

1 Introduction

1.1 Introduction to this Service Manual

The T610 MDT Service Manual is provided for use by personnel who are required to service and maintain the MDT. This manual consists of seven chapters as follows:

This chapter	Introduces the T610 MDT and provides relevant technical and performance data.
Chapter 2	Health and Safety Information States the hazards associated with service and maintenance of the MDT, and the means by which such hazards can be avoided.
Chapter 3	Circuit Operation Provides a functional description of the MDT's electronic circuitry.
Chapter 4	Servicing Provides instructions for disassembling, servicing and assembling the MDT.
Chapter 5	Functional Tests Describes the on-board test facilities that can be used to check that the MDT is functioning correctly.
Chapter 6	Fault Finding A series of charts are provided to assist during fault finding and rectification.
Chapter 7	PCB Information Provides a circuit diagram, PCB layouts, grid reference index and parts list for the MDT's Main printed circuit board (PCB).

If further information is required about the T610 MDT or this Manual, it can be obtained from Tait Electronics Ltd. or accredited agents. When requesting this information, please quote the equipment type number (e.g. T610-110) and serial number. In the case of the Service Manual quote the Tait Internal Part Number (IPN), e.g. M610-100-100, and for circuit diagrams quote the Title, IPN and Issue.

1.2 Introduction to the T610 MDT

The T610 Mobile Data Terminal (MDT) is part of the Tait *inform* suite of products for computer-assisted voice and data despatch. The T610 MDT operates in conjunction with a data-capable T2000 mobile radio, combining all the features of the T2000 with text massaging capability.

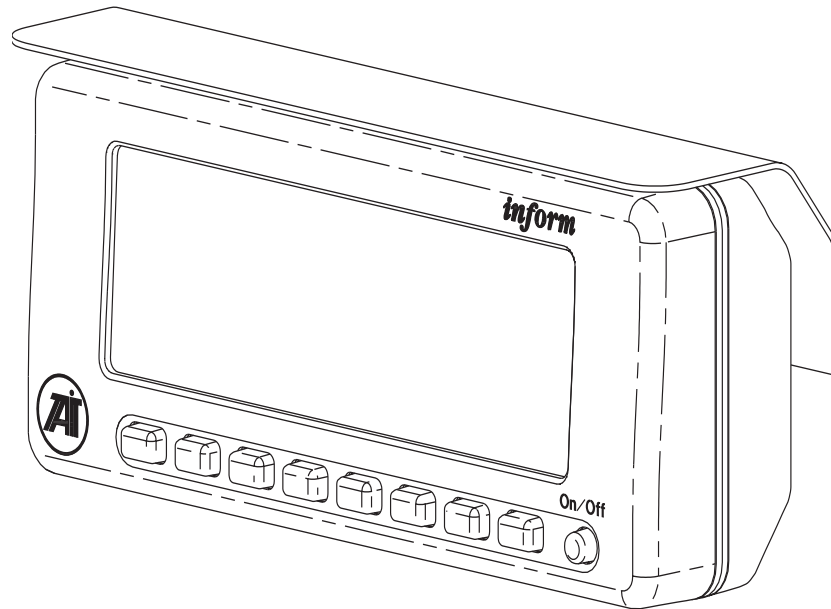


Figure 1.1 T610 Mobile Data Terminal

Most of the functions of the MDT are microprocessor controlled. The system software is stored in Flash read-only memory (ROM). The operating parameters are programmable and stored in non-volatile random access memory (RAM). Programming is achieved using a personal computer (PC) via the MDT's EIA 232 data communications port.

1.3 Specifications

The performance figures stated herein are typical values, unless otherwise indicated, for equipment operating at standard room temperature.

The test methods used to obtain the performance data are, where applicable, those described in the European specification ETS 300-113. Details of test methods and the conditions which apply for type approval testing in all countries can be obtained from Tait Electronics Limited.

1.3.1 Mechanical Specifications

Construction	.. High temperature plastic
Dimensions (w x h x d)	.. 190 mm x 80 mm x 50 mm (7.5" x 3.1" x 2")
Weight	.. 570 g (1 lb 4 oz)
Operating temperature	
Internal	.. -10°C to +60°C
Surface (sunshield fitted)	.. -10°C to +110°C
Ambient storage temperature	.. -20°C to +60°C
LCD screen display area	.. 127 mm x 34 mm (5" x 1.3") 240 pixels x 64 pixels
External connectors	.. 15-pin, D-range (female)
Keypad	.. eight, multifunctional softkeys and power on/off

1.3.2 Electrical Specifications

Operating voltage	.. 10.8 V to 16 V (nominal 13.8 V)
Current consumption	
Backlighting on	.. 400 mA (maximum), 300 mA (nominal)
Backlighting off	.. 100 mA (maximum), 50 mA (nominal)
Audible indicator	.. Piezo, user adjustable volume
Memory	
Flash ROM	.. 128 KB
Battery-backed static RAM	.. 128 KB
Battery backup	.. coin-type lithium, 3 V, 500 mAh
Radio interface	
Electrical	.. EIA 232
Communication protocol	.. UADG MAP27 version 1.3
Communication speed	.. 1200/9600 bps
Programming interface	
Electrical	.. EIA 232
Communication speed	.. 4800 bps
Software	.. Tait PGM610

1.3.3 Miscellaneous Specifications

Messaging	
Status messages	.. up to 30 programmable strings; maximum 20 alphanumeric characters
Storage of received messages	.. programmable, between 1 and 20

END OF CHAPTER 1