



## TB8100 External Channel Select

Issue No.: JI-128-01

Author: TEA Workshop



### General

This modification has been designed for external, manual channel selection on a TB8100 Base Station.

**Note:** Original installation of this option was utilized for Tetracom Pty Ltd (S/O S40115055)

### Parts

Part Number	Description	Supplier	Qty.
DMC12702	12 x 7 x 0.2 Screened Cable	Tycab	600mm
SR-1250	Pushwheel BCD switch	Jaycar	x 2
SR-1254	(Pair) Locking End Caps	Jaycar	x 2
SR-1256	Switch Spacer (if required)	Jaycar	-
None	Black Perspex – 80 x 35 mm	Custom Product	x 1
303-161	Grommet - 6.5 mm inner/ 9.5 mm outer	Farnell	x 1
354-00010-36	Fastener – Cable Lug	Tait	x 1
345-00040-20	Torx button head m3 x 10	Tait	x 2
352-00010-08	Nut Hex	Tait	x 2
353-00010-11	Washer	Tait	x 2
150-728	25 Pin DRange (male plug)	Farnell	x 1
470-041	Casing DB25 Plug (complete)	Farnell	x 1
400-00020-07	2mm Sil Rubber Sleeving (length = 10 mm)	Tait NZ	x 10

### Procedure

1. Mount SR-1250 BCD switches to Black Perspex plate.
2. Bolt Perspex plate to TBA2020 Control Panel. **Refer Diagrams 1, 2, 3 and 4.**
3. Fit shielded cable to switches as outlined by **Diagram 5**. (ensure cable anchored to panel).  
**Refer Diagrams 6 and 7.**
4. Fit cable through rear cover (316-06785-00 Blank Rear Panel) by drilling 10mm hole and fitting grommet (303-161). **Refer Diagram 8.**
5. Wire DB25 male plug to cable as per **Diagram 5**. Also **Refer Diagrams 9**.

**Note:** Perspex cover fitted to TBA2020 has been custom made for BCD Channel switch mounting to panel – no part number available.

Diagram 1



Diagram 2



Diagram 3



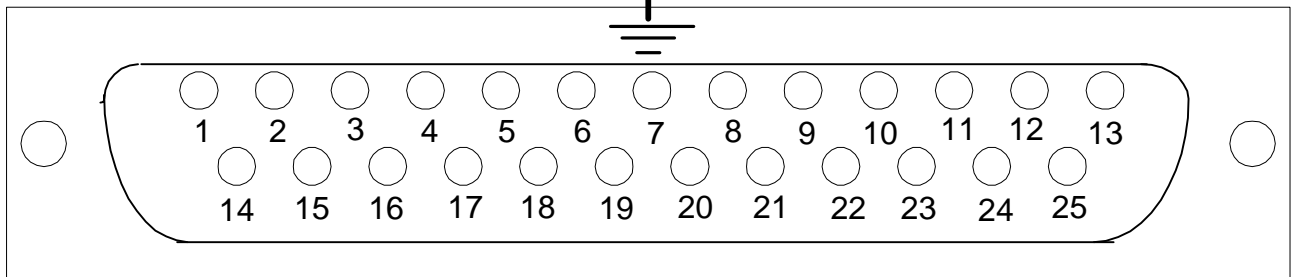
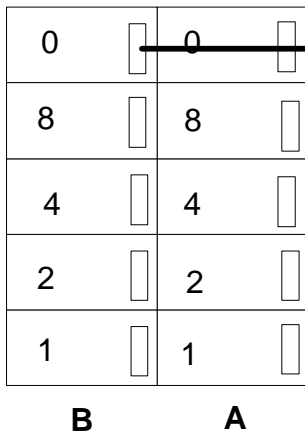
Diagram 4



Diagram 5

Wiring Diagram

BCD Switches (Rear View)



DB25 (Front View)

BCD PIN A	BCD PIN B	WIRE COLOUR	DB25 PIN
1	-	Green	18
2	-	Blue	19
4	-	Purple	20
8	-	Grey	21
-	1	Brown	14
-	2	Red	15
-	4	Orange	16
-	8	Yellow	17
0	0	Braid	Ground
Unused	Unused	White	22
Unused	Unused	Black	23

Diagram 6

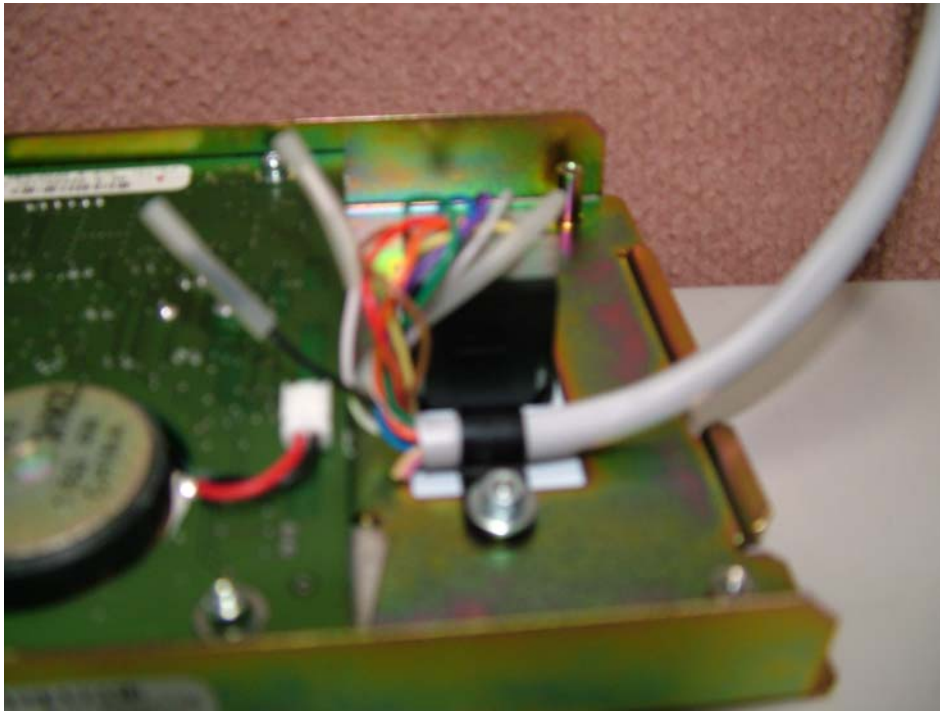


Diagram 7

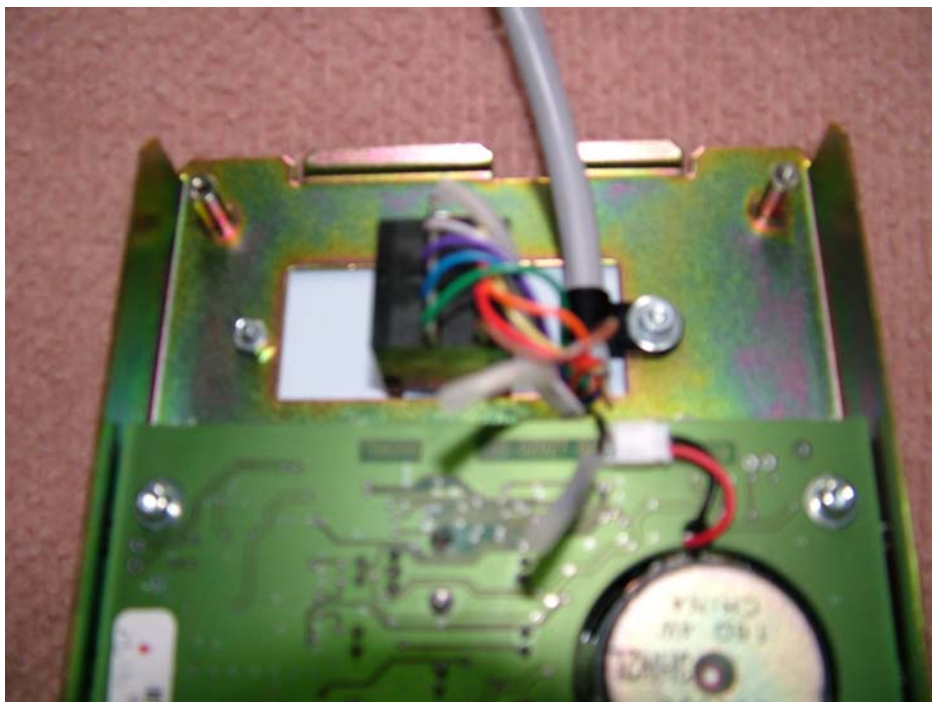


Diagram 8

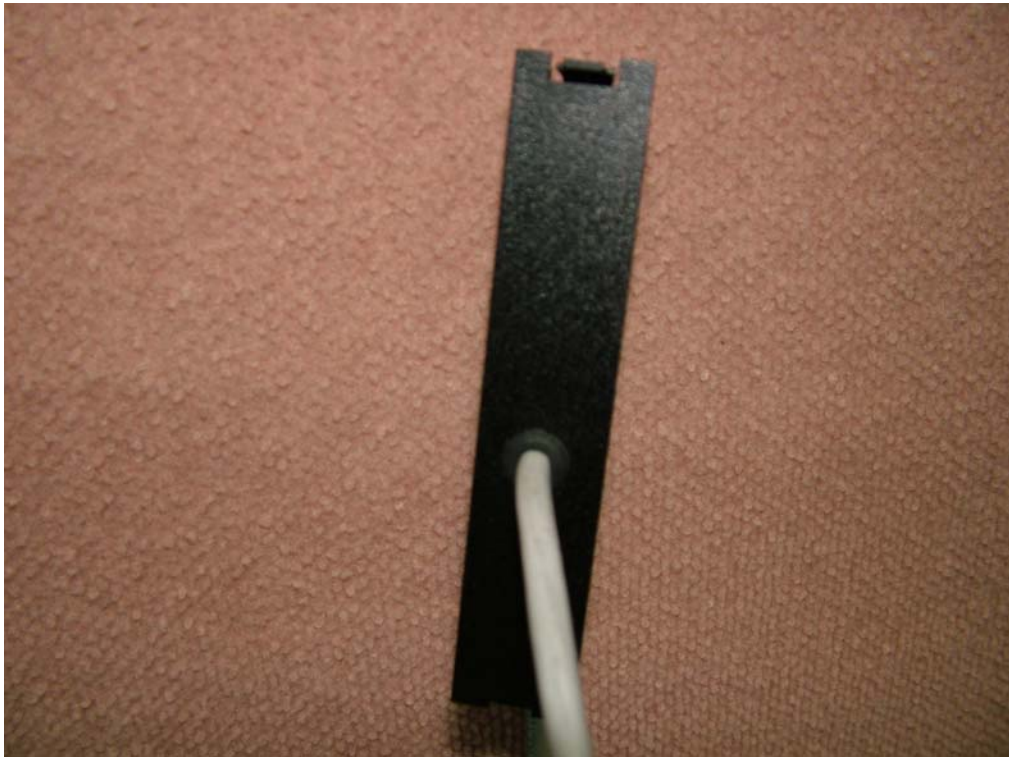
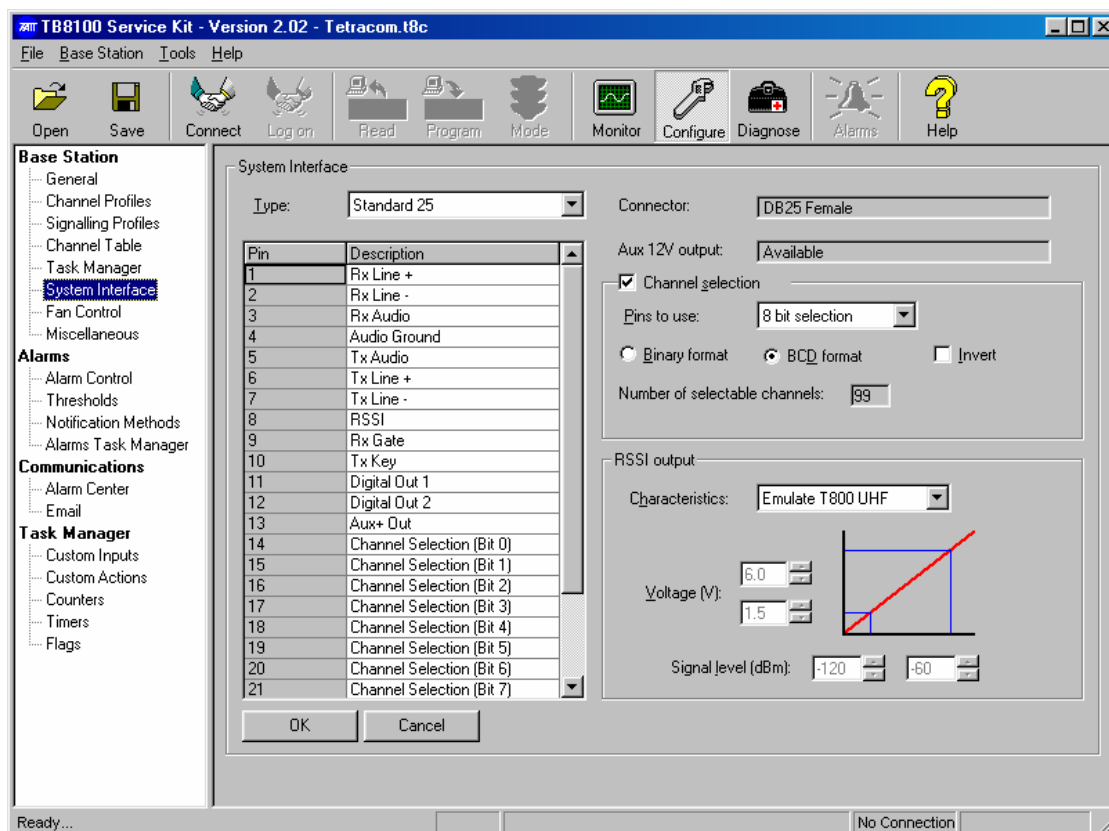


Diagram 9



## Specifications:

- Configure Base Station setup (particularly System Interface Section) as outlined in template below



- A standard SIF board fitted to the Reciter is required for full external channel change options (255 channels)
  - ie: TBA10A0 (SIF non-isolated 600  $\Omega$  audio)
  - or
  - TBA10B0 (SIF isolated 600  $\Omega$  audio)
 This gives maximum 10 digital inputs for maximum BCD channel selection.
- A TBA10C0 (SIF isolated 600  $\Omega$  E + M) can be used but has limited digital inputs available (6) which reduces BCD channel selection ability.
- SIF's (MPT Trunked) not suitable for this application.

**Note:** This job description only outlines fitting of external BCD Channel selection for up to 99 channels. An extra SR-1250 BCD switch is required to be wired in for maximum channel selection (255 channels)

**Installation:**

Fit TBA2020 Control Panel to rack. Run cable internally out blank rear cover and connect to 25 pin socket on rear of Reciter. Power up and test external channel select with Base Station appropriately configured. Channel indication is given in the TB8100 Service Kit in: Diagnose/Digital I/O section while unit is in run mode. **Refer Diagrams 10 and 11**

**Diagram 10****Diagram 11**