

# MaraTrac™ Mobile Radio

## The Rugged High Power Mobile Radio for Reliable Talk and Listen Communication.

### **Simple.**

The two piece radio has a small control head that can be mounted anywhere in your vehicle. An easy to read 2 digit LED display on the control head indicates channels and scan conditions. Dedicated buttons provide easy control of features like scan, multiple Private Line codes, signalling calls, external alarms, and repeater Talkaround. Low band users will find the external squelch control knob ideal for controlling squelch sensitivity in cities or rural environments.

### **Flexible.**

MaraTrac ships with features to meet the needs of many users. With the Radio Service Software (RSS), features can be enabled or changed in the field.

You can program from 1 to 99 channels with any number of Private Line or Digital Private Line codes. For multiple repeater applications, you can select different PL or DPL codes without changing channels. With a touch of the talkaround button, you can bypass repeater channels and talk radio to radio.

When you need to monitor more than one channel, the Priority Scan feature can be enabled. Operator Selectable Single Priority Scan lets you program the channels to be monitored and to designate a priority channel. If you need more than one scan list, the RSS can be used to preprogram multiple lists.

For efficient non-voice use of radio frequencies, MaraTrac ships with Stat-Alert and Quik Call II signalling formats. Through the RSS, you can select a signalling format and enable various features. Both Stat-Alert and Quik Call II allow a radio dispatcher to page or selectively call an individual vehicle. In addition, Stat-Alert signalling provides ID with each press of the microphone PTT, and the press of a footswitch can indicate an emergency condition. All signalling decoders allow for connection to external alarms like horn honking or flashing lights.

### **Rugged.**

MaraTrac radios are backed by Motorola's one-year Parts and Labor Warranty for protection against defects in material and workmanship under normal use and service.

MaraTrac – the high power mobile that takes you back to the basics with simple controls, flexible field programmable features, and reliable communications for rugged environments.



# MaraTrac™ Mobile Radio

## Programmable Standard Features

- Up to 99 channels with unlimited PL, DPL or CSQ
- Talkaround with button control
- Programmable Home button
- Operator Select Multiple PL (16 codes)

## Scan

- 1 operator selectable list/16 members in list or 32 preprogrammed lists/8 members per list

## Signalling

- Stat-Alert PTT ID, Emergency alarm, DOS, Radio Check, Call Alert Decode, Voice Selective Call Decode
- QC II Call Alert Decode, Voice Selective Call Decode
- DTMF Decode, Single-tone Encode field retrofits available

## Available Accessories



Siren/PA with direct entry keypad controls



Rear control handset with speaker and switch control

- DTMF microphones
- External alarm relay kit
- Handset

## Performance Specifications

### General

<b>Channel Capability:</b>	99 Channels						
<b>Operation:</b>	13.8 VDC Negative Ground Only						
<b>Dimensions:</b>	Radio: 10.0" H x 14.5" W x 2.5" L	Control Head*: 6.5" H x 3.4" W x 1.7" L	Speaker*: 5.5" x 2.5"				
<b>Weight:</b>	Radio: 16 lbs. (7.26 kg)	Control Head: 12.0 oz. (0.3 kg)	Speaker: 1.5 lbs. (0.7 kg)				
<b>Metering:</b>	Totally electronic using an IBM Personal Computer, a Radio Interface Box (RIB) and field service software.						
		<b>Maximum Current Drain</b>					
<b>Model</b>	<b>Pkg.</b>	<b>Minimum RF Power Output</b>					
			<table border="1"> <tr> <th>Off @ 13.8V</th> <th>Standby @ 13.8V</th> <th>Receive at Rated Audio @ 13.8V</th> <th>Transmit @ 13.4V</th> </tr> </table>	Off @ 13.8V	Standby @ 13.8V	Receive at Rated Audio @ 13.8V	Transmit @ 13.4V
Off @ 13.8V	Standby @ 13.8V	Receive at Rated Audio @ 13.8V	Transmit @ 13.4V				
T81XTA7TA7-K	A7	29.7-50 MHz 110 Watts	60mA 700mA 3.0A 27A				
T73XTA7TA7-K	A7	150-174 MHz 100 Watts**	60mA 700mA 3.0A 27A				

\* Excluding mounting bracket

\*\* VHF "MaraTrac" Mobile Radios are adjustable to 75 watts

### Transmitter

<b>Output impedance:</b>	50 ohms				
<b>Spurious and Harmonics:</b>	More than 80 dB below carrier (for EIA spec., RS152B)* *Spur @ Fc ± 14.4 MHz within FCC (VHF Band)				
<b>Frequency Stability:</b>	± 0.0005% of assigned center frequency -30°C to +60°C, 25°C Ref.				
<b>Modulation:</b>	15K0F2D, 16K0F1D, 16K0F3E				
<b>Audio Sensitivity:</b>	0.080V ± 4 dB for 60% max. deviation @ 1000 Hz				
<b>FM Hum and Noise:</b>	-45dB Low Band, VHF				
<b>EIA Method:</b>					
<b>Audio Response:</b>	EIA				
<b>Audio Distortion:</b>	Less than 3% @ 1000 Hz, 60% max. deviation				
<b>Maximum Frequency Separation:</b>	29.7-36 MHz 6.3 MHz	36-42 MHz 6 MHz	42-50 MHz 8 MHz	150-174 MHz 24.0 MHz	

### Receiver

<b>Channel Spacing:</b>	Low Band 20 kHz, VHF 30 kHz (25 kHz Int.)			
<b>Sensitivity:</b>	(per EIA Spec RS204C)			
<b>12 dB EIA SINAD:</b>	Low Band: 0.35 µV, VHF			
<b>Selectivity:</b>	Low Band, VHF: -80dB			
<b>Intermodulation:</b>	Low Band, VHF: -80dB			
<b>Spurious &amp; Image Rejection:</b>	Low Band, VHF: -80dB			
<b>Input Impedance:</b>	50 ohms			
<b>Audio Output:</b>	10 Watts at less than 5% distortion (into 3.2 ohm load at 1000 Hz)			
<b>Maximum Frequency Separation:</b>	29.7-36 MHz 6.3 MHz	36-42 MHz 6 MHz	42-50 MHz 8 MHz	150-174 MHz 24.0 MHz
<b>Frequency Stability:</b>	-30°C to +60°C, 25°C Ref. ± 0.0005% of assigned center frequency			

### MIL-STD 810E Testing Environmental Performance

MaraTrac meets or exceeds applicable MIL 810 D and E standards for shock, vibration, rain, salt fog, and dust.

### FCC Designation

Low Band - ABZ89FT1619 VHF - ABZ89FT3731



# MOTOROLA

Specifications subject to change without notice.

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