

TSD-4416 5/1W UHF (410-470 MHz)

TSD-4116 5/1W VHF (136-174 MHz)

TSD-4424 5/1W UHF (410-470 MHz)

TSD-4124 5/1W VHF (136-174 MHz)

**The TSD-4000 Series** of radios combine exceptional two-way radio functionality with analog and DMR Tier II TDMA digital technology.



TSD-4424/TSD-4124

TSD-4416/TSD-4116

- 512 Channels (Display: 32 Ch / 16 Zones, Non Display: 16 Ch / 32 Zones)
- 5W RF Output Power VHF & UHF
- 2600 mAh Li-Ion Battery  
Battery Life Based on a 90/5/5 Duty Cycle:  
23 Hours Digital and 17 Hours Analog
- 1 Watt Audio Output
- Direct or Repeater TDMA Tier II Mode
- Ch. Tri-Mode - DMR, Analog or Mixed
- Smooth Analog-to-Digital Transition
- Remote Stun/Revive
- Encryption AES (128, 192, 256)
- Contact Menu for Individual & Group Calling (Display)
- Voice Recording (Display)
- Lone Worker (Display)
- Call Log (Display)
- Flashlight (Display)
- Remote Monitoring
- CTCSS/DCS, VOX
- 2-Pin Audio Connector
- IP54 Certified



## SPECIFICATIONS

### GENERAL

TSD-4116 VHF	136-174 MHz
TSD-4416 UHF	410-470 MHz
TSD-4124 VHF (Display)	136-174 MHz
TSD-4424 UHF (Display)	410-470 MHz
Channel Capacity	512; 16 Ch. w/32 Zones
Digital	DMR Tier II TDMA
Channel Spacing	25/20/12.5 kHz (Analog) 12.5 kHz (Digital) 2 Time Slots of 6.25 Each
Operating Voltage	7.4VDC
Battery Capacity	2600 mAh Li-Ion
Frequency Stability	± 1.0 PPM (-30° to +60° C)
Antenna Impedance	50 Ω
Dimensions (H/W/D)	4.6 x 2.16 x 1.33" (118x55x34 mm)
Weight (w/ Battery)	9.0 oz. (234 g.)
Case/Frame	Polycarbonate/Aluminum Die Cast
Battery Life (Hours)	Analog: 17 Hours, Digital: 23 Hours 90/5/5 duty cycle

### TRANSMITTER

RF Output Power	5/1 Watts
FM Modulation	11K0F3E (12.5 kHz), 14K0F3E (20 kHz), 16K0F3E (25 kHz)
4FSK Digital Modulation	12.5 kHz Data Only: 7K60FXD, 12.5 kHz Data & Voice: 7K60FXW
Conducted/Radiated Emission	-36dBm<1GHz, -30dBm>1GHz
Modulation Limiting	±2.5 kHz (12.5 kHz), ±4.0 kHz (20 kHz), ±5.0 kHz (25 kHz)
FM Noise	40dB (12.5 kHz)
Adjacent Channel Power	60dB (12.5 kHz), 70dB (20/25 kHz)
Audio Distortion	3% maximum with 1kHz modulation
Digital Vocoder Type	AMBE3000 Vocoder Chip with AMBE+2 Voice Compression Algorithm
Digital Protocol	ETSI-TS102 361-1-2-3

### RECEIVER

Sensitivity (Analog)	0.25µV @ 12dB SINAD
Sensitivity (Digital)	0.22µ V/BER 5%
Selectivity TIA-603 ETSI	>65dB (12.5 kHz), 70dB (20/25 kHz)
Intermodulation TIA-603 ETSI	>70dB (12.5/20/25 kHz)
S/N	40dB (12.5 kHz), 43dB (20 kHz), 45dB (25 kHz)
Audio Output Power	1.0 Watt
Audio Distortion	< 3% at rated output
Audio Response	+1, ~ -3dB From 6dB per octave de-emphasis characteristics
Spurious Emission	70dB

#### PACKAGE INCLUDES:

Radio, 2600 mAh Li-Ion battery, rapid rate desktop charger, antenna, belt clip and user manual.

Specifications are subject to change without notice.

## ACCESSORIES



### Charger Options

Dual Slot Rapid Rate Desktop Charger  
2600 mAh Li-Ion Battery  
TSA-6006TS4 - 6 Unit Gang Charger w/Dual Slot  
TSA-1020TS4 - 10 Unit Gang Charger w/Dual Slot



### Other Options

Nylon Carrying Case  
Leather Carrying Case w/Belt Loop Swivel

### ENVIRONMENTAL

Operating Temperature	-30° C to +60° C
Storage Temperature	-40° C to +85° C
ESD	IEC 61000-4-2/±8KV/±15 KV
Dust & Water Protection	IP-54 Standard

Approvals	FCC	Industry Canada
TSD-4116	VSOXP-100D	184A-XP100D
TSD-4416	VSOXP-400D	184A-XP400D
TSD-4124	VSOXP-100D	184A-XP100D
TSD-4424	VSOXP-400D	184A-XP400D



Manufactured to ISO-9002:2000 quality standard.

NOTE: Some features indicated by specifications listed are prohibited by FCC rule and are not available on models sold in the U.S. or its territories.



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