



AMPLIFIER SIGNAL PROBLEMS

RAW SIGNAL DISPLAYED BUT LOWER TRACES ARE FLAT

If there is a red line in the Raw trace, it usually indicates too much artifact. This is considered an invalid signal and the program stops providing data and feedback for the lower traces. If there is too much EEG signal being clipped, adjust the threshold lines for the Raw trace to include more of the signal. If the signal is very large, check impedance.

FLAT OR WEAK EEG SIGNAL

- ? ***Incorrect communications setup***
- ? ***Communications Input device not working***
- ? ***Faulty components between amplifier and client***
- ? ***ProComp Connect Error -200***

If you see the battery voltage value or OK in the bottom right corner of the EEG brainwave screen, the amplifier is communicating with the program.

The voltage reading or OK indicates communication with the amplifier is working. Troubleshoot the connections between the amplifier and the client. Tag the items in use and swap out backup parts until you identify the part(s) that impact the signal. Check impedance and make adjustments to obtain a value of 20 or below. (For troubleshooting connections with ProComp amplifiers, additional tips are available in [Signal Problems-ProComp Amplifiers](#) on the ESS Support FAQ page)

If NONE displays in the lower right-hand corner of the EEG brainwave screen:

If NONE is displayed on the EEG screen it indicates the problem source is between the computer and the amplifier.

esiPro 4.3 Amplifiers

1. Check the lights on the amplifier.
 - Power, USB, Online = On; Calibration = Off
2. Select Configuration from the Preferences menu and click the Devices tab. Be sure your amplifier settings are correct.
 - Make sure the correct model is selected for "Source of EEG/Peripheral Data".
3. Reset the USB attachment.
 - a. First, exit EEGer.
 - b. Unplug the USB cable from the computer.
 - c. Pause for Windows to acknowledge the removal and then plug back into the same USB port.
 - d. Listen for the Windows tone that the device is acknowledged (two tones going up in pitch).
 - e. Watch for a "Found New Hardware Wizard" window to appear. If so, the device was not attached to that port/computer previously. Either move the cable to the previously used port or you may need to follow prompts to install the driver for the cable/amplifier (The driver installation CD may be necessary.)
4. Check the Windows Device Manager for the device. If it is not there, remove the cable from the USB port, pause for Windows to acknowledge the removal and reinsert it.
 - XP/2000/Vista: "TDS Alpha 400 Amplifier" under "Universal Serial Bus Controllers"

ProComp Amplifiers

1. Is there a “ProComp Connect Error” message in the lower-left corner?
 - a. First, exit EEGer.
 - b. Turn OFF the amplifier.
 - c. Restart the computer with the amplifier OFF.
2. Be sure the amplifier is turned ON and the power light is not flashing.
3. Remove and re-insert the fiber optic cable at both ends. Make sure it goes in about ½-inch and does not get caught on the edge half way. Tighten the screw cap securely, but not too tight so it will not crack the glass inside the cable.
4. Make sure the cable is not kinked or coiled less than 4” in diameter.
5. Disconnect the connection between the ProSB (gray box) and the tan cable then reattach securely (Note: the screws do not reach to secure this connection.)
6. ProComp2: Unlike other ProComp amplifiers, you should *not* use a FlexPro pre-amplifier in Channel A. You must use a FlexPro pre-amplifier in Channel B of ProComp2 amplifiers and in both A&B of other ProComp amplifiers.
7. If the amplifier is attached to the computer using a USB port, reset the USB attachment.
 - a. First, exit EEGer.
 - b. Unplug the USB cable from the computer.
 - c. Pause for Windows to acknowledge the removal and then plug back into the same USB port.
 - d. Listen for the Windows tone that the device is acknowledged (two tones going up in pitch).
 - e. Watch for a “Found New Hardware Wizard” window to appear. If so, the device was not attached to that port/computer previously. Either move the cable to the previously used port or you may need to follow prompts to install the driver for the cable/amplifier (A driver installation CD may be necessary.)
 - f. Return to EEGer if the device seems to be attached correctly. If you receive a message about ports when opening EEGer, pay attention to the incorrect port and list of installed ports. Settings in EEGer must match the available ports.
8. Select Configuration from the Preferences menu and click the Devices tab. Be sure your amplifier settings are correct.
 - a. Make sure the “Serial port for data source connection” is set correctly.
 - b. The ProComp port cannot be the same port as the game computer connection.
 - c. Make sure the ProComp protocol selection on the Device or Device Options tab is correct for the DIP switch settings of the amplifier. (Spectrum = 1 ON, 2,3,4 OFF; Biograph = 2 ON, 1,3,4 OFF)
 - d. If you make any changes, be sure to click Store Settings before you exit the window.
 - e. If there’s still a problem, exit EEGer and check the Windows Device Manager to make sure the port specified in Configuration, Preferences is available under “Ports (COM & LPT)” and is functioning properly.

NeuroCybernetics Amplifier using A/D Card

- If the status line shows a red STOP, the A/D board is not running (and there should be an error message somewhere). This may occur if you did not properly complete board setup in the InstaCal software. Refer to the COMPLETE EEGer Manual or the User Wiki at www.eeger.com for more information.

J&J Amplifiers: BrainLynx, C2Mini, GP+, etc.

1. Is there an error message displayed in the lower-left corner of the EEG screen (e.g., C2Mini Not Echoing Settings; Unable to Locate USB Device)?
 - a. Select Configuration from the Preferences menu and click the Devices tab. Be sure your amplifier settings are correct. Make sure the “Source of EEG/peripheral data” is set correctly.
 - b. If EEGer is version 4.1.5H or earlier, update to the latest EEGer release. To download, visit: <http://www.eegspectrum.com>, click the link for [EEGer™ Support](#) and click [UPDATES AND DOWNLOADS](#) or order an installation CD from EEG Spectrum Systems.
 - c. Follow directions to change batteries and/or reset the USB Connection (steps 3 & 4).
2. Change the batteries and/or check for correct insertion.
 - a. First, exit EEGer.
 - b. You must unplug the amplifier from the computer’s USB port to change/check the batteries.
 - c. Reconnect to the same USB port.
 - d. Listen for the Windows tones that indicate the device is recognized (two tones going up in pitch).
3. Reset the USB Connection.
 - a. First, exit EEGer.
 - b. Unplug the USB cable from the computer.
 - c. Pause for Windows to acknowledge the removal and then plug back into the same USB port.
 - d. Listen for the Windows tones that indicate the device is recognized (two tones going up in pitch).
4. Check the Windows Device Manager for the device. If it is not there, remove the cable from the USB port, pause for Windows to acknowledge the removal and reinsert it.
 - XP/2000: “Human Interface Device”
 - Vista: “Composite USB Device” under “Universal Serial Bus Controllers”

BrainMaster Amplifiers

1. Make sure the “Serial port for data source connection” is the COM port that was assigned when you installed the BrainMaster amplifier (as displayed under “Ports (COM & LPT)” in the Windows Device Manager).
2. Make sure the Serial Number and Pass Key are correctly entered on the Device Options tab. The Pass Key should be different than the key you use in the BrainMaster software. Contact BrainMaster Technologies for an EEGer-specific key.
 - a. If it is there, try another battery. If still not responding, the unit may require repair.
 - b. A/D Card with NeuroCybernetics Amp:
 - c. Check the setup in InstaCal.
 - d. Make sure you have the correct A/D card number as defined in the InstaCal software.
3. Reset the amplifier connection:
 - a. Esc to exit the session.
 - b. Unplug the device from the computer (A/D amps - computer must be OFF; Amplifier power switch should be OFF).
 - c. Pause for Windows to acknowledge the removal then reattach the amplifier.
 - d. Return to the EEG training display.

Other Devices:

- If the status line shows NONE or DEAD, the device is not communicating (there should be an error message).