



Technical Note TN-738

**Instructions for Fitting a CSI
DCS 23 Board to T800 Series 2
Equipment**

1 October 2002

Applicability

These fitting instructions are to be used when a CSI DCS-23 board is to be fitted to T800 series 2 equipment

1. Introduction

These fitting instructions were written specifically for T8XX-XX-XXXX Revision -02 PCB's. However if the DCS-23 board is to be fitted to earlier or later revisions then the various connection points in this instruction can be used for cross referencing with the unit you are installing the DCS-23 into. If unsure please contact your local Tait dealer or subsidiary

2 Receiver Fitting Instructions

**T855-XX-XXXX
Receiver**

Wire the DCS-23 unit into the audio processor as follows

DCS-23 Signal	Wire Colour	T855 Connection
+ Power	Red	+ 13.80 Volts (P258)
Ground	Black	GND (P222)
Mute Output	White	RX Disable B (Pad 228)
Discriminator Audio	Green	Audio 1 (Pad 207)
Hi Pass Out	Blue	I/O (Pad 250)
Microphone Hang up	Violet	GND (P213)

Audio Processor
link settings

1. Fit link PL240 4-5 (K-L)
2. Remove Link PL230 (N-P)
3. Fit Link PL260 1-2 (U-V)

Jumper settings
for DCS-23

Solder jumper 11(IN) on DCS board **ONLY** if Data inversion is required

**T835-XX-XXXX
Receiver**

Wire the DCS-23 unit into the audio processor as follows

DCS-23 Signal	Wire Colour	T835 Connection
+ Power	Red	+ 13.80 Volts (P258)
Ground	Black	GND (P222)
Mute Output	White	RX Disable B (Pad 228)
Discriminator Audio	Green	Audio 1 (Pad 207)
Hi Pass Out	Blue	I/O (Pad 250)
Microphone Hang up	Violet	GND (P213)

Audio Processor
link settings

1. Fit link PL240 4-5 (K-L)
2. Fit Link PL230 2-3
3. Fit Link PL260 1-2 (U-V)

Jumper settings
for DCS-23

Solder jumper 11(IN) on DCS board **ONLY** if Data inversion is required

Alignment
Procedure for
DCS-23 and T8XX
Receiver

No alignment is required for the DCS-23 in the Receiver. The T8XX-XX-XXXX Receiver is aligned as per the manual and/or Customer requirements

Mounting of
DCS-23

Fit a piece of double sided vinyl tape to the bottom side of the DCS-23 board, mount the unit to the top of **T210** in the Receiver. Ensure that the board is located away from the chassis of the Receiver. Using the piece of double sided vinyl tape, provided with the DCS-23 kit, fit this to the top of the unit to provide insulation against possible chassis shorts. **Fit sleeving** to the end of the unused wires on the DCS-23 board. **DO NOT DISCONNECT THEM FROM J1 ON THE DCS BOARD COMPLETELY.** Place the unused wires in a position so as not to interfere with the operation of the Receiver and the DCS-23 board.

3 Transmitter Fitting Instructions

T85X-XX-XXXX Transmitter/Exciter

Wire the DCS-23 unit into the audio processor as follows. Cut wires on DCS-23 J1 loom to 80mm.

DCS-23 Signal	Wire Colour	T85X Connection
+ Power	Red	+ 9.0 Volts (P258)
Ground	Black	GND (P263)
PTT Input	Orange	TX-Enable – Opt. (P217)* See Modifications
DCS Output	Yellow	CTCSS (P255)

Audio Processor link settings

There are no special link settings for the Transmitter/Exciter Audio processor.

T83X-XX-XXXX Transmitter/Exciter

Wire the DCS-23 unit into the audio processor as follows. Cut wires on DCS-23 J1 loom to 80mm.

DCS-23 Signal	Wire Colour	T83X Connection
+ Power	Red	+ 9.0 Volts (P230)
Ground	Black	GND (P263)
PTT Input	Orange	TX-Enable – Opt. (P217)* See Modifications
DCS Output	Yellow	CTCSS (P255)

Modifications to T85X/T83X Transmitter/Exciter

The DCS-23 requires a ‘Pull to Ground’ to operate correctly. To achieve this D240 on the ‘TX Enable – Opt.’ Line on the T85X/T83X (Ver. –02) needs to be shorted out. Using a soldering iron place a short on D240 across pins 1 and 3. Later Revision Boards have an output pad on **Pin 3 of D240** and **do not** require this modification.

Alignment Procedure of DCS-23 and Transmitter/Exciter.

For the latest programming and Alignment instruction for the DCS-23 please refer to the **Instruction Sheet** provided with the DCS-23 board. The T8XX-XX-XXXX Transmitter/Exciter is aligned as per manual and/or Customers specifications.

Mounting of DCS-23 Fit a piece of double sided vinyl tape to the bottom side of the DCS-23 board, mount the unit to the top of **T210** in the Transmitter/Exciter. Ensure that the board is located away from the chassis of the Transmitter/Exciter. Using the piece of double sided vinyl tape, provided with the DCS-23 kit, fit this to the top of the unit to provide insulation against possible chassis shorts. **Fit sleeving** to the end of the unused wires on the DCS-23 board. **DO NOT DISCONNECT THEM FROM J1 ON THE DCS BOARD COMPLETELY.** Place the unused wires in a position so as not to interfere with the operation of the Transmitter/Exciter and the DCS-23 board.

Compliance No Compliance issues

CSO Instruction Please ensure all relevant Technical Staff are aware of these instructions.

4. Issuing authority

Name and position of issuing officer Rob Ottaway
Team Leader Infrastructure.

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