

# MRP2000

## USER MANUAL



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## Cautions

The MRP2000 repeater operates from DC power source between 12 and 16 volts.

**NEVER** connect to a power source of more than 16v DC. Voltage above 16 volts DC will cause damage to the transceivers and repeater interface controller.

**DO NOT** reverse the polarity of the power supply when connecting the MRP2000.

**DO NOT** operate the MRP2000 in extreme temperature ranges; below -10°C or above +60°C.

**NEVER** operate the MRP2000 without both antennas connected to the aerial ports, as this will cause damage to the PA devices of the transceivers.

**BEWARE** The transceivers inside the MRP2000 may become hot. Care should be taken to not touch the transceiver casing if opening the repeater soon after use.

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## Introduction

This instruction manual details the operation of the MRP2000 mobile repeater unit. Please read this manual carefully before using the MRP2000.

The MRP2000 mobile repeater has been designed to offer maximum communication flexibility.

It provides essential radio communication in several operational modes :

- between control room and ambulance crew whilst in the vehicle
- between control room and crew members when they are out of the vehicle
- between individual crew members when they are out of the vehicle.

The MRP2000 repeater comprises three ICOM PMR mobiles (1 VHF and 2 UHF), two control heads and two fist microphones for in-vehicle use. The radio equipment is housed in a lockable steel enclosure which also includes an antenna duplexer and the repeater control circuitry.

The VHF transceiver is a 25 Watt PMR mobile, with multiple signalling formats. These can be tailored to match system requirements for standard VHF voice and signalling communications.

The UHF transceivers are PMR mobiles, with multiple signalling formats. One radio is configured to act as a receiver, the other as a transmitter. Transmit power is set to 2 watts.

The MRP2000 talk-through functions are easily accessed via the UHF radio control head. The LCD display clearly shows operational status. If SELCALL hand-portable radios are in use by vehicle crew members, the talk-through functions may be controlled remotely. Your dealer/installer can provide additional information regarding these advanced functions.

## **Overview**

The MRP2000 has been designed for fast, reliable, intuitive operation.

The standard fist microphone(s) may be used. For hands free operation the IC-HS62 microphone and IC-HS15SF switch box is recommended.

### **VHF**

The VHF radio operates as a standard mobile radio on the system which provides the normal voice and signalling communications between the mobile and the control room. See section on front panel description for the key assignments for the VHF radio.

### **UHF**

The UHF radios have a dual role. They may operate as if they were a standard mobile radio, providing communications between the vehicle and UHF hand-portables. Alternatively, if all crew members have left the vehicle the MRP2000 may be switched into talk-through mode thus providing communication between UHF hand-portables over a wide area.

### **VHF –UHF**

Whilst crew members are away from the vehicle they may need to communicate with the control room. This can be achieved via the VHF-UHF talk-through function which allows direct communication via the UHF hand-portables.

### **Talk through**

The talk through functions are under the control of the vehicle crew. Talk-through (VHF-UHF or UHF-UHF) can be selected and turned on or off as required via the UHF radio control head. Alternatively crew members may control talk-through (VHF-UHF or UHF-UHF) remotely by the use of SELCALL from their UHF hand portable radios (if provided).

In some instances the control room may need to contact crew members who are away from the vehicle. In these cases the control room can instigate the VHF - UHF talk through via SELCALL on the VHF radio. This provides an all informed net (control room and all crew members).

Depending on the system configuration, talk through duration may be limited by a time out timer (duration preset by your installer). After a period of inactivity the MRP2000 will revert to non talk-through operating mode.

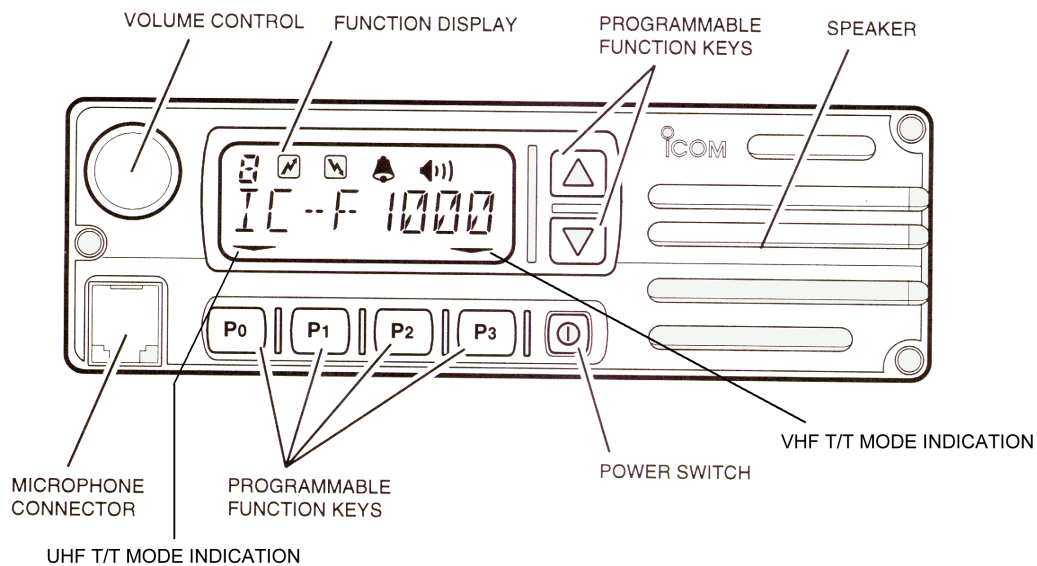
## Front panel description

Both radio heads must be switched on for full operation of the MRP2000.

In the standard configuration of the MRP2000, two radio front panels are connected via separation leads. One controls the VHF radio and the other controls the UHF radios.

The LCD function display shows either; channel numbers, text or SELCALL codes depending on configuration. It will also indicate whether the MRP2000 is in talk through (T/T) mode. See diagram below.

Setting controls on one radio has no effect on the other.



The front panels have six programmable buttons :

- P0 –P3
- Up and Down Arrows.

These are preset before delivery by your radio dealer/installer.  
See your dealer/installer for details of your configuration.

## Operation

### To switch the MRP2000 on.

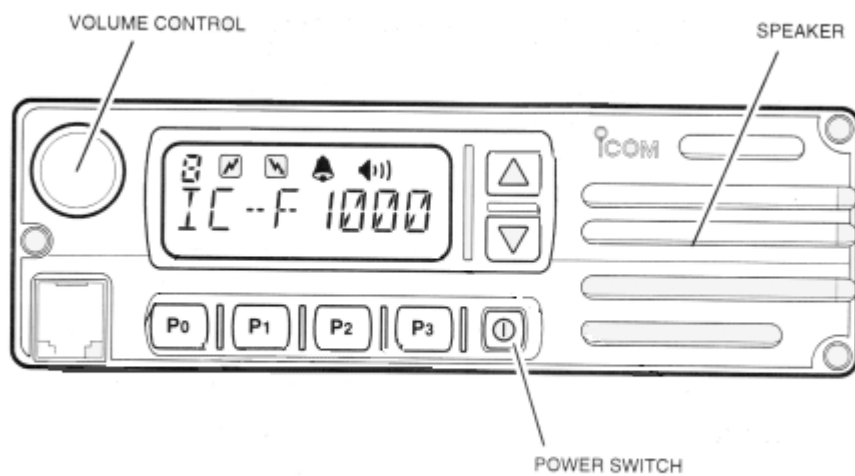
Press the Power button briefly to switch the unit on. Each head needs to be switched on to provide full operation.

### To switch off.

Press the Power button briefly to switch the unit off

### Volume setting

Rotate the volume control to required audio level from built in speaker.



## To switch between talk-through/normal mode

The standard configuration allows talk-through to be toggled on and off.

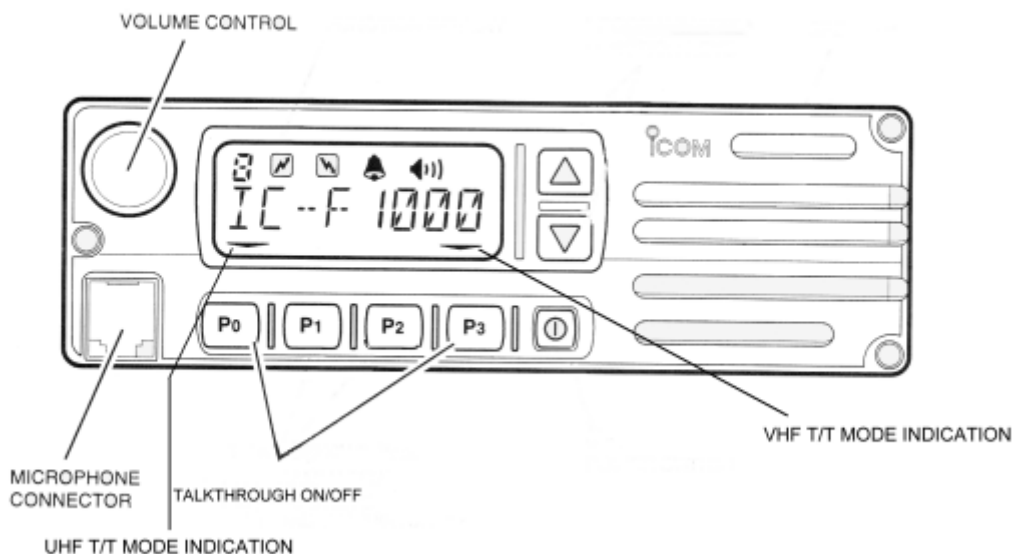
To toggle UHF talk-through on press P0 briefly. The UHF T/T indicator will appear when talk-through is in operation. (This mode allows crew hand-portable to crew hand-portable via the MRP2000).

To toggle UHF talk-through off press and hold P0 for 2 seconds.

To toggle VHF talk-through on press P3 briefly. The VHF T/T indicator will appear when talk-through is in operation. (This mode allows control to talk to crew hand-portable radios).

To toggle VHF talk-through off press and hold P0 for 2 seconds.

**Note:** Talk-through may be turned off automatically by the time out timer function.



## Microphone Operation

To use the supplied fist microphone, plug the connector into the microphone socket.

To transmit press and hold the Press To Talk button on the microphone. Release to return to receive mode.



## **Options**

### **HS15SF/HS62**

The IC-HS15SF is a switch box for hands free use. This connects to the standard microphone socket. The switch box has a Press To Talk (PTT) toggle switch which connects via a lead to the IC-HS62 flexible gooseneck microphone.

See your dealer/installer for details.