

it's **simoco**

TSF2000 VHF/UHF BASE STATION



The TSF2000 is a range of advanced Base Stations for Analogue Communications Systems.

The TSF 2025 and 2100 are slim-line, cost effective, high performance Base Stations for the 21st Century with comprehensive remote control facilities.

- High performance in 1RU height, 19" base station series, TSF2025: 1-25W cont, and TSF2100: 25-100W cont.
- High environmental specification.
- Transmit Duty Cycle 100%, Full Duplex.
- Modular construction for low MTTR.
- Rack or wall mounted.
- Microsoft Windows® based Programming Tool.
- DSP controlled, fully programmable.
- Five key PMR frequency bands covered (66-520MHz).
- Completely compatible with SRM9000 Series of Mobile Radios.
- In-built loudspeaker for audio monitoring.
- 37-way Facilities socket with programmable pin functions.
- Two 2/4-wire line connections.
- Dual-redundant, speed controlled fans with remote alarms.
- Line Signalling, Voting Tones, RSSI.
- Local Encode/Decode of CTCSS, DCS, Selcall tones (decode only).



TSF
2000

SPECIFICATIONS

General

Channel Bandwidth	12.5kHz, 20kHz or 25kHz selectable per channel
Modulation	Freq. F3E (voice) pre-emphasised/flat, or FFSK data (1200 or 2400bps)
Frequency Bands	EO: 66–88MHz AC: 136–174MHz R3: 335–400MHz TU: 400–480MHz UW: 440–520MHz
Stability	±2.0 ppm
Temperature	–25°C to +55°C Operating (Full Spec.) –40°C to +80°C Storage
Antenna Connect	2 x 50W female N-type
Environmental	IP20 ingress protection, Humidity < non condensing
Inputs/Outputs	Engineer's handset (RJ45 – front panel) 2 x 2/4-wire line audio interfaces (screw terminal) 2 x line audio connections + E&M signalling (RJ45) Programmable facilities connector (37 way D-type) RS232 serial connection (9 way D) Ethernet IP Interface (10BASE T – RJ45) Power Connector (5 Pin, 25 D-shell)
Supply Voltage	10.8 to 16.2V DC negative earth (13.65V nominal)
Dimensions	44mm (1RU) High x 433mm Wide x 430mm Deep (Excluding Cables)
– In wall mount	125mm High x 465mm Wide x 470mm Deep
Power Requirement	12V DC Nominal for 25W (additional 24V needed for 100W)
Weight	6.95 kg

Transmitter

Transmit Power	1W to 25W (TSF2025) selectable per channel 25W to 100W (TSF2100) selectable per channel
Tx Current Consumption	25W @ 5.7A (Typical; 20°C, no Engineer's Handset)
Duty Cycle	100%
Audio Distortion	<5% at 1kHz, 60% deviation
Audio Frequency Response	+1dB to –3dB of pre-emphasised 300 to 3000Hz of 25kHz channel, 300 to 2550Hz on 12.5kHz channel
Intermodulation	>40dB (12.5kHz), 45dB (25kHz)
Hum and Noise	>40dB (12.5kHz), 45dB (25kHz)
Transmit Rise Time	<25mS

Receiver

Sensitivity	Voice: 12dB SINAD for 0.3 μ V _{pd} for 25kHz channel Data: typical FFSK performance for <10 ⁻² BER (< 20%MER): 0.3 μ V – 1200 baud in 12.5kHz & 1200/2400 baud in 25kHz 0.5 μ V – 2400 baud in 12.5kHz channel
Rx Current Consumption	Typical: 1.0A (20°C; no Engineers Handset) Max: 1.55A (fans & audio on max plus Engineers Handset)
Selectivity	>73dB (25kHz), >63dB (12.5kHz)
Intermodulation	>70dB attenuation
Audio Response	±3dB of de-emphasised 300–2550Hz for 12.5kHz chan with CTCSS
Audio Output	2W _{rms} internal monitor speaker
Distortion	<5%
Blocking	>95dB at ± 1Mhz
Hum and Noise	>40dB (12.5kHz)



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