PART **G** **Additional information**

This part provides reference information, including a glossary of terms.

Contents

Glossary

active

The 'on' (asserted) state of a signal or indicator.

ADC

Analog to digital converter. An electronic device that outputs binary data dependant upon the magnitude of voltage input.

brownout

A dip in the supply voltage sufficient to put the control section into hardware reset.

calibration

The process of determining the **calibration data** for a radio. Calibration is normally only carried out during product manufacture or major service.

calibration data

The set of coefficients for each of the electronic tuning variables, as a function of frequency, which allows the radio to calculate the **configuration data** for any frequency it operates on. The **calibration data** is unique for each radio.

call

A complete exchange of information between two or more parties. In **trunked mode**, this may occur on the **control channel** or on a **traffic channel**.

CCTM

Computer controlled test mode. The operating mode of the radio whereby computer equipment can control various radio functions by sending commands down a serial link to the radio.

channel

A receive/transmit frequency pair.

configuration

The determination and setup of the **configuration data** for a given frequency from the programmed **calibration data** (i.e. electronic tuning).

configuration data

The data set corresponding to the value of the electronic tuning variables on a given channel. This is calculated for each frequency from the **calibration data**.

control channel

The **channel** used by a **trunking system** to control the radio.

conventional mode

The mode of operation whereby the radio behaves as a conventional two-way radio (i.e. non-trunked operation).

CTCSS

Continuous Tone Controlled Squelch System. Continuous, subaudible coding on the channel for the purpose of segregating user groups.

DAC

Digital to analog converter. An electronic device that outputs a voltage dependent upon the value of binary data input.

database

The set of programmable data points that allows the product to be customised for a particular application or mode of operation.

Note: Terms that appear in **bold sans serif** font are also defined in this glossary.

DC

Direct current.

DCS

Digitally coded squelch. Continuous, subaudible coding (repeating digital code sequence) on the **channel** for the purpose of segregating user groups.

delayed

Key action. The input is not actioned until it has been stable for the duration of the debounce interval.

dialled string

A sequence of characters entered via the keypad. May contain **numbers**, **labels**, '*' or '#'. Used to initiate **calls** or invoke special functions.

dialling

The act of entering a number or label by typing in successive characters on the keyboard.

DSP

Digital signal processor.

DTMF

Dual tone multiple frequency. Method of encoding digits (0 to 9) and characters (A to F), each as a pair of eight standard tones.

economy mode

When the radio is cycling between the **receive mode** and **standby** state. Available on Tait Orca conventional handportables.

ECR

External call request.

EPROM

Erasable programmable read only memory.

EPTT

External press-to-talk.

ESN

The MPT1343 defined electronic serial number of the radio.

FFSK

Fast frequency shift keying. The signalling method employed in trunked radios. Data is represented by 1 cycle of 1200 Hz (logic 1) or 1.5 cycles of 1800 Hz (logic 0) and is transmitted at 1200 baud.

fixed (indicators)

Do not time out of their own accord. Generally indicate mode of operation or state.

idle

The state of the radio in **trunked mode** when it is not engaged in a call or call setup, or in **conventional mode** when the radio is not transmitting.

IF

Intermediate frequency.

inactive (indicator)

The 'off' (unasserted) state of a signal or indicator.

label

A plain language word (1 to 8 characters long) that is defined to represent a valid dialled string at radio programming time.

LCD

Liquid crystal display.

LED

Light emitting diode.

LPF

Low pass filter.

MCU

Micro control unit.

mute

The receive audio gating element. When active, receive audio is passed to the speaker. The decision to activate/deactivate the audio signal path is based on an evaluation of signalling codes (**CTCSS**, **DCS**, **Selcall**) contained in the audio information (contrast with **squelch**).

number

A simple **string** that corresponds to an MPT1343 defined called party identifier.

PA

Power amplifier.

PABX

Private automatic branch exchange.

PCB

Printed circuit board.

PLL

Phase locked loop.

PLCC

Plastic leaded chip carrier.

PMR

Private mobile radio.

programming mode

The mode of operation of the radio in which computer equipment can read from and write to the radio **database**.

PSTN

Public switched telephone network.

RAM

Random access memory.

receive mode

This is the state wherein the radio is producing a valid busy output, irrespective of whether any audio output is produced at the speaker

terminals. The +5V-ECON supply is on, and sufficient time has elapsed for various circuit blocks to settle.

RF

Radio frequency.

RSN

The radio's unique serial number.

RSSI

Received signal strength indicator.

SCI

Serial communications interface. This is the serial interface from the radio to an external device, normally utilising transmit and receive data, signal and ground lines.

Selcall

Selective calling. Sequential tone burst coding on the channel for the purpose of selecting an individual or group with which to communicate.

selecting

The act of picking a **label** from a displayed list using the arrow keys.

signalling

Non-voice coding on the channel for the purpose of identifying parties and/or segregating user groups, e.g. **CTCSS**, **DCS**, **Selcall**.

SMD

Surface mount device.

SOIC

Small outline integrated circuit.

SOT

Small outline transistor.

squelch

The channel busy detection circuitry. The decision to activate/deactivate the audio signal path is based on a signal-to-noise measurement on the received **RF** signal (the squelch circuitry precedes the **mute** circuitry).

standby state

This is essentially when the +5V-ECON line is off. That is, when the radio is drawing the minimum current, while still being switched on.

string (simple)

A sequence of the characters 0 to 9, *, #, which instructs the radio to initiate a call or perform some other function.

successful (call)

A **call** for which a **traffic channel** is assigned.

system restart

The action taken by the radio (e.g. in response to the '^' character received on the **SCI**) where it immediately ceases current operation, then behaves as though it has just been switched on.

TCXO

Temperature compensated crystal oscillator (voltage controlled). The frequency reference for the **RF** part of the radio.

test mode

The operating mode of the radio whereby computer (computer equipment can control various radio functions by sending controlled) commands down a serial link to the radio.

traffic channel

The channel used by the radio for the duration of a **call**.

transmit mode

The radio has validated a request and commenced or completed the sequence of switching out of **receive mode**. This does not necessarily imply that **RF** is being generated.

trunked mode

The mode of operation of the radio whereby the radio obeys commands on the **control channel** and generally operates as proscribed in MPT1343.

trunking system

The infrastructure comprising repeaters and radios required to support a number of **control channels** and **traffic channels**.

VCO

Voltage controlled oscillator. The oscillator that generates either the on-channel signal to drive the transmitter, or the local oscillator to mix incoming **RF** signals to the **IF** of the radio. The instantaneous frequency of the VCO is determined by a combination of the synthesiser (**PLL**) and the modulation signals TCXO-MOD and VCO-MOD.

VOX

Voice operated transmit.

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