

# TM8200 Radio Specifications

**Please note:** These specifications are typical performance measurements as per the ETS standards.

## General Performance

Channel Capacity		1500 Conventional Channels (300 Scan/Vote Groups)
Channel Spacing (Bandwidth)	Narrow Medium Wide	12.5kHz (7.5kHz) 20kHz (12kHz) 25kHz (15kHz)
Frequency Range	A4 B1 C0 D1 H5 H6	66-88MHz 136-174MHz 175-225MHz 216-266MHz 400-470MHz 450-530MHz
Minimum Frequency step	At 530MHz	50Hz
Frequency Stability	-30°C to +60°C	+/- 1.5 ppm
Reference Oscillator Frequency		10.4MHz below 100MHz 13MHz above 100MHz
Power Supply Negative Ground	Receive and transmit Receive Only	10.8 – 16.8VDC 10.2 – 16.8VDC
Supply Current No backlighting Full backlighting	Off Receive standby Receive standby 3W Audio Transmit 25W VHF Transmit 25W UHF Transmit 5W VHF Transmit 5W UHF	3mA 150mA 230mA 700mA 4.7A 6.2A 2.7A 3.2A
Weight	Body with Control Head	1.5kg
Size		
Radio with Control Head	Depth Width Height	185mm 182mm 70mm
Operational Temperature		-30°C to +60°C

# Transmitter

This section covers the performance of the TM8200 25W transmitter.

Output Power	High	25W
	Medium	12W
	Low	5W
	Very Low	1W
Modulation Limiting	12.5kHz	<+/-2.5kHz
	20kHz	<+/-4kHz
	25kHz	<+/-5kHz
FM Hum and Noise	12.5kHz VHF	39dB
	20kHz VHF	42dB
	25kHz VHF	44dB
	12.5kHz UHF	38dB
	20kHz UHF	41dB
	25kHz UHF	43dB
Conducted/Radiated Emissions	All radios	<-36dBm to 1GHz
	Radio band below 500MHz	<-30dBm 1 to 4GHz
Adjacent Channel Power	All radios	-70dB
Audio Response	Voice	300Hz – 3000Hz
	Extended (via tap-in)	4Hz – 6000Hz (25kHz) 60% modulation
Audio Distortion	1kHz 60% modulation	<3%
Audio Tap Input Level	For 60% modulation	-10dBm equivalent into 10K
Transmit Rise Time	EPPT to 90% power	<10ms
Transmit Inhibit Power Special application use	When inhibited by digital input	<-50dBc
Duty cycle		33% - 1 minute transmit, 2 minutes receive

# Receiver

This section covers the performance of the TM8200 receiver.

Sensitivity		<-118dBm for 12dB SINAD <-115dBm for 20dB SINAD Phos
Intermodulation		>67dB ETS/>75dB EIA
Selectivity	12.5kHz 20kHz 25kHz	>65dB >70dB >75dB
Spurious Responses		>72dB
Audio Distortion	1kHz 60% modulation	<3%
Hum and Noise	12.5kHz VHF 20kHz VHF 25kHz VHF 12.5kHz UHF 20kHz UHF 25kHz UHF	40dB 42dB 45dB 40dB 41dB 43dB
Audio Response	Voice Extended (via tap-out)	300Hz – 3000Hz 4Hz – 6000Hz (25kHz) 60% modulation
Audio Tap Output Level	600 Ohm unbalanced	-10dBm into 60% modulation
Audio Output Power	External Internal	10W (BTL output) 4W

## Environmental

This section describes the environmental specifications the TM8200 radio has been tested to. The following standards have been tested to MIL-STD-810 C, D, E and F.

<b>MIL-STD-810 Standard</b>	<b>Method (F only)</b>	<b>Procedure</b>
Low Pressure	500.4	1
High Temperature	501.4	1 & 2
Low Temperature	502.4	1 & 2
Temperature Shock	503.4	1
Solar Radiation	505.4	1
Rain	506.4	3
Humidity	507.4	1
Salt Fog	509.4	1
Dust	510.4	1
Vibration	514.5	1
Shock	516.5	1 & 5
<b>IP Test</b>		
Rain and Dust		IP54

## Compliances

This section describes the main compliances the TM8200 product holds.

Europe	ETS	ETS300-086 ETS300-113 EN300-219 EN60950-1:2001 73/23/EEC
Australia /NZ		AS4295 all parts ACA acceptance FFSK/THSD
USA		CFR 47:Part 22 CFR 47 Part 90 CFR 47: Part2
Canada		RS119 issue 6
China		GB/T 15844.1 – 1995 GB/T 16611 – 1996