



THE FUTURE OF BUSINESS COMMUNICATION, DELIVERED TODAY

MOTOTRBO™ DIGITAL TWO-WAY RADIO SYSTEM

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.

PRODUCT SPEC SHEET

MOTOTRBO DIGITAL TWO-WAY RADIO SYSTEM



XPR™ 4550 / XPR 4580
Display Mobile Radios



XPR 6550 / XPR 6580
Display Portable Radios

XRC 9000
Trunking Controller



XPR 6350 / XPR 6380
Non-Display Portable Radios



XPR 8380 / XPR 8400
Repeaters



XPR 4350 / XPR 4380
Numeric Display Mobile Radios

MTR3000
Base Station/Repeater



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 meets the most demanding specs, including IP57 for water submersibility (portables) and U.S. Military 810 C, D, E and F. It's "intrinsically safe" when purchased and equipped with an FM/CSA battery, for use where flammable gas, vapors or combustible dust may be present. And backed by a two-year Standard Warranty, one-year Repair Service Advantage (US)/Extended Warranty (Canada) and minimum 1-year warranty for accessories.

PRODUCT SPEC SHEET

MOTOTRBO™ XPR™ 6550/XPR 6350 PORTABLE RADIOS

GENERAL SPECIFICATIONS

| | DISPLAY XPR 6550 | | | NON-DISPLAY XPR 6350 | | |
|---|------------------|--|---------------|--|--|---------------|
| | VHF | UHF Band I | UHF Band II | VHF | UHF Band I | UHF Band II |
| Channel Capacity | | Up to 1,000 | | | 32 | |
| Frequency | 136-174 MHz | 403-470 MHz | 450-512 MHz | 136-174 MHz | 403-470 MHz | 450-512 MHz |
| Dimensions | | 5.18 in H x 2.5 in W x 1.39 in L (131.5 mm H x 63.5 mm W x 35.2 mm L) | | | 5.18 in H x 2.5 in W x 1.39 in L (131.5 mm H x 63.5 mm W x 35.2 mm L) | |
| Weight (with IMPRES Li-Ion 1500 mAh Battery) (with IMPRES Li-Ion 1400 mAh FM Battery) (with IMPRES Li-Ion 2150 mAh Battery) (with NiMH 1300 mAh Battery) | | 12.7 oz (360 g) 13 oz (370 g) 13.17 oz (375 g) 15.2 oz (430 g) | | | 11.63 oz (330 g) 11.98 oz (340 g) 12.12 oz (345 g) 14.09 oz (400 g) | |
| Power Supply | | 7.5 V nominal | | | 7.5 V nominal | |
| FCC Description | AZ489FT3815 | AZ489FT4876 | AZ489FT4884 | AZ489FT3815 | AZ489FT4876 | AZ489FT4884 |
| IC Description | 109U-89FT3815 | 109U-89FT4876 | 109U-89FT4884 | 109U-89FT3815 | 109U-89FT4876 | 109U-89FT4884 |
| Average battery life at 5/5/90 duty cycle with battery saver enabled in carrier squelch and transmitter in high power. | | | | | | |
| IMPRES Li-Ion 1500 mAh Battery | | Analog: 9 hrs Digital: 13 hrs | | | Analog: 9 hrs Digital: 13 hrs | |
| IMPRES Li-Ion FM 1400 mAh Battery | | Analog: 8.5 hrs Digital: 12 hrs | | | Analog: 8.5 hrs Digital: 12 hrs | |
| IMPRES Li-Ion 2150 mAh Battery | | Analog: 13.5 hrs Digital: 19 hrs | | | Analog: 13.5 hrs Digital: 19 hrs | |
| NiMH 1300 mAh Battery | | Analog: 8 hrs Digital: 11 hrs | | | Analog: 8 hrs Digital: 11 hrs | |
| RECEIVER: DISPLAY XPR 6550 & NON-DISPLAY XPR 6350 | | | | GPS: DISPLAY XPR 6550 & NON-DISPLAY XPR 6350 | | |
| Frequencies | 136-174 MHz | 403-470 MHz | 450-512 MHz | Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at a nominal -130 dBm signal strength) | | |
| Channel Spacing | | 12.5 kHz / 25 kHz* | | TTFF (Time To First Fix) Cold Start | < 2 minutes | |
| Frequency Stability (-30° C, +60° C, +25° C) | | +/- 0.5 ppm | | TTFF (Time To First Fix) Hot Start | < 10 seconds | |
| Analog Sensitivity (12dB SINAD) | | 0.35 uV 0.22 uV (typical) | | Horizontal Accuracy | < 10 meters | |
| Digital Sensitivity | | 5% BER: 0.3 uV | | MILITARY STANDARDS: DISPLAY XPR 6550 & NON-DISPLAY XPR 6350 | | |
| Intermodulation (TIA603C) | | 70 dB | | | 810E | |
| Adjacent Channel Selectivity | | | | Applicable MIL-STD | Methods | Procedures |
| TIA603 | | 60 dB @ 12.5 kHz, 70 dB @25 kHz* | | Low Pressure | 500.3 | II |
| TIA603C | | 45 dB @ 12.5 kHz, 70 dB @25 kHz* | | High Temperature | 501.3 | I/A, II/A1 |
| Spurious Rejection (TIA603C) | | 70 dB | | Low Temperature | 502.3 | I/C3, II/C1 |
| Rated Audio | | 500 mW | | Temperature Shock | 503.3 | I/A, 1C3 |
| Audio Distortion @ Rated Audio | | 3% (typical) | | Solar Radiation | 505.3 | I |
| Hum and Noise | | -40 dB @ 12.5 kHz -45 dB @ 25 kHz* | | Rain | 506.3 | I, II |
| Audio Response | | TIA603C | | Humidity | 507.3 | II |
| Conducted Spurious Emission (TIA603C) | | -57 dBm | | Salt Fog | 509.3 | I |
| | | | | Dust | 510.3 | I |
| | | | | Vibration | 514.4 | I/10, II/3 |
| | | | | Shock | 516.4 | I, IV |
| | | | | ENVIRONMENTAL SPECIFICATIONS: DISPLAY XPR 6550 & NON-DISPLAY XPR 6350 | | |
| TRANSMITTER: DISPLAY XPR 6550 & NON-DISPLAY XPR 6350 | | | | Operating Temperature | -30° C / +60° C | |
| Frequencies | 136-174 MHz | 403-470 MHz | 450-512 MHz | Storage Temperature | -40° C / +85° C | |
| Channel Spacing | | 12.5 kHz / 25 kHz* | | Thermal Shock | Per MIL-STD | |
| Frequency Stability (-30° C, +60° C, +25° C Ref.) | | +/- 0.5 ppm | | Humidity | Per MIL-STD | |
| Low Power Output | 1 W | 1 W | | ESD | IEC-801-2KV | |
| High Power Output | 5 W | 4 W | | Dust and Water Intrusion | IEC 60529 - IP57 | |
| Modulation Limiting | | +/- 2.5 kHz @ 12.5 kHz +/- 5.0 kHz @ 25 kHz* | | Packaging Test | MIL-STD 810D and E | |
| FM Hum and Noise | | -40 dB @ 12.5 kHz -45 dB @ 25 kHz* | | Testing completed using portable radio with attached battery and antenna. | | |
| Conducted / Radiated Emission | | -36 dBm < 1 GHz -30 dBm > 1 GHz | | FACTORY MUTUAL APPROVALS: DISPLAY XPR 6550 & NON-DISPLAY XPR 6350 | | |
| Adjacent Channel Power | | 60 dB @ 12.5 kHz 70 dB @ 25 kHz* | | MOTOTRBO XPR Series portable radios have been certified by FM and CSA Approvals in accordance with Canada and U.S. Codes as intrinsically safe for use in Class I, II, III, Division 1, Groups C, D, E, F, G, when properly equipped with a Motorola FM approved battery option. They are also approved for use in Class I, Division 2, Groups A, B, C, D. | | |
| 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.

**Radio only. Li-Ion battery -10° C; NiMH battery -20° C.

Specifications subject to change without notice. All specifications shown are typical.

Radio meets applicable regulatory requirements. Version 10 07/10



PRODUCT SPEC SHEET



MOTOTRBO™ XPR™ 6580/XPR 6380 PORTABLE RADIOS

GENERAL SPECIFICATIONS

| | DISPLAY XPR 6580 | NON-DISPLAY XPR 6380 | MILITARY STANDARDS | | | | |
|--|--|--|--------------------|-------------|-------------|-------------|---------------|
| Channel Capacity | Up to 1000 | Up to 32 | | 810E | | 810F | |
| Frequency Band | 800 and 900 MHz | 800 and 900 MHz | Applicable MIL-STD | Methods | Procedures | Methods | Procedures |
| Dimensions (HxWxL) with Li-Ion Battery | 5.18 in H x 2.5 in W x 1.39 in L (131.5 mm H x 63.5 mm W x 35.2 mm L) | 5.18 in H x 2.5 in W x 1.39 in L (131.5 mm H x 63.5 mm W x 35.2 mm L) | Low Pressure | 500.3 | II | 500.4 | II |
| Weight with IMPRES Li-Ion 2150 mAh Battery | 13.17 oz (375 g) | 12.12 oz (345 g) | High Temperature | 501.3 | I/A, II/A1 | 501.4 | I/Hot, II/Hot |
| Power Supply | 7.5 V nominal | 7.5 V nominal | Low Temperature | 502.3 | I/C3, II/C1 | 502.4 | I/C3, II/C1 |
| FCC Description | ABZ99FT5011 | ABZ99FT5011 | Temperature Shock | 503.3 | I/A, 1C3 | 503.4 | I |
| IC Description | 109AB-99FT5011 | 109AB-99FT5011 | Solar Radiation | 505.3 | I | 505.4 | I |
| Average battery life at 5/5/90 duty cycle with battery saver enabled in carrier squelch and transmitter in high power. | | | Rain | 506.3 | I, II | 506.4 | I, III |
| IMPRES Li-Ion 2150 mAh Battery | Analog: 13 hrs Digital: 17 hrs | Analog: 13 hrs Digital: 17 hrs | Humidity | 507.3 | II | 507.4 | - |
| IMPRES Li-Ion 1400 mAh Battery | Analog: 9 hrs Digital: 12 hrs | Analog: 9 hrs Digital: 12 hrs | Salt Fog | 509.3 | I | 509.4 | I |

RECEIVER

| | | | | | | |
|-----------------|--|-----------|-------|------------|-------|-------|
| Frequencies | 800 MHz: 854-866 MHz and 869-870 MHz 900 MHz: 935-941 MHz | Vibration | 514.4 | I/10, II/3 | 514.5 | I/24 |
| Channel Spacing | 800 MHz: 12.5 and 25 kHz 900 MHz: 12.5 kHz | Shock | 516.4 | I, IV | 516.5 | I, IV |

| | | ENVIRONMENTAL SPECIFICATIONS | |
|--|--------------------------------------|--|--------------------|
| Frequency Stability (-30° C, +60° C, +25° C) | +/- 0.5 ppm | Operating Temperature | -30° C / +60° C |
| Analog Sensitivity (12 dB SINAD) Typical | 0.25 uV | Operating Temperature (w/ IMPRES Li-Ion battery) | -10° C to +60° C |
| Digital Sensitivity | 5% BER: 0.3 uV | Storage Temperature | -40° C to +85° C |
| Intermodulation (TIA603C) | 70 dB | Thermal Shock | Per MIL-STD |
| Adjacent Channel Selectivity (TIA603) - 1T | 60 dB @ 12.5 kHz 70 dB @ 25 kHz | Humidity | Per MIL-STD |
| Adjacent Channel Selectivity (TIA603C) - 2T | 45 dB @ 12.5 kHz 70 dB @ 25 kHz | ESD | IEC-801-2KV |
| Spurious Rejection (TIA603C) | 70 dB | Dust and Water Intrusion | IEC 60529 - IP54 |
| Rated Audio | .5 W | Packaging Test | MIL-STD 810D and E |
| Audio Distortion @ Rated Audio | 3% (typical) | Testing completed using portable radio with attached battery and antenna. | |
| Hum and Noise | -40 dB @ 12.5 kHz -45 dB @ 25 kHz | FACTORY MUTUAL APPROVALS | |
| Audio Response | TIA603C | MOTOTRBO XPR Series portable radios have been certified by FM and CSA Approvals in accordance with Canada and U.S. Codes as intrinsically safe for use in Class I, II, III, Division 1, Groups C, D, E, F, G, when properly equipped with a Motorola FM approved battery option. They are also approved for use in Class I, Division 2, Groups A, B, C, D. | |
| Conducted Spurious Emission (ETSI) | -57 dBm |   | |

TRANSMITTER

| | | | | | |
|--------------------------------------|--|--|--------------------|--------------------|--------------------|
| Frequencies | 800 MHz: 809-821 MHz, 824-825 MHz, 854-866 MHz and 869-870 MHz 900 MHz: 896-902 MHz and 935-941 MHz | ONLY THE FOLLOWING FREQUENCIES ARE SUPPORTED BY THE XPR 6580 / XPR 6380 | | | |
| Channel Spacing | 800 MHz: 12.5 and 25 kHz 900 MHz: 12.5 kHz | Band | Receive | Transmit | |
| Frequency Stability (-30° C, +60° C) | +/- 0.5 ppm | 800 MHz | 851.0125 | 806.0125 | 851.0125 |
| Low Power Output | 1 W | | 851.5125 | 806.5125 | 851.5125 |
| High Power Output | 2.5 W | | 852.0125 | 807.0125 | 852.0125 |
| Modulation Limiting | +/- 2.5 kHz @ 12.5 kHz +/- 5.0 kHz @ 25 kHz | | 852.5125 | 807.5125 | 852.5125 |
| FM Hum and Noise | -40 dB @ 12.5 kHz -45 dB @ 25 kHz | | 853.0125 | 808.0125 | 853.0125 |
| Conducted / Rated Emission (ETSI) | -36 dBm < 1 GHz -30 dBm > 1 GHz | | 854.000 - 865.9875 | 809.000 - 820.9875 | 854.000 - 865.9875 |
| Adjacent Channel Power | -60 dB @ 12.5 kHz -70 dB @ 25 kHz | | 866.0125 | 821.0125 | 866.0125 |
| Audio Response | TIA603C | | 866.5125 | 821.5125 | 866.5125 |
| Audio Distortion (per EIA) | 3% | | 867.0125 | 822.0125 | 867.0125 |
| FM Modulation | 12.5 kHz: 11K0F3E 25 kHz: 16K0F3E | | 867.5125 | 822.5125 | 867.5125 |
| 4FSK Digital Modulation | 12.5 kHz Data Only: 7K60FXD 12.5 kHz Data & Voice: 7K60FXE | | 868.0125 | 823.0125 | 868.0125 |
| Digital Vocoder Type | AMBE +2™ | | 869.000 - 870.000 | 824.000 - 825.000 | 869.000 - 870.000 |
| Digital Protocol | ETSI TS 102 361-1, -2, -3 | | 935.000 - 941.000 | 896.000 - 902.000 | 935.000 - 941.000 |

GPS

| | |
|---|--------------|
| Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at a nominal -130 dBm signal strength) | |
| TTF (Time To First Fix) Cold Start | < 2 minutes |
| TTF (Time To First Fix) Hot Start | < 10 seconds |
| Horizontal Accuracy | < 10 meters |

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

PRODUCT SPEC SHEET

MOTOTRBO™ XPR™ 4550/XPR 4350 MOBILE RADIOS

GENERAL SPECIFICATIONS

| | DISPLAY XPR 4550 | | | NUMERIC DISPLAY XPR 4350 | | |
|-------------------|--|---|---|--|---|---|
| | VHF | UHF Band I | UHF Band II | VHF | UHF Band I | UHF Band II |
| Channel Capacity | Up to 1,000 | | | 32 | | |
| Typical RF Output | | | | | | |
| Low Power | 1-25 W | 1-25 W | — | 1-25 W | 1-25 W | — |
| High Power | 25-45 W | 25-40 W | 1-40 W | 25-45 W | 25-40 W | 1-40 W |
| Frequency | 136-174 MHz | 403-470 MHz | 450-512 MHz | 136-174 MHz | 403-470 MHz | 450-512 MHz |
| Dimensions | 2.01 in H x 6.89 in W x 8.11 in L (51 mm H x 175 mm W x 206 mm L) | | | 2.01 in H x 6.89 in W x 8.11 in L (51 mm H x 175 mm W x 206 mm L) | | |
| Weight | 4.0 lbs (1.8 kg) | | | 4.0 lbs (1.8 kg) | | |
| Current Drain: | | | | | | |
| Standby | 0.81 A max | 0.81 A max | 0.81 A max | 0.81 A max | 0.81 A max | 0.81 A max |
| Rx @ Rated Audio | 2 A max | 2 A max | 2 A max | 2 A max | 2 A max | 2 A max |
| Transmit | 1-25 W: 11.0 A max 25-45 W: 14.5 A max | 1-25 W: 11.0 A max 25-40 W: 14.5 A max | 1-40 W: 14.5 A max (11.0 A max < 25 W) | 1-25 W: 11.0 A max 25-45 W: 14.5 A max | 1-25 W: 11.0 A max 25-40 W: 14.5 A max | 1-40 W: 14.5 A max (11.0 A max < 25 W) |
| FCC Description | 1-25 W: ABZ99FT3083 25-45 W: ABZ99FT3082 | 1-25 W: ABZ99FT4081 25-40 W: ABZ99FT4080 | 1-40 W: ABZ99FT4083 | 1-25 W: ABZ99FT3083 25-45 W: ABZ99FT3082 | 1-25 W: ABZ99FT4081 25-40 W: ABZ99FT4080 | 1-40 W: ABZ99FT4083 |
| IC Description | 1-25 W: 109AB-99FT3083 25-45 W: 109AB-99FT3082 | 1-25 W: 109AB-99FT4081 25-40 W: 109AB-99FT4080 | 1-40 W: 109AB-99FT40830 | 1-25 W: 109AB-99FT3083 25-45 W: 109AB-99FT3082 | 1-25 W: 109AB-99FT4081 25-40 W: 109AB-99FT4080 | 1-40 W: 109AB-99FT4083 |

RECEIVER: DISPLAY XPR 4550 & NUMERIC DISPLAY XPR 4350

| RECEIVER: DISPLAY XPR 4550 & NUMERIC DISPLAY XPR 4350 | | | GPS: DISPLAY XPR 4550 & NUMERIC DISPLAY XPR 4350 | | |
|---|---|-----------------------------------|--|---|-------------|
| Frequencies | 136-174 MHz | 403-470 MHz | 450-512 MHz | Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at a nominal -130 dBm signal strength) | |
| Channel Spacing | 12.5 kHz / 25 kHz* | | TTFF (Time To First Fix) Cold Start | < 1 minute | |
| Frequency Stability (-30° C, +60° C, +25° C) | +/- 0.5 ppm | | TTFF (Time To First Fix) Hot Start | < 10 seconds | |
| Analog Sensitivity (12dB SINAD) | 0.3 uV 0.22 uV (typical) | | Horizontal Accuracy | < 10 meters | |
| Digital Sensitivity | 5% BER: 0.3 uV | | MILITARY STANDARDS: DISPLAY XPR 4550 & NUMERIC DISPLAY XPR 4350 | | |
| 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* | Applicable MIL-STD | Methods | Procedures |
| TIA603C | 50 dB @ 12.5 kHz, 80 dB @ 25 kHz* | 50 dB @ 12.5 kHz, 75 dB @ 25 kHz* | Low Pressure | 500.3 | II |
| Spurious Rejection (TIA603C) | 80 dB | 75 dB | High Temperature | 501.3 | I/A, II/A1 |
| Rated Audio | 3 W (Internal) 7.5 W (External - 8 ohms) 13 W (External - 4 ohms) | | Low Temperature | 502.3 | I/C3, II/C1 |
| | | | Temperature Shock | 503.3 | I/A1C3 |
| | | | Solar Radiation | 505.3 | I |
| | | | Rain | 506.3 | I, II |
| Audio Distortion @ Rated Audio | 3% (typical) | | Humidity | 507.3 | II |
| Hum and Noise | -40 dB @ 12.5 kHz -45 dB @ 25 kHz* | | Salt Fog | 509.3 | I |
| | | | Dust | 510.3 | I |
| Audio Response | TIA603C | | Vibration | 514.4 | I/10, II/3 |
| Conducted Spurious Emission (TIA603C) | -57 dBm | | Shock | 516.4 | I, IV |

TRANSMITTER: DISPLAY XPR 4550 & NUMERIC DISPLAY XPR 4350

| TRANSMITTER: DISPLAY XPR 4550 & NUMERIC DISPLAY XPR 4350 | | | ENVIRONMENTAL SPECIFICATIONS: DISPLAY XPR 4550 & NUMERIC DISPLAY XPR 4350 | | |
|--|---|-------------|---|--------------------------|--------------------|
| Frequencies | 136-174 MHz | 403-470 MHz | 450-512 MHz | Operating Temperature | -30° C / +60° C |
| Channel Spacing | 12.5 kHz / 25 kHz* | | | Storage Temperature | -40° C / +85° C |
| Frequency Stability (-30° C, +60° C, +25° C Ref.) | +/- 0.5 ppm | | | Thermal Shock | Per MIL-STD |
| Low Power Output | 1-25 W | 1-25 W | — | Humidity | Per MIL-STD |
| High Power Output | 25-45 W | 25-40 W | 1-40 W | ESD | IEC-801-2KV |
| Modulation Limiting | +/- 2.5 kHz @ 12.5 kHz +/- 5.0 kHz @ 25 kHz* | | | Dust and Water Intrusion | IEC 60529 - IP54 |
| FM Hum and Noise | -40 dB @ 12.5 kHz -45 dB @ 25 kHz* | | | Packaging Test | MIL-STD 810D and E |
| 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.
Radio meets applicable regulatory requirements. Version 9 03/10

PRODUCT SPEC SHEET

MOTOTRBO™ XPR™ 4580/XPR 4380 MOBILE RADIOS

GENERAL SPECIFICATIONS

| | DISPLAY XPR 4580 | NUMERIC DISPLAY XPR 4380 | GPS | | | | |
|---|--|--|---|--|--------------------|--------------------|---------------|
| Channel Capacity | Up to 1,000 | Up to 32 | Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at a nominal -130 dBm signal strength) | | | | |
| Typical RF Output | 806-870 MHz 10-35 W 896-941 MHz* 10-30 W | 806-870 MHz 10-35 W 896-941 MHz* 10-30 W | TTF (Time To First Fix) Cold Start | < 1 minute | | | |
| Frequency Band | 800 and 900 MHz | 800 and 900 MHz | TTF (Time To First Fix) Hot Start | < 10 seconds | | | |
| Dimensions | 2.01 in H x 6.89 in W x 8.11 in L (51 mm H x 175 mm W x 206 mm L) | 2.01 in H x 6.89 in W x 8.11 in L (51 mm H x 175 mm W x 206 mm L) | Horizontal Accuracy | < 10 meters | | | |
| Weight | 4.0 lbs (1.8 kg) | 4.0 lbs (1.8 kg) | MILITARY STANDARDS | | | | |
| Current Drain: Standby | 0.81 A max | 0.81 A max | Applicable MIL-STD | 810E | | 810F | |
| | | | | Methods | Procedures | Methods | Procedures |
| Rx @ Rated Audio | 2 A max | 2 A max | Low Pressure | 500.3 | II | 500.4 | II |
| Transmit | 12.0 A max | 12.0 A max | High Temperature | 501.3 | I/A, II/A1 | 501.4 | I/Hot, II/Hot |
| Power Supply | 12 V dc Negative Ground | 12 V dc Negative Ground | Low Temperature | 502.3 | I/C3, II/C1 | 502.4 | I/C3, II/C1 |
| FCC Description | ABZ99FT5010 | ABZ99FT5010 | Temperature Shock | 503.3 | I/A1C3 | 503.4 | I |
| IC Description | 109AB-99FT5010 | 109AB-99FT5010 | Solar Radiation | 505.3 | I | 505.4 | I |
| RECEIVER | | | Rain | 506.3 | I, II | 506.4 | I, III |
| | | | Frequencies | 800 MHz: 854-866 MHz and 869-870 MHz 900 MHz: 935-941 MHz | Humidity | 507.3 | II |
| Channel Spacing | 800 MHz: 12.5 and 25 kHz 900 MHz: 12.5 kHz | | Salt Fog | 509.3 | I | 509.4 | I |
| Frequency Stability (-30° C, +60° C, +25° C) | +/- 0.5 ppm | | Dust | 510.3 | I | 510.4 | I |
| Analog Sensitivity (12dB SINAD) | 0.22 uV | | Vibration | 514.4 | I/10, II/3 | 514.5 | I/24 |
| Digital Sensitivity | 5% BER: 0.28 uV | | Shock | 516.4 | I, IV | 516.5 | I, IV |
| Intermodulation (TIA603C) | 78 dB | | ENVIRONMENTAL SPECIFICATIONS | | | | |
| Adjacent Channel Selectivity TIA603 TIA603C | 65 dB @ 12.5 kHz, 75 dB @ 25 kHz 50 dB @ 12.5 kHz, 75 dB @ 25 kHz | | Operating Temperature | -30° C / +60° C | | | |
| Spurious Rejection (TIA603C) | 75 dB | | Storage Temperature | -40° C / +85° C | | | |
| Rated Audio | 3 W (Internal) | | Thermal Shock | Per MIL-STD | | | |
| Audio Distortion @ Rated Audio | 3% (typical) | | Humidity | Per MIL-STD | | | |
| Hum and Noise | -45 dB @ 12.5 kHz -45 dB @ 25 kHz | | ESD | IEC-801-2KV | | | |
| Audio Response | TIA603C | | Dust and Water Intrusion | IEC 60529 - IP54 | | | |
| Conducted Spurious Emission (TIA603C) | -57 dBm | | Packaging Test | MIL-STD 810D and E | | | |
| TRANSMITTER | | | ONLY THE FOLLOWING FREQUENCIES ARE SUPPORTED BY THE XPR 4580 / XPR 4380 | | | | |
| Frequencies | 800 MHz: 809-821 MHz, 824-825 MHz, 854-866 MHz and 869-870 MHz 900 MHz: 896-902 MHz and 935-941 MHz | | Band | Receive | Transmit | | |
| Channel Spacing | 800 MHz: 12.5 and 25 kHz 900 MHz: 12.5 kHz | | 800 MHz | 851.0125 | 806.0125 | 851.0125 | |
| Frequency Stability (-30° C, +60° C, +25° C Ref.) | +/- 0.5 ppm | | | 851.5125 | 806.5125 | 851.5125 | |
| Low Power Output | 10 W | | | 852.0125 | 807.0125 | 852.0125 | |
| High Power Output | 800 MHz: 35W 900 MHz: 30W | | | 852.5125 | 807.5125 | 852.5125 | |
| Modulation Limiting | +/- 2.5 kHz @ 12.5 kHz +/- 5.0 kHz @ 25 kHz | | | 853.0125 | 808.0125 | 853.0125 | |
| FM Hum and Noise | -40 dB @ 12.5 kHz -45 dB @ 25 kHz | | | 854.000 - 865.9875 | 809.000 - 820.9875 | 854.000 - 865.9875 | |
| Conducted / Radiated Emission | -36 dBm < 1 GHz -30 dBm > 1 GHz | | | 866.0125 | 821.0125 | 866.0125 | |
| Adjacent Channel Power | -50 dB @ 12.5 kHz -60 dB @ 25 kHz | | | 866.5125 | 821.5125 | 866.5125 | |
| Audio Response | TIA603C | | | 867.0125 | 822.0125 | 867.0125 | |
| Audio Distortion | 3% | | | 867.5125 | 822.5125 | 867.5125 | |
| FM Modulation | 12.5 kHz: 11K0F3E 25 kHz: 16K0F3E | | 868.0125 | 823.0125 | 868.0125 | | |
| 4FSK Digital Modulation | 12.5 kHz Data Only: 7K60FXD 12.5 kHz Data & Voice: 7K60FXE | | 869.000 - 870.000 | 824.000 - 825.000 | 869.000 - 870.000 | | |
| Digital Vocoder Type | AMBE +2™ | | 900 MHz | 935.000 - 941.000 | 896.000 - 902.000 | 935.000 - 941.000 | |
| Digital Protocol | ETSI TS 102 361-1, -2, -3 | | | | | | |

*For frequencies 901–902, 940–941 MHz, FCC Rule Part 24 limits power to 7W ERP. Specifications subject to change without notice. All specifications shown are typical. Radio meets applicable regulatory requirements. Version 1 03/10

PRODUCT SPEC SHEET
MOTOTRBO™ XPR™ 8400 REPEATER

GENERAL SPECIFICATIONS

| | XPR 8400 | | |
|---|--|---|------------------------|
| | VHF | UHF Band I | UHF Band II |
| Channel Capacity | 1 | | |
| Typical RF Output: 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 (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: Low Power High Power | 1 A (1 A DC typical) 1 A (1 A DC typical) | | |
| Current Drain During Transmit: Low Power High Power | 3 A (7.5 A DC typical) 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 25-45 W: 109AB-99FT3025 | 1-25 W: 109AB-99FT4026 25-40 W: 109AB-99FT4025 | 1-40 W: 109AB-99FT4027 |

RECEIVER

| | 136-174 MHz | 403-470 MHz | 450-512 MHz |
|---|--|--|-------------|
| 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 (12dB SINAD) | 0.30 uV 0.22 uV (typical) | | |
| Digital Sensitivity | 5% BER: 0.3 uV | | |
| Intermodulation (TIA603C) | 78 dB | 75 dB | |
| Adjacent Channel Selectivity: TIA603 TIA603C | 65 dB @ 12.5 kHz, 80 dB @ 25 kHz* 50 dB @ 12.5 kHz, 80 dB @ 25 kHz* | 65 dB @ 12.5 kHz, 75 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

| | 136-174 MHz | 403-470 MHz | 450-512 MHz |
|---|---|-------------|-------------|
| 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 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

PRODUCT SPEC SHEET
MOTOTRBO™ XPR™ 8380 REPEATER

GENERAL SPECIFICATIONS

| | | XPR 8380 | TRANSMITTER | | |
|--|--|--|---|---|--|
| | | 800/900 MHz | | XPR 8380 | |
| Channel Capacity | | 1 | | 800/900 MHz | |
| Typical RF Output | | 10–35 W (806-870 MHz) | Frequencies | 851-870 MHz 935-941 MHz | |
| | | 10–30 W (896-941 MHz) | Channel Spacing | 12.5 kHz / 25 kHz | |
| Frequency | | 806–941 MHz | Frequency Stability (-30° C, +60° C, +25° C Ref.) | +/- 0.1 ppm | |
| Dimensions | | 5.22 in H x 19 in W x 11.67 in L (132.6 mm H x 482.6 mm W x 296.5 mm L) | Power Output | 10–35 W : 851-870 MHz / 10–30 W : 935-941 MHz | |
| Weight | | 31 lbs (14 kg) | Modulation Limiting | +/- 2.5 kHz @ 12.5 kHz +/- 5.0 kHz @ 25 kHz | |
| Voltage Requirements | | 100–240 V AC 47–63 Hz (13.6 V DC) | Digital Modulation Fidelity (4FSK) | FSK Error 5% FSK Magnitude 1% | |
| Current Drain During Standby | | 1.0 A (100 V AC) 0.5 A (240 V AC) 1.0 A (typical)(13.4 V DC) | FM Hum and Noise | -40 dB @ 12.5 kHz -45 dB @ 25 kHz | |
| Current Drain During Transmit Low Power | | 3.0 A (100 V AC) 1.5 A (240 V AC) 10 A (typical)(13.4 V DC) | Conducted / Radiated Emission | -36 dBm < 1 GHz -30 dBm > 1 GHz | |
| Current Drain During Transmit High Power | | 4.0 A (100 V AC) 1.8 A (240 V AC) 12 A (typical)(13.4 V DC) | Adjacent Channel Power | -50 dB @ 12.5 kHz -60 dB @ 25 kHz | |
| Operating Temperature Range | | -30°C to +60°C | Audio Response | TIA603C | |
| Max Duty Cycle | | 100% | Audio Distortion | 3% | |
| FCC Description | | 10–35 W: ABZ99FT6001 | FM Modulation | 12.5 kHz: 11K0F3E 25 kHz: 16K0F3E | |
| IC Description | | 10–35 W: 109AB-99FT6001 | 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 ETSI TS 102 361-2 ETSI TS 102 361-3 | |
| RECEIVER | | | ONLY THE FOLLOWING FREQUENCIES ARE SUPPORTED BY THE XPR 8380 | | |
| Frequencies | | 806-825 MHz 896-902 MHz | | | |
| Channel Spacing | | 12.5 kHz / 25 kHz for 800 MHz 12.5 kHz only for 900 MHz | | | |
| Frequency Stability (-30° C, +60° C) | | +/- 0.1 ppm | Band | Receive | Transmit |
| Analog Sensitivity (12dB SINAD) | | 0.22 uV (typical) | 800 MHz | 806.0125 806.5125 | 851.0125 851.5125 866.0125 |
| Digital Sensitivity | | 5% BER: 0.3 uV 0.22 uV (typical) | | 807.0125 807.5125 | 821.5125 822.0125 822.5125 852.0125 852.5125 867.0125 |
| Intermodulation (TIA603C) | | 78 dB | | 808.0125 | 823.0125 853.0125 868.0125 |
| Adjacent Channel Selectivity TIA603 | | 65 dB @ 12.5 kHz, 75 dB @ 25 kHz | | 809.000 - 820.9875 | 824.000 - 825.000 854.000 - 865.9875 869.000 - 870.000 |
| Adjacent Channel Selectivity TIA603C | | 50 dB @ 12.5 kHz, 75 dB @ 25 kHz | | | |
| Spurious Rejection (TIA603C) | | 75 dB | | | |
| Audio Distortion @ Rated Audio | | 3% (typical) | | | |
| Hum and Noise | | -45 dB @ 12.5 kHz -45 dB @ 25 kHz | 900 MHz | 896.000 - 902.000* | 935.000 - 941.000* |
| Audio Response | | TIA603C | | | |
| Conducted Spurious Emission (TIA603C) | | -57 dBm | | | |

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

PRODUCT SPEC SHEET

MTR3000 BASE STATION/REPEATER UHF SPECIFICATIONS

GENERAL SPECIFICATIONS

| | T3000A - MTR3000 | T2003A - UPGRADE KIT FOR MTR2000 STATIONS |
|----------------------------------|------------------|---|
| Number of Frequencies | | Up to 16 |
| Modulation | | FM & 4FSK |
| Frequency Generation | | Synthesized |
| Channel Spacing Analog / Digital | | 12.5 kHz, 25 kHz / 12.5 kHz (6.25e compliant) |
| Mode of Operation | | Simplex / 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) |

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)

| | | |
|--|----------------------|--|
| Frequencies | 403-470, 450-524 MHz | 403-470 MHz |
| Selectivity (TIA603) 25 kHz / 12.5 kHz | | 80 dB (86 dB typical) / 75 dB (78 dB typical) |
| Selectivity (TIA603D) 25 kHz / 12.5 kHz | | 75 dB (85 dB typical) / 45 dB (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 (typical 95 dB) |
| 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% (1.5% 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 |
| RF Input Impedance | | 50 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 |
| 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 nominal, 45 dB nominal |
| Frequency Stability (for temperature and aging variation) | | 1.5 PPM/External Ref (optional) |
| 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 | | 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

| Frequency Range in MHz | Model | Type | 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 +2™ 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

PRODUCT SPEC SHEET

MTR3000 BASE STATION/REPEATER VHF SPECIFICATIONS

GENERAL SPECIFICATIONS

| | T3000A - MTR3000 | T2003A - UPGRADE KIT FOR MTR2000 STATIONS |
|----------------------------------|------------------|---|
| Number of Frequencies | | Up to 16 |
| Modulation | | FM & 4FSK |
| Frequency Generation | | Synthesized |
| Channel Spacing Analog / Digital | | 12.5 kHz, 25 kHz / 12.5 kHz (6.25e compliant) |
| Mode of Operation | | Simplex / 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)

| | 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 | 3.5A/ 1.9A | 12.2A |

RECEIVER (VHF)

| | | |
|--|--|---|
| Frequency | | 136-174 MHz |
| Selectivity (TIA603) 25 kHz / 12.5 kHz | | 80 dB (90 dB typical) / 75 dB (82 dB typical) |
| Selectivity (TIA603D) 25 kHz / 12.5 kHz | | 80 dB (90 dB typical) / 50 dB (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 (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 (52 dB typical) |
| Frequency Stability (for temperature and aging variation) | | 1.5 PPM/External Ref (optional) |
| 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 | | 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

| Frequency Range in MHz | Model | Type | 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 |
| 136-174 | T2003A | Transmitter | 1-30 / 40 | ABZ89FC3797 |

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 +2™ 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

PRODUCT SPEC SHEET

MTR3000 BASE STATION/REPEATER 800/900 MHZ SPECIFICATIONS

GENERAL SPECIFICATIONS

| | T3000A - MTR3000 | T2003A - UPGRADE KIT FOR MTR2000 STATIONS |
|----------------------------------|------------------|---|
| Number of Frequencies | | Up to 16 |
| Modulation | | FM & 4FSK |
| Frequency Generation | | Synthesized |
| Channel Spacing Analog / Digital | | 12.5 kHz, 25 kHz / 12.5 kHz (6.25e compliant) |
| Mode of Operation | | 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 (24.7 - 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) |

800/900 MHZ 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 | 3.4A/ 1.9A | 12.0A |

RECEIVER (800/900 MHz)

| | 806 - 825 & 896 - 902 MHz | 806 - 825, 896 - 902 MHz |
|--|---------------------------|--|
| Frequencies | | |
| Selectivity (TIA603): 800MHz: 25 kHz, 12.5 kHz / 900 MHz: 12.5 kHz | | 85 dB , 75 dB / 75 dB |
| Selectivity (TIA603D): 800MHz: 25 kHz, 12.5 kHz / 900 MHz: 12.5 kHz | | 80 dB (87 dB typical), 55 dB (62 dB typical) / 55 dB (62 dB typical) |
| Analog Sensitivity 12dB SINAD | | 0.28 uV (0.21 uV typical) |
| Digital Sensitivity 5% BER | | 0.28 uV |
| Signal Displacement Bandwidth: 800MHz: 25 kHz, 12.5 kHz / 900 MHz: 12.5 kHz | | 2 kHz, 1 kHz / 1 kHz |
| Intermodulation Rejection: 800MHz: 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; 300-3000 Hz referenced to 1000 Hz at line output |
| 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): 800MHz: 25 kHz, 12.5 kHz / 900 MHz: 12.5 kHz | | 50 dB nominal, 45 dB nominal / 45 dB nominal |
| RF Input Impedance | | 50 Ohms |

TRANSMITTER (800/900 MHz)

| | 851 - 870 & 935 - 941 MHz | 851 - 870, 935 - 941 MHz |
|--|---------------------------|--|
| Frequencies | | |
| Power Output (Continuous Duty) | 8-100 watts | 20-75 watts |
| Electronic Bandwidth | | Full Band |
| Output Impedance | | 50 Ohms |
| Intermodulation Attenuation | 55 dB | 50 dB |
| Maximum Deviation (RSD) 25 kHz / 12.5 kHz | | ±5 kHz, ±2.5 kHz / ±2.5 kHz |
| Audio Sensitivity | | 60% RSD @ 80 mV RMS |
| Spurious and Harmonic Emissions Attenuation 800 MHz / 900 MHz | 90 dB / 86 dB | 80 dB / 80 dB |
| FM Hum and Noise (750 µs de-emphasis): 800MHz: 25 kHz, 12.5 kHz / 900 MHz: 12.5 kHz | | 50 dB nominal, 45 dB nominal / 45 dB nominal |
| Frequency Stability (for temperature and aging variation) | | 0.1PPM/ External Ref (optional) |
| 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 | | FM Modulation: 800 MHz: 12.5 kHz: 11K0F3E; 25 kHz: 16K0F3E 900 MHz: 12.5 kHz: 11K0F3E 4FSK Modulation: 12.5 kHz - Data Only: 7K60FXD; 12.5 kHz - Data & Voice: 7K60FXE |

FCC TYPE ACCEPTANCE

| Frequency Range in MHz | Model | Type | 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 |

Industry Canada Approval: IC ID 109AB-5817; IC Model T3000-8/900
 Specifications per TIA/EIA 603D unless otherwise noted
 Product meets ETSI 300-086 & ETSI 300-113
 RoHS compliant; UL Listed
 Digital Protocol ETSI 102 361-1, -2, -3; AMBE +2™ Vocoder
 Specifications subject to change without notice. Version 3 12/10

PRODUCT SPEC SHEET
XRC 9000 TRUNKING CONTROLLER

GENERAL SPECIFICATIONS

| | |
|-----------------------------|---|
| Model | Single-Site Controller: TT2213A Multi-Site Controller: TT2215A |
| Performance | Celeron M, 1 GHz Microprocessor |
| Ethernet Connections | 4 Auto sensing 10/100 Mbps Ports (only one supported) |
| Serial Connections | 8 RS-232 Ports (only one supported) |
| Operating System | Linux |
| AC Input Power Requirements | 100/240 VAC, 47 to 63 Hz, 50 Watts fully loaded. |
| Standard Warranty | Two years |

PHYSICAL

| | |
|------------|---|
| Dimensions | 3.54 in H x 17.32 in W x 9.96 in L without mounting tabs (90 mm H x 440 mm W x 253 mm L) |
| Mounting | Standard 19" rack mounting |
| Weight | 15.4 lbs. (7 kg) |

ENVIRONMENTAL SPECIFICATIONS

| | |
|-----------------------|------------------------------|
| Operating Temperature | -30 to +60°C (-22 to +140°F) |
| Humidity | 5 to 95% RH |
| Storage Temperature | -40 to +95°C (-40 to +185°F) |

STANDARDS

| | |
|--------|--|
| FCC | Part 15 Subpart B, CISPR 22 Class A |
| UL/cUL | UL60950-1, CSA C 22.2 No. 60950-1-03, LVD EN60950-1 |

Specifications subject to change without notice. All specifications shown are typical.
Controller meets applicable regulatory requirements. Version 1 09/10

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