

**TUNE-UP PROCEDURE**

This exhibit contains the tune-up procedure as it will appear in the Configuration Service Software (CSS) manual.

The following adjustments comprise the total transmitter alignment:

1. Reference Oscillator
2. Transmitter Power Output
3. Transmit Deviation Control
4. Reference Modulation Compensation

Note: All adjustments are factory pre-set and do not require alignment under normal operating conditions. In the event alignment is needed, refer servicing to qualified radio maintenance personnel only.

**TEST EQUIPMENT**

<b>Description</b>	<b>Recommended model</b>
1. Service Monitor	Motorola R-2001 or equivalent
2. PC with CSS	

**TRANSMITTER ALIGNMENT PROCEDURE**

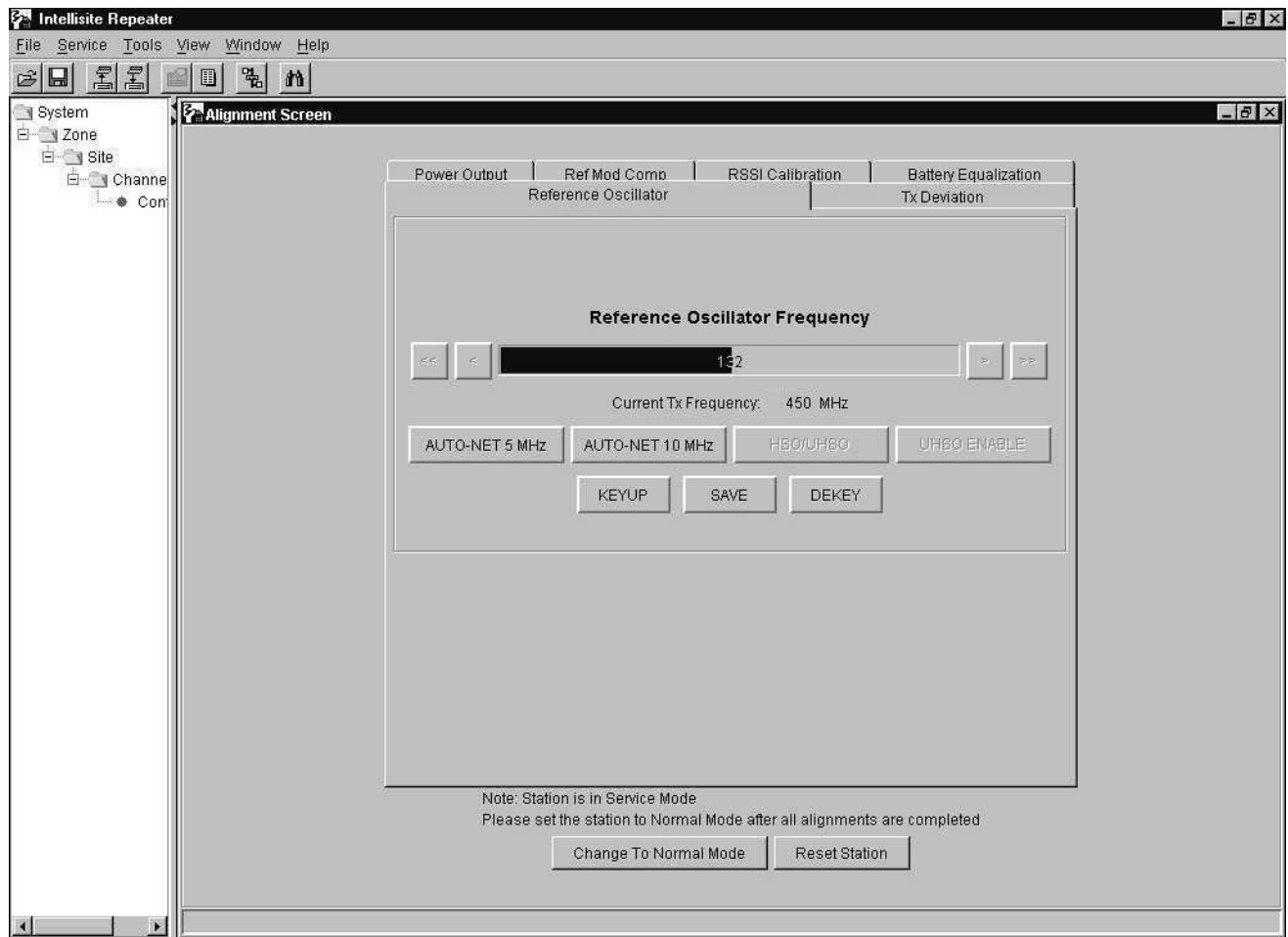
CSS/RSS Port: A 9-pin D connector is provided on the station control module front panel to allow service personnel to connect a PC loaded with the Configuration Service Software (CSS) and perform programming and maintenance tasks via this TIA RS-232 port. The following pages of this exhibit will show the important alignment screens.

**EXHIBIT DESCRIPTION**

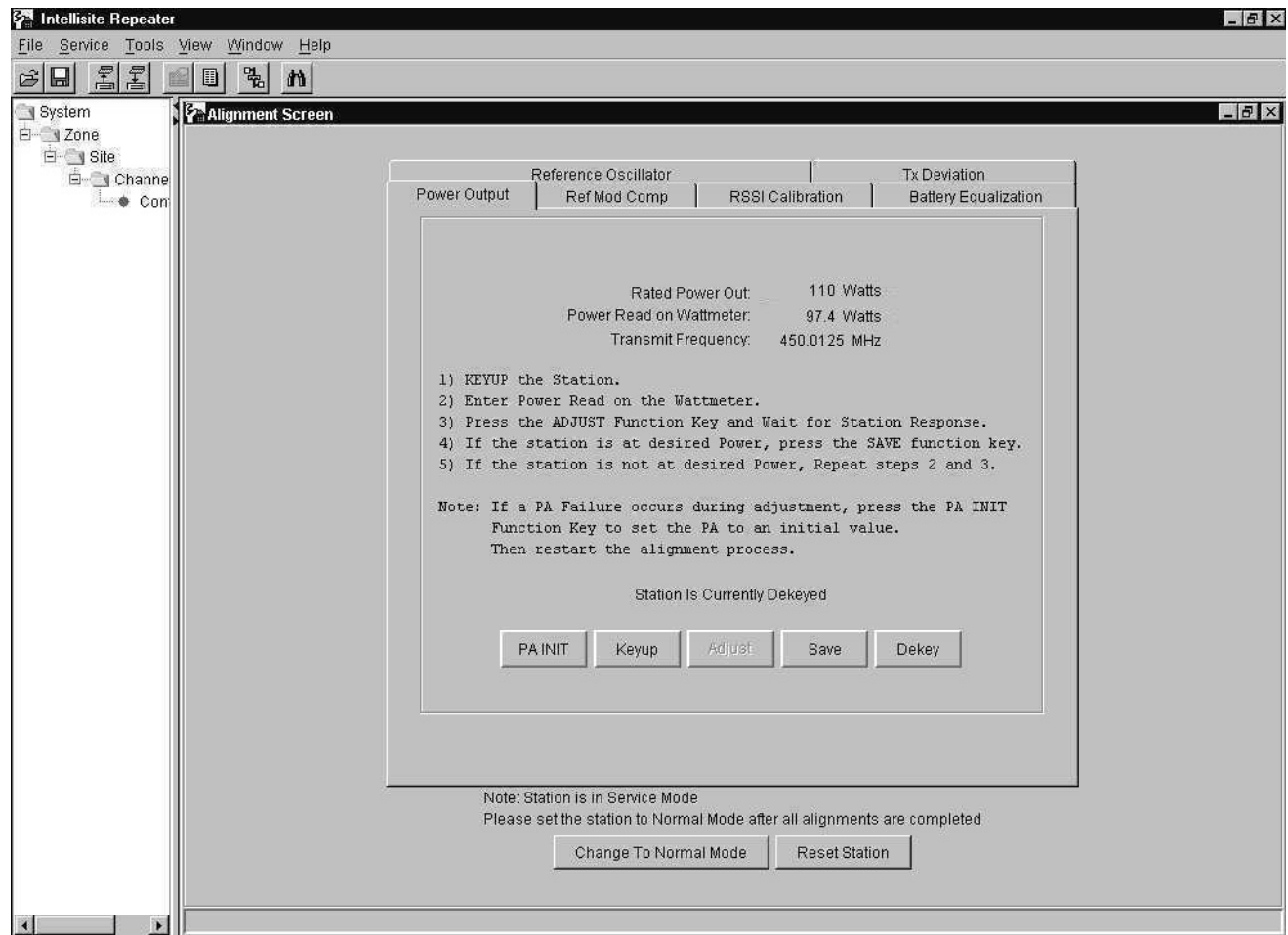
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|----|--|
| 9A | Reference Oscillator Alignment Screen              |
| 9B | Transmitter Power Output Alignment Screen          |
| 9C | Transmitter Deviation Alignment Screen             |
| 9D | Reference Modulation Compensation Alignment Screen |

All adjustments are software controlled and are pre-set at the factory. Certain station operating parameters can be changed via man-machine interface (MMI) commands, within predetermined limits. Examples include transmit / receiver operating frequencies and power level.

**TUNE-UP PROCEDURE - Reference Oscillator Alignment Screen**



# TUNE-UP PROCEDURE - Transmitter Power Output Alignment Screen



# **TUNE-UP PROCEDURE - Transmitter Deviation Alignment Screen**

The screenshot shows the 'Intellisite Repeater' software window. On the left is a tree view with 'System', 'Zone', 'Site', 'Channel', and 'Configuration' (selected). The main area is the 'Alignment Screen' with tabs for 'Power Output', 'Ref Mod Comp', 'RSSI Calibration', and 'Battery Equalization'. The 'Tx Deviation' tab is active, showing a 'Reference Oscillator' section with four frequency settings:

Frequency	Deviation (kHz)	Current Deviation	Action
Frequency 1	5.31	5.31	Key On Freq1
Frequency 2	5.18	5.18	Key On Freq2
Frequency 3	6.46	6.46	Key On Freq3
Frequency 4	6.6	6.6	Key On Freq4

Below these settings, it shows 'Current Frequency (MHz)' as 450.0125 and 'Key On Status' as 'Keyed Up On Frequency 1'. There are 'Save' and 'Dekey' buttons. At the bottom, a note states: 'Note: Station is in Service Mode. Please set the station to Normal Mode after all alignments are completed.' Below the note are 'Change To Normal Mode' and 'Reset Station' buttons. A status bar at the very bottom says 'Click to Keyup the station using Frequency 1'.

**TUNE-UP PROCEDURE - Reference Modulation Compensation Alignment Screen**

