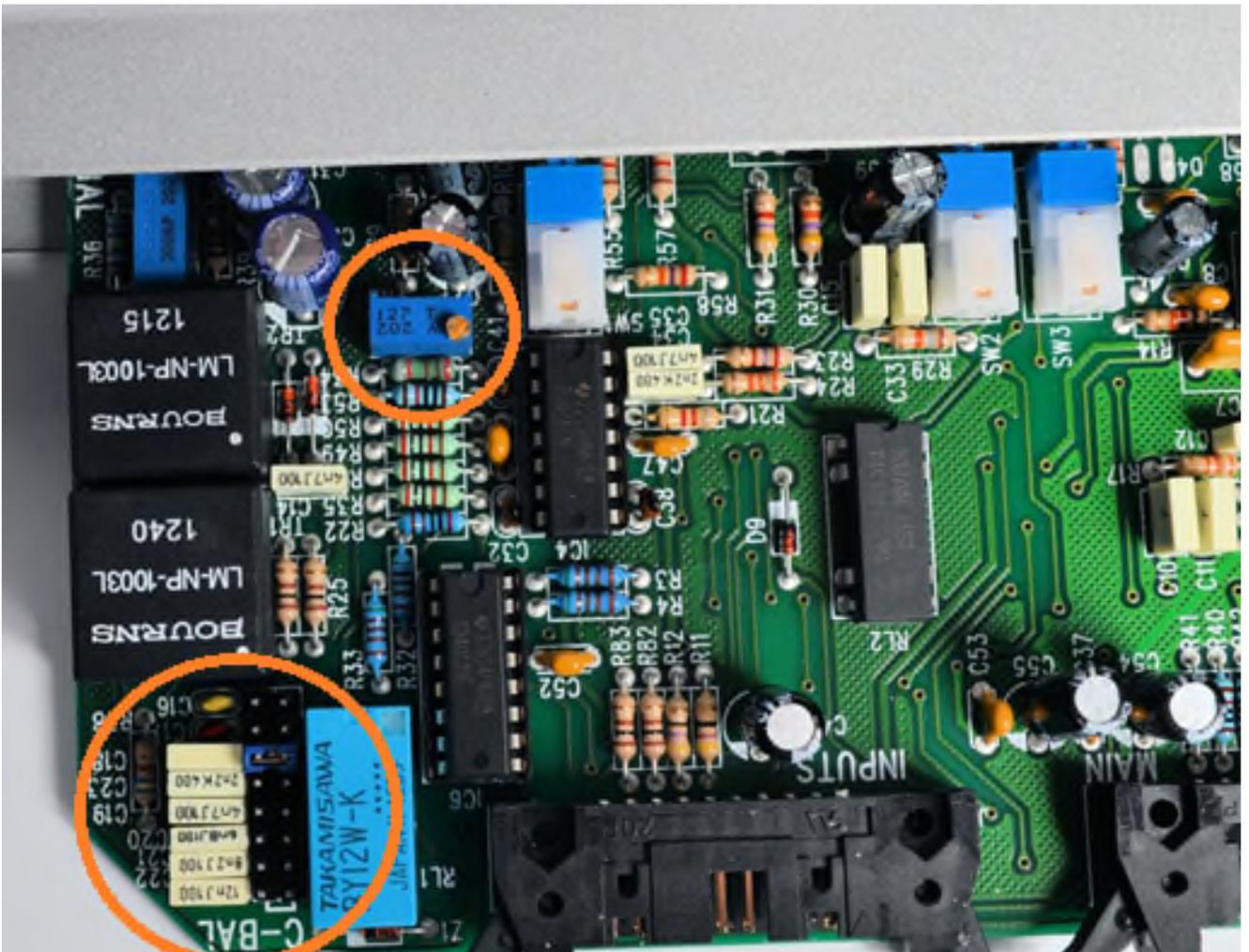


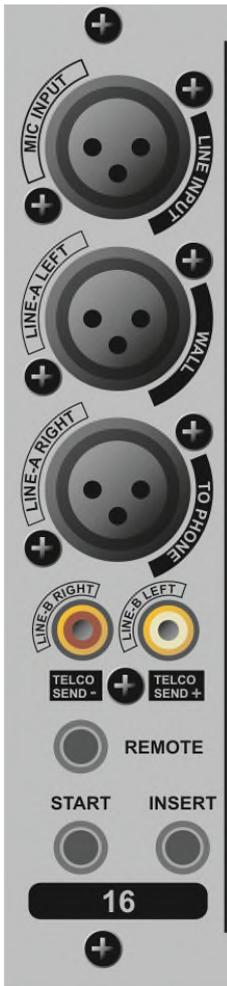
AIRLAB



ALIGNMENT OF N-1 (MixMinus)

NOTE: This alignment has already taken place at the factory, however if you later on extend the AIRLAB with another TELCO module you need to follow the next steps for a correct alignment of the N-1 signal for every new installed TELCO module.

1. Power down the AIRLAB.
2. Connect the TELCO module to its flatcable connectors and lay down the module horizontally on the surface of the other modules. Put an isolating material between the TELCO module and the surface of the other modules to avoid damage and shorts.



Now locate the blue trimmer VR2 (close to switch "LINE") in the top Orange circle of the above picture.

3. Activate the 'LINE IN' switch on the TELCO module.
4. Connect an audio source to the LINE IN connector of the TELCO, easiest is a 1kHz +4dB tone from a signal generator. If you don't have a signal generator you can also generate a 1kHz sine wave with Audacity on you're PC. Be sure that it is +6dBu at the program output.
5. Connect a oscilloscope/audio measurement device or if you don't have one a headphone or power amp to the TELCO SEND CINCH + connector.
6. Check again if there's no short between PCB of the TELCO module and the surface it's put on.
7. Power up the AIRLAB.
8. Move the fader to the top position. Set TELCO send potentiometer to Maximum. Press the ON switch. Press the Line in switch. Press the PROGRAM switch.
9. CHECK if the CRM outputs this LINE IN signal (No CRM select switches are active) to be sure that you have correctly connected and routed your source.
10. Now adjust the trimmer VR2 to a position where a minimum of signal is heard out of the TELCO OUT Cinch + connector.

Good luck!

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RC balance adjustments on location/in the field



The R/C is a onetime only adjustment. Only in those situations where the TELCO module is connected to another telephone line a repeated adjustment could be necessary.

NOTE: The R/C balance trimming can only be performed after you have correctly followed the N-1 alignment procedure.

1. Power down the AIRLAB.
2. Connect the TELCO module to the right connectors and horizontally lay down the module on the surface of the other modules. Put an isolating material between the TELCO module and the surface of the other modules to avoid damage and shorts.
3. Connect a 0dBu unbalanced or +4dB 1kHz sine wave from a signal generator or an audio source to one of the other modules and activate the **Prog switch ON and SUB, CUE off!!** If you don't have a signal generator you can also generate a 1kHz sine wave with Audacity on you're PC. Be sure that it is +6dBu at the program output.
4. Connect the telephone system to the TELCO module's WALL connector.
5. Connect a Phone appliance to the "TO PHONE" connector.
6. Check if there is no short between the TELCO PCB and the surface it is put on.
7. Power up the AIRLAB.
8. On you're TELCO deselect Line In. Set Telco send to 12 O'clock. Set Gain to 12 O'clock.
9. Now make a call to the TELCO and take the call by pressing ON and moving the fader up.
10. Now locate the C balance jumper (close to switch "LINE") in the bottom Orange circle of the above picture.
11. Now measure the Program output with a oscilloscope. Adjust R. Bal the trimmer above the TELCO send potentiometer while moving the Hybrid fader up and down till the sine wave at the oscilloscope almost doesn't change.
12. It can happen that you'll have to change the C balance jumper to a different value to get a better result in a non changing sine wave when moving the fader measured at the oscilloscope. Re do step 11 and 12 till best result found.

With a oscilloscope and 1kHz sine wave it is easier to find out if there is a change in the signal (Sine wave) when listening it can be more difficult.

Good luck!

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