

# **OWNER'S MANUAL**

# **SHOGUN**

**PLL 40 CHANNEL  
MOBILE TRANSCEIVER**

**Professional Quality  
and Performance Standards**

Thank you for buying this SHOGUN CB Radio.

If you follow these simple instructions you will enjoy many years of trouble free breaking.

"You need to apply to a Post Office for a licence to operate this equipment. It is against the law not to have the correct licence. Modification of this product in any way may contravene your operating licence and render you liable for prosecution."

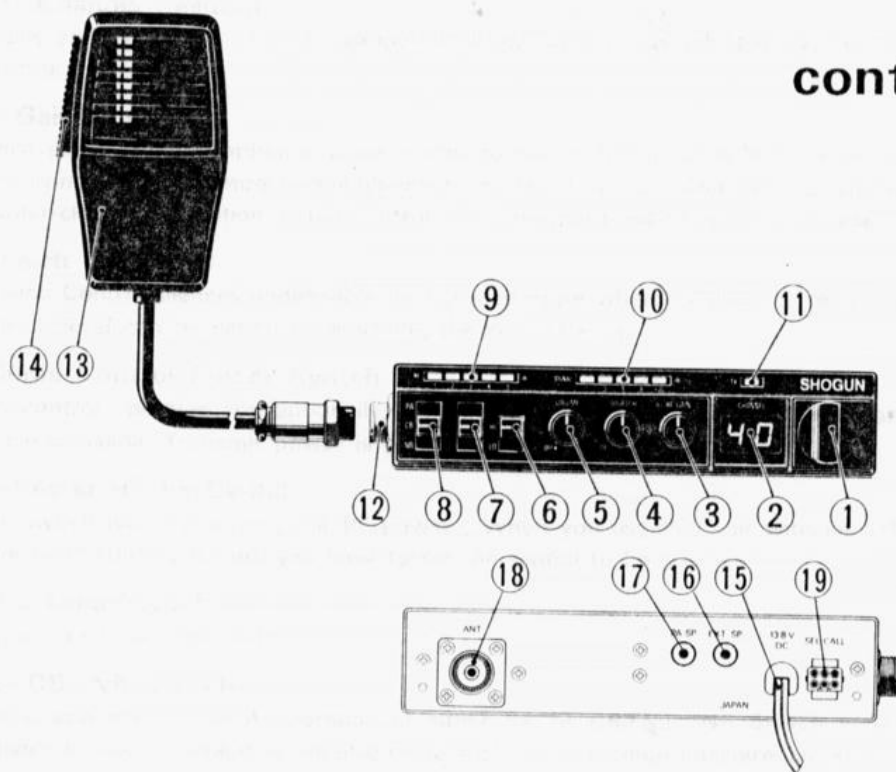
### **Do's & Don'ts,**

1. Do obtain a suitable antenna from a reputable CB shop.
2. Do have the antenna properly fitted to your vehicle or home and tuned with a proper SWR meter.
3. Do not operate the set without antenna or with a broken antenna connection cable, as this could damage the set.
4. Do not attach your CB radio direct to the mains electricity supply. If you do, it will burn out and the guarantee will be void.
5. Do make sure that your SHOGUN CB radio is attached to 12 volts supply with the Red lead to the positive and the Black lead to the negative terminals. Most vehicles have a Negative earth system but check that yours really does before you connect up. If your vehicles uses 24 volts, the power supply to your SHOGUN must be reduced.
6. Do attach the SHOGUN CB Radio to your vehicle securely.
7. Do take precautions against theft - your SHOGUN CB radio will be admired by one and all - including thieves.

## introduction

SHOGUN is a 40 Channel Citizen's Band FM Transceiver designed for mobile use. Advance Phase Lock Loop Frequency control on all channels. For maximum enjoyment of your new transceiver and for many years of trouble-free operation, read your owner's carefully before installing or operating this unit.

## controls



### Front View

1. Channel Selector
2. LED Channel Readout
3. RF Gain Control
4. Squelch Control
5. Volume Control/Power Switch
6. RF Power Hi-Lo Switch
7. Delta Tune Switch
8. PA-CB-NB Switch
9. LED RF-PA Level Display
10. LED S Level Display
11. TX Indicator

### Microphone

12. Microphone Jack
13. Microphone
14. Press-To-Talk Switch

### Rear View

15. DC Power Cord
16. External Speaker Jack
17. PA Speaker Jack
18. Antenna Connector
19. Selective Call Socket

# control functions

- 1. Channel Selector**

With this control you can select any of the CB channels. 1-40
- 2. LED Channel Readout**

This is an LED digital channel readout to show the channel selected by the Channel Selector.
- 3. RF Gain Control**

Adjust as required to optimize signal. This control is functional in CB mode, and is used primarily to optimize reception in strong signal areas. The gain is reduced by counter-clockwise rotation of the control. The normal position is full clockwise.
- 4. Squelch Control**

Squelch Control silences undesirable background noise when no signal is received. The Squelch level can be varied by adjusting the control knob.
- 5. Volume Control/Power Switch**

This control operates conventionally; rotate knob clockwise to turn power on and to increase volume. Transmit power is not affected by the volume control.
- 6. RF Power Hi-Lo Switch**

This switch is for changing the RF power. When you use this unit with an antenna more than 10m by height, you have to set the switch to Lo-position.
- 7. Delta Tone Switch**

Adjust for clearer reception.
- 8. PA-CB-NB Switch**

This selects the mode of operation in either PA or CB(FM). NB Switch works effectively to reduce repetitive impulse noise such as an ignition interference, etc.
- 9. LED RF-PA Level Display**

Red LED's indicate relative RF power output when transmitting and relative PA power output when PA is operated.
- 10. LED S Level Display**

Green LED's indicate relative incoming signal strength when receiving.
- 11. TX Indicator**

This LED indicator illuminates in green during transmission.
- 12. Microphone Jack**

Insert microphone plug all the way in and tighten collar.
- 13. Microphone**

#### 14. Press-To-Talk Switch

Press to talk in both CB and PA mode. Release when receiving CB broadcasts.

#### 15. DC Power Cord

Power for the transceiver is supplied through this cable.

#### 16. External Speaker Jack

Jack for connection of a headphone for private listening or 4~8 ohm external speaker. Insertion of a plug automatically silences the internal speaker.

#### 17. PA Speaker Jack

Jack for connection of 4~8 ohm PA speaker when using is this mode.

#### 18. Antenna Connector

For antenna lead-in cable with matching PL-259 coaxial antenna plug.

#### 19. Selective Call Socket

Accepts the plug of Selective Call Unit.

# CB operation

## Preparing to Transmit or Receive:

1. Make sure that the microphone 13 is plugged in 12 : the unit will not operate unless the microphone is attached.
2. Make sure that a proper CB antenna is attached 18.
3. Select the CB mode (PA—CB—NB) 8.

## To Receive

1. Turn the Power Switch 5 on and increase the volume slightly.
2. Select a CB station with the channel selector 1.
3. Increase volume 5 to a comfortable listening level, then adjust the Squelch Control 4. SQUELCH ADJUST: During a time when only background noise is present on the station, rotate the Squelch Control Knob slowly clockwise just until background noise disappears. NOTE: The NB automatically stops working when strong stations are on near your channel in order to prevent Inter-modulation, and Cross-modulation from getting worse.

The sound is not heard unless the connector or a sell-call unit is connected to the Sell-Call Jack 19.

## To Transmit

Hold the microphone three to four inches from your lips. Press the button 14 on the side of the microphone while talking. Speak in a normal voice directly into the microphone. Remember to release the microphone button to receive.

## To Operate PA

NOTE: FOR PA OPERATION, AN 4~8 OHM PA SPEAKER MUST BE PLUGGED INTO THE PA JACK AT THE REAR OF THE UNIT.

1. Turn the power Switch 5 on and increase the volume slightly.
2. Select the PA mode 8.
3. Press the button 14 on the side of the microphone while talking. Speak directly into the microphone and adjust volume 5 as desired.

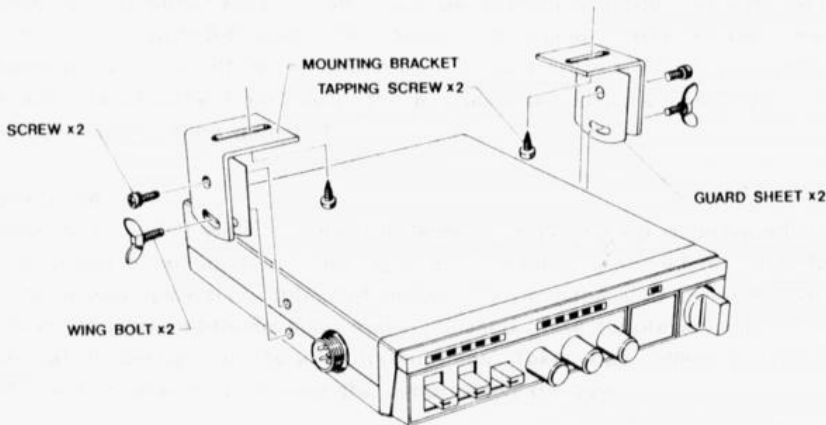
NOTE: CONNECTION OF AN EXTERNAL SPEAKER WILL DEACTIVATE THE INTERNAL SPEAKER IN THE TRANSCEIVER. SOUND WILL THEN COME FROM THE EXTERNAL SPEAKER.

# installation

A location in the Car or Truck should carefully be chosen for convenience of operation and non-interference with normal driving functions. Mounting may be under the dash or the instrument panel or any place where a secure installation can be made.

## Transceiver Mounting

Before installing the transceiver in a car, truck and etc., be sure to choose a location which is convenient to the operating controls and will not interfere with the normal functions of the driver. The transceiver may be mounted to the underside of the instrument panel or dashboard of a car, truck and etc., by means of the special brackets which are supplied with the transceiver. Attach the brackets to the underside of the instrument panel using self-threading screws (See Fig. 1).



## DC Power Connection

This transceiver may be operated from a 12 volt DC battery source on Negative ground system. It is designed to operate within an input voltage of 11.6 to 15.6 volts DC. Make sure that the voltage to the transceiver does not exceed 15.6 volts DC.

**NOTE:** Before making any power connection, you must determine whether the vehicle or boat has a negative or positive ground system. Then make the following connections. Using the end of the DC power cable, connect the fused Red lead of the '+' (positive) side of the electrical system and the Black lead to the '-' (negative) side of the electrical system. The Red lead should be connected to the accessory post on the ignition switch, the voltage regulator side of the ammeter and/or the accessory side of the fuse block. The Black lead should be connected to the metal firewall or any other point that is connected to the vehicle chassis (ground).

### **Antenna Connection**

The antenna lead-in cable (RC-58U or RC8/U) should be terminated with a PL-259 type coaxial connector which should then be attached to the matching SO-239 connector at the rear of the transceiver.

### **Microphone Connection**

Insert the 5-pin plug at the end of the coiled cord into the microphone socket at the side of the transceiver.

### **Mobile Antenna**

The Antenna system is included the transmission line and it is very important that you use the correct type of the transmission line. The transmission line should be the coaxial type and should have an impedance equal to the antenna impedance which must be 50 ohms. Generally speaking, you should keep the length of the transmission line minimum. Remember that line losses increase with frequency. To use a foam-insulated coax for best results. The above discussion is as important for reception as it is for transmission. If a mismatch exists between the antenna and the transceiver, the excellent sensitivity and signal-to-noise ratio of the receiver circuitry will be defeated.

### **Ignition Interference**

Your transceiver is equipped with a special RF Noise Silencer which is designed to provide outstanding reduction of an ignition noise. Ignition interference should not therefore be a problem in most cases. However, sufficient noise may be generated by some vehicles to make it necessary to install additional suppression. Several noise suppressor kits are available which include all necessary parts and instructions. Take your vehicle to a skilled auto technician who will be able to carry out the suppression for you.



# specifications

## GENERAL

1. Circuitry: 24 Transistors, 2 FET Transistors, 42 Diodes, 6 ICs, 12 LEDs.
2. Frequency Control: PLL (Phase Locked Loop) Frequency Synthesizing System.
3. Channels: 40 Channels
4. Mode of Operation: FM
5. Power Source Voltage: 13.8V DC
6. Operating Temperature:  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$
7. Speaker: 3" Dynamic, 8 ohm
8. Microphone: Dynamic 500 ohm

## RECEIVER SECTION

1. Receiving System: Dual Conversion System
2. Sensitivity: FM: Less than 0.5uV for 12dB SINAD(0.3uV nominal)
3. Selectivity: 5KHz minimum at 6dB down
4. Adjacent Channel Rejection: More than 60dB
5. Audio Output Power: 3W at 4 ohm, 1.8W at 8 ohm(10% distortion)
6. Squelch Sensitivity: Threshold; less than 0.5uV  
Tight; 1000uV to 10,000uV
7. Spurious Rejection: More than 60dB
8. AGC figure of merit: More than 60dB/-15dB
9. Signal Meter(S9): 30uV to 300uV

## TRANSMITTER SECTION

1. Modulation System: FM(F3)
2. RF Output Power: 3.3W-3.8W
3. Modulation Capability: Less than 2KHz(FM)
4. RF Meter: 5th LED

ch 20. Diode P. b 220MV L0  
 c 170MV L0  
 e 7.1V L0  
 e 658MV L0

