



VHF AND UHF FM REPEATERS

IC-FR3000 (VHF FM Repeater)
IC-FR4000 (UHF FM Repeater)



- **50 Watt continuous full duty cycle operation**

This repeater looks as good as it performs. A rugged heatsink, large cooling fans and a high performance power module provide the repeater with a stable 50W at full duty cycle operation.

- **Automatic battery backup system**

A built-in backup system supports automatic switching to an external power supply (13.6V DC) if the AC power supply fails.

- **Multiple CTCSS & DTCS tone memories with multiple memory channels**

Up to 16 CTCSS/DTCS tones (TX/RX tones respectively) can be programmed in a channel. This feature allows you to share a channel with multiple user groups. You can also give priority/exclusive use to a specified group simply by programming different tones to another memory channel. Ideal for many different applications.

- **Built-in 2-Tone, 5-Tone, DTMF encoder & decoder**

Multiple signaling systems are equipped as standard. These systems are fully compatible with Icom F-series radios.

- **Internal space for duplexer and isolator**

The repeater has an internal space to install a duplexer and isolator*. The controls of the duplexer are accessible from the front of the repeater without disassembly. Faster and easier maintenance and adjustment is possible.

* Ask your dealer for details about available duplexers and isolators.

- **Telephone interconnect capability**

- **DTMF remote control capability**

You can control the repeater from a remote location over the air or over a phone line with DTMF.

- **Optional wall mount bracket, MB-77 and 19 inch rack mount bracket, MB-78**



19-inch rack mount, MB-78



Installation on a wall with the MB-77

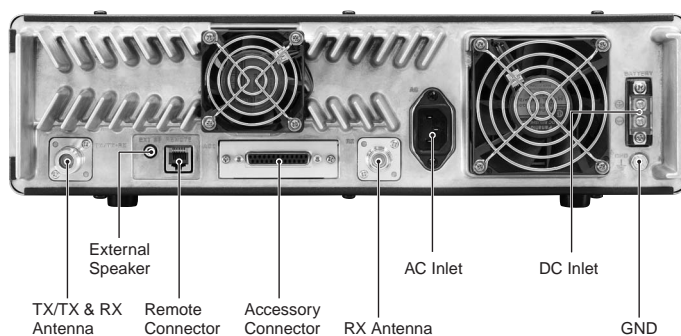
Icom Inc.

ADDITIONAL FEATURES

- Master/Slave backup operation by connecting two repeaters
- Self check function checks for internal errors and alerts with a beep sound or with a phone call
- Accessory connector (D-sub 25-pin) on the rear panel for trunking controller including LTR, PassPort, SmarTrunkII and MPT1327
- Compatible with VEGA tone remote control system
- 5-Tone relay function
- Optional Voice Scrambler UT-109 or UT-110
- CW ID transmitter (DTMF or 5-Tone also selectable)
- Password and kill/stun function for security
- 16-digit alphanumeric display convenient for base station operation
- A programmable button gives access to a customized function

All trademarks are the properties of their respective holders.

REAR VIEW



SPECIFICATIONS

GENERAL

- Frequency coverage :
 - IC-FR3000 148–172, 150–174MHz
 - IC-FR4000 400–430, 430–450, 450–480MHz
- Number of channels : 32 channels
- Channel spacing : 12.5/25kHz
- PLL channel step : 5, 6.25kHz
- VHF repeater operation : 2.5kHz
- Frequency stability :
 - VHF ±2.5ppm
 - UHF (U.S.A. version) ±1.5ppm
 - (Other versions) ±2.5ppm
- Operating temperature range : -30°C to +60°C; -22°F to +140°F
- Power supply voltage : 13.6V DC
 - 100–120V AC (50/60Hz)*
 - 220–240V AC (50/60Hz)*
 - (* Depending on version)

- Current drain (at 13.6V DC) :
 - TX VHF (at 50W) 15A
 - UHF (at 50W) 20A
 - RX Max. audio 2A typ.
 - Stand-by 1A typ.
- Antenna impedance : 50Ω (Type-N × 2)
- Dimensions (W×H×D) : 410 × 110 × 360 mm ; 16⁵/₃₂ × 4¹¹/₃₂ × 14³/₁₆ in
- Weight : 12kg ; 26.4lb (approx.)

TRANSMITTER

- Output power : 50W (high), 10W (low) selectable (at 13.6V DC)
- Max. frequency deviation : ±5.0/2.5kHz (wide, narrow)
- Spurious emissions : 70dB
- Adjacent channel power : 70/60dB (wide/narrow)
- Hum and noise : 40/34dB (wide/narrow)
- Microphone impedance : 600Ω (8-pin modular)

RECEIVER

- Sensitivity : 0.25μV typ. (at 12dB SINAD)
- Adjacent Ch, selectivity : 70/60dB (wide, narrow)
- Spurious response : 70dB
- Intermodulation rejection : 70dB
- Hum and noise ratio : 40/34dB (wide, narrow)
- Audio output power : 2.5W typ. at 10% distortion with a 4Ω load
- Ext. speaker connector : 2-conductor 3.5 (d) mm (1/8"/4Q)

Applicable U.S. Military Specifications
Icom makes rugged products that have been tested to and passed the following MIL-STD requirements and strict environmental standards.

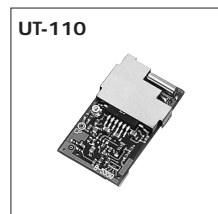
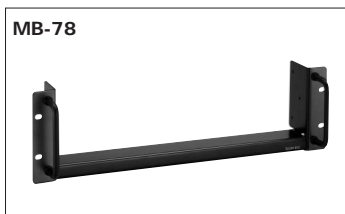
Standard	MIL 810 C		MIL 810 D		MIL 810 E		MIL 810 F	
	Method	Proc.	Method	Proc.	Method	Proc.	Method	Proc.
High Temp.	502.1	I	501.2	I, II	501.3	I, II	501.4	I, II
Low Temp.	502.1	I	502.2	I, II	502.3	I, II	502.4-3	I, II
Vibration	514.2	VIII, X	514.3	I	514.4	I	514.5	I
Shock	516.2	I	516.3	I	516.4	I	516.5	I

Measurements made in accordance with EIA/TIA-603-A. Compatibility of functions for use with a telephone line may not work in some countries. All stated specifications are subject to change without notice or obligation.

OPTIONS

Some options may not be available in some countries. Please ask your dealer for details.

- **MB-77 WALL MOUNT BRACKET**
For mounting the repeater on a wall. Hinges provide easy maintenance while mounted.
- **MB-78 19" RACK MOUNT BRACKET**
The 19 inch rack mount bracket is 3U height (133.5mm; 5¹/₄ in).
- **HM-152 HAND MICROPHONE**
- **HM-152T DTMF MICROPHONE**
- **SM-25 DESKTOP MICROPHONE**
Convenient for dispatching. Equipped with a monitor switch.
- **UT-109 VOICE SCRAMBLER UNIT (Version 01)**
Provides operating security. Up to 32 non-rolling scrambling codes are available.
- **UT-110 VOICE SCRAMBLER UNIT (Version 01)**
Up to 1020 (255 codes × 4 groups) rolling scrambling codes are available.



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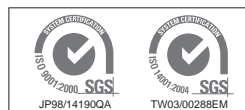
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