

# PH690

## DMR Portable Radio

- Large Display with Full Keypad
- Loud and Clear Sound, Long Battery Life
- Excellent Man-Machine Interface
- High Hardware Specification
- IP68



## Technical Specifications






General	
Digital Protocol	ETSI/TS102 361-1,-2,-3
Frequency	UHF:1400-470MHz ; VHF:136-174MHz
Channel Capacity	1024
Zone Capacity	64
Channel Spacing	12.5kHz/20kHz/25kHz
Frequency Stability	±0.5ppm
Operating Voltage	7.4V
Battery Capacity	2000mAh
Battery Life(5:5:90)	Analog: 14 hours Digital: 18 hours
Size (H x W x D)	126x54.5x32mm(without antenna)
Weight	About 310g (with antenna and battery)
Screen	2.0inch LCD, 240x320, 6 Lines Text
Vocoder	AMBE++
Bluetooth	BT2.1+EDR/4.0 (optional)
Location	GPS/Glonass (optional)
Man Down	Support
Vibration	Support
Real Time	Support
Geomagnetic	Support
Encryption	Support SW and HW Encryption (Optional)
Receiver	
Sensitivity(Analog)	0.22uV(12dB SINAD)
Sensitivity(Digital)	0.22uV (5% BER)
Adjacent Channel Selectivity	60 dB@12.5kHz/70 dB@20/25kHz (TIA603A) -1T
	45dB@12.5kHz /70 dB@20/25kHz (TIA603D) -2T
	60dB@12.5kHz /70 dB@20/25kHz ( ETSI )
Intermodulation	70 dB (TIA603D)
	65 dB (ETSI)
Spurious Rejection	70 dB (TIA603D)
	70 dB (ETSI)
Blocking or Desensitization	80dB (TIA603D)
	84dB (ETSI)
Co-channel Rejection	-12~0 dB @12.5kHz/-8~0 dB @20/25kHz
Hum and Noise	-40 dB@12.5kHz /-43 dB@20kHz /-45 dB@25kHz
Rated Audio Power	0.5W
Max Audio Power	2.0W
Audio Distortion @ Rated Audio	≤3% (Typical)
Audio Response	+1 ~ -3dB (TIA603D)
Conducted Spurious Emission	-57 dBm (TIA603D)

Transmitter	
Low Power Output	1W
High Power Output	4W (UHF1) ; 5W(VHF)
FM Modulation	12.5kHz: 11K0F3E / 20kHz: 14K0F3E / 25kHz: 16K0F3E
4FSK Digital Modulation	12.5kHz Data Only: 7K60F1D&7K60FXD
	12.5kHz Voice Only: 7K60F1E&7K60FXE
	12.5kHz Voice And Data: 7K60F1W
Conducted/Radiated Emission	-36dBm ≤1GHz ; -30dBm >1GHz
Modulation Limiting	±2.5kHz @12.5kHz /±4kHz @20kHz /±5.0kHz @25kHz
FM Hum and Noise	-40 dB@12.5kHz /-43dB@20kHz /-45 dB@25kHz
Adjacent Channel Power	60 dB@12.5kHz /70 dB @20/25kHz
Audio Distortion @ Rated Audio	≤3% (Typical)
Audio Response	+1 ~ -3dB(TIA603D)

Environmental	
Operating Temperature	-30°C ~ +60°C
Storage Temperature	-40°C ~ +85°C
ESD	IEC 61000-4-2 (level 4) ±8kV (Contact) ±15kV(Air)
Dust and Water Resistance	IP68
Reliability	MIL-STD-810 G

GPS	
Accuracy specs are for long-term tracking (95th percentile values>5satellites visible at nominal -130 dBm signal strength)	
TTFF (Time To First Fix) - Cold Start	<60s
TTFF (Time To First Fix) - Hot Start	<10s
Location Accuracy	<10m

## Standard Accessories

		
2000mAh Li-ion Batteryx1	Chargerx1	Power Adapterx1
		
Belt Clipx1	Antennax1	