Line Level Setup Check List Of T800 Modules While Connected to a A800-SIM(V3)

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General

This set of instructions outlines the line level set up required to T800 Series II modules used with the A800-SIM (V3). The following instruction will describe the setting of line levels for a narrow band TTR and a wide band link connected to an A800-SIM (V3). The A800-SIM setup is described in the SIM manual (AM8-SIM).

This sheet can be printed out and used in the running up of the bases before installation or taken to each site as a test sheet to make sure the bases & links are aligned and operating correctly.

Procedure

TICK

- ❑ 1. Connect the TTR Receiver to a communications test set, on generate mode. Connect the TTR Exciter to a communications test set on monitor (receive) mode
- ❑ 2. Generate into the TTR Receiver the required CTCSS tone @ 300hz deviation
- ❑ 3. Monitor the TTR Exciter using the test set and make sure that the CTCSS level is 300hz. If it is not then adjust level of the CTCSS using the pot. on the ST-133 CTCSS encoder in the SIM.
- ❑ 4. Now generate into the TTR Receiver a 1khz tone @ 1.5khz deviation + CTCSS @ 300hz giving a total of 1.8khz deviation into the TTR Receiver
- ❑ 5. Adjust the line level pot on the TTR Exciter to maximum
- ❑ 6. Using a millivoltmeter make sure that 0dBm of signal is going out of the TTR Receiver line. If not then adjust the line level pot. on the TTR Receiver so that 0dbm comes out the RX audio line.
- ❑ 7. Check that max. deviation (voice & CTCSS) on the TTR Exciter is 2.5khz. To do this generate a 1 khz tone at 2.2khz deviation & a CTCSS tone at 300hz deviation into the receiver and adjust the Exciter line level pot. to maximum. If the maximum deviation is not 2.5khz then use PGM800Win to adjust the Epot maximum deviation to 2.5khz.
- ❑ 8. Monitor the TTR Exciter deviation out and set the TTR Exciter line level pot. to 1.8khz deviation out (1khz tone @ 1.5khz deviation + CTCSS @ 300hz deviation). ***Note***: Make sure that 1khz tone @ 1.5khz deviation into the TTR Receiver = 1.5khz deviation out of the TTR Exciter. It is not critical if 300hz of CTCSS into the TTR Receiver = 400 or 500hz of CTCSS out the TTR Exciter so long as the 1khz tone level is right. (ie. you might have coming out of the TTR Exciter 1khz tone @ 1.5khz deviation + CTCSS @ 500hz which totals up to 2khz out, this is OK.)
- ❑ 9. Check the TTR Receiver receive sensitivity (should open at around -117dbm). If not then

adjust the front panel gating sensitivity pot on the TTR Receiver.

- ❑ 10. Make sure TTR PA power out is 50 watts.
- ❑ 11. Now monitor the Link Transmitter output with the Test set
- ❑ 12. Adjust the Link Transmitter line level pot to maximum.
- ❑ 13. Check that the maximum deviation (voice & CTCSS) on the Link transmitter is 5khz. To do this generate a 1 khz tone at 2.2khz deviation & a CTCSS tone at 300hz deviation into the TTR receiver and adjust the transmitter line level pot. to maximum. If the maximum deviation is not 5khz then use PGM800Win to adjust the Epot maximum deviation to 5khz.
- ❑ 14. Monitor the Link Transmitter and adjust the line level pot on the Link Transmitter to 3.5khz (1khz tone @ 3khz deviation + CTCSS @ 500hz dev). ***Note***: Make sure that 1khz tone @ 1.5khz deviation into the TTR Receiver = 3khz deviation out of the Link Transmitter. It is not critical if 300hz of CTCSS into the TTR Receiver = 600 or 700hz of CTCSS out the Link Transmitter so long as the 1khz tone level is right. (ie. you might have coming out of the Link Transmitter 1khz tone @ 3khz deviation + CTCSS @ 700hz which totals up to 3.7khz out, this is OK.)
- ❑ 15. Make sure the Link Transmitter power out is approx. 1 to 2 watts
- ❑ 16. Move the communication test set generate coax to the Link Receiver and generate a 1khz tone @ 3khz deviation + CTCSS @ 500hz giving a total of 3.5khz deviation into the Link Receiver.
- ❑ 17. Move the communication. test set monitor(receive) coax from the Link Transmitter back to the TTR Exciter and while monitoring the TTR Exciter deviation adjust the Link Receiver front panel line level pot. to achieve a TTR Exciter deviation out of 1.8khz (1khz tone @ 1.5khz dev. + 300hz of CTCSS). ***Note***: Make sure that 1khz tone @ 3khz deviation into the Link Receiver = 1.5khz deviation out of the TTR Exciter. It is not critical if 500hz of CTCSS into the Link Receiver = 400 or 500hz of CTCSS out the TTR Exciter so long as the 1khz tone level is right. (ie. you might have coming out of the TTR Exciter 1khz tone @ 1.5khz deviation + CTCSS @ 500hz which totals up to 2khz out, this is OK.)
- ❑ 18. Check the Link Receiver receive sensitivity (should open at around -110dbm). Adjust either the carrier mute pot. in the audio processor if Carrier (RSSI) Muting is used or the front panel line level pot. if Noise Muting is used
- ❑ 19. If there are more links on the site then do steps 11 to 15 for each additional transmitter, then do steps 16 to 18 for each additional receiver.

The above steps have been followed and completed for the radio site at_____

Signed : _____

Date : _____