



TB7100 BASE STATION/REPEATER

The TB7100 is a compact, cost-effective base station/repeater for use as a line-controlled base, talk through repeater, RF modem, data repeater or with TaitNet TN1100 MPT 1327 trunked systems.

Flexible communications

- 100 channels with CTCSS and DCS sub-audible signaling
- Covers five key frequency bands from 66-530MHz
- Two digit LCD display
- Four programmable function keys
- Continuous duty at 25W, 40W (UHF) and 50W (VHF) power output
- Full duplex operation (when fitted with optional duplexer)
- Tone on idle and CWID

Uncompromising base station design

- Capable of operation at ambient temperatures of up to 140°F (60°C) and lowest -22°F (-30°C)
- Fans and heatsink designed to give 100 per cent transmit duty cycle
- Programmable fan operation
- Integral monitor speaker for audio testing
- 9-way RS232 serial data port
- 25-way system interface for connecting external equipment
- Low standby power consumption (140mA in economy mode, 25W)
- Rack or wall mounted

Conveniently compact

The only repeater on the market with optional internal power supply and internal duplexer in a slimline 1U format. This makes the TB7100 easy to transport and install; an ideal choice when space for your RF equipment is limited.

Ideal for single site coverage

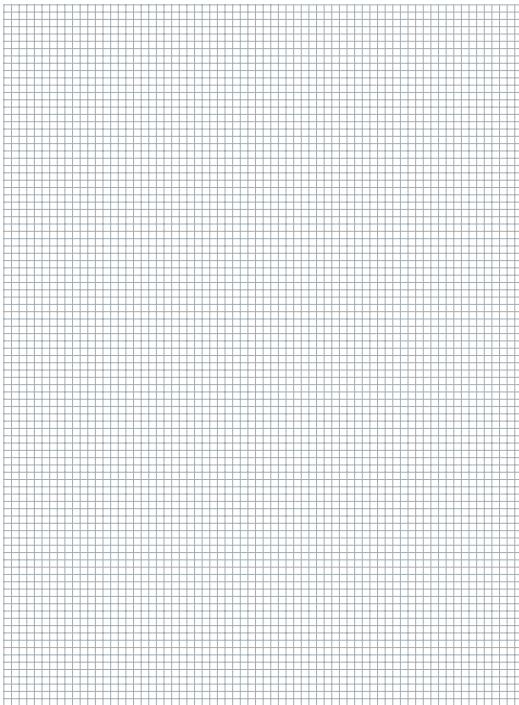
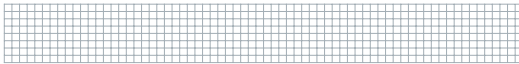
A cost-effective repeater for single site applications such as industrial or campus sites, shopping malls, hotels, small taxi or bus fleets.

Ease of integration

Add a T1810 channel controller to create a low cost TN1100 trunked system, ideal for mine or industrial applications, ports and railway stations, building sites, security and maintenance services.

Data support

Supports both 12/19.2kbps Tait High Speed Data and 1200/2400 baud FFSK as standard. The TB7100 can be configured as a data repeater or RF modem and is fully compatible with the TM8000 range of mobile radio equipment.



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.

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AUTHORIZED DEALER

TB7100 Specifications

General

	Band	Operational Frequency	Transmit Power
VHF	A4	66-88MHz	25W
	B1	136-174MHz	25W, 50W
	D1	216-266MHz	25W
UHF	H5	400-470MHz	25W, 40W
	H6	450-530MHz	25W
	H7	450-520MHz	40W
Frequency Stability	±1.5ppm		
Channel/Network Capacity	100		
Channel Spacing	12.5/20/25kHz		
Channel Increment	7.5/12.5/15/20/25/30kHz		
Dimensions (WxDxH)	19 x 15.7 x 1.8in (483 x 400 x 43.5mm) 1U Rack Space		
Weight	13.2lb (6kg)		
Operational Temperature	25W 40/50W		
System Types	-22° to 140°F (-30° to 60°C) -22° to 122°F (-30° to 50°C)		
Data Types	Full Duplex Voice TTR & LCR 1200 FFSK, 12K NB, 19K2 WB, THSD		
Operational Data Modes	FFSK, Tait High Speed Data		
DC Current	Transparent Mode		
Audio Input Types	25W TB7100	40W TB7100	
	3.1A (5W) 6.3A (25W) 540mA 280mA	4.9A (15W) 8.2A (40W) 540mA 280mA	
Audio Interface Level (For nominal 60% deviation)	Input	Output	
	600Ω Balanced Unbalanced Microphone	600Ω Balanced Unbalanced Monitor Speaker	
Audio Response Bandwidth	Balanced -20 to +6dBm Unbalanced 220µV-3Vpp		
Audio Response	Balanced -20 to +3dBm Unbalanced 220µV-3Vpp		
Audio Distortion	300Hz – 3kHz Flat or de-emphasized		
	< 3% at 1kHz 60% deviation		

Transmitter

Output Power	25W, 12W, 5W, 1W
25W	40W, 20W, 15W, 10W
40W UHF	50W, 25W, 15W, 10W
50W VHF	
Modulation Limiting	
12.5kHz	±2.5kHz
20kHz	±4kHz
25kHz	±5kHz
FM Hum and Noise	
12.5kHz	-35dB
20kHz	-39dB
25kHz	-41dB
Conducted/Radiated Emissions	
	-36dBm < 1GHz
	-30dBm > 1GHz
Transmit Rise Time	10ms

Receiver

Sensitivity	0.35µV [-116dBm] for 12dB SINAD
Intermodulation	25W: 70dB 40/50W: 75dB (typical)
Selectivity	
12.5kHz	68dB
20kHz	73dB
25kHz	75dB
Spurious Response	≤73dB
Ultimate Signal to Noise	36dB/38dB/40dB (NB/MB/WB)
Hum and Noise	
12.5kHz	-40dB
20kHz	-41dB
25kHz	-43dB

FCC and IC ID

Frequency Range	FCC Acceptance Number	FCC Part Number CRF47	IC Acceptance Number
66-88MHz	CASTBBA4A	22, 90	
136-174MHz	CASTBBB1A	22, 90	737A-TBBB1A
	CASTBBB1B	15, 22, 74, 90, 90.210	737A-TBBB1B
	CASTBBD1A	80, 90, 90T	
216-266MHz	CASTBBH5A	22, 90	737A-TBBH5A
	CASTBBH5B	22, 74, 90, 90.210, 95A	737A-TBBH5B
400-470MHz	CASTBBH7B	22, 74, 90, 90.210, 95A	
	CASTBBH6A	22, 90	737A-TBBH6A