

# Proven performance and reliability.

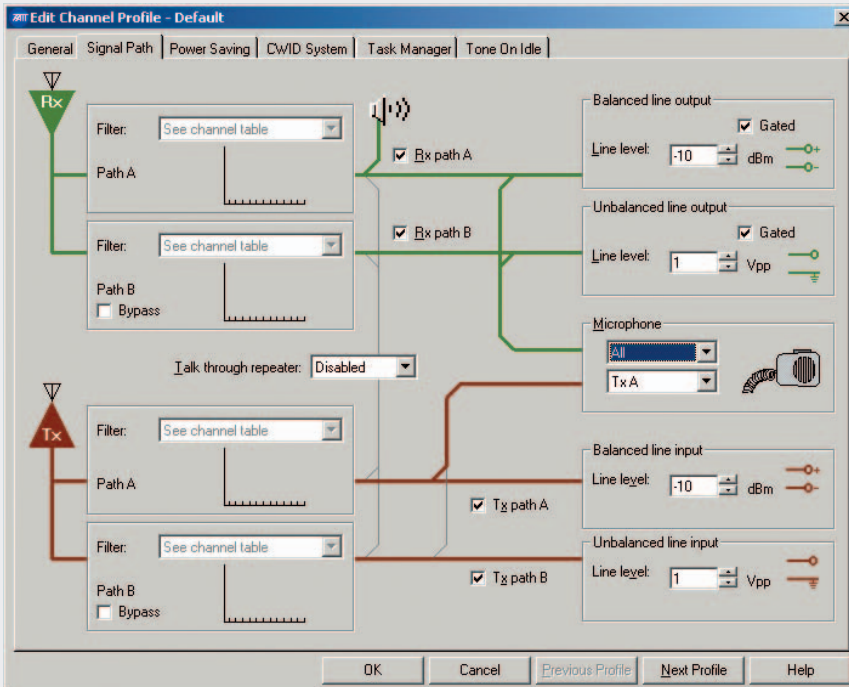
The TB8100 is a highly flexible base station/repeater, ideal for any analog application: a simple conventional repeater, POCSAG paging transmitter, simulcast or MPT 1327 trunked system.



## 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
- ▶ 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.

**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**

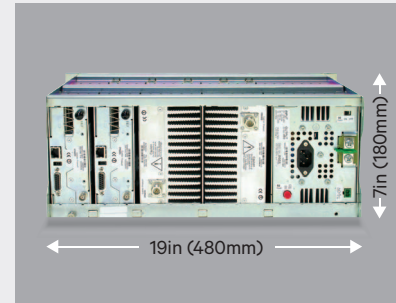
The Advanced Profiles option gives you precise control over your channel configuration and access to the most advanced base station features.

**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.



Clean back panel design with industry-standard interfaces enables easy connectivity to the rest of the system and third party vendors. Pictured: dual 50W system with AC/DC Power Management Unit.

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.
- ▶ 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**

	<b>Operational Frequency</b>	<b>PA</b>		
VHF	136–156MHz 148–174MHz 174–193MHz 193–225MHz	136–174MHz 174–225MHz		
UHF	380–420MHz 400–440MHz 440–480MHz 470–520MHz	380–520MHz		
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 and others			
Frequency Stability	±0.5ppm			
External Reference	10MHz or 12.8MHz			
Power Consumption*	<b>12VDC</b>	<b>24VDC</b>	<b>48VDC</b>	<b>120VAC</b>
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.

\*\*\*9HO does not have 95A

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

**AUDIO**

	<b>Input</b>	<b>Output</b>
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 Audio Response	300kHz to 3.4kHz 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)	
FM Hum and Noise	<b>VHF/UHF</b> -50dB (NB), 55dB (WB)	<b>800MHz</b> -50dB (NB), 53dB (WB)
Conducted/Radiated Emissions	-36dBm to 1GHz	-20dBm to 9GHz

**RECEIVER**

Sensitivity	0.25μV (-119dBm)	
Spurious Responses	≥100dB	
Intermodulation	<b>VHF/UHF</b> 80dB (NB), 85dB (WB)	<b>800MHz</b> 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

Tait is your complete supplier of radio communications equipment offering mobile, portable and infrastructure solutions. Tait is renowned for its flexibility, responsiveness and commitment to producing innovative world-class mobile radio communications products.

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

+Please note that not all frequency bands and power outputs are available in all markets. For further information please check with your nearest Tait office or authorized dealer.

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