

GME

Electrophone

INSTRUCTION MANUAL

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GX292 10 CHANNEL 27 MHz MARINE TRANSCEIVER

COMPLIES WITH SPECTRUM MANAGEMENT
AGENCY STANDARD SMAS244

Issue 01

**STANDARD COMMUNICATIONS
PTY. LTD.**

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SPECIFICATIONS

GENERAL

Frequency Range:	27.680 MHz to 27.980 MHz
No. of Channels :	10
Mode :	AM (A3E)
Frequency Control:	Phase Locked Loop Synthesiser
Frequency Stability :	± 500Hz
Operating Temperature :	0° C to +55° C
Antenna Impedance :	50 Ohms
Operating Voltage :	12.6 Volts Nominal
Weight (with batteries) :	480 grams approx.
Size :	165mm (H) x 60mm (W) x 40mm (D)
Microphone :	Electret type

RECEIVER

System :	Dual Conversion superheterodyne.
IF Frequencies :	1st - 10.7 MHz 2nd - 455 kHz
Sensitivity :	0.7 μ V for 12 dB SINAD

Adjacent Channel

Rejection :	-55 dB
Image Rejection :	-55 dB
Audio output :	1 Watt into 8 Ω (10% THD)
Current :-	
Squelched :	80 mA (typical)
Battery Save :	42 mA (typical)

TRANSMITTER

RF Power output :-	
Alkaline Batteries:	3.5 Watts nominal @ 12.6V
Nicad Batteries:	3.0 Watts nominal @ 10.8V.
Modulation level :	±85% @ 7.6mV @ 1kHz
Spurious & Harmonic Suppression :	-75 dBc
Current - Full Mod. :	1.6 Amps (typical)

GENERAL DESCRIPTION

The GME Electrophone GX292 is an extremely compact 10 channel synthesised 27 MHz handheld marine transceiver. It is specifically designed for short to medium range or point to point communications.

The GX292 is an innovative design for a 27 MHz marine portable radio. It contains technology normally reserved for commercial communications equipment.

SURFACE MOUNTED COMPONENTS

Part of the GX292 circuitry incorporates the latest robot assembled surface mount technology, resulting in a very compact radio with outstanding performance and extremely

high quality and reliability.

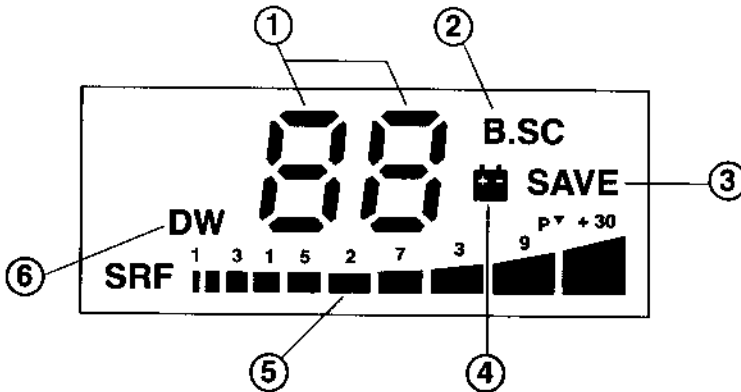
LIQUID CRYSTAL DISPLAY (LCD)

The GX292 is fitted with a Liquid Crystal Display which consumes very little power and is easy to view under a wide range of lighting conditions. A light switch with automatic timeout provides backlighting for night use.

BATTERY SAVING FEATURE

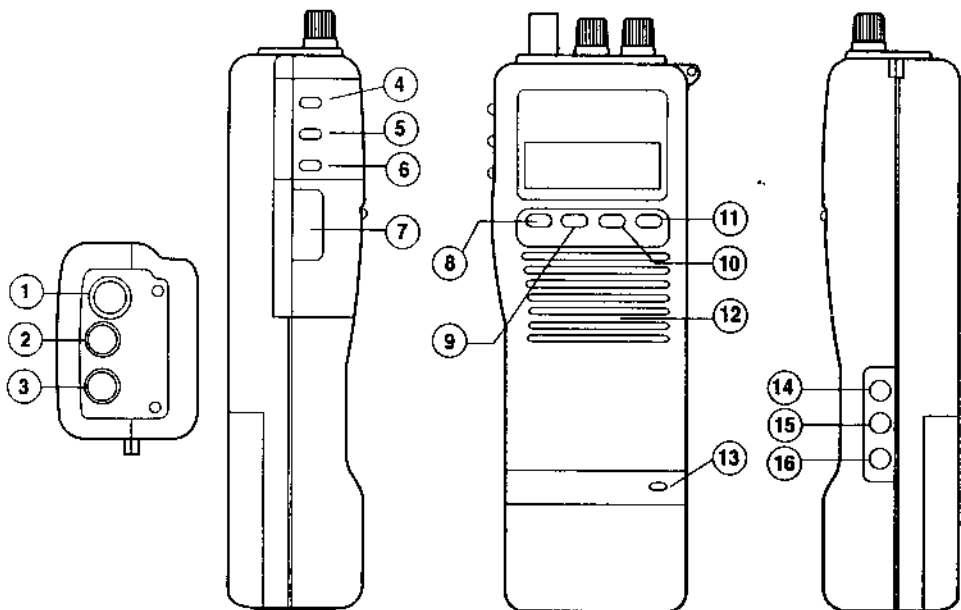
An automatic battery saving feature is built in to the GX292 which allows it to sleep during periods of inactivity, while continuing to check for incoming signals. When the receiver is sleeping, it consumes very little power, resulting in a significant energy saving. Whenever the battery saving feature is active, **SAVE** appears on the LCD.

LIQUID CRYSTAL DISPLAY



- 1. Channel Display.**
Indicates the currently selected channel.
- 2. Busy Scan Mode Indicator.**
Visible when the GX292 is scanning.
- 3. Battery Saver Indicator.**
Visible when the Battery Saver mode is active.
- 4. Low Battery Indicator.**
Appears when the battery needs replacing (or NICAD's need recharging).
- 5. Signal Strength/Power Output Meter.**
Indicates signal strength on receive and RF Power output on transmit.
- 6. Dual Watch Indicator.**
Appears when the Dual Watch function is selected.

CONTROLS



1. TNC Antenna Socket.

2. SQUELCH Control

Used to quieten the receiver when there are no signals present.

3. VOLUME Control

Controls the audio output level from the speaker. Incorporates the ON/OFF switch.

4. LIGHT Button

Activates the display backlighting. The light will extinguish automatically after a few seconds to conserve the battery.

5. UP Button

Steps upward through the channels (selects higher channel numbers).

6. DOWN Button

Steps downward through the channels (selects lower channel numbers).

7. PTT Button

Press the Push-To-Talk button to transmit.

8/9. M1 / M2 Buttons

Programmes or selects channels in memory locations 1 and 2.

10. SCAN Button

Activates the SCAN mode, causing the GX292 to scan through all 10 channels.

11. DW Button

Activates the dual watch mode.

12. Speaker.

13. Microphone.

14. External Microphone/PTT Socket.

15. Extension Speaker Socket.

16. External Charging Socket

OPERATION

RECEIVING

VOLUME ON/OFF

Rotate the volume control clockwise past the click. Adjust the control for a comfortable listening level.

SQUELCH

The variable squelch control is used to eliminate the background noise when there are no signals present. Adjust the squelch by first rotating it fully counter clockwise until the background noise is heard, then advancing it clockwise until the noise just disappears. At this setting, the receiver will remain quiet while there are no signals present, but an incoming signal will open the squelch and be heard. As the squelch is advanced further, stronger signals will be required to overcome it. To receive very weak signals or to disable the squelch, turn the control fully counter clockwise.

SELECTING CHANNELS

Select channels by pressing the channel UP/DOWN buttons on the side of the GX292. Press **UP** to step up one channel and **DOWN** to step down one channel. To change channels quickly, press and hold the **UP** or **DOWN** button for more than one second. Release the button when the desired channel number is displayed.

BACK LIGHTING

To illuminate the LCD display, press the **LIGHT** button on the side of the radio. The display will remain lit for 5 seconds. The lamps will then turn off to conserve battery power.

M1/M2 BUTTONS

The GX282 has two memories, each of which can be programmed with any of the 10 fitted marine channels.

To programme a memory:

1. Select the required channel using the channel **UP** / **DOWN** buttons.
2. Press and HOLD the required memory button (M1 or M2) for a couple of seconds until the radio beeps.

The channel is now programmed into the memory. Repeat the process with another channel to programme the other memory.

To recall a memory, quickly press and release the required memory button. The stored channel will be selected.

SCANNING

Press the **SCAN** button to scan upwards through all 10 channels at a rate of 10 channels per second. B.SC will be displayed indicating that BUSY SCAN is selected. If a busy channel is found, scanning will pause on that channel for 5 seconds, then resume. To hold a busy channel either press **SCAN** again or press the **PTT** button. Scan will be cancelled.

DUAL WATCH

Press the **DW** button to activate the DUAL WATCH function. This function allows two user selectable channels to be monitored simultaneously. The Dual Watch function is set as follows:

1. Press the **UP** or **DOWN** button to select the first channel you wish to monitor (e.g Channel 88).
2. Press the **DW** button to activate the Dual Watch mode.
3. Now select the second channel using the **UP** / **DOWN** buttons (e.g Channel 94).

After a few seconds, the display will alternate between the two selected channels as they are monitored. If one channel becomes busy, the

GX292 will pause on that channel but will continue to monitor the other channel every few seconds. If both channels are busy, the GX292 will continue to monitor both channels, pausing for a few seconds on each. To stay on a busy channel either press **(DW)** to cancel the Dual Watch mode, or press the **(PTT)** button.

TRANSMITTING

To transmit, press the push-to-talk **(PTT)** button on the side of the radio. Hold the radio so the microphone is 2-6cms from your mouth and slightly to one side so that your voice does not project directly into the microphone. Speak at a normal voice level. When you have finished talking, release the **(PTT)** button to receive.

BATTERIES

The GX292 can be fitted with either 9 "AA" sized Alkaline batteries or 9 rechargeable NICAD batteries. Standard carbon batteries are not recommended due to their reduced operating life.

To fit the batteries, slide the battery compartment cover downward. Insert the batteries into the compartment taking care that the polarity is correct. When done, refit the battery cover.

Do not mix Alkaline and NICAD batteries in the battery compartment as they are not compatible.

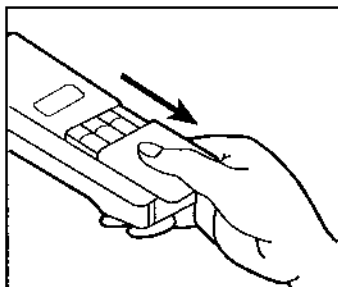
CHARGING

If NICAD batteries are used, they can be recharge using the Charging socket. To ensure the NICAD's are charged safely, we

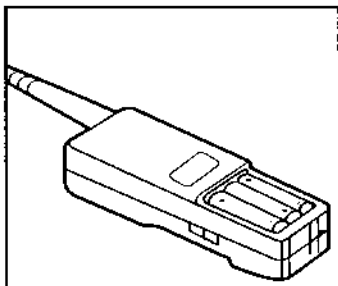
recommend they be charged using the GME NICAD battery charger model BC560.

DO NOT CONNECT EXTERNAL POWER TO THE GX292 WHILE ALKALINE BATTERIES ARE INSTALLED AS DAMAGE TO THE RADIO WILL RESULT.

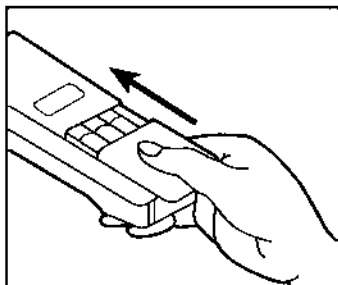
1. Slide battery cover downward.



2. Insert batteries.



3. Refit battery cover.



ANTENNA

For best performance, the flexible antenna should be held in a vertical position and kept away from metal structures. The operating range should cover several kilometers depending on terrain, obstacles and climatic conditions. Range can be greatly increased by connecting the GX292 to a mobile or base station antenna.

DO NOT TRANSMIT WITHOUT AN ANTENNA CONNECTED OTHERWISE THE TRANSMITTER MAY BE DAMAGED.

OPERATING ON THE 27 MHz MARINE BAND

Normal Operating Procedure

Most calls to other vessels or stations are made on channel 88. After listening to ensure channel 88 is clear, call the other station, repeating both callsigns three times.

e.g. Coast Guard, Coast Guard, Coast Guard
This is -
Seaspray, Seaspray, Seaspray
Over.

Once contact has been made, move straight to another channel (e.g 91 or 94) to continue your conversation. This leaves channel 88 clear for emergencies or other calls. Don't forget to return to channel 88 or select Dual Watch when you have finished otherwise you may miss other calls meant for you.

Emergency Procedures

All emergency calls should be made on channel 88. There are three main types of emergency call.

1. MAYDAY, MAYDAY, MAYDAY

This call should be used when you are in grave and imminent danger and require immediate assistance. You should call MAYDAY three times followed by your vessels name or callsign three times. Then state your position, a brief description of your vessel, the nature of the emergency, the number of people on board and their condition. If you hear no reply, repeat the call at short intervals because someone may be able to hear you but you might not be able to hear their reply.

After contact has been made, follow any instructions given to you.

2. PAN PAN, PAN PAN, PAN PAN

Use this call when an emergency situation exists but there is no immediate danger. The call should be made the same way as the MAYDAY call. If you hear no reply, repeat the call at regular intervals.

3. SECURITE, SECURITE, SECURITE

(Pronounced Say-Cure-E-Tay)

This call is used to warn other shipping of dangers or hazards e.g. bad weather, container adrift etc. The call may be made to a local monitoring station or to all ships in the area.

CHANNEL/ FREQUENCY CHART

CH.	FREQUENCY	APPLICATION
68	27.680MHz	Commercial, Ship-shore-ship.
72	27.720MHz	Professional fishing.
82	27.820MHz	Professional fishing.
86	27.860MHz	Secondary distress and safety.
88	27.880MHz	Primary distress and calling only.
90	27.900MHz	Domestic ship-shore-ship.
91	27.910MHz	Domestic ship-shore-ship.
94	27.940MHz	Club events, ship-shore-ship.
96	27.960MHz	Ship to ship.
98	27.980MHz	Rescue organisations.

WARRANTY

GME ELECTROPHONE limit this warranty to the original purchaser of the equipment.

GME ELECTROPHONE warrant this product to be free from defects in material and workmanship for a period of twelve (12) months from the date of purchase from their authorised dealer.

Should the product require servicing during this period, all labour and parts used to effect repairs will be supplied free of charge. GME ELECTROPHONE reserve the right to determine whether damage has been occasioned by accident, misuse or improper installation whereby the warranty would be void, including:

Transceivers which have been damaged due to:

- (a) Incorrect or reverse polarity connection to a battery or power supply.
- (b) Connection to an incorrect supply voltage.

(c) Operation without an antenna or by connection to an antenna which has been incorrectly installed, resulting in damage to the transceivers output transistors.

(d) Effects of water or moisture penetration.

(e) Non-factory modifications.

Procedure to be followed by claimant: In the event of a defect occurring during the twelve (12) month warranty period, the original purchaser may return the defective unit along with suitable proof of purchase date (i.e receipt, docket, credit card slip etc) and a full description of the defect to the dealer from whom the unit was purchased.

All freight charges incurred for transportation by the dealer or GME ELECTROPHONE are the purchasers responsibility.

The dealer will forward the unit to the closest authorised GME ELECTROPHONE service depot in your particular state.

GME ELECTROPHONE AFTER SALES SERVICE

Your ELECTROPHONE transceiver is especially designed for the environment encountered in domestic or portable installations. The use of all solid state circuitry, careful design and rigorous testing, result in high reliability. Should a failure occur however, GME ELECTROPHONE maintain a fully equipped service facility and spare parts stock to meet the customers requirements long after the expiry of the warranty period.

GME *Electrophone*

A DIVISION OF STANDARD COMMUNICATIONS PTY. LTD.

SYDNEY
6 Frank Street,
GLADESVILLE 2111
(02) 816 4755
Fax : (02) 816 2198

MELBOURNE
96 Voltri Street,
MENTONE 3194
(03) 584 8099
Fax : (03) 584 8446

BRISBANE
Unit 1, 16 Dulacca St,
ACACIA RIDGE 4110
(07) 273 4355
Fax : (07) 273 5907

ADELAIDE
Unit 1/4 West Therbarton Rd,
THEBARTON 5031
(08) 234 2633
Fax : (08) 234 5138

PERTH
Unit 4, 43 Norma Rd,
MYAREE 6154
(08) 330 5322
FAX : (09) 317 1787

AUCKLAND, N.Z.
P.O. Box 58446
GREENMOUNT
(08) 274 0955
Fax : (09) 274 0959