

Proven performance and reliability.

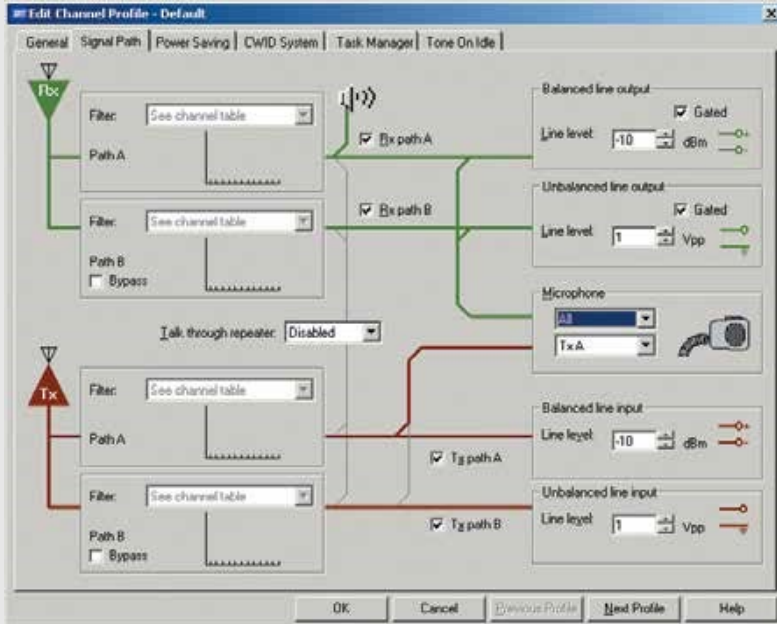
The TB8100 is a highly flexible base station/repeater, ideal for any analog application: a simple conventional repeater, POCSAG paging transmitter, duplex radio link, simulcast or MPT 1327 trunked system.



KEY FEATURES

- ▶ 255 channels with up to 16 CTCSS and DCS sub-audible tones per channel, as a community repeater without additional equipment*
- ▶ Covers key frequency bands from 136MHz to 941MHz
- ▶ The TB8100 can house two repeaters, or a repeater + link in the same subrack providing an alternative method of connecting repeaters
- ▶ Tone on idle and CWID
- ▶ System interface options include Isolated Audio, Isolated Audio E&M, TaitNet MPT Trunked, TaitNet RS232 and TaitNet Ethernet
- ▶ Ethernet system interface option enables IP management of communications system
- ▶ Fast key-up time of 2ms
- ▶ Monitor and manage 150 parameters, including 43 alarm parameters remotely
- ▶ Computer Controlled Interface (CCI) protocol allows external computer equipment to remotely monitor and control a TB8100 base station
- ▶ Power Save option has receive power as low as 60mA, ideal for solar sites
- ▶ Built-in spectrum analyzer measures received signal levels across the selected band

*Advanced Profiles option required



Comprehensive and intuitive software can be used to change configuration quickly and easily.

FEATURES AND BENEFITS

Complete remote operation

With its many remote monitoring options the TB8100 is ideal for isolated sites. Users can manage more than 150 parameters remotely with TB8100 Service Kit software.

Advanced diagnostics

Monitor your entire network from a central location with the TB8100 alarm reporting option. This means you do not need to manually connect to each base station to check it, minimizing maintenance time and costs.

Tough design

Specified to operate continuously at full power, at up to 15,000ft (4,572m) and in temperatures as high as 140°F (60°C). Large heatsinks mean that no spacing is required between base stations.

Excellent RF specifications

Outstanding specifications for selectivity, sensitivity and adjacent channel interference make the TB8100 ideal for use in high-noise environments.

Flexible software

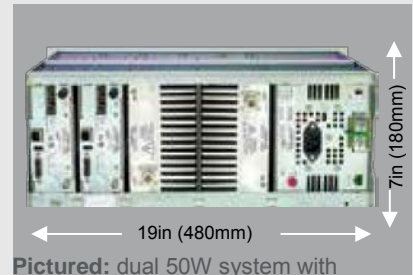
The Advanced Profiles option gives you precise control over your channel configuration and access to the most advanced base station features.

Transition to digital

A common hardware platform makes it a smooth transition from the TB8100 to digital technologies, including P25 and DMR (Digital Mobile Radio).

Tait solution

Combined with Tait terminals and TaitNet infrastructure products, Tait offers customized communication solutions, all working seamlessly with the intelligent, flexible TB8100 base station/repeater.



Pictured: dual 50W system with AC/DC Power Management Unit.

Clean back panel design with industry-standard interfaces enables easy connectivity to the rest of the system and third party vendors.

Front-loading modules slip into the 4U subrack, making building the system, replacing a module or accessing a system interface board fast and simple.

TB8100 modules include:

- ▶ Reciter - contains the receiver and exciter.
- ▶ VHF and UHF capability within the same subrack.
- ▶ Power Amplifier - available as 5W, 50W and 100W modules.
- ▶ Power Management Unit - provides AC and/or DC power, and includes an auxiliary power supply.
- ▶ System Interface – provides access to multiple interfaces.
- ▶ Subrack, Front panel and Control panel.

| GENERAL | | | | |
|----------------------------------|--|--------------|--------------|---------------|
| | Operational Frequency | PA | | |
| VHF | 136–156MHz | 136–174MHz | | |
| | 148–174MHz | | | |
| | 174–193MHz | 174–225MHz | | |
| | 193–225MHz | | | |
| UHF | 380–420MHz | 380–520MHz | | |
| | 400–440MHz | | | |
| | 440–480MHz | | | |
| | 470–520MHz | | | |
| 700/800MHz | 762–776/850–870MHz (Tx) 792–824MHz (Rx) | 760–870MHz | | |
| 900MHz | 896–912MHz (Rx) 927–941MHz (Tx) | 850–960MHz | | |
| Electronic Switching Range | ≥2% of centre frequency (eg: 10MHz @ 500MHz) | | | |
| Channel/Network Capacity | 255 | | | |
| Channel Spacing | 12.5/20/25kHz | | | |
| Channel Increment | 0.125kHz | | | |
| Dimensions (WxDxH) | 19 x 15 x 7in (480 x 390 x 180mm) 4U Rack Space | | | |
| Weight | Single 5/50W: 45lb (21kg) | | | |
| | Single 100W: 47lb (22kg) | | | |
| | Dual 5/50W: 61lb (28kg) | | | |
| Operational Temperature | -22° to 140°F (-30° to 60°C) | | | |
| Description | Modular base station/repeater/receiver | | | |
| System Types | Conventional FM, MPT 1327 Trunked, QS2 Simulcast, Duplex Radio Link and others | | | |
| Frequency Stability | ±0.5ppm | | | |
| External Reference | 10MHz or 12.8MHz | | | |
| Power Consumption* | 12VDC | 24VDC | 48VDC | 120VAC |
| Standby (20ms Receiver Cycling) | 720mA | 360mA | 170mA | |
| Sleep (200ms Receiver Cycling) | 400mA | 200mA | 98mA | |
| Deep Sleep (1s Receiver Cycling) | 109mA | 61mA | 31mA | |
| Tx @ 5W** | 2.6A | 1.3A | 0.61A | 47VA |
| Tx @ 50W** | 10A | 5.4A | 2.6A | 138VA |
| Tx @ 100W** | 19.2A | 10.3A | 4.9A | 239VA |
| Supply Requirements | | | | |
| Mains | 88 to 264V (PFC power factor correction) | | | |
| DC | 12V, 24V, 48V (Nominal +ve or -ve earth) | | | |
| Options | Optional coax relay kit | | | |

*Power consumption is dependent on the status of the licensed power save software features and the selected settings for Tx key time, Rx cycling.

**Transmit tests without fans operating.

***9H0 does not have 95A

All parameters are measured in accordance with TIA/EIA 603 procedures unless otherwise specified.

AUDIO

| | Input | Output |
|--|--|---|
| Audio Input Types | 600Ω Balanced Unbalanced Microphone | 600Ω Balanced Unbalanced Monitor Speaker |
| Audio Interface Level (for nominal 60% deviation) | Balanced -20 to +10dBm Unbalanced 0.3Vpp to 3Vpp | Balanced -20 to +10dBm Unbalanced 0.3Vpp to 3Vpp |
| Audio Response Bandwidth | 300Hz to 3.4kHz | |
| Audio Response | Flat or de-emphasized | |
| Audio Distortion | ≤2% at -70dBm | |
| Audio Filtering Characteristics | Flat or de-emphasized Full band or speech band Subaudible band only Filters can be applied independently to each of the input sources | |

TRANSMITTER

| | | |
|------------------------------|---|-----------------------|
| Modulation Limiting | ±2.5KHz (NB), ±5KHz (WB) | |
| Transmit Rise Time | 2ms | |
| Transmit Power Rating | 100W Continuous (programmable from 10W to 100W) 50W Continuous (programmable from 5W to 50W) 5W Continuous (programmable from 1W to 5W) | |
| | VHF/UHF | 800mHz |
| FM Hum and Noise | -50dB (NB), 55dB (WB) | -50dB (NB), 53dB (WB) |
| Conducted/Radiated Emissions | -36dBm to 1GHz | -20dBm to 9GHz |

RECEIVER

| | | |
|--------------------------|----------------------|----------------------|
| Sensitivity | 0.25µV (-119dBm) | |
| Spurious Response | ≥100dB | |
| | VHF/UHF | 800mHz |
| Intermodulation | 80dB (NB), 85dB (WB) | 80dB (NB), 85dB (WB) |
| Selectivity | 85dB (NB), 90dB (WB) | 79dB (NB), 84dB (WB) |
| Ultimate Signal to Noise | 45dB (NB), 53dB (WB) | 43dB (NB), 47dB (WB) |

Authorized Partners

Specifications are subject to change without notice and shall not form part of any contract. They are issued for guidance purposes only. All specifications shown are typical.

*Contact your local Tait representative for more information.

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