	160.675	25W & 1W
02	156.100	160.700	25W & 1W	62	156.125	160.725	25W & 1W
03	156.150	160.750	25W & 1W	63	156.175	160.775	25W & 1W
04	156.200	160.800	25W & 1W	64	156.225	160.825	25W & 1W
05	156.250	160.850	25W & 1W	65	156.275	160.875	25W & 1W
06	156.300	156.300	25W & 1W	66	156.325	160.925	25W & 1W
07	156.350	160.950	25W & 1W	67	156.375	156.375	25W & 1W
08	156.400	156.400	25W & 1W	68	156.425	156.425	25W & 1W
09	156.450	156.450	25W & 1W	69	156.475	156.475	25W & 1W
10	156.500	156.500	25W & 1W	70	156.525	156.525	25W & 1W
11	156.550	156.550	25W & 1W	71	156.575	156.575	25W & 1W
12	156.600	156.600	25W & 1W	72	156.625	156.625	25W & 1W
13	156.650	156.650	25W & 1W	73	156.675	156.675	25W & 1W
14	156.700	156.700	25W & 1W	74	156.725	156.725	25W & 1W
15	156.750	156.750	25W & 1W	75	—	—	—
16	156.800	156.800	25W & 1W	76	—	—	—
17	156.850	156.850	25W & 1W	77	156.875	156.875	25W & 1W
18	156.900	161.500	25W & 1W	78	156.925	161.525	25W & 1W
19	156.950	161.550	25W & 1W	79	156.975	161.575	25W & 1W
20	157.000	161.600	25W & 1W	80	157.025	161.625	25W & 1W
21	157.050	161.650	25W & 1W	81	157.075	161.675	25W & 1W
22	157.100	161.700	25W & 1W	82	157.125	161.725	25W & 1W
23	157.150	161.750	25W & 1W	83	157.175	161.775	25W & 1W
24	157.200	161.800	25W & 1W	84	157.225	161.825	25W & 1W
25	157.250	161.850	25W & 1W	85	157.275	161.875	25W & 1W
26	157.300	161.900	25W & 1W	86	157.325	161.925	25W & 1W
27	157.350	161.950	25W & 1W	87	157.375	161.975	25W & 1W
28	157.400	162.000	25W & 1W	88	157.425	162.025	25W & 1W
29	—	—	—	89	—	—	—

NOTE: Mark (—) shows transmitter and receiver inhibited channel.

2. ADDITIONAL SCANDINAVIAN CHANNELS

	Channel No. Indicator	Frequency (MHz)	
		Transmitter	Receiver
For Fishing Boats	1P	155.625	155.625
	2P	155.775	155.775
	3P	155.825	155.825
For Pleasure Boats	1L	155.500	155.500
	2L	155.525	155.525

Transmitter power 1W & 25W for all channels listed above.

3. PRIVATE CHANNELS

Private channels (option)	P0	Transmitter frequency range (155.000 to 159.225 MHz)
	P1	
	P2	Receiver frequency range (155.000 to 163.825 MHz)
	P3	
	P4	
	P5	
	P6	
	P7	
	P8	
	P9	

CARE AND MAINTENANCE

Your MC6700 is a precision piece of electronic equipment and you should treat it accordingly. Due to the rugged design, very little maintenance is required, however, a few precautions should be observed.

If your radio has been accidentally subjected to spray or splash, you should immediately wipe it down with a soft cloth dampened with fresh water.

If the antenna has been damaged, you should not transmit except in the case of emergency. A defective antenna may cause damage to your radio.

You are urged to arrange for periodic performance checks with your UNIDEN Marine Dealer.

SERVICE

Should you find it desirable or necessary to have service performed on your MC6700, you are urged to contact the UNIDEN Dealer from whom you made your purchase. He, or any other UNIDEN dealer is able to provide you with complete service performed by well qualified personnel.