

Transportable Mobile Radios TM8000 and TM9000



BACKGROUND

The Transportable Mobile Radio developed by Tait Custom Integration (TCI) was designed for public safety field officers, therefore quality and performance was given the highest consideration. The Transportable Mobile Radio is a complete portable radio unit, consisting of a Tait mobile radio in a rugged case with an interconnect board that interfaces to an internal battery, Input/Output (I/O) ports, and various optional features.

Three tiers of the Transportable Mobile Radio have been designed to accommodate different levels of use, each of these tiers can be fitted with custom options. This product has a variety of applications and could benefit users such as police working outside their usual location or safety workers in emergency/disaster situations.

FEATURES

- Rugged plastic suitcase (watertight, crushproof and dust proof).
- Designed for dust protection and no moisture ingress to IP67.
- Replaceable battery tray - enabling easy changeover to a separate fully charged battery.
- An N-type antenna connector on the outside of the case allows for an external antenna to be mounted.
- 25W TM8000 or TM9000 radio with optional power settings of high (25W), medium (15W) or low (5W).
- Current controlled battery charger.
- Separate LED to indicate if the charger is activated.
- Momentary pushbutton with a separate LED indicator turns the radio on or off, independent of a control head being fitted.
- Two bi-colour LEDs, one on the top panel and one on the outside front of the case, indicate the status of the battery and transmit activity.
- An optional data logger, that receives data from the radio, can be fitted. This enables data to be downloaded via the options connector at a later date.
- An optional GPS receiver fitted with access to the GPS antenna connector on the top panel.



Transportable Mobile Radio showing cable and adaptor satchel in the lid.

PRODUCT TIERS

Three product tiers have been created as a basic starting point for ordering the product. The standard features offered in Tier One are available in all tiers. The options described in Tier Two are available in Tier Three.

Tier One

- Rugged plastic suitcase (watertight, crushproof and dust proof).
- IP67 rated with lid closed.
- Tait 25W analogue mobile radio body fitted.
- Control head speaker only.
- Analogue radio control head mounted on top panel.
- DC power input to case via an external IP67 connector.

- External power in is 10.8V – 16V DC.
- 12V gel-cell battery providing 16 hours of operation when set to medium power (15W) output for 10/10/80 duty cycle.
- 2.5A maximum charge current.
- Low battery control. The radio turns on at 11.7V and off at 10.7V.
- Low voltage alarm causes the
 - LEDs on inside and outside of case to flash when voltage drops below 11.4V DC, and
 - battery to disconnect when voltage drops below 10.7V DC.
- External N-type antenna connector.
- Internal battery-isolate switch for travelling (air transportation).
- Weighs less than 13kg.
- Cigarette lighter power lead (switched and fused).
- Rugged microphone as standard.
- Optional DTMF microphone.



Top panel of transportable showing storage of the rugged microphone.

Tier Two

- Tait analogue (TM8000) or digital P25 (TM9000) mobile radio body fitted.
- Analogue or digital radio control head mounted on top panel.
- External options connector with all the radio's I/O brought out for interfacing with third party equipment.
- Audio for remote loudspeaker on external options connector.
- Optional high power speaker (10W).
- Optional GPS operation.
- Optional data logger.
- 12V (standard) or 24V (optional) operating voltage.
- Antenna supplied to suit.
- Socket for external microphone.
- Rx and Tx audio is available on external options connector for a third party voice recorder.



Transportable Mobile Radio with battery removed for easy changeover.

Tier Three

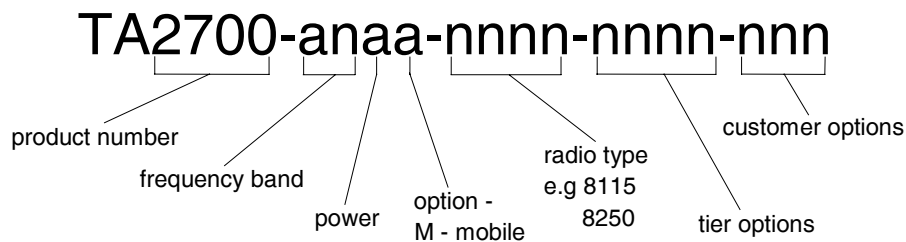
- Tait digital P25 mobile radio body fitted.
- No analogue radio option.
- Hand-Held Control Head (HHCH) fitted.
- No internal control head fitted.
- Internal high power loudspeaker fitted (10W).

Notes

- The microphone socket at the side and on the top panel will always be wired identically. Both are set up in the factory for either the standard microphone or the Hand-Held Control Head (HHCH).
- The HHCH is currently only available on the Tier Three product with the TM9000 digital radio.
- Not all I/Os can be used at the same time, and therefore not all features can be used together.
- The TM9000 digital radios cannot be used in the Tier One product, some of the features required for the radio are not available.
- The battery life depends on the power setting of the radio, figures quoted are with the radio set at medium power (15W).

PRODUCT NUMBERING

The product number for ordering is allocated once the customer's requirements are discussed with the Tait Systems Engineering team (TELSE). The allocated number will have the format shown below.



Numbering Examples

TA2700-B1EM-8115-1112-002

- Frequency band B1 = 136-174MHz.
- Power E = 25W.
- Option M = mobile.
- Radio type = 8115.
- Tier options = Tier One, TM8100 control head, 12V only.
- Customer options = DTMF microphone.

TA2700-A4EM-8250-2212-000

- Frequency band A4 = 66-88MHz.
- Power E = 25W.
- Option M = mobile.
- Radio type = 8250.
- Tier options = Tier Two, TM8200 control head, 12V only, external microphone and options connector.
- Customer options = Nil.



This product is suitable for a wide range of customer uses, however further development and/or type approvals may be required in some cases. For further information, please contact the Tait Systems Engineering team (telse@tait.co.nz).