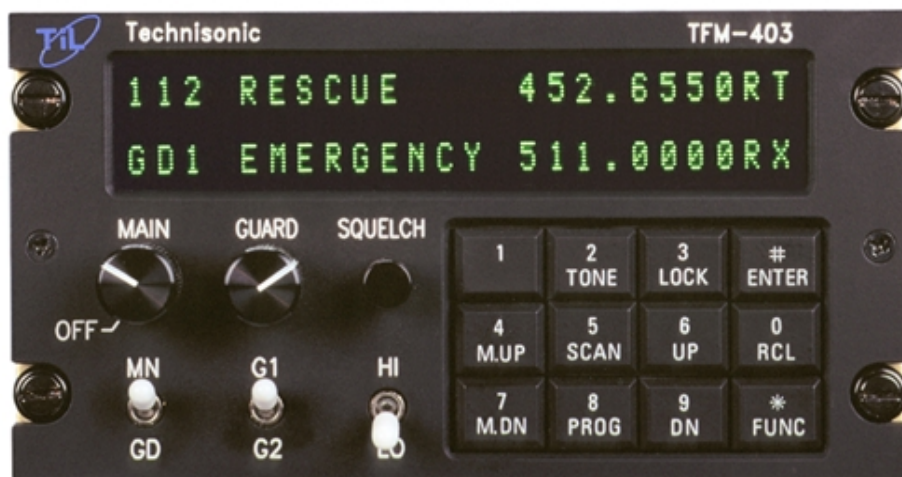


MODEL TFM-403

Airborne UHF FM Transceiver



Technisonic UHF FM Airborne Transceiver

The Technisonic TFM-403 UHF/FM transceiver utilizes state of the art frequency synthesis techniques to provide FM communications on every currently available channel within the Public Safety, Forestry, Government Agency, and General Service UHF/FM Band. The TFM-403 covers from 403.0000 MHz to 512.0000 MHz in 2.5 KHz steps. Data entry and function control are via a front panel, 12 button keypad. Operating frequency and other related data are presented on a 48 character, two line LED matrix display, which is available in either red or green.

Technisonic FM transceivers can be operated in the Direct Entry simplex mode by simply keying in the desired operating frequency, or can function without restriction on any split frequency pair within the band. There are 120 memory positions accessible, each of which can store a receive frequency, a transmit frequency, a separate CTCSS and/or a DPL/DCS (Digitally Coded Squelch) tone for each receive and transmit frequency, and a 9 character alpha numeric identifier for each channel. Data is easily entered into the preset memory positions for both main and guard channels via the front panel keyboard, or can be downloaded from a PC using MS DOS based software provided with each transceiver. All stored information is available for instant recall by keypad command, or by pressing the M UP or M Down buttons on the keypad, which allows the operator to scroll through the 120 preset channels.

Compare These Features

Technisonic FM transceivers feature a synthesized, programmable two channel guard receiver, a DTMF encoder for signaling during transmit, display of CTCSS tone frequency as well as EIA identifier and/or display of a DPL/DCS code, and a scan/priority scan function that can scan any or all of the channels stored in preset memory. Additional operator selectable capabilities include a 90 second transmitter time out, a keyboard lock out feature and a direct/repeat function for simplex "talkaround" (car to car) operation.

The TFM-403 Dzus panel mounted transceiver is completely self contained in a 8.0 x 3.0 x 5.75 inch chassis weighing just 3.1 pounds. Front panel controls are MAIN for main channel volume; GUARD for guard channel volume; SQUELCH for squelch test; a MN/GD switch provides for main or guard transmitter selection; a G1/G2 switch selects guard 1 or guard 2 receive and transmit; and a HI/LO switch allows for control of transmitter power output. HI power is 10 Watts, LO power is 1 Watt. The TFM-403 is available with either 5 volt AC or 28 volt DC back lighting controlled by the aircraft dimmer bus. Display brightness is controlled from the front panel keypad. The small size and weight of the TFM-403 makes it ideally suited to helicopter installations. Technisonic FM transceivers are compliant with RTCA DO-160C categories relating to Vibration, Overpressure, Humidity, Temperature and Altitude, Magnetic Effect, Power Input, Voltage Spike, Decompression, and RF emissions (including Section 21, Category Z). Technisonic has been granted a Supplemental Type Certificate (STC) covering installation of the TFM-403 in most helicopter types as well as most Cessna, single engine fixed wing aircraft. Contact Technisonic Customer for further information.

TFM-403 General Specifications

Frequency range	403.000 MHz to 512.000 MHz
Tuning increments	2.5 KHz
Operating mode	F3E simplex or semi-duplex
Channel spacing	20 KHz or 25 KHz as per applicable DOC and FCC specifications
Physical dimensions	Approx. 8.0 x 3.0 x 5.75 inches
Weight	3.1 Lbs. (1.4 Kg)
Temperature range	-45 deg C to +70 deg C
Altitude certification	50,000 ft.
Power requirement	28 VDC Receive - 700 mA 1 Watt transmit - 1.3 amps 10 Watts transmit - 2.0 Amps
Certification	FCC and DOC approved
RTCA DO-160C Environmental category compliance	(B2,D1)XXX(B,M,N)XXXXXXZBBXXXZXXX
Guard receiver	2 channel, synthesized
CTCSS squelch encoder/decoder	all available CTCSS tones
DPL/DCS squelch encoder/decoder	all available codes, 000 to 777
Audio output	500 mw into 600 ohms
Speaker output	2.5 Watts RMS into 4 ohms
Back lighting	28 VDC or 5 VAC (specify when ordering))
Display color	Green (standard) or Red (specify)

Minimum Performance Specifications

Main receiver

Sensitivity	Better than 0.35 microvolts at 12 dB SINAD
Adjacent channel	-65 dB (25 KHz)
Spurious attenuation	-90 dB
Third order intermod	-65 dB
Image attenuation	-70 dB
FM acceptance	\pm 6 KHz
Hum and noise	better than 40 dB
Audio distortion	Less than 5%
Antenna conducted emissions	less than -70 dBm

Guard receiver

All specifications as per main receiver

Transmitter

Power output	1 Watt or 10 Watts, front panel selectable
Output impedance	50 ohms
Maximum deviation	Limited to \pm 5 KHz
Spurious attenuation	-90 dB below carrier
Frequency stability	\pm 0.0005%
Microphone circuit	Carbon or equivalent
Sidetone output	500 mW (max) into 600 ohms
Harmonic attenuation	-65 dB below carrier level
FM Hum and Noise	-40 dB
Audio input	50 mV at 2.5 KHz into 200 ohms for 3.5 KHz deviation, adjustable
Audio distortion	Less than 5%

Note: *Specifications are subject to change without notice*

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