

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.

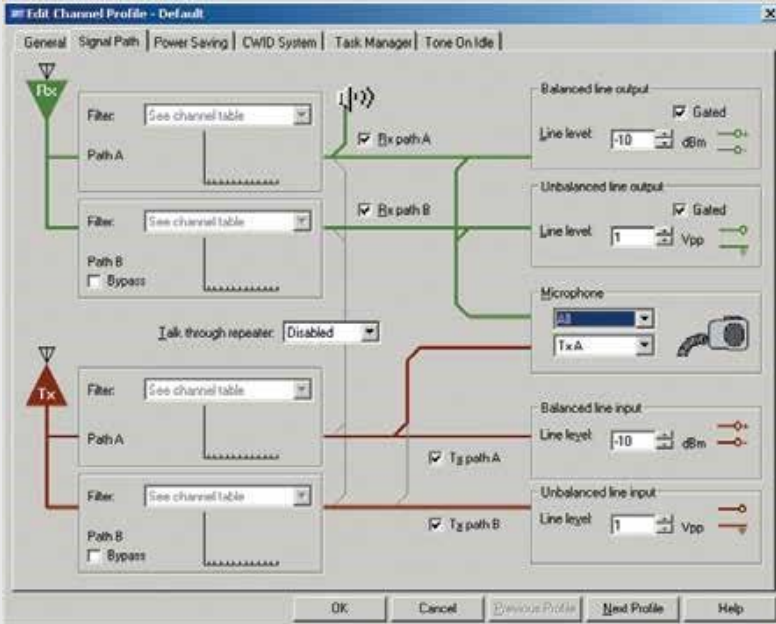


KEY FEATURES

- ▶ 255 channels with up to 16 CTCSS or 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 sub rack 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 50MW, ideal for solar sites**
- ▶ Built-in spectrum analyzer measures received signal levels across the selected band

*Advanced Profiles option required.

** With 12V PA option



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

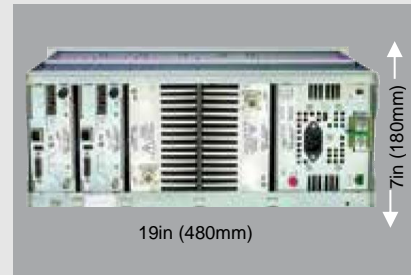
The Advanced Profiles option gives you precise control over your channel configuration and access to the most advanced base station features.

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.



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.
- ▶ VHF and UHF capability within the same sub rack.
- ▶ 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	896-902MHz (Rx) **** 927–941MHz (Tx)	850–941MHz			
Electronic Switching Range	≥2% of centre frequency (eg: 10MHz @ 500MHz)				
Channel/Network Capacity	255				
Channel Spacing	12.5/20/25kHz				
Channel Increment	VHF 2.5KHz and 3.125KHz, other bands 5KHz and 6.25KHz				
Dimensions (WxDxH)	19 x 15 x 7in (480 x 390 x 180mm) 4U Rack Space				
Weight	Single 5/50W: 47.4lb (21.5kg)				
	Single 100W: 50lb (22.8kg)				
	Dual 5/50W: 63lb (28.6kg)				
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*	12VDC	24VDC	48VDC	110VAC	240VAC
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	118VA
Tx @ 50W**	10A	5.4A	2.6A	138VA	177VA
Tx @ 100W**	19.2A	10.3A	4.9A	239VA	262VA
Supply Requirements	88 to 264V (with power factor correction)				
Mains	12V, 24V, 48V (Nominal +ve or -ve earth) 12v PA is –ve earth only with PMU				
DC					
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

**** Also 852-854MHz and 928-930MHz Tx/Rx on both sub bands.

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	≤3% at -70dBm	
Audio Filtering Characteristics	Flat or de-emphasized Full band or speech band Sub audible band only Filters can be applied independently to each of the input sources	

TRANSMITTER

Modulation Limiting	±2.5KHz (NB), ±4KHz (MB*), ±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)

* Mid bandwidth is only available in 380-520MHz.

To operate Tx deviation >2.5KHz in 150-174&421-470MHz a software feature license must be enabled.

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.

For further information please check with your nearest Tait office or authorized dealer.

The word "Tait" and the Tait logo are trademarks of Tait Limited.

Tait Limited facilities are certified for ISO9001:2008 (Quality Management System), ISO14001:2004 (Environmental Management System) and ISO18001:2007 (Occupational Health and Safety Management System) for aspects associated with the design, manufacture and distribution of radio communications and control equipment, systems and services. In addition, all our Regional Head Offices are certified to ISO9001:2008.

