Validating TDM gain adjustments:

Validating Output Gain Adjustments:

- 1. Set the Audio Analyzer to measure dbu.
- 2. Set the Audio Analyzer's input filter to <10Hz-80kHz range.
- 3. Set the Audio Analyzer's input to Hi-Z inputs.

Gain adjustment pots are present on both the Input cards and the Output cards.

Use the TDM's internally generated Test Tones to validate the Output Gain Adjustments. The TDM must be "out-of-service" to perform this validation.

- 1. Perform a "soft-reset" by pressing the Ouput and Take buttons at the same time.
- 2. The TDM switch should re-initialize and the front panel display should look like the following:



- 3. Press the Function key once to display the "Alpha Setup" screen.
- 4. Press the Function key again to display the "Presence of Signal" screen.
- 5. Press the Function key again to display the "Pattern/Level" screen. The display should be:



- 6. Press the Take key to highlight the Level.
- 7. Press the Take key again to display the following:



8. Use Rotary Knob to change from "Diagonal" to "One In to all Out's"



9. Press the Take key. The display will change to the following:



10. Turn the Rotary knob counter-clockwise to scroll to the Internal Test Tone Input Numbers:

 1, 1025
 Mute

 1, 1026
 Tone/H

 23dbu, 1kHz (Measures 996.84 Hz)
 Test Tone

 1, 1027
 Tone/M

 4dbu, 1kHz (Measures 996.84 Hz)
 Test Tone

 -10dbu, 1kHz (Measures 996.84 Hz)
 Test Tone

The factory uses the 1, 1026 Tone/H test tone to adjust the gain pots on the output cards to 23dbu + -.050dbu.

Use the Rotary knob to select the 1026 Tone/H test tone(Customer may use Tone/M 4dbu test tone if there is a concern about the level)



- 11. Press the Take key.
- 12. Use the analyzer to measure the outputs. All outputs should measure 23dbu +/- .05dbu (4dbu +/- .05dbu if using Tone/M)
- 13. Any output that measures out of spec can be reset by adjusting that output's gain pot. You will need to remove the I/O board above the I/O card that has the output that needs to be adjusted. You will also need short non-conductive tweeker tool. DO NOT USE A METAL SCREWDRIVER.
- 14. Perform a "soft reset" by pressing the Output and Take keys at the same time once all outputs are validated.

Validating Input Gain adjustments:

- 1. Output gains must be validated using the procedure above before validating the Input gain adjustments. The Inputs and Outputs are adjusted at the factory for a Unity Gain of 0.00dbu +/- .100 dbu.
- 2. Set the Audio Generator produce a 1 KHz test signal. Set the Output Level of the Audio Generator to a safe level (ie 4dbu). DO NOT EXCEED 23dbu on the output of the Audio Generator.
- 3. Set the Audio Generator's Output Impedance to 40 Ohm Balanced.
- 4. Input Gains may be validated on a Diagonal or on a "One In to all Outs" basis.
- 5. To Validate on a"One In to all Outs" or a "Diagonal" basis:
 - 5.1 Perform a "soft-reset" by pressing the Ouput and Take buttons at the same time.
 - 5.2. The TDM switch should re-initialize and the front panel display should look like the following:



- 5.3. Press the Function key once to display the "Alpha Setup" screen.
- 5.4. Press the Function key again to display the "Presence of Signal" screen.
- 5.5 Press the Function key again to display the "Pattern/Level" screen. The display should be:



This line scrolls from Right to Left

- 5.6. Press the Take key to highlight the Level.
- 5.7 Press the Take key again to display the following: If a Diagonal is desired, Press the Take key and go to step 6.



5.8. Use Rotary Knob to change from "Diagonal" to "One In to all Out's"



5.9. Press the Take key. The display will change to the following:



- 5.10 Use the Rotary knob to sroll to the desired Input.
- 5.11 Press the Take key. The desired Input is now routed to all Outputs.
- 6. Connect the Audio Generator's Output to the desired Input on the TDM Switcher.
- 7. Connect the Audio Analyzer's Input to the desired Output on the TDM Switcher.
- 8. If the Audio Generator is set to 4dbu verify an meaurement of 4dbu +/- .1 on the Audio Analyzer.
- 9. Any Input that measures out of spec can be reset by adjusting that Input's gain pot to provide a Unity Gain. DO NOT READJUST THE GAINS ON THE OUTPUT CARDS.You will need to remove the I/O board above the I/O card that has the Input that needs to be adjusted. You may have to move and Input card that is right below the TDM Controller card or the TDM Card. You will also need short non-conductive tweeker tool. DO NOT USE A METAL SCREWDRIVER.\
- 10. Perform a "soft reset" by pressing the Output and Take keys at the same time once all Inputs are validated.