

# VISAR™

## User Guide

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## GENERAL INFORMATION

With the VISAR™ radio you have chosen an excellent portable radio. The Motorola warranty for quality guarantees the high standard of Motorola products. Your VISAR™ radio has left our factory only after extensive tests.

This user guide describes the way a **standard** radio works. Since standard operation may be changed by programming, the way your radio operates may differ slightly from what is described here.

If in doubt contact the person in charge of your radio system or your local service representative.

## FUNCTIONS OF THE BUTTONS

Numbers in brackets refer to the illustrations on the fold out pages.

- (1) **Radio ON/OFF and Volume Control**
- (2) **Channel display**, with two characters. Backlit when any button is pressed.
- (3) **Jack connector**  
For 3.5 mm audio accessories. Should be fitted with the supplied cover (13) when not in use.
- (4) **Antenna connector**
- (5) **Channel up/down selectors and display flip buttons**
- (6) **Call button 1 or emergency** (programmable)
- (7) **Monitor button**
- (8) **Transmit key (PTT)**  
Push to talk, release to listen.
- (9) **Keypad**, for entering variable address digits or DTMF numbers on preprogrammed channels.



**(10) Universal connector**

For remote speaker/microphone and other accessories. Provides access for programming and testing. Should be fitted with the supplied cover (12) when not in use.

**(11) Three-colour indicator**

**Red**, continuous: radio transmits

**Red**, flashing, when transmitting: low battery

**Red**, flashing, when receiving: channel busy

**Yellow**, fast flashing: Individual call reminder

**Yellow**, slow flashing: Group call reminder

**Green**, flashing: Scanning on

**Red, Yellow, Green** alternating: Hardware error

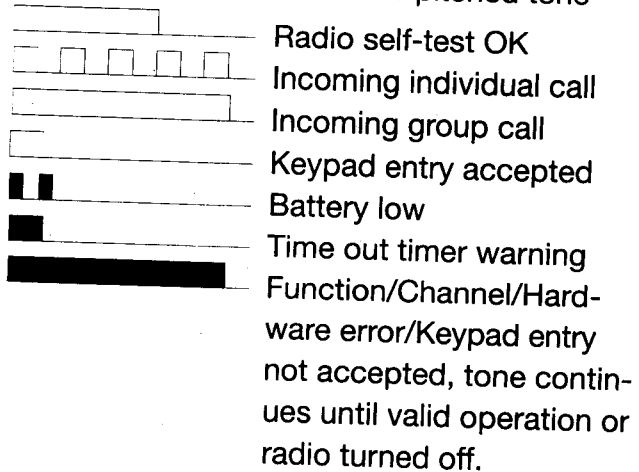
**(12) Universal Connector Cover**

**(13) Jack Connector Cover**

**(14) Battery latch**

**AUDIO SIGNALS**

— High pitched tone    ■ low pitched tone



## GENERAL OPERATION

### Fitting/Removing Battery

Before fitting or removing the battery always turn the radio off.

In order to fit the battery, place the four tabs on the sides of the battery in the corresponding holes in the radio and press the battery towards the top of the radio until the battery latch (14) at the bottom has engaged.

To remove the battery, press the battery latch (14) down and lift the battery away from the radio.

**Note:** The battery must be charged before initial use.

### Fitting/Removing Universal Connector Cover

When the radio is delivered from the factory, the universal connector cover (12) is fitted.

To remove the cover, bend it slightly around the middle and pull it away from the radio.

To fit the cover, place the hook on the bottom of the cover in the connector recess (hole in cover pointing upwards). Bend it slightly around the middle, to make the hook on the top of the cover snap into place.

### Radio ON/OFF and Volume Control

Turn the radio on by turning the on/off button (1) clockwise. The radio carries out a self-test which will end with a beep if completed successfully. The two digits and the scan symbol  $\approx$  in the display (2) will illuminate briefly.

If the radio sounds an error tone, please contact the person in charge of your radio system or your local service representative.

Adjust the volume to a comfortable listening level by turning the on/off button (1).

Turn the radio off by turning the on/off button (1) anti-clockwise.

### **Display Flip**

In order to ease the reading of the display (2) while the radio is in the carrying case, press the two channel up/down selectors (5) simultaneously for two seconds, and the display (excluding the scan symbol) will flip.

Repeat the process to turn the display back to the original state.

### **Channel Selection**

Use the two channel up/down selectors (5) to scroll until the desired channel is displayed.

Prior to transmission always make sure that the channel is free. When occupied the indicator (11) will be flashing red. If in doubt press the monitor button (7) to listen to the channel.

### **OUTGOING CALLS**

When you have selected channel and address (keypad radio only, see "**Address Selection**"), you are ready to transmit.

Press the call button (6) to transmit the call. The red indicator lights.

## Communication Procedure

After sending out your call, please wait until the conversation is set up. Press the transmit key (PTT) while talking, release it while listening. Speak in a normal tone of voice, keeping a distance of 5-10 cm from the microphone. While transmitting the red indicator (11) will light.

If your radio is equipped with a time out timer, a warning tone will sound a few seconds before the transmitter is switched off.

## Call Termination

The call will terminate automatically when the conversation has ended.

## INCOMING CALLS

When a call is received the alert tone for individual call or for group call is heard and the yellow indicator (11) flashes. The call is handled as described in "**Communication Procedure**" and "**Call Termination**".

## EMERGENCY OPERATION

Emergency operation may be set up in a number of different ways. Please find below a description of the standard operation.

**Note:** This function might **not** be programmed in your radio!

Although not a standard feature, Emergency may be programmed on call button 1 (6).

In an emergency situation, press the emergency button (call button 1).

To avoid inadvertent activation of the emergency function, the button has to be pressed for approximately one second.



When the radio enters the emergency procedure, all indicators will remain as they were before the emergency and no operation of the radio is possible. The radio transmits the emergency tone so other users listening to the channel are aware that an emergency situation has arisen and the microphone stays open so that they can hear what goes on.

The emergency procedure stops only when the radio receives a special call from the base.

## **SCANNING**

The radio may be programmed with a number of different types of scan. Please contact the person in charge of your radio system or your local Motorola representative for further information.

## **RADIO WITH KEYPAD**

### **Address Selection**

The number of a radio is called the address. It may consist of up to seven digits. The address may be selected manually via the keypad.

Select the channel that is programmed for address selection. Then use the keypad to enter the variable address digits.

### **DTMF (Phone)**

DTMF means Dual Tone Multi Frequency and is used when the radio is required to operate in a radio system with an interface to public telephone systems.

Select the channel that is programmed for DTMF and dial the number directly from the keypad. If a wrong digit is entered, press one of the channel buttons (5) to leave the channel and start again.



When the number is completed a ringing or busy tone is heard and the conversation is handled as described in "**Communication Procedure**".

### **RADIO CARE**

- Avoid any physical abuse of the radio such as carrying the radio by its antenna.
- In the event of the radio being splashed by water, or exposed to salt spray, ensure that the radio surfaces are wiped, and the battery contacts cleaned, to prevent undue corrosive action.
- Wipe the battery contacts with a lint free cloth to remove dirt, grease or any other material which may prevent a good electrical contact of the battery terminals to the radio.
- When the universal connector is not being used it should be fitted with the supplied cover.
- The radio housing should be cleaned with a cloth dampened with clean water, a mild liquid soap solution or isopropyl alcohol.

### **CAUTION**

**The use of chemicals such as detergents, alcohol (except isopropyl), aerosol sprays, and petroleum products may be harmful and damage the radio housing.**

### **SAFETY INFORMATION**

During normal use, this radio will subject you to radio energy substantially below the level where any kind of harm is reported.





- **DO NOT** however hold the radio with the antenna very close to, or touching exposed parts of the body, especially the face or eyes, while transmitting. The radio will perform best if the microphone is 5 to 10 cm away from the mouth and the radio is vertical.



- **DO NOT** hold the transmit (PTT) key in when not actually desiring to transmit.
- **DO NOT** allow children to play with any radio equipment containing a transmitter.
- **DO NOT** operate the radio near unshielded electrical blasting caps or in an explosive atmosphere.
- **DO NOT** dispose of the battery on a fire as it may explode.
- **DO NOT** short-circuit the battery, e.g. by accidentally placing a paper clip or a key across the battery contacts. This may permanently damage the battery and cause a fire or burn hazard.

## COMPUTER SOFTWARE COPYRIGHTS

The products described in this manual may include copyrighted computer programmes stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Motorola/Europe and Motorola Inc. certain exclusive rights for copyrighted computer programmes, including the right to copy or reproduce in any form the copyrighted computer programme. Accordingly, any copyrighted computer programmes contained in the products described in this manual may not be copied or reproduced in any manner without the express written permission of the holders of the rights. Furthermore, the purchase of these products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any licence under the copyrights, patents, or patent applications of the holders of the rights, except for the normal non-exclusive royalty free licence to use that arises by operation of law in the sale of the product.



## VISAR Energy Systems Tips

**DO** charge VISAR batteries for 16 hours prior to initial use, in order to achieve optimum battery performance.

**DO** charge VISAR batteries for 16 hours after 2 months of storage.

**DO** allow the VISAR battery to reach room temperature ( at least 1 hour) before placing it in the charger. Charge Temperature Range: +10°C to +40°C. Most efficient charging of nickel metal hydride (NiMH) and nickel cadmium (NiCd) batteries is accomplished at temperatures between +10°C and +25°C. The VISAR charger will not charge unless the battery is within the charge temperature range.

**DO** take VISAR batteries out of a charger when they are fully charged. Batteries allowed to remain in the charger for extended periods lose cycle life.

**DO** turn the VISAR radio off if attached to the battery when charging the battery.

**DO** check VISAR chargers for proper operation.

**DO** use a VISAR battery for at least 4 hours prior to recharging, or preferably until the VISAR radio low battery alert "chirp" sounds off.

**DO** turn off the VISAR radio when not in use. Even though the radio is not transmitting or receiving, it will continue to discharge the battery. Batteries can become irreversibly damaged if the radio is left on.

**DO** choose the appropriate VISAR battery and charger for your application. The Motorola VISAR Energy System offers several battery and charger versions which vary in size and capability.

**DO NOT** use non-approved, non-Motorola battery equipment. Some commercially available products are not designed for NiMH charge/discharge requirements and may actually permanently damage you VISAR battery.

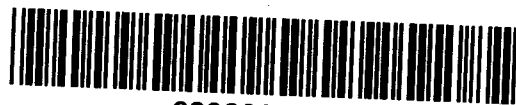
**DO NOT** use chemical cleaners to clean VISAR batteries. Use only mild soap and dry thoroughly with a soft cloth. Contacts can be cleaned with a dry pencil eraser.

&

**REMEMBER.....**

**Conserve VISAR Battery Life Cycles!**

Each VISAR battery has a limited number of life cycles; each time the VISAR battery is charged and discharged, one cycle of battery life is used.



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**VISAR™ Energy Systems**

**68P02904X03**

**English**

