

HT 1000

SYNTHESIZED FM PORTABLE RADIO

Creating New Horizons

- VHF ▶ 5 to 1 Watts
- ▶ 136-174 MHz
- UHF ▶ 4 to 1 Watts
- ▶ 403-470 MHz
- ▶ 450-520 MHz
- 800 ▶ 3 Watts
- ▶ 806-870 MHz

2 Channel Model

16 Channel Model

12.5/20/25/30 kHz

Channel Spacing

RSS Programmable Per

Mode UHF/VHF

The HT 1000 portable series offers you small, rugged, economically packaged radios loaded with features never before offered in a Motorola HT portable product. In addition to the size, durability, and affordability advantages the HT 1000 radio offers, it also includes programmable function controls and radio-to-radio cloning for increased user flexibility. Of course, the HT 1000 radio family incorporates the quality and reliability you have come to expect from Motorola—the leader in FM two-way radio communications.



GENERAL FEATURES

All HT 1000 radios include the following hardware:

- ▶ Belt Clip and Antenna
- ▶ Three Side Programmable Buttons
- ▶ "Quick Disconnect" Accessory Port
- ▶ Rotary Channel Selector Knob
- ▶ Noise Canceling Microphone
- ▶ On/Off/Volume Knob
- ▶ Top Mounted Emergency Button
- ▶ Dual Charge High Capacity Battery
- ▶ Top Mounted Bi-Color LED Indicator
- ▶ Weather-Sealed Universal Connector
- ▶ 3-Position Programmable Toggle Switch



Easy access controls



Programmable buttons and switches

2 Channel models are not compatible with Public Safety microphone or MTVA (Mobile Vehicular Adaptor).

Full Band Operation

The HT 1000 radio features Motorola's broadest band range. With "Full Band VHF," a single model can operate from 136 to 174 MHz. The entire UHF band is covered with 2 models, and the 800 MHz band needs only one.

Enhanced Audio

The HT 1000 radio is one of the loudest portables ever developed by Motorola. Improved voice intelligibility at high volumes means less distortion and fewer miscommunications. The radio's standard noise canceling microphone will minimize background noise.

Universal Connector

A weather-sealed connector allows all reprogramming, tuning and testing to be performed without opening the radio.

Radio-to-Radio Cloning

Using a simple cloning cable you can duplicate one radio's operating parameters into another HT 1000 portable of the same sub-band.

Channel Scan Monitoring

Allows the radio to scan all of its operating channels. Channel Scan is capable of scanning for PL, DPL, Carrier Squelch, Quik-Call and Stat-Alert Selective Call, and can be configured for Non-Priority or Single Priority operation. The HT 1000 radio also includes Talk-back scan and nuisance channel delete capability where the user can temporarily delete an unwanted active channel from the scan list by simply pressing a button.

Adjustable Power Levels (UHF and VHF only)

The HT 1000 portable can be programmed to adjust RF power levels automatically on a mode slaved basis, or manually through operation of a switch. Variable RF

power level provides the radio with the capability of having up to two power levels in one radio, and the capability of operating in high or low power on a per channel basis. The default power levels in VHF are 5 Watts (high) and 1 Watt (low), and in UHF are 4 Watts (high) and 1 Watt (low). The two power levels can be changed in the field by a service technician if other than the default settings are required.

Smart PTT-Busy Channel Lockout

Prevent users from "talking over" each other by restricting the user from transmitting if activity is detected on the channel. The radio will generate a continuous tone upon PTT depress if a transmission is not being allowed. Inhibit Transmit can be activated for any busy channel or only on a busy channel with a different squelch code. A quick-key over-ride option can work in conjunction with Smart PTT to allow the user to override the transmit inhibit state for times when transmission is critical.

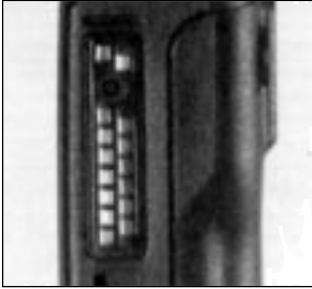
Repeater and Talkaround Operation

Allows the user to choose operation through a repeater (where the transmit frequency is not equal to the receive frequency), or operation that bypasses a repeater and talks directly to another unit (Talkaround or Direct Operation). When the feature is mode slaved, the channel is programmed to operate either in the direct or repeat mode. Alternatively, the repeater/talkaround function can be programmed to the three position toggle switch where the user can select from the two operating choices in the field.

Coded Squelch Operation

Allows the user to operate a radio in Carrier Squelch, PL or DPL mode. All of these different modes of operation are available, with 16 unique decode codes and 16 unique encode codes all possible in a single radio unit. When in the Carrier Squelch mode, the user will hear all traffic on the selected channel, but when operating in PL or DPL modes, the user will hear only those messages that are intended for his group. Tone PL and Digital PL can be mixed on a per channel basis.

GENERAL FEATURES



Side mounted, weather sealed universal connector

Low Battery Alert

The LED indicator will blink red if the battery falls below a specified voltage level while in the transmit mode. The radio can also be programmed to sound an alert tone if the low battery condition is detected during transmission or periodically while in the stand-by mode.

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Time-Out Timer

Limits the amount of time the radio user can continuously transmit on a channel. If the user holds down the PTT longer than the preprogrammed limit, the radio automatically emits a warning tone, then stops transmitting, and will generate a talk prohibit tone until the PTT is released.

Quik-Call Signalling

Selective Signalling Decode

Provides another convenient way for the dispatcher to initiate a voice page message to an individual or a group. When the user receives a Selective Call, the radio will generate alert tones, flash the green LED, and will unmute so an incoming message can be heard.

The radio stays unmuted until the user takes action. A Quik-Call II signal can be Individual Call, a long Tone B Group Call or a Dual Call.

SIGNALLING FEATURES

MDC-1200 STAT-ALERT Signalling

Unit ID and Emergency—Each HT 1000 radio can be programmed to send a unique digital identification code at the beginning of each transmission, at the end, or both. This ID may be combined with an emergency alarm that is activated by an emergency button on that top of the radio. The dispatcher cannot only quickly identify the radio user, but can also receive nearly instant clear indication of critical situations.

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Call Alert and Selective Call Decode

Provides an efficient way for the dispatcher to initiate a page or a voice page message to an individual or a group. It is a convenient way to eliminate the need for users to listen to traffic that does not concern them. When the user receives a Call Alert, the radio will continuously generate a series of four tones as well as flash the green LED until the user takes action. When the user receives a Selective Call, the radio will generate alert tones, flash the green LED, and will unmute so an incoming message can be heard.

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Radio Check

Allows the dispatcher to determine if the radio unit is on the air and within communications range without disturbing the radio operator.

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Tilt Switch

When equipped with the optional Tilt Switch accessory, the HT 1000 radio will send an emergency transmission after a preprogrammed delay time if the radio is tilted greater than 60°.

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OPTIONAL FEATURES

Touch Code Signalling

Any HT 1000 radio with the appropriate TOUCH-CODE signalling option can encode Dual Tone Multi-Frequency tones via a keypad. This will allow a user to access the land-line phone network or to operate remote control devices.

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Intrinsically Safe

The HT 1000 portable, when ordered with the Intrinsically Safe option and used with Motorola's FM batteries, is approved for operation in hazardous atmospheric environments by the U.S. Factory Mutual agency.

MOTOROLA BUILT AND BACKED

ALT

The HT 1000 portable will keep working under harsh conditions. Like all Motorola products, the radio is subjected during the design stages to our unique Accelerated Life Test (ALT) which simulates five years of intensive field stress.

HT 1000

Synthesized FM Portable Radio

SPECIFICATIONS

TYPICAL PERFORMANCE SPECIFICATIONS**

General	Model Number	Channels	Bandsplit	RF Power Output	Display/Keypad
VHF Models	H01KDC9AA1_N	2*	136-174 MHz	1 to 5 Watts	None/Optional
	H01KDC9AA3_N	16	136-174 MHz	1 to 5 Watts	None/Optional
UHF Models	H01RDC9AA1_N	2*	403-470 MHz	1 to 4 Watts	None/Optional
	H01RDC9AA3_N	16	403-470 MHz	1 to 4 Watts	None/Optional
	H01SDC9AA1_N	2*	450-520 MHz	1 to 4 Watts	None/Optional
	H01SDC9AA3_N	16	450-520 MHz	1 to 4 Watts	None/Optional
800 Models	H01UCC9AA3_N	16	806-870 MHz	3 Watts	None/Optional
Power Supply:	Provided through one rechargeable nickel cadmium battery.				
Sealing:	Withstands rain testing per Mil. Std. 810 C/D/E				
Shock and Vibration:	Protection provided via impact resistant housing exceeding EIA RS-316B and Mil. Std. 810 C/D/E				
Dust and Humidity:	Protection provided via weather resistant housing exceeding EIA RS-316B and Mil. Std. 810 C/D/E				

*2 channel models are not compatible with MTVA or Public Safety microphone.

Radio Dimensions		Radio Weight	
Radio Only:	6.30" (H) x 2.34" (W) x 1.49" (D)	Radio Only:	10.2 oz.
With High Capacity Battery:	6.30" (H) x 2.34" (W) x 1.49" (D)	With High Capacity Battery:	18.3 oz.
With Ultra High Capacity Battery:	6.30" (H) x 2.34" (W) x 1.54" (D)	With Ultra High Capacity Battery:	19.4 oz.

Dimensions Note: All depth and width dimensions reflect measurements taken at the widest points on the radio unit. They do not reflect every width and depth point on the radio.

Battery Life @ 5/5/90	VHF @ 5W	VHF @ 1W	UHF @ 4W	UHF @ 1W	800 @ 3W
High Capacity Battery:	8.0 Hours	11.0 Hours	8.0 Hours	11.0 Hours	8.0 Hours
Ultra High Capacity Battery:	9.0 Hours	12.0 Hours	9.0 Hours	12.0 Hours	9.0 Hours

**All specifications are per EIA 316B unless otherwise noted.

TRANSMITTER				
Frequency Range:	136-174 MHz	403-470 MHz	450-520 MHz	806-825 MHz 851-870 MHz
Channel Spacing:	12.5/25/30 kHz	12.5/25 kHz	12.5/25 kHz	25 kHz
FM Hum & Noise: @ 12.5 kHz: @ 25 or 30 kHz: (Companion Receiver Method)	-40 dB -45 dB	-40 dB -45 dB	-40 dB -45 dB	-45 dB
Audio Distortion:	3%	3%	3%	3%
Spurious & Harmonics:	-66 dBW	-66 dBW	-66 dBW	-46 dBW
Frequency Stability: @ 12.5 kHz: @ 25 or 30 kHz: (-30 to +60° C; 25° C ref.)	± .0002% ± .0002%	± .0002% ± .0002%	± .0002% ± .0002%	± .00015%
FCC ID:	AZ489FT3768	AZ489FT4781	AZ489FT4780	AZ489FT5747
Emission Designators: 25 kHz: 12.5 kHz:	16K0F3E 20K0F2D 20K0F1E 11K0F3E 11K0F2D	16K0F3E 16K0F1D 15K0F2D 20K0F1E 11K0F3E 11K0F2D	16K0F3E 20K0F2D 20K0F1E 11K0F3E	16K0F3E 15K0F2D 16K0F1D 16K0F1E 20K0F1E 14K0F3E 14K0F1D N/A
Audio Response: (from a 6 dB/octave pre-emphasis 300 to 3000 Hz)	+1, -3 dB	+1, -3 dB	+1, -3 dB	+1, -3 dB

RECEIVER				
Frequency Range:	136-174 MHz	403-470 MHz	450-520 MHz	806-825 MHz 851-870 MHz
Channel Spacing:	12.5/25/30 kHz	12.5/25 kHz	12.5/25 kHz	25 kHz
Modulation Acceptance @ 12.5 kHz: @ 25 or 30 kHz:	± 3.75 kHz ± 7.5 kHz	± 3.75 kHz ± 7.5 kHz	± 3.75 kHz ± 7.5 kHz	± 7.5 kHz
Audio Distortion:	3%	3%	3%	3%
Intermodulation @ 12.5 kHz: @ 25 or 30 kHz:	-65 dB -75 dB	-63 dB -73 dB	-63 dB -73 dB	-70 dB
Sensitivity: 20 dB Quieting 12 dB Sinad:	.40 µV .28 µV	.40 µV .28 µV	.40 µV .28 µV	.50 µV .35 µV
Adjacent Channel Selectivity (EIA Sinad) @ 12.5 kHz: @ 25 or 30 kHz:	-65 dB -75 dB	-63 dB -73 dB	-63 dB -73 dB	-70 dB
Spurious Response Rejection: ½ I.F.:	-75 dB	-73 dB	-73 dB	-70 dB
Image Rejection:	-74 dB	-73 dB	-73 dB	-74 dB
Rated Audio Output:	500 mW	500 mW	500 mW	500 mW
Frequency Stability: @ 12.5 kHz: @ 25 or 30 kHz: (-30 to +60° C; 25° C ref.)	± .0002% ± .0002%	± .0002% ± .0002%	± .0002% ± .0002%	± .00015%

Standard	U.S. Military Spec 810C		U.S. Military Spec 810D		U.S. Military Spec 810E	
	Method	Procedure	Method	Procedure	Method	Procedure
Low Pressure	500.1	I	500.2	II	500.3	II
High Temperature	501.1	I	501.2	I (Cat. A1), II	501.3	I (Cat. A1), II
Low Temperature	502.1	I	502.2	I (Cat. C1), II	502.3	I (Cat. C1), II
Temperature Shock	503.1	I	503.2	I (Cat. A1, C1)	503.3	I (Cat. A1, C1)
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	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	VII, VIII, X	514.3	I (Cat. 8)	514.4	I (Cat. 8)
Shock	516.2	I, II, V	516.3	I, IV	516.4	I, IV

Specifications subject to change without notice.



SUPPORT SERVICES
Wherever Motorola sells, our product is backed by service. Our products are serviced throughout the world by a wide network of company or authorized independent distributor service organizations.



MOTOROLA

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