

# PH690

## DMR Portable Radio

- 
- Large Display with Full Keypad
  - Loud and Clear Audio, Long Battery Life
  - Excellent User Interface
  - High Specification Full Featured
  - IP68
- 



# Technical Specifications

General	
Digital Protocol	ETSI/TS102 361-1,-2,-3
Frequency	UHF1:400-470MHz; 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
	12.5KHz Data Only: 7K60F1D&7K60FXD
4FSK Digital Modulation	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

