



Technical Note TN-736

Enhanced Features for the Tait Orca 5000 MPT Trunked and Conventional radios

17 October 2002

Applicability

This Technical note applies to the enhanced features added to the Orca 5000 Conventional radios with v2.06 (or later) Firmware, and in conjunction with v3.5.0 Conventional Programming Application (CPA), and to the Orca 5000 MPT Trunked Application (TPA) in conjunction with Firmware v4.14 (or later).

1. Enhancements

Audio Noise Reduction

The Audio Noise Reduction (ANR) enhancement is available in both the Conventional programming application TOP-CPA v3.5.0 when Orca 5000 models are selected, and the MPT Trunked programming application TOP-TPA v3.5.0 when Orca 5000 models are selected.

When the Audio Noise Reduction tickbox is enabled and programmed to the radio, the background noise on a weaker signal is reduced in level if the mute is open but there is no current activity on the channel.

Enabling this option applies to all channels.

The ANR tickbox is found on:

- the User Selectable page in the Orca MPT Trunked Programming Application (TPA) v3.5.0 (or later)
- the Receive Monitoring page in the Conventional Programming Application (CPA) v3.5.0 (or later)

NOTE: While the ANR enhancement is available in the MPT Trunked Firmware, it is **only** valid on any Conventional channels (101 – 110) that are programmed.

Flexiscan

The Flexiscan enhancement is available in the Orca Conventional Programming Application (CPA) v3.5.0 (or later), and in conjunction with Orca 5010 and 5020 Conventional Firmware v2.06 (or later).

Flexiscan has feature changes over and above the standard scanning options (which are still available). This enhancement is similar to user requirements of the North American market.

- Scan with Priority or Dual Priority - the first two members in the list are the respective priority channels
- Transmit channel selection during scanning – either Selected (transmits on the channel left before Flexiscan started) or a Scanned (the current valid Flexiscan member) channel
- Scan with Subaudible Signaling, this means the radio will only stop scanning on this channel if it **also** decodes a valid sub-audible signal
- Scan after transmission - the radio will either stop scanning at transmit PTT or recommence scanning after user transmission and the Group Hold Time (Orca 5020 only)
- Flexiscan member changes - if enabled the 15 members can be changed by user keypad (Orca 5020 only)

The Flexiscan tickbox is found on the User Selectable Parameters page, and the scan members and options are found on a new tab added to the Scan Groups page.

To set-up Flexiscan, enter up to 15 members from the list of valid radio channels

- Enabling a function button to Toggle Flexiscan can start and stop Flexiscan operation
- Enabling a function button to Program Flexiscan will allow the user to change the Flexiscan members

When the radio is in Flexiscan Program mode it displays the text noted in the screen-shot below left.



The topline text 'FSPR' indicates FlexiScan Programming mode. The 'S' identifies that channel 'ONE' will be scanned. A short press of the (✓) will toggle this channel member to 'NS' and channel 'ONE' will not be scanned.

If the user attempts to include more than 15 members to a Flexiscan group the text GROUP FULL will be displayed for 3 seconds and a low tone beep heard.

Once any changes have been made, wait 10 seconds, and the radio will exit Flexiscan Programming mode and commence Flexiscanning the channel members.



NOTE: When Flexiscan is commenced it scans the Flexiscan group members AND the channel the radio scan was started on, giving a maximum of 16 members. The screen-shot above shows the radio in Flexiscan, including the channel called '5020'.

Dynamic Power Control

Dynamic Power Control is a feature that, when enabled, forces the portable radio's transmitter from High to Low RF power setting if the RSSI received is above the value nominated in the Power Reduction Level field.

This feature will allow users who work in very close proximity to the MPT system to conserve battery shift-life by reducing the transmitter power (and therefore battery current load) when it is not required.

To enable this feature, tick the DYN PWR tickbox in the User Defined Menu page of the programming application (see screen-shot on next page).

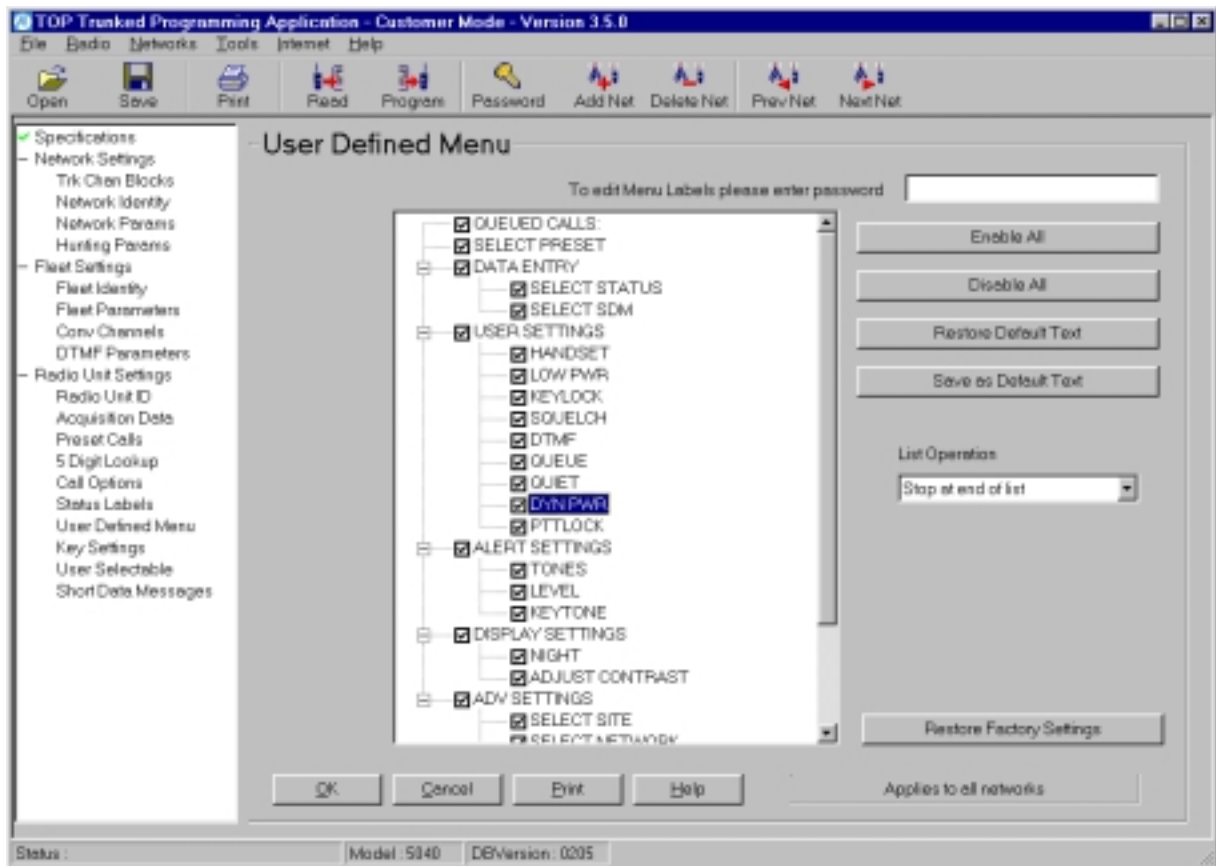
Ticking the Initial Setting tickbox on the User Selectable page will force the radio into Dynamic Power Control regardless of what the radio user menu setting was when the radio was switched off.

The number in the Power Reduction Level field is the value in decibels (dB) *less* than the L2 value. This can be changed to any value deemed productive for your user.

The value of L2 in existing portable radios was -100 dBm.

This value was changed to -94 dBm from the production of radio serial number **14164616**.

The default value for the Power Reduction Level is 32 (dB), this means the radio will drop the transmitter power level to Low when the received RSSI is -62 dBm or higher.



Compliance Issues

None

CSO Instruction

Please inform all technical, sales staff and accredited dealers of the enhancements now available.

2. Issuing authority

Name and position of issuing officer

Graham Brenchley
Customer Support Engineer

Confidentiality

Confidential – This message or document contains proprietary information intended only for the person(s) or organisation(s) to whom it is addressed. All Recipients are legally obliged to not disclose Tait technological or business information to any persons or organizations without the written permission of Tait.

Distribution Level

Associate.

Document History

Original Release 17 October 2002 GCB