



UHF TRUNKED RADIO

IC-F4TR



Icom Inc.

The ideal subscriber unit for UHF SMR and ESMR operations

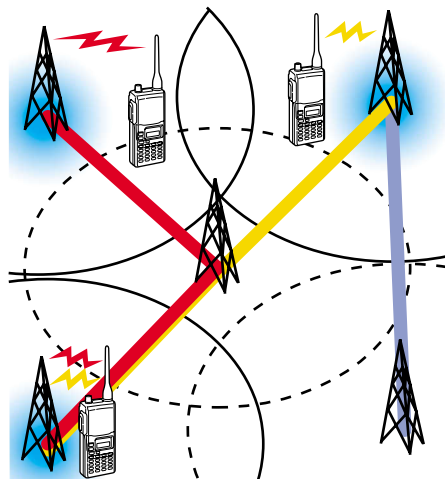
Many of today's Community Repeater and Specialized Mobile Radio (SMR) operators are considering the emerging business opportunities in UHF trunking. Also, the new Enhanced Specialized Mobile Radio (ESMR) network solutions are an effective strategy for the traditional dispatch market now being attacked by PCS and Cellular phone competition. The Icom IC-F4TR is the perfect subscriber unit for this strong and viable market. Conventional operation, basic LTR® and PassPort® are all built-in offering you a complete upgrade path as your system grows. Flash memory will enable the easy addition of future system enhancements as they are developed. Icom radios are known for their rugged MIL spec. reliability and solid performance, and so is the IC-F4TR, a strict requirement for a problem-free fleet radio. All the most popular system features are included but unnecessary and complicated features have been eliminated to keep the operation simple. The Icom IC-F4TR is a cost effective, rugged and reliable subscriber unit with a built-in upgrade path to increase your loading factor and Revenue Per Unit (RPU).

UHF TRUNKED RADIO IC-F4TR

Multiple modes

Conventional, basic LTR® and PassPort® are built-in. Conventional operation and talk-around are both available from the front panel during LTR® and PassPort® operation. Flash memory enables future system upgrades and future compatibility with other protocols.

• System image diagram



Conventional features

250 channels either 12.5 kHz or 25 kHz, CTCSS, DTCS and alpha names.

LTR® features

50 systems with up to 100 groups per system. All basic LTR® system features.

PassPort® features

60,000 useable ID's, individual mobile ID's and roamer ID's, wide area dispatch, selective calling, ESN (Electrical Serial Number) check, message trunking, OTAR (Over the Air Re-programming), automatic registration, call forwarding and voice mail.

Advanced trunking performance

Our new Fractional-N system for ultra high-speed PLL lock-up provides faster acquisition times and efficient trunking performance. The built-in receive signal strength indicator (RSSI) enables seamless roaming under the PassPort® protocol, as the IC-F4TR automatically registers with the nearest site (does not rely on BER calculations which slow down the registration process).

Simple and keypad versions

Select which is right for you, the keypad version with full interconnect capability or the simple dispatch subscriber unit without keypad.



Entire UHF bandwidth usable

Three bandwidth versions (400–430 MHz, 450–490 MHz, and 480–512 MHz) all have switchable 12.5/25 kHz width by channel, and 5/6.25 kHz frequency pitch making all the new UHF channels available for trunking, even if your channels aren't right next to each other.

Alphanumeric display

The 8-digit LCD display has 18 icons that indicate system status and operational selections, including battery condition. The new 11-segment character set may be toggled from the control panel between system/group numbers or PC pre-programmed alpha names.

OPTIONS

BATTERY PACKS AND CASE



| BATTERY PACKS & CASE | TYPE & CAPACITY | OUTPUT POWER | BATTERY LIFE |
|----------------------|-------------------------|--------------|--------------|
| BP-194 | AA (R6) batteries x 8* | 4 W typ. | 4.5 hours |
| BP-195 | Ni-Cd 9.6 V/700 mAh | 4 W typ. | 4.5 hours |
| BP-196 | Ni-Cd 9.6 V/1050 mAh | 4 W typ. | 6.5 hours |

*Ni-Cd cells in the BP-194 BATTERY CASE must be purchased separately. Approx. output power and operating times (Tx (Hi): Rx: standby=5:5:90)

BC-121 + AD-81 (6 pcs.)



BC-121 MULTI-CHARGER + AD-81 CHARGER ADAPTER + BC-124 AC ADAPTER
For rapid charging of up to 6 battery packs (six AD-81s are required.), BP-195 or BP-196. The BC-124 outputs 12 V DC and has 7 A capacity for the BC-121. Charging time: 1.5 to 2 hours.

BC-143 DESKTOP CHARGER



BC-143 DESKTOP CHARGER
For rapid charging of battery packs. An AC adapter is supplied with the charger. Charging time: 1 to 1.5 hrs. **BC-119 DESKTOP CHARGER** is also available for rapid charging with **AD-81 CHARGER ADAPTER**.

BC-133 BATTERY CHARGER



BC-133 BATTERY CHARGER
Regularly charges a battery pack, BP-195 or BP-196, with/without transceiver. The AC adapter, BC-122, is additionally required.

SPEAKER MICROPHONES



HM-46 : Slim dimensions. Equipped with an earphone jack and a transmit indicator.
HM-75A : Allows you to remotely select operating channel, etc. during conventional operation.
HM-131 : Compact and durable body. Equipped with an earphone jack and a revolving clip.

HS-51 HEADSET



For hands-free operation. Includes VOX, PTT and "one-touch" PTT with a time-out timer.

HM-128 EARPHONE- MICROPHONE



The light weight earphone-mic. has a compact microphone that clips to your lapel.

HS-94 EARHOOK-HEADSET + VS-1 VOX SWITCH CASE

Flexible boom microphone and rotating earbud with a spring earhook.

BC-110A/C/D/V WALL CHARGER



Use for charging the connected battery pack.

MB-74 BELT CLIP



Alligator type clip. **MB-68** is also optionally available.

SP-13 EARPHONE



Provides clear audio in noisy environment.

AD-98FSC ANTENNA CONNECTOR ADAPTER



Allows you to connect a BNC-type antenna.

CP-12L CIGARETTE LIGHTER CABLE WITH NOISE FILTER



Allows you to charge a battery pack connected to the transceiver via a DC power source (12-16 V DC). For charging ONLY—the transceiver cannot be simultaneously operated.

BC-110A/C/D/V WALL CHARGER



Use for charging the connected battery pack.

FA-SC73US STUBBY ANTENNA



60 mm of stubby antenna. Frequency range: 450-490MHz

Programmable keys

Each version has 7 PC programmable keys, which may be assigned functions to customize operations for end users. System/Group, Home System, Scan/Scan clear, Talk around, Auto dialler, and keypad lock are some assignment examples.

Advanced PC programming

You may assign mode (conventional, LTR® or PassPort®) by system, default talk group for home button, power-ON home or previous group, over the air programming for PassPort®, network roaming, 5/3 MHz offset by channel, LTR® polarity by system, home channel and area bit by system, Tx and Rx ID, and UID for PassPort®.

MIL grade durability

Durable design features a one-piece aluminum die-cast chassis, polycarbonate front panel and screw type antenna. The IC-F4TR meets MIL spec. C, D and E.



Multiple scan mode

Conventional, system and group scan enable continuous contact under multi system operation without any action by the end-user.

Other features

- Powerful 4 W output with the standard battery
- 1050 mAh Ni-Cd battery pack
- CTCSS, DTCS and DTMF encoder/decoder built-in
- Scanning, Time-out timer functions available
- IBM/PC Windows® programming capabilities
- DTMF encoder/decoder, selective call, ANI and stun/kill
- CTCSS/DCS encode decode and reverse burst,

and more...

SPECIFICATIONS

GENERAL

- Frequency range : 400–430 MHz, 450–490 MHz, 480–512 MHz
- Type of emission : 16K0F3E (25 kHz)
11K0F3E (12.5 kHz)
- PLL channel step : 5 kHz, 6.25 kHz
- Antenna impedance : 50 Ω
- Usable temperature range: –30°C to +60°C; –22°F to +140°F
- Frequency error : ±2.5 ppm
- Power supply requirement: 9.6 V DC (Icom battery pack)
- Current drain (approx.) :

| | | |
|----------|--------------|--------|
| Transmit | at 4 W | 1.4 A |
| | at 1 W | 0.7 A |
| Receive | stand-by | 110 mA |
| | rated output | 280 mA |
- Dimensions : 57(W)×140(H)×37 (D) mm
(projections not included) ; 2¼(W)×5½(H)×1½(D) in
- Weight (with BP-196) : 390 g; 13.8 oz

TRANSMITTER

- Modulation system : Variable reactance frequency modulation
- Output power : 4 W
- Max. freq. deviation : ±5 kHz (25 kHz)
±2.5 kHz (12.5 kHz)
- Spurious emissions : 70 dB typical
- Adjacent Ch. power : 75 dB typical (25 kHz)
70 dB typical (12.5 kHz)
- Audio harmonic distortion: 5% max.
- Residual modulation : 40 dB (25 kHz)
34 dB (12.5 kHz)
- Limiting character of modulation: 60–100%
- External MIC connector : 3-conductor 2.5 (d) mm (1/10")/2.2 kΩ

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RECEIVER

- Intermediate freq. : 1st 47.25 MHz
2nd 450 kHz
- Sensitivity : 0.3 μV (at 12 dB SINAD)
- Squelch sensitivity : 0.3 μV (typical; at threshold)
- Adjacent Ch. selectivity : 70 dB typical (25 kHz)
65 dB typical (12.5 kHz)
- Spurious response : 70 dB typical
- Intermodulation rejection ratio: 75 dB typical
- Hum and noise ratio : 48 dB typical (25 kHz)
43 dB typical (12.5 kHz)
- Audio output power : 500 mW (at 5% distortion with an 8 Ω load)
- External SP connector : 2-conductor 3.5 (d) mm (1/8")/8 Ω

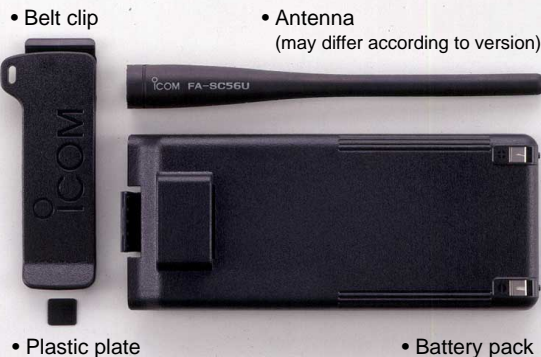
Applicable U.S. Military Specifications

Icom makes rugged products that meet MIL-STD requirements and strict environmental standards as follows.

| Standard | MIL 810C | | MIL 810D | | MIL 810E | |
|-----------------|----------|-----------|----------|-----------|----------|-----------|
| | Method | Procedure | Method | Procedure | Method | Procedure |
| Low Pressure | 500.1 | I | 500.2 | I, II | 500.3 | I, II |
| High Temp. | 501.1 | I | 501.2 | I, II | 501.3 | I, II |
| Low Temp. | 502.1 | I | 502.2 | I, II | 502.3 | I, II |
| Temp. Shock | 503.1 | I | 503.2 | I | 503.3 | I |
| Solar Radiation | 505.1 | I | 505.2 | I | 505.3 | I |
| Rain | 506.1 | I, II | 506.2 | I, II | 506.3 | I, II |
| Humidity | 507.1 | I, II | 507.2 | II, III | 507.3 | II, III |
| Salt Fog | 509.1 | I | 509.2 | I | 509.3 | I |
| Dust | 510.1 | I | 510.2 | I | 510.3 | I |
| Vibration | 514.2 | VIII, X | 514.3 | I | 514.4 | I |
| Shock | 516.2 | I, II, V | 516.3 | I, IV | 516.4 | I, IV |

Measurements made in accordance with EIA/TIA-603. All stated specifications are typical and subject to change without notice or obligation.

Supplied accessories:



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Certificate Number Q14190

Icom Inc. (Japan), is an ISO9001 certification acquired company.