

1 T800-22-0000 General Information

This section provides a description and specification of the T800-22-0000 base station/repeater rack frame.

The following topics are covered in this section.

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1.1 The T800-22-0000 Rack Frame

The T800-22-0000 is a standard 5U high, 19" wide base station/repeater rack frame. The rack frame houses the range of T800 Series II modules within the frequency range 66-960MHz, with power outputs ranging from 1-100W. It can be configured as a base station or repeater by changing links on the backplane PCB.

Figure 1.1 shows the mechanical layout of the T800-22-0000 rack frame. This is shown in more detail, along with specific components and parts lists, in Section 3.3.

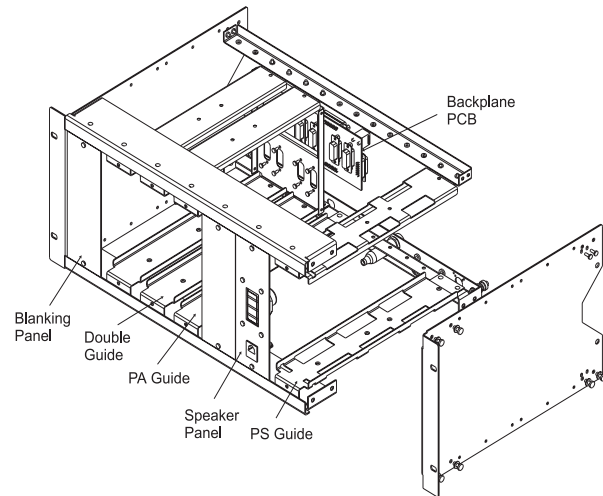


Figure 1.1

A brief description of each component is given below.

1.1.1 Panels

The T800-22-0000 rack frame comes complete with two blank panels and a speaker panel. The placement of these panels is shown above in Figure 1.1, with a front view shown in Figure 1.2.

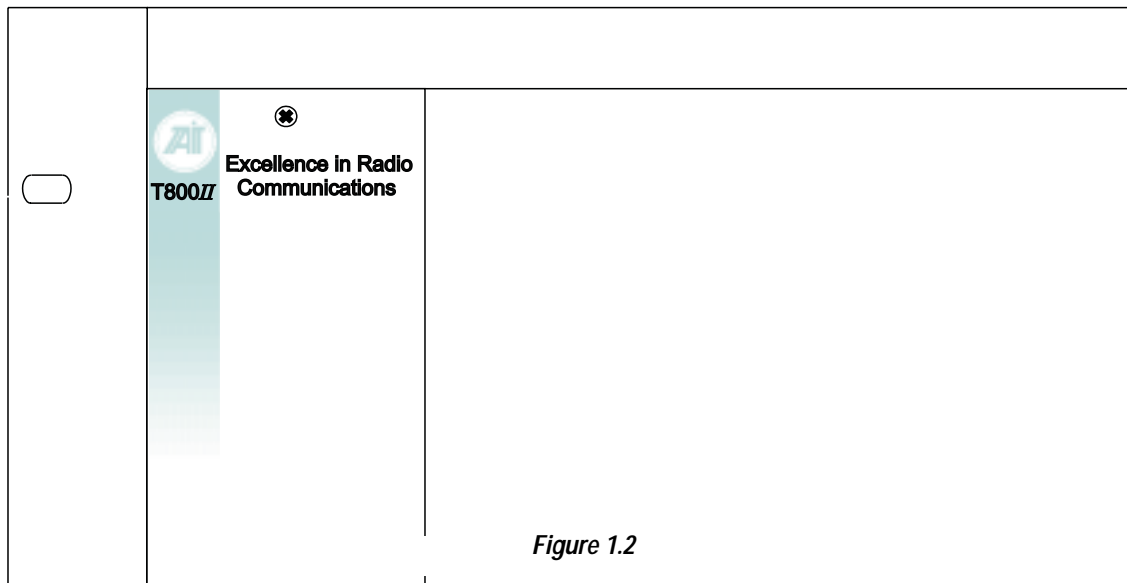


Figure 1.2

Blank Panels

Blank panels are optional, and are used to cover up empty spaces in a rack frame.

Speaker Panel

The speaker panel, shown right, is fitted with an RJ11 connector for programming T800 Series II modules via a programming lead. If the speaker panel needs to be removed, a mirror RJ11 programming port connector is provided on the backplane PCB.

The speaker panel is described further in Section 2.4.

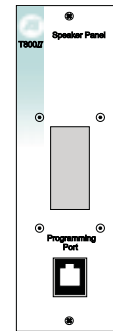


Figure 1.3

1.1.2 Guides

The guide kits listed below are available for the T800-22-0000 rack frame. They are illustrated in Figure 1.1 in this section, and more information can be found in Section 1.1.4 and in Section 3.3.

- **Double guide kit**
This kit fits into a T800 Series II rack frame and accepts two T800 Series II modules (except for power supplies and power amplifiers which must use their own guides). Refer to Sections 1.1.4 & 3.3 for more information and illustrations.
- **Power Supply (T807/8) guide kit**
This kit fits into a T800 Series II rack frame and accepts one T800 Series II power supply (refer to Sections 1.1.4 & 3.3 for more information and illustrations).
- **PA (50W) guide kit**
This kit fits into a T800 Series II rack frame and accepts one T800 Series II 50W power amplifier (refer to Sections 1.1.4 & 3.3 for more information and illustrations).
- **PA (100W) guide kit**
This kit fits into a T800 Series II rack frame and accepts one T800 Series II 100W power amplifier (refer to Sections 1.1.4 & 3.3 for more information and illustrations).

1.1.3 Backplane PCB

The backplane PCB has been laid out with OEM (Original Equipment Manufacturer) products in mind. The T800-22-0000 rack frame can be configured as either a base station or repeater by means of five link jumpers.

The main components of the backplane PCB are listed below.

- RJ11 connector - used for module programming whenever the speaker panel has been removed
- Two 25-way D-ranges - supplying all Rx and Tx/Ex/PA module pinouts.
- Two channel select DIP switches (SW1 and SW2) - can be operated separately for Rx or Tx/Ex, or combined for a single channel selection across both Rx and Tx/Ex modules. The DIP switches will only work when DR2 is connected to the module.
- A coaxial relay driver (CN1) - used in base station mode.
- A cooling fan driver (CN2) - activated off the Tx key line.

These components are all described further in Section 2.

- A programming connector (CN3) - used for looping the serial programming port from backplane to backplane.

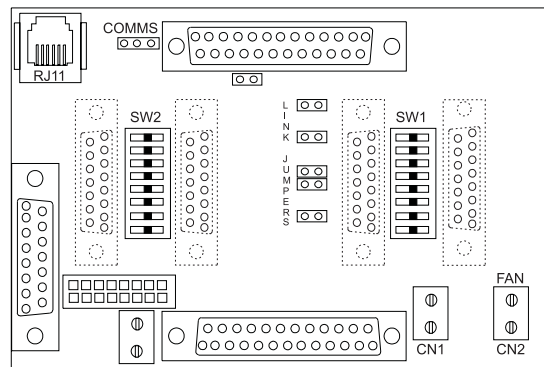


Figure 1.4 Layout Of Backplane PCB 220-01409-01

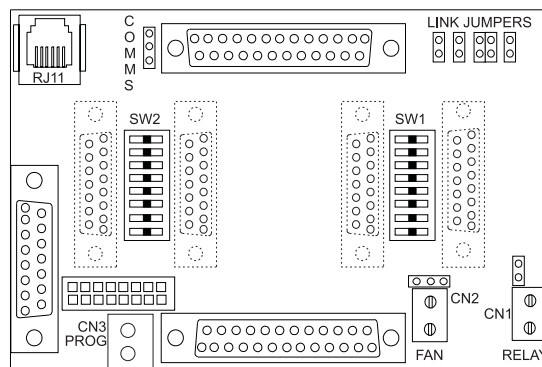


Figure 1.5 Layout Of Backplane PCB 220-01409-03

1.1.4 Series II Optional Kits

There are several Series II optional kits available for the T800-22-0000 rack frame. These are listed below with their appropriate Product Codes which should be used for ordering purposes from your nearest Tait Dealer or Subsidiary.

General Ancillary Kits

- **T004-72** **RF Coaxial relay kit**
An assembly fitted with three female N-type connectors, complete with a mounting bracket and two coaxial cables terminated in male N-type connectors (refer to Section 2 for more information).
- **T800-03-0000** **Auxiliary D-range kit**
An additional D-range kit, normally fitted as D-range 2, comprising one D-range plug assembly complete with connecting loom and mounting screws. The ribbon cable loom connects the D-range PCB to the Micromatch socket (SK805) in the microcontroller compartment. This kit is typically used in paging applications and where external channel control is needed.

Front Panel Kits

- **T800-15-0000** **Speaker/Programming port kit**
A 60mm speaker panel fitted with a 4Ω speaker and complete with mounting hardware (refer to page 1.4 in this section, and Sections 2 & 3 for illustrations and more information).
- **T800-40-0001** **Blank panel with fitting kit**
The blank panel is used to cover up empty spaces in a rack frame. The kit comprises the blanking guide, blank panel and mounting screws (refer to Section 3 for illustration).

Rack Ancillaries

- **T800-19-0000** **Rack fan kit - rail mounted**
This kit features a rack mounting fan which is designed to fit into the base of any standard 483mm rack frame without affecting its ability to house seven modules. The kit contains all mounting hardware.
- **T800-19-0010** **Rack fan kit - Series II guide mounted**
This kit features a guide mounting fan, and includes all mounting hardware.

Guide Kits

- **T800-41-0002** **Double guide kit**
This kit fits into a T800 Series II rack frame and accepts two T800 Series II modules (except for power supplies and power amplifiers which must use their own guides). It is supplied disassembled and comprises a top and bottom rail, a double width rear panel, four D-range sockets and mounting screws (refer to Section 3.3 for an illustration and more information).
- **T800-44-0000** **Power Supply (T807/8) guide kit**
This kit fits into a T800 Series II rack frame and accepts one T800 Series II power supply. It comprises a top and bottom rail and mounting screws (refer to Section 3.3 for an illustration and more information).
- **T800-45-0000** **PA (50W) guide kit**
This kit fits into a T800 Series II rack frame and accepts one T800 Series II 50W power amplifier. It comprises a top guide stop, a bottom guide rail and mounting screws (refer to Section 3.3 for an illustration and more information).
- **T800-45-0001** **PA (100W) guide kit**
This kit fits into a T800 Series II rack frame and accepts one T800 Series II 100W power amplifier. It comprises a top guide stop, a bottom guide rail, extra mounting brackets for the double width front panel and mounting screws (refer to Section 3.3 for an illustration and more information).

Rack PCBs

- **T800-50-0000** **Standard rack backplane PCB**
This PCB is described in detail in Section 1.1.3. Refer to Section 3.2 for illustrations and more information.
- **T800-60-0000** **Personality PCB for monitor and channel select**

1.2 Specifications

The performance figures given are minimum figures, unless otherwise indicated.

Details of test methods and the conditions that apply for safety and EMC testing can be obtained from Tait Electronics Ltd.

General:

Frequency Range	.. base station .. repeater
Coaxial Relay Driver	.. negative volts switched
Cooling Fan Driver	.. negative volts switched
Channel Selection	.. single DIP switches for both Rx and Tx/Ex modules plus paralleled external select line via SK6
Speaker Output	.. 4 Ohm nominal 2W
Programming Port	.. 5V logic levels
Fuse:	
T8x6/T8x8 or 25/50W	.. 15A slow blow
T8x9 100W	.. 30A slow blow
OEM Output Connectors	.. via two 25-way D-range sockets

Wire:

Power supply wire consists of red and black 154 auto cable (41/0.3 PVC). All other wire consists of tinned Copper 7/0.2 PVC coated wire.

Tri-rated cable	.. 56/0.3mm (4.0mm) - 12 AWG
Max. operating temperature	.. 105°C
Voltage rating	.. 600V
Nominal outside dia	.. 4.3mm
Current rating at 30°C	.. 41 amps

Note: Optional Tri-rated cable for power supply feeds is available on request.

Dimensions:

Height	.. 222mm (5U high)
Width	.. 482mm (19" rack mount)
Length	.. 322mm plus clearance space of 50mm

Weight:

.. 4.5kg

