

Dymedix Complete + Installation Addendum for EMBLA PSG Systems

Adding a New Hypopnea Channel

Step 1. Load the montage you typically use for your sleep study. With the study running, select the Data drop down menu at the top and go to Add/Remove Traces.

The screenshot displays the RemLogic software interface for a sleep study. The main window shows a multi-channel recording titled "Composite Device - Room 1 + Video" for "Jason PSG". The recording is at the 38.08s mark. The channels include EEG (E1-M2, E2-M2, C3-M2, C4-M1, F3-M2, F4-M1, O1-M2, O2-M1), 700pV/Vom, ChinL-Ch, mV, EMG Tibi..., Left Leg, Right Leg, Sen/Vom, Snore, mbar, Nasal Pr..., mbar, Thermistor, mV, Thorax, mV, Abdomen, mV, and SpO2. An "Add/Remove Traces" dialog box is open in the center, showing a list of channels with checkboxes and filter/signal type information.

Label	Filters	Signal Type
<input type="checkbox"/> Abdo		Ab Resp
<input type="checkbox"/> C3		EEG-C3
<input checked="" type="checkbox"/> C3-M2	HC: 35 H...	EEG-C3-M2
<input type="checkbox"/> C4		EEG-C4
<input checked="" type="checkbox"/> C4-M1	HC: 35 H...	EEG-C4-M1
<input type="checkbox"/> F3		EEG-F3
<input checked="" type="checkbox"/> F3-M2	HC: 35 H...	EEG-F3-M2
<input type="checkbox"/> F4		EEG-F4
<input checked="" type="checkbox"/> F4-M1	HC: 35 H...	EEG-F4-M1
<input type="checkbox"/> M1		EEG-M1
<input type="checkbox"/> M2		EEG-M2
<input type="checkbox"/> O1		EEG-O1
<input checked="" type="checkbox"/> O1-M2	HC: 35 H...	EEG-O1-M2
<input type="checkbox"/> O2		EEG-O2

Step 2. Select the unused Thermistor trace from the menu.

The screenshot displays the RemLogic software interface for an Airflow, Dymedix Workpad. The main window shows a multi-channel PSG recording titled "Composite Device - Room 1 + Video" for "Jason PSG". The recording time is 38.08s. The channels listed on the left include F3-M2, F4-M1, O1-M2, O2-M1, 700V/Vom, ChinL-Ch, mV, EMG Tibi., Left Leg, Right Leg, 5mV/cm, Snore, mbar, Nasal Pr..., mbar, Thermistor, mV, Thermistor, mV, Thorax, mV, Abdomen, mV, SpO2, Pulse, bpm, CFlow, and L/min. An "Add/Remove Traces" dialog box is open in the center, showing a list of traces with checkboxes. An arrow points to the "Thermistor" entry, which is currently unchecked. The dialog box has columns for Label, Filters, Signal Type, and Properties. The "Thermistor" entry has a filter of "HC: 4 Hz,..." and a signal type of "Resp.FlowTemp-Thermisto...".

Label	Filters	Signal Type
<input checked="" type="checkbox"/> E2-M2	HC: 35 H...	EOG-E2-M2
<input type="checkbox"/> Heart Rate_DR		HeartRate_BeatBeat-EKG
<input checked="" type="checkbox"/> Pulse		Pulse_Averaged-Probe
<input type="checkbox"/> Flow_DR		Resp.Flow-Cannula,Nasal
<input checked="" type="checkbox"/> CFlow		Resp.Flow-FlowGenerator
<input type="checkbox"/> XFlow_DR		Resp.Flow-Inductive
<input checked="" type="checkbox"/> Thermistor		Resp.FlowTemp-Thermisto...
<input checked="" type="checkbox"/> Thermistor	HC: 4 Hz,...	Resp.FlowTemp-Thermisto...
<input type="checkbox"/> Therm		Resp.FlowTemp-Thermoco...
<input type="checkbox"/> LEAK		Resp.Leak-FlowGenerator
<input type="checkbox"/> ResMed Minu...		Resp.MinuteVentilation-Fl...
<input checked="" type="checkbox"/> Abdomen		Resp.Movement-Inductive...
<input checked="" type="checkbox"/> Thorax		Resp.Movement-Inductive...
<input type="checkbox"/> Phase_DR		Resp.Phase-Inductive

Step 3. Once the trace is on the screen, right click on the trace and go to filter settings. For adding a hypopnea channel, you will want to set your low cut frequency to .05Hz.

The screenshot displays the RemLogic software interface for polysomnography (PSG) recording. The main window shows a multi-channel recording titled "Jason PSG" with a time scale from 0 to 38.08 seconds. The channels listed on the left include F3-M2, F4-M1, O1-M2, O2-M1, 700µV/cm ChnL-Ch, mV, EMG Tibi, Left Leg, Right Leg, 5mV/cm, Snore, mbar, Nasal Pr..., mbar, Thermistor, mV, Thermistor, mV, Thorax, mV, Abdomen, mV, SpO2, 100%, Pulse, bpm, CFLOW, and L/min. A "Trace Properties" dialog box is open over the traces, showing filter settings. The "Filters" tab is active, and the "Band limitation filters" section is expanded. The "Low cut frequency" is set to 0.05 Hz (-3dB), and the "High cut frequency" is set to 30 Hz (-3dB). The "Notch filter" section shows "Powerline" set to 60 Hz rejection. An arrow points to the "Low cut frequency" input field. The software interface includes a menu bar (File, Edit, View, Data, Events, Analysis, Reports, Tools, Window, Help), a toolbar, and a status bar at the bottom showing "Room 1 + Video", "Thermistor", "200 Hz", "Ep: 19", "Airflow, Dymedx", "9m 48s", and "NUM". The system tray at the bottom right shows the time as 11:50 AM on 10/1/2015.

Step 4. Once you have adjusted your filters to appropriate settings, right click again on the trace. Under the General tab, you can change the name of the trace. You can label one for hypopnea detection and one for apnea detection.

The screenshot displays the RemLogic software interface for polysomnography (PSG) data analysis. The main window shows a multi-channel PSG trace for 'Jason PSG' on 'Composite Device - Room 1 + Video'. The trace includes channels for C3-M2, C4-M1, F3-M2, F4-M1, O1-M2, O2-M1, Chin-L-Ch., EMG Tibi., Right Leg, Snore, Nasal Pr., Thermistor, and SpO2. A 'Trace Properties' dialog box is open over the trace, showing the 'General' tab. The 'Trace name' field is set to 'Airflow Hypopneal'. Other fields include 'Signal type: Resp.FlowTemp-Thermistor.NasalOral', 'Sampling rate: 200 Hz (200.005 Hz)', and 'Channel number: 262166'. The dialog box has 'OK' and 'Cancel' buttons. The software interface includes a menu bar (File, Edit, View, Data, Events, Analysis, Reports, Tools, Window, Help), a toolbar, and a status bar at the bottom showing 'Room 1 + Video', 'Thermistor', '200 Hz', 'Ep: 22', 'Airflow, Dymedix', '13m 50s', and 'NUM'. The system clock in the bottom right corner shows '11:54 AM 10/1/2015'.

Step 5. Once you have completed setting up your traces, under the View tab at the top you can save the changes to your template using the Save Workspace Template.

The screenshot displays the RemLogic software interface for polysomnographic (PSG) data analysis. The main window shows a multi-trace recording titled "Composite Device - Room 1 + Video" with a time scale from 23 to 23. The traces include C3-M2, C4-M1, F3-M2, F4-M1, O1-M2, O2-M1, ChinL-Ch., EMG Tibi., Right Leg, Snore, Nasal Pr., Thermistor, and SpO2. The 'View' menu is open, showing options such as Spectral, Respiration, CPC, Event Radar, Hypnogram, Oxygen Monitor, Pressure Monitor, Signal Status, Trace Overview, Workspace, Delete Pane, RemAxis View, Show Full Screen, Split Vertical, Split Horizontal, Video, Edit Sheet Templates..., Edit Workspace Templates..., Load Workspace Template..., Revert To Workspace Template, Save Workspace Template, and Save As Workspace Template... The 'Save Workspace Template' option is highlighted. The bottom status bar shows "Room 1 + Video", "Thermistor", "200 Hz", "Ep: 31", "Airflow, Dymedex", "15m 53s", and "NUM". The system tray at the bottom right shows the time "11:56 AM" and date "10/1/2015".