



# DP405

## DMR Portable Radio

- Easy to Carry with Rugged Design
- Cost-effective
- Dual Modes(analog & digital)for Smooth Migration
- DMO 2-slot Increases Call Capacity
- User-defined Voice Announcement



## DP405 DMR Portable Radio

### Key Features and Benefits

#### • Voice Annunciation

Channel number; zone change will be announced by voice. This helps operation under low visibility. This annunciation can be customized by user.

#### • Clear and Loud Voice in Compact Size Device

Good audio quality provided by DMR technology and a 1W high-power loudspeaker. Make it possible to hear loud and clear even in noisy environments.

#### • Dual-timeslot Communication in DMO Mode

Provide Direct Mode Operation in 2 slots increasing channel capacity without increasing channel frequency spectrum.

#### • Analog, Digital and Mixed Modes

DP405 is able to detect signal type when receiving a call and automatically switch between analog and digital mode. The user can reply during the call hang time using PTT. This feature improves migration from analog to digital.

#### • Long Operation Time

TDMA technology and power-saving feature enable the battery to work longer. DP405 with standard 2000mAh battery can work up to 15-18 hours in 5-5-90 mode.

#### • Digital Encryption

DP405 supports ARC 40-bit encryption, which guarantees communication safety and improve communication privacy. Encryption function provide further protection against over-the-air interception.

#### • Various Digital Signaling

DP405 supports features such as Radio Check, Call Alert, Stun/Revive, Radio Kill, and Remote Monitor, which make the radio management easy.

#### • Man Down (optional)

DP405 supports Man Down to guarantee user's safety at all times.

#### • Pseudo Trunk

This feature can improve frequency efficiency by allocating the free slot to a member and helps you to communicate timely in an emergency.

All specifications are tested according to applicable standards, and subject to change without notice due to continuous development.

## Specifications

General	
Frequency Range	136-174MHz, 350-400MHz, 400-470MHz, 400-520MHz
Channel Capacity	256
Zone Capacity	16
Channel Spacing	25kHz/12.5kHz(Analog) ; 12.5kHz(Digital)
Operating Voltage	7.4V DC $\pm 20\%$
Battery	2000mAh Li-ion(Standard)
Battery Life	Analog: 15 hours@2000mAh (5-5-90 Duty Cycle, High TX Power)
Frequency Stability	$\pm 1.5$ ppm
Antenna Impedance	50 $\Omega$
Dimension(H*W*D) (with battery, without antenna)	116mm*54mm*31mm
Weight (with standard battery)	280g(2000mAh)
LCD Display	None

Receiver	
Sensitivity Analog	0.22 $\mu$ V@12dB SINAD
Sensitivity Digital	0.22 $\mu$ V@BER5%
Selectivity	60dB@12.5kHz, 70dB@25kHz(TIA-603) 60dB@12.5kHz, 70dB@25kHz(ETSI)
Spurious Response Rejection	60dB@12.5kHz, 70dB@25kHz(TIA-603) 60dB@12.5kHz, 70dB@25kHz(ETSI)
Inter-modulation	70dB@12.5kHz/25kHz(TIA-603) 65dB@12.5kHz/25kHz(ETSI)
Hum and Noise	40dB@12.5kHz, 45dB@25kHz
Rated Audio Power Output	1W@16 $\Omega$
Rated Audio Distortion	$\leq 3\%$ (typically)
Audio Response	+1~-3dB
Conducted Spurious Emission	-57dBm@<1GHz, -47dBm@>1GHz

Transmitter	
RF Power Output	VHF: 1W/5W; UHF: 1W/4W
FM Modulation	11KΦF3E@12.5kHz; 16KΦF3E@25kHz
4FSK Digital Modulation	7K6ΦFXD@Data; 7K6ΦFXW@Data+Voice
Modulation Limiting	$\pm 2.5$ kHz@12.5kHz; $\pm 5$ kHz@25kHz
Radiated Spurious Emission	-36dBm < 1GHz, -30dBm > 1GHz
FM Hum & Noise	40dB@12.5kHz, 45dB@25kHz
Adjacent Channel Power	60dB@12.5kHz, 70dB@25kHz
Audio Response	+1~-3dB
Audio Distortion	3%
Digital Vocoder Type	AMBE+2™
Digital Protocol	ETSI-TS102 361-1,-2,-3

Environment Specifications	
Operating Temperature	-30°C ~ +60°C
Storage Temperature	-40°C ~ +85°C
ESD	IEC61000-4-2(Level4) $\pm 4$ kV(Contact) $\pm 8$ kV(air)

### Standard Accessories



Adaptor



Single Unit Charger



Battery



Belt Clip



Antenna



Strap



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# DP405S

## DMR Portable Radio

Easy to Carry with Rugged Design  
Cost-effective without Compromise on Quality  
Dual Modes (analog & digital) for Smooth Migration  
DMO 2-slot Increases Call Capacity  
User-defined Voice Announcement



**KIRISUN DMR Solution  
Delivers Significant Benefits**

**DP405S**



# DP405S DMR Portable Radio

## KEY FEATURES AND BENEFITS

### • Self-defined Voice Annunciation

The user can directly download voice annunciation of different languages and also zone alert tone to the radio through the PC software based on the actual needs. After powering on, the voice annunciation will automatically switch to the local language.

### • Compact Size with Clear and Loud Voice

The application of 1W high-power loudspeaker and the technology of advanced digital voice encoding as well as forward error correction make it possible for the user to hear clear and loud voice even in the noisy environment.

### • Improved Call Capacity with DMO 2-slot.

The feature of DMO 2-slot realizes two group calls on the same frequency at the same time in Direct Mode. The call capacity can be increased without having to apply for additional frequency, thus greatly helping the user to save the cost.

### • Smooth Transition and Compatibility with Both Analog and Digital Mode

It supports both digital and analog mode, so the user can go on using the existing analog radio to talk to DP405S.

### • Longer Operation Duration

TDMA technology and power-saving feature enable the battery to work longer. DP405S with standard 2000mAh battery can perform for 16 hours to meet the user's demands on longer operation.

### • ARC 40-bit Encryption Guarantees Safe Communication

It supports ARC 40-bit encryption, which guarantees communication safety and prevent from being eavesdropped.

### • Various Digital Signaling

It supports features such as Radio Check, Call Alert, Stun/Revive, Radio Kill, and Remote Monitor, which make radio management easy.

### • Man Down (optional).

It supports Man Down to guarantee user's safety at all times.

### • Pseudo Trunk

This feature can improve frequency efficiency by allocating the free slot to a member and helps you to communicate timely in an emergency.

## SPECIFICATIONS

### General

Frequency Range	446.00625-446.19375MHz
Channel Capacity	256
Zone Capacity	16
Channel Spacing	25KHz/12.5KHz(Analog) 12.5KHz(Digital)
Operating Voltage	7.4V DC $\pm 20\%$
Battery	2000mAh Li-ion(Standard)
Battery Life	Analog: 25 hours@2000mAh
(5-5-90 Duty Cycle, High TX Power)	Digital: 20 hours @2000mAh
Frequency Stability	$\pm 1.5$ ppm
Antenna Impedance	50 $\Omega$
Dimension(H*W*D) (with battery, without antenna)	116mm*54mm*31mm
Weight(with standard battery)	280g(2000mAh)
LCD Display	None

### Receiver

Sensitivity Analog	0.22 $\mu$ V@12dB SINAD
Sensitivity Digital	0.22 $\mu$ V@BER5%
Selectivity	60dB@12.5kHz, 70dB@25kHz(TIA-603)
	60dB@12.5kHz, 70dB@25kHz(ETSI)
	70dB@12.5kHz/25kHz(TIA-603)
	70dB@12.5kHz/25kHz(ETSI)
	40dB@12.5kHz, 45dB@25kHz
Spurious Response Rejection	1W@16 $\Omega$
	<3%(typically)
Hum and Noise	+1~-3dB
Rated Audio Power Output	-57dBm@<1GHz, -47dBm@>1GHz
Rated Audio Distortion	
Audio Response	
Conducted Spurious Emission	

### Transmitter

RF Power Output	0.5W
FM Modulation	11K $\Phi$ F3E@12.5kHz; 16K $\Phi$ F3E@25kHz
4FSK Digital Modulation	7K6 $\Phi$ FXD@Data; 7K6 $\Phi$ FXW@Data + Voice
Modulation Limiting	$\pm 2.5$ kHz@12.5kHz; $\pm 5$ kHz@25kHz
FM Hum & Noise	40dB@12.5kHz, 45dB@25kHz
Adjacent Channel Power	60dB@12.5kHz, 70dB@25kHz
Audio Response	+1~-3dB
Audio Distortion	3%
Digital Vocoder Type	ABME+2 <sup>nd</sup>
Digital Protocol	ETSI-TS102 361-1,-2,-3

### Environment Specifications

Operating Temperature	-30 $^{\circ}$ C ~ +60 $^{\circ}$ C
Storage Temperature	-40 $^{\circ}$ C ~ +85 $^{\circ}$ C
ESD	IEC61000-4-2(Level4)
	$\pm 4$ kV(Contact) $\pm 8$ kV(air)

All specifications are tested according to applicable standards, and subject to change without notice due to continuous development.

## STANDARD ACCESSORIES



Adaptor



Single Unit Charger



Battery



Belt Clip



Antenna



Strap



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### Headquarters

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FC CE ISO9001: 2015 Accredited Designer & Manufacturer