

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.



- 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



TSD-4424/TSD-4124

TSD-4416/TSD-4116



**10 Unit Gang
Charger/Dual Slot**
Radio/Battery & Battery
only

**6 Unit Gang
Charger/Dual Slot**
Radio/Battery &
Battery only



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



Speaker Mic Options

Standard Speaker Microphone
Heavy Duty Speaker Microphone
Heavy Duty Speaker Microphone w/Vol Control



Ear Piece Options

"D" Style Earhook Speaker w/Lapel Mic/PTT
"C" Style Earhook Speaker w/Lapel Mic/PTT
Clear Earbud Speaker w/Lapel Mic/PTT



Other Options

Nylon Carrying Case
Leather Carrying Case w/Belt Loop Swivel
Programming Software and Cable (USB)

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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