



THE FUTURE OF BUSINESS COMMUNICATION, DELIVERED TODAY

MOTOTRBO™ DIGITAL TWO-WAY RADIO REPEATERS

Make technology more productive and personal. You asked for a forward-thinking way to connect your people to their work, wherever they go. An innovative business tool that increases their efficiency while lowering your costs. Versatile and powerful, MOTOTRBO combines the best of two-way radio functionality with the latest digital technology. It integrates voice and data seamlessly, offers enhanced features that are easy to use and delivers increased capacity to meet your communication needs from the field to the factory floor. With exceptional voice quality and long battery life, MOTOTRBO keeps your work teams connected when communication is a must.

HIGH-POWERED PERFORMANCE

Because MOTOTRBO uses TDMA digital technology, it delivers integrated voice and data, twice the calling capacity plus clearer voice communications. When it comes to battery performance, MOTOTRBO radios operate 40 percent longer between recharges compared to analog. In fact, the leading-edge IMPRES™ technology in our batteries, chargers and audio accessories also ensures longer talk time and clearer audio.

INDUSTRY-LEADING APPLICATIONS

Motorola's Application Developer Program offers customized data applications so you can adapt your radios to your unique business needs. Because we've created the largest developer program in the industry, we can provide nimble applications that address your challenges and answer your objectives — from work order ticket management to network management, email gateways to location tracking, dispatch consoles to telephony integration, and beyond.

Whether you want to send text messages or track work order information, pinpoint work crew locations with integrated GPS or manage your fleet from a central dispatch location, MOTOTRBO™ paves the way — with customizable data applications on one convenient device.

MOTOTRBO REPEATERS

ADDED FUNCTIONALITY

MOTOTRBO offers added functionality, including dispatch capability with the MIP 5000 VoIP console, enhanced call signaling, basic and enhanced privacy-scrambling, option board expandability and compatibility with SCADA solutions for utility and public service monitoring and alarms. Plus digital telephone interconnect capability to enable communication between radios and landline or mobile phones as well as a transmit interrupt suite — with voice interrupt, emergency voice interrupt or data over voice interrupt — to prioritize critical communication the moment you need it.

EXPANDED CAPACITY AND COVERAGE

Your workforce is hard at work every day — picking up loads, making road repairs, providing security, responding to guest requests or restoring power after a storm. That's why you need the proven performance of MOTOTRBO radio systems for non-stop communication no matter the size of your work force, no matter where they go.

MOTOTRBO's IP Site Connect dramatically improves customer service and productivity by using the Internet to extend coverage to users anywhere in the world. Our

scalable, single-site Capacity Plus solution expands capacity to over 1,000 users without adding new frequencies. Connect Plus multi-site digital trunking enables you to accommodate the high volume, wide area communication your business requires. Whether you need coverage at a single site or across multiple sites, MOTOTRBO can be scaled to meet your needs.

MIGRATE AT YOUR OWN PACE

Keeping operations running smoothly during a change in communication systems is vital to your business. It's easy to migrate to digital with MOTOTRBO because radios operate in analog and digital mode while the dynamic mixed mode repeater functionality streamlines automatic switching between analog and digital calls. So you can begin using MOTOTRBO radios and repeaters on your existing analog system, and when your time and budget allow you can begin migrating to digital at your own pace.

RELIABLE DURABILITY

MOTOTRBO repeaters are backed by a two-year Standard Warranty.



MOTOTRBO™ XPR™ 8400 REPEATER

GENERAL SPECIFICATIONS

		XPR 8400	
	VHF	UHF Band I	UHF Band II
Channel Capacity		1	
Typical RF Output:	1.25.W/	1.25.1//	
Low Power High Power	1-25 W 25-45 W	1-25 W 25-40 W	1-40 W
Frequency	136-174 MHz	403-470 MHz	450-512 MHz
Dimensions		5.22 in H x 19 in W x 11.67 in L	100 012 11112
		(132.6 mm H x 482.6 mm W x 296.5 mm L)	
Weight		31 lbs. (14 kg)	
Voltage Requirements		100-240 V AC (13.6 V DC)	
Current Drain During Standby:		1 A /1 A DO ported l	
Low Power High Power		1 A (1 A DC typical) 1 A (1 A DC typical)	
Current Drain During Transmit:		(
Low Power		3 A (7.5 A DC typical)	
High Power		4 A (12 A DC typical)	
Operating Temperature Range		-30°C to +60°C	
Max Duty Cycle		100%	
FCC Description	1-25 W: ABZ99FT3026 25-45 W: ABZ99FT3025	1-25 W: ABZ99FT4026 25-40 W: ABZ99FT4025	1-40 W: ABZ99FT4027
IC Description	1-25 W: 109AB-99FT3026	1-25 W: 109AB-99FT4026	1-40 W: 109AB-99FT4027
	25-45 W: 109AB-99FT3025	25-40 W: 109AB-99FT4025	
RECEIVER			
Frequencies	136-174 MHz	403-470 MHz	450-512 MHz
Channel Spacing		12.5 kHz / 25 kHz*	
Frequency Stability (-30° C, +60° C, +25° C)		+/- 0.5 ppm	
Analog Sensitivity		0.30 uV	
(12dB SINAD)		0.22 uV (typical)	
Digital Sensitivity		5% BER: 0.3 uV	
Intermodulation (TIA603C)	78 dB	75 dB	
Adjacent Channel Selectivity: TIA603	65 dB @ 12.5 kHz, 80 dB @ 25 kHz*	65 dB @ 12.5 kHz, 75 dB @ 25 kHz*	
TIA603C	50 dB @ 12.5 kHz, 80 dB @ 25 kHz*	50 dB @ 12.5 kHz, 75 dB @ 25 kHz*	
Spurious Rejection (TIA603C)	80 dB	75 dB	
Audio Distortion @ Rated Audio		3% (typical)	
Hum and Noise		-40 dB @ 12.5 kHz -45 dB @ 25 kHz*	
Audio Response		TIA603C	
Conducted Spurious Emission (TIA603C)		-57 dBm	
TRANSMITTER		0, d5	
Frequencies	136-174 MHz	403-470 MHz	450-512 MHz
Channel Spacing	130 174 191112	12.5 kHz / 25 kHz*	100 012 WHZ
Frequency Stability (-30° C, +60° C, +25° C Ref.)		+/- 0.5 ppm	
Low Power Output	1-25 W	1-25 W	
High Power Output	25-45 W	25-40 W	1-40 W
Modulation Limiting		+/- 2.5 kHz @ 12.5 kHz +/- 5.0 kHz @ 25 kHz*	
FM Hum and Noise		-40 dB @ 12.5 kHz -45 dB @ 25 kHz*	
Conducted / Radiated Emission		-36 dBm < 1 GHz -30 dBm > 1 GHz	
Adjacent Channel Power		60 dB @ 12.5 kHz 70 dB @ 25 kHz*	
Audio Response		TIA603C	
Audio Distortion		3%	
FM Modulation		12.5 kHz: 11K0F3E 25 kHz*: 16K0F3E	
4FSK Digital Modulation		12.5 kHz Data Only: 7K60FXD 12.5 kHz Data & Voice: 7K60FXE	
Digital Vocoder Type		AMBE +2™	
Digital Protocol		ETSI TS 102 361-1, -2, -3	

^{*25} kHz will not be available on new equipment in the U.S. after 1/1/2013. Specifications subject to change without notice. All specifications shown are typical. Repeater meets applicable regulatory requirements. Version 1 01/11

MOTOTRBO™ XPR™ 8380 REPEATER

GENERAL SPECIFICATIONS

-40 dB @ 12.5 kHz -45 dB @ 25 kHz		
-36 dBm < 1 GHz -30 dBm > 1 GHz		
-50 dB @ 12.5 kHz -60 dB @ 25 kHz		
TIA603C		
3%		
12.5 kHz: 11K0F3E 25 kHz: 16K0F3E		
12.5 kHz Data Only: 7K60FXD 12.5 kHz Data & Voice: 7K60FXE		
AMBE +2 TM		
ETSI TS 102 361-1 ETSI TS 102 361-2 ETSI TS 102 361-3		
nit		
866.0125		
866.5125		
867.0125		
867.5125		
868.0125		
869.000 - 870.00		
000* 935.000 - 941.000*		

Specifications subject to change without notice. All specifications shown are typical. Repeater meets applicable regulatory requirements. Version 2 07/10

MTR3000 BASE STATION/REPEATER UHF SPECIFICATIONS

GENERAL SPECIFICATIONS

GENERAL SPECIFICATIONS	T3000A - MTR3000			T2003A - UPGRADE KIT FOR MTR2000 STAT	TONS	
Number of Frequencies	10007		Jp to 16			
Modulation	FM & 4FSK					
Frequency Generation	Synthesized					
Channel Spacing Analog / Digital	12.5 kHz, 25 kHz / 12.5 k			xHz (6.25e compliant)		
Mode of Operation	Simplex / Semi-Duplex /			<u> </u>		
Temperature Range	-30°C to +60°C					
Antenna Connectors			ransmit and Receive, Type	"N" Female		
AC Operation			5-264 VAC, 47-63 Hz			
DC Operation			8.6 VDC (25.7-30.7 VDC ful	Il rated output power)		
Dimensions		5	i.25 in H x 19 in W x 16.5 in 33 mm H x 483 mm W x 41			
Weight		4	0 lbs (19 kg)			
UHF INPUT CURRENT (T3000A)						
	AC Line 117 Volts / 220 Volts			28 VDC D/C Battery Revert, Neg. Gnd.		
100 W Standby	0.4A / 0.4A			0.8A		
100 W Transmit	3.3A/ 1.8A			11.5A		
RECEIVER (UHF)	I.					
Frequencies	403-470, 450-524 MHz			403-470 MHz		
Selectivity (TIA603) 25 kHz / 12.5 kHz		8	0 dB (86 dB typical) / 75 dE	3 (78 dB typical)		
Selectivity (TIA603D) 25 kHz / 12.5 kHz			'5 dB (85 dB typical) / 45 dE			
Analog Sensitivity 12dB SINAD			1.30 uV (0.22 uV typical)			
Digital Sensitivity 5% BER			1.30 uV (0.20 uV typical)			
Signal Displacement Bandwidth 25 kHz / 12.5 kHz			kHz / 1 kHz			
Intermodulation Rejection 25 kHz and 12.5 kHz		8	15 dB			
Spurious and Image Response Rejection		8	5 dB (typical 95 dB)			
Audio Response	+1,-3 dB from 6 dB per octave de-emphasis; 300-3000 Hz referenced to 1000 Hz at line outpu					
Audio Distortion	Less than 3% (1.5% typical) at 1000 Hz, 60% RSD					
Line Output	330 mV (RMS) @ 60% RSD					
FM Hum and Noise (750 μs de-emphasis) 25 kHz / 12.5 kHz	50 dB nominal / 45 dB nominal			nal		
RF Input Impedance		5	0 Ohms			
TRANSMITTER (UHF)						
Frequencies	403-470, 470-524 MHz			403-435, 435-470 MHz		
Power Output (Continuous Duty)	8-100 watts			2-30/40 watts; 25-100 watts		
Electronic Bandwidth	Full Band		ull Band	·		
Output Impedance		5	i0 Ohms			
Intermodulation Attenuation	55 dB			40 dB for 40W and 100W stations; 70 dB for 30W station		
Maximum Deviation (RSD) 25 kHz / 12.5 kHz		±	5 kHz / ±2.5 kHz			
Audio Sensitivity		6	0% RSD @ 80 mV RMS			
Spurious and Harmonic Emissions Attenuation	90 dB			85 dB		
FM Hum and Noise (750 µs de-emphasis) 25 kHz / 12.5 kHz		5	0 dB nominal, 45 dB nomin	nal		
Frequency Stability (for temperature and aging variation)			.5 PPM/External Ref (optio	·	_	
Audio Response		3	1,-3 dB from 6 dB per octa 100-3000 Hz referenced to 1	1000 Hz at line output		
Audio Distortion			ess than 3% (1% typical) a			
Emission Designators	FM Modulation: 12.5 kHz: 11K0F3E; 25 kHz: 16K0F3E 4FSK Modulation: 12.5 kHz - Data Only: 7K60FXD; 12.5 kHz - Data & Voice: 7K60FXE					
FCC TYPE ACCEPTANCE	1		Z.O KI IZ - Data X VUICE. /KI	oo! AL		
Frequency Range in MHz	Model	Туре		Power Output in Watts	US Type Acceptance Number	
406.1 - 470	T3000A	Transmitter		8-100	ABZ89FC4823	
403 - 470	T3000A	Receiver		N/A	ABZ89FR4824	

Frequency Range in MHz	Model	Туре	Power Output in Watts	US Type Acceptance Number
406.1 - 470	T3000A	Transmitter	8-100	ABZ89FC4823
403 - 470	T3000A	Receiver	N/A	ABZ89FR4824
470 - 512	T3000A	Transmitter	8-100	ABZ89FC4825
450 - 512	T3000A	Receiver	N/A	ABZ89FR4826
406.1 - 470	T2003A	Transmitter	25 - 100	ABZ89FC4827
406.1 - 470	T2003A	Transmitter	2 - 30/40	ABZ89FC4829
403 - 470	T2003A	Receiver	N/A	ABZ89FR4828

Industry Canada Approval: IC ID 109AB-T3000; IC model T3000-UHFR1 Specifications per TIA/EIA 603D unless otherwise noted Product meets ETSI 300-086 & ETSI 300-113 CE Marked; RoHS compliant; UL Listed Digital Protocol ETSI 102 361-1, -2, -3; AMBE +2TM Vocoder 25 kHz will not be available on new equipment in the U.S. after 1/1/2013. Specifications subject to change without notice. Version 3 12/10

MTR3000 BASE STATION/REPEATER VHF SPECIFICATIONS

GENERAL SPECIFICATIONS

GENERAL SPECIFICATIONS	1					
	T3000A - MTR3000			T2003A - UPGRADE KIT FOR MTR20	000 STATIONS	
Number of Frequencies	Up to 16					
Modulation	FM & 4FSK Synthesized					
Frequency Generation	·					
Channel Spacing Analog / Digital				kHz / 12.5 kHz (6.25e compliant)		
Mode of Operation				ex / Semi-Duplex / Duplex		
Temperature Range	−30°C to +60°C					
Antenna Connectors			Transmit and Receive, Type	"N" Female		
AC Operation			85-264 VAC, 47-63 Hz			
DC Operation		28.6 VDC (25.7-30.7 VDC full rated output power)				
Dimensions	5.25 in H x 19 in W x 16.5 in L 133 mm H x 483 mm W x 419 mm L					
Weight			40 lbs (19 kg)			
VHF INPUT CURRENT (T3000A)	T					
	AC Line 117 Volts / 220 Volts			28 VDC D/C Battery Revert, Neg. G	ind.	
100 W Standby	0.4A / 0.4A			0.8A		
100 W Transmit	3.5A/ 1.9A			12.2A		
RECEIVER (VHF)						
Frequency			136-174 MHz			
Selectivity (TIA603) 25 kHz / 12.5 kHz			80 dB (90 dB typical) / 75 dB			
Selectivity (TIA603D) 25 kHz / 12.5 kHz			80 dB (90 dB typical) / 50 dB	3 (60 dB typical)		
Analog Sensitivity 12dB SINAD			0.30 uV (0.22 uV typical)			
Digital Sensitivity 5% BER			0.30 uV (0.20 uV typical)			
Signal Displacement Bandwidth 25 kHz / 12.5 kHz			2 kHz / 1 kHz			
Intermodulation Rejection 25 kHz and 12.5 kHz			85 dB			
Spurious and Image Response Rejection			85 dB (95 dB typical)			
Audio Response			+1,-3 dB from 6 dB per octave de-emphasis; 300-3000 Hz referenced to 1000 Hz at line output			
Audio Distortion			Less than 3% (1% typical) at 1000 Hz; 60% RSD			
Line Output			330 mV (RMS) @ 60% RSD			
FM Hum and Noise (750 μs de-emphasis) 25 kHz / 12.5 kHz			50 dB (56 dB typical) / 45 dB	3 (52 dB typical)		
RF Input Impedance			50 Ohms			
TRANSMITTER (VHF)						
Frequencies	136-174 MHz		136-154, 150-174 MHz			
Power Output (Continuous Duty)	8-100 watts		1-30/40 watts, 25-100 watts			
Electronic Bandwidth			Full Band			
Output Impedance			50 Ohms			
Intermodulation Attenuation	55 dB			40 dB for 40W and 100W stations; 70 dB for 30W station		
Maximum Deviation (RSD) 25 kHz / 12.5 kHz			±5 kHz / ±2.5 kHz			
Audio Sensitivity			60% RSD @ 80 mV RMS			
Spurious and Harmonic Emissions Attenuation	90 dB			85 dB		
FM Hum and Noise (750 μs de-emphasis) 25 kHz / 12.5 kHz			50 dB (55 dB typical) / 45 dB	B (52 dB typical)		
Frequency Stability (for temperature and aging variation)			1.5 PPM/External Ref (option	nal)		
Audio Response			+1,-3 dB from 6 dB per octa 300-3000 Hz referenced to			
Audio Distortion			Less than 3% (1% typical) a	· · · · · · · · · · · · · · · · · · ·		
Emission Designators			FM Modulation: 12.5 kHz: 1 4FSK Modulation: 12.5 kHz 12.5 kHz - Data & Voice: 7K	- Data Only: 7K60FXD;		
FCC TYPE ACCEPTANCE	1					
Frequency Range in MHz	Model	Туре		Power Output in Watts	US Type Acceptance Number	
136-174	T3000A	Transmitter		8-100	ABZ89FC3793	
136-174	T3000A	Receiver		N/A	ABZ89FR3794	
136-174	T2003A	Transmitter		25-100	ABZ89FC3795	
136-174	T2003A	Receiver		N/A	ABZ89FR3796	
120 174	T2002A	Transmitter		1.20 / 40	AD700002707	

Transmitter

1-30 / 40

Industry Canada Approval: IC ID 109AB-3793; IC model T3000-VHF Specifications per TIA/EIA 603D unless otherwise noted Product meets ETSI 300-086 & ETSI 300-113 CE Pending; RoHS compliant; UL Listed Digital Protocol ETSI 102 361-1, -2, -3; AMBE +2TM Vocoder 25 kHz will not be available on new equipment in the U.S. after 1/1/2013. Specifications subject to change without notice. Version 3 12/10

136-174

T2003A

ABZ89FC3797

MTR3000 BASE STATION/REPEATER 800/900 MHZ SPECIFICATIONS

GENERAL SPECIFICATIONS

GENERAL SPECIFICATIONS	T		T		
	T3000A - MTR3000		T2003A - UPGRADE KIT FOR MTR2000	STATIONS	
Number of Frequencies		Up to 16			
Modulation		FM & 4FSK			
requency Generation		Synthesized			
Channel Spacing Analog / Digital		12.5 kHz, 25 kHz / 12.5 kHz			
Mode of Operation		Semi-Duplex / Duplex	<u> </u>		
emperature Range		-30°C to +60°C			
Antenna Connectors		Transmit and Receive, Type	e "N" Female		
AC Operation		85-264 VAC, 47-63 Hz			
OC Operation	28.6 VDC (24.7 - 30.7 VDC full rated output power)				
Dimensions		5.25 in H x 19 in W x 16.5 133 mm H x 483 mm W x 4			
Veight		40 lbs (19 kg)			
800/900 MHZ INPUT CURRENT (T300)	DA)				
	AC Line 117 Volts / 220 Volts		28 VDC D/C Battery Revert, Neg. Gno	1.	
00 W Standby	0.4A / 0.4A		0.8A		
00 W Transmit	3.4A/ 1.9A		12.0A		
RECEIVER (800/900 MHz)					
requencies	806 - 825 & 896 - 902 MHz		806 - 825, 896 - 902 MHz		
Selectivity (TIA603): 100MHz: 25 kHz, 12.5 kHz / 900 MHz: 12.5 kHz		85 dB , 75 dB / 75 dB			
Selectivity (TIA603D): 100MHz: 25 kHz, 12.5 kHz / 900 MHz: 12.5 kHz		80 dB (87 dB typical), 55 dB 55 dB (62 dB typical)	B (62 dB typical) /		
analog Sensitivity 12dB SINAD		0.28 uV (0.21 uV typical)			
Digital Sensitivity 5% BER		0.28 uV	uV		
ignal Displacement Bandwidth: 00MHz: 25 kHz, 12.5 kHz / 900 MHz: 12.5 kHz		2 kHz, 1 kHz / 1 kHz	kHz		
ntermodulation Rejection: 300MHz: 25 kHz, 12.5 kHz / 900 MHz: 12.5 kHz		90 dB			
Spurious and Image Response Rejection	85 dB (typical 95 dB)				
Audio Response	+1,-3 dB from 6 dB per octave de-emphasis;				
Audio Distortion	300-3000 Hz referenced to 1000 Hz at line output Less than 3% (1.5% typical) at 1000 Hz, 60% RSD				
ine Output	330 mV (RMS) @ 60% RSD				
FM Hum and Noise (750 µs de-emphasis):	50 dB nominal , 45 dB nominal				
300MHz: 25 kHz, 12.5 kHz / 900 MHz: 12.5 kHz	טט טט ווטווווומון אי טי אי ווטווווומון אי טי איז ווטווווומון איז איז ווטווווומון איז איז ווטווווומון איז איז א				
RF Input Impedance		50 Ohms			
TRANSMITTER (800/900 MHz)					
requencies	851 - 870 & 935 - 941 MHz		851 - 870, 935 - 941 MHz		
ower Output (Continuous Duty)	8-100 watts		20-75 watts		
Electronic Bandwidth	Full Band		Band		
Output Impedance		50 Ohms			
ntermodulation Attenuation	55 dB		50 dB		
Maximum Deviation (RSD) 25 kHz / 12.5 kHz		±5 kHz, ±2.5 kHz / ±2.5 kHz	±5 kHz, ±2.5 kHz / ±2.5 kHz		
Audio Sensitivity		60% RSD @ 80 mV RMS	RSD @ 80 mV RMS		
Spurious and Harmonic Emissions Attenuation 100 MHz / 900 MHz	90 dB / 86 dB		80 dB / 80 dB		
M Hum and Noise (750 μs de-emphasis): 00MHz: 25 kHz, 12.5 kHz / 900 MHz: 12.5 kHz		50 dB nominal, 45 dB nom	inal / 45 dB nominal		
requency Stability for temperature and aging variation)		0.1PPM/ External Ref (opti	onal)		
Audio Response	+1,-3 dB from 6 dB per octave pre-emphasis; 300-3000 Hz referenced to 1000 Hz at line output				
Audio Distortion		Less than 3% (1% typical)	at 1000 Hz; 60% RSD		
Emission Designators		900 MHz: 12.5 kHz: 11K0F	12.5 kHz: 11K0F3E; 25 kHz: 16K0F3E 3E z - Data Only: 7K60FXD; 12.5 kHz - Data & Vo	pice: 7K60FXE	
FCC TYPE ACCEPTANCE	1		. , ,	···	
Frequency Range in MHz	Model	Туре	Power Output in Watts	US Type Acceptance Number	
851 - 870 & 935- 941	T3000A	Transmitter	8-100	ABZ89FC5817	
806 - 825 & 896 - 902	T3000A	Receiver	N/A	ABZ89FR5818	
851 - 870	T2003A	Transmitter	20-75	ABZ89FC5819	

Frequency Range in MHz	Model	Туре	Power Output in Watts	US Type Acceptance Number
851 - 870 & 935- 941	T3000A	Transmitter	8-100	ABZ89FC5817
806 - 825 & 896 - 902	T3000A	Receiver	N/A	ABZ89FR5818
851 - 870	T2003A	Transmitter	20-75	ABZ89FC5819
806 - 825	T2003A	Receiver	N/A	ABZ89FR5820
935 - 941	T2003A	Transmitter	20-75	ABZ89FC5821
896 - 902	T2003A	Receiver	N/A	ABZ89FR5822

For more information on how to make your business more efficient and better connected, **visit www.motorola.com/mototrbo**

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