

BioGraph Infiniti

Quick Start Guide



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The Manufacturer:

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Product Name:

ProComp Infiniti System
ProComp5 Infiniti System
FlexComp Infiniti System
MyoTrac Infiniti System
ProComp2 System

Product No.:

T7110M, T7120M, T7150M, T7160M,
T7170M, T7500M, T7520M, T7550M,
T7555M, T9800
T7535

Device Name:

ProComp Infiniti,
FlexComp Infiniti,
MyoTrac Infiniti,
ProComp 5 Infiniti
ProComp 2

Device No.:

SA7500, SA7550, SA9800, SA7525, SA7400

EC

REP

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- Type BF (Battery-powered Floating) Equipment
- Internally powered equipment
- Continuous operation
- Read Instruction Manual – Refer to applicable hardware manuals for additional information.

CAUTION

- US Federal Law restricts this device to sale by, or on order of, a physician or any other practitioner licensed by the law of the state in which he or she practices to use or order the use of this device.

WARNING

- Do not operate Active Sensors within 10 feet of an operating cellular phone, similar radio transmitting device, other powerful radio interference producing sources such as arc welders, radio thermal treatment equipment, x-ray machines, or any other equipment that produces electrical sparks.
- All encoders are totally isolated from line (110 or 220VAC) power due to battery operation and fiber optic connections to computers. However, many hospitals and the FDA require that computers, printers and any other equipment used with medical devices be electrically isolated from line voltage to UL or CSA medical safety standards.
- The PC used with device must be placed outside the patient/client environment (more than 3 meters or 10 feet) or the PC must comply with EN 60601-1-1 (system safety).
- After use, the Disposable Electrodes may be a biohazard. Handle, and when applicable, dispose of these materials in accordance with accepted medical practice and any applicable local, state and federal laws and regulations.
- Reusable electrodes present a potential risk of cross-infection especially when used on abraded skin, unless they are restricted to a single patient or sterilized between patients. If sterilizing electrodes, employ only gas sterilization.
- Radiated radio frequency electromagnetic fields can cause performance degradation in the MyoScan-Pro EMG sensor. In the worst case, an RF field strength of 22mV/M can cause an increase of 1 μ V in the signal reading from a MyoScan-Pro sensor. Be sure to keep in mind that a very relaxed muscle should provide an EMG reading of approximately 1–3 μ V.
- Due to the slight risk of inducing photosensitive epileptic seizures, proceed with caution when using repetitive EP/ERP visual stimuli protocols with BioGraph Infiniti 4.0 (Protocol Generator algorithm/Evoked Potential screen instrument) and the AV Sync sensor. If a seizure appears to be starting, stop the visual stimulus immediately.
- Explosion Hazard; Do not use in the presence of a flammable anesthetic mixture with air, or with Oxygen or Nitrous Oxide.
- Not to be immersed in water
- Take care in arranging patient and sensor cables to avoid risk of patient entanglement or strangulation.
- The operator is responsible for ensuring the safety of any devices controlled or triggered by Infiniti equipment or software, or by any software or hardware receiving data from Infiniti equipment. Infiniti equipment must not be configured or connected in such a way that failure in its data acquisition, processing or control functions can trigger patient feedback stimulus that poses an unacceptable level of risk.
- Use of any equipment in a biofeedback context should be immediately terminated upon any sign of treatment-related distress or discomfort.
- Not to be connected to a patient undergoing MRI, Electro surgery or defibrillation.

ATTENTION

- Sensors damaged by static electricity are not covered under warranty. To prevent static discharge from damaging the sensor and/or encoders, use anti-static mats or sprays in your working area. A humidifier may also be used to prevent static environments by conditioning hot, dry air.
- Do not apply any electrode gel or equivalent directly on the sensor snaps. Always use electrodes as a medium between the sensor and the client.
- Not for diagnostic purposes, not defibrillator proof, not for critical patient monitoring.
- To prevent voiding warranty by breaking connector pins, carefully align white guiding dot on sensor plug with slot on sensor input.
- Sharp bends or winding the fiber optic cable in a loop smaller than 4 inches (10cm) may destroy the cable.
- A fiber optic cable not fully pushed into its receptacle may cause the unit not to operate; make sure that both ends of the cable are fully inserted into their receptive jacks and the nut is tightened firmly.
- Make sure to remove electrodes from sensor snaps immediately after use.
- Do not plug third party sensors directly into instrument inputs. Plug only Thought Technology Active Sensor cable connectors into instrument inputs. All electrodes and third party sensors must be connected to active

- sensors, either directly or through an adapter.
- Remove batteries when the device is not being used for an extended period of time. Please dispose of batteries following local regulations.

INTENDED PURPOSE

- Biofeedback, Relaxation & Muscle Re-education purposes.

CONTRAINDICATIONS

- None

NOTE

- No preventative inspections required; maintenance must be performed by qualified personnel.
- The supplier will make available, upon request, circuit diagrams, component parts lists and description or other information required for the repair of product by qualified personnel.
- If a fiber optic or patient cable is damaged or breaks please replace.
- Due to the essential performance and intended use of the device, testing for immunity to electromagnetic disturbances was not required and was not performed. The device may be susceptible at levels below IEC60601-1-2 immunity test levels.
- The operator must be familiar with typical characteristics of signals acquired by this equipment, and be able to detect anomalies in the acquired signal that could interfere with treatment effectiveness. Depending on the importance of signal integrity, it may be advisable to continuously monitor the raw signals, in time and/or frequency domain, while the device is being used for biofeedback or other purposes. If anomalies are observed on acquired signals, and if you suspect a problem with electromagnetic interference, contact Thought Technology for a technical note on identification and remediation.

MAINTENANCE AND CALIBRATION

- Wipe encoder with a clean cloth
- Factory testing and calibration ensure equipment accuracy and frequency response. The user may invoke a self-calibration function that will recalibrate certain device parameters (see section in hardware manual). Contact Thought Technology for factory recalibration if necessary.

STORAGE

- Store in its original case at up to 90% humidity / 30C°

TRANSPORTATION

- Transport in its original case

Guidance and manufacturer's declaration – electromagnetic emissions		
The Infiniti system is intended for use in the electromagnetic environment specified below. The customer or the user of the Infiniti system should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The Infiniti system uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Not applicable	The Infiniti system is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.

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Introduction

Overview

The purpose of this Quick Start Guide is to provide you with a rapid overview of the main functions of the BioGraph Infiniti program. It includes an introduction to recording open display and script sessions, as well as basic functions used for reviewing and reporting upon session data.

This manual uses examples to illustrate how to record open display and script sessions, as well as functions for reviewing sessions. Screen captures were taken from sessions recorded using the ProComp Infiniti encoder and channel sets, display screens and sample data from the EEG Suite. What you see on your computer monitor will vary, depending on the encoder type and Application Suites that you are using.

Please refer to the on-line help manual for a more detailed description of all the functions and features of the program. To open on-line help, simply press the F1 function key, on your keyboard, from any window in the program. Because the on-line help manual is designed to provide contextual information, it should automatically open at the section that discusses the window from which the help was called.

Recommended Requirements for Running BioGraph Infiniti

This list shows the requirements recommended at the time this manual was written. Because of the volatile nature of the computer industry, it may be subject to change. If you are concerned about the ability of your computer to run BioGraph Infiniti, you can view the most current list of requirements at our website, www.thoughttechnology.com.

Note: *BioGraph Infiniti 4.0 is a 32-bit software program. It is not 64-bit compatible.*

- IBM PC compatible, AMD Athlon XP 3000 or higher, Pentium P4 CPU speed 3 GHz or higher or equivalent mobile Laptop CPU
- Desktop or Laptop with two monitor capability
- Microsoft® Windows® 2000 with Service Pack 4, or Windows XP with Service Pack 2
- 50 – 60 gigabytes hard disk space for video recording and processing. (The software needs 2.5 gigabytes to install and run of available hard drive space)
- Memory, 512 MB of RAM or more
- CD ROM or DVD drive (DVD drive is required for DVD functions in BioGraph Infiniti 3.0 and later)
- SVGA graphic card (1024 x 768) or higher resolution adapter & monitor
- 32 bit compatible sound card & speakers
- 1 to 4 USB ports, depending on the desired number of Pro/Flex Infiniti encoders
- 1 to 4 serial com ports, depending on the desired number of ProComp+ encoders
- Mouse or compatible pointing device
- MS Word 97 or higher (for printing purposes)
- Compact Flash Reader (For use with compact flash card only)
- Webcam 30 frames per second (for video purposes only)
- Internet access (for updating Software)

Note: *To use certain more complex screens, such as Coherence, your system must conform to these recommended computer requirements.*

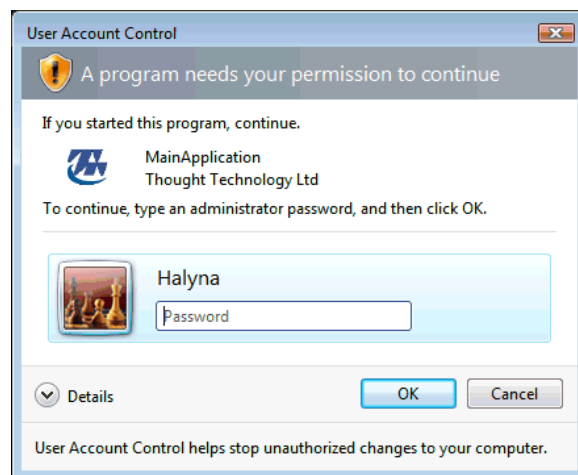
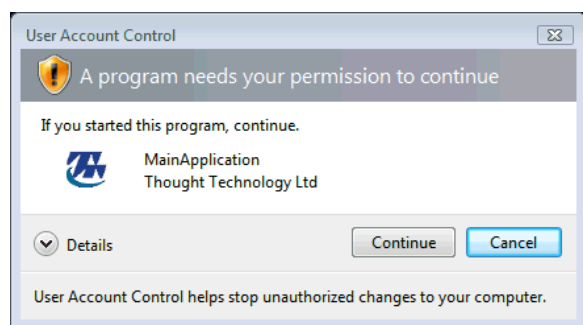
Before You Begin

Ensure that BioGraph Infiniti 4.0 and at least one Application Suite have been installed on your computer.

A Special Note for Vista Users

BioGraph Infiniti and the Developer Tools (Channel Editor, Script Editor, Screen Editor and Screen Editor Lite) will run on a Vista operating system. However, because of Vista's robust security features, each time you open one of these applications, the User Account Control will request authorization to run it.

If you run an application as Administrator, you can continue without further intervention.



If you try to run an application as a user without Administrator privileges, you must be able to enter the Administrator password before you can continue.

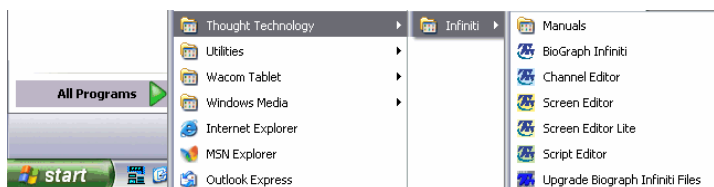
Note: You can disable the User Account Control, but we **strongly** recommend against this.

When you copy items into or delete items from subfolders in **Program Files\Thought Technology\Infiniti**, you will be asked to confirm the changes. Be aware of this when you add Application Suites from third-party developers to your BioGraph Infiniti installation, since it may be necessary to copy scripts, screens, and channel sets into the appropriate subfolders.

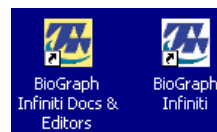
Starting BioGraph Infiniti

To start the software, do one of the following:

- Select **BioGraph Infiniti** in the **Start Menu** under **Program Files\Thought Technology\Infiniti**.

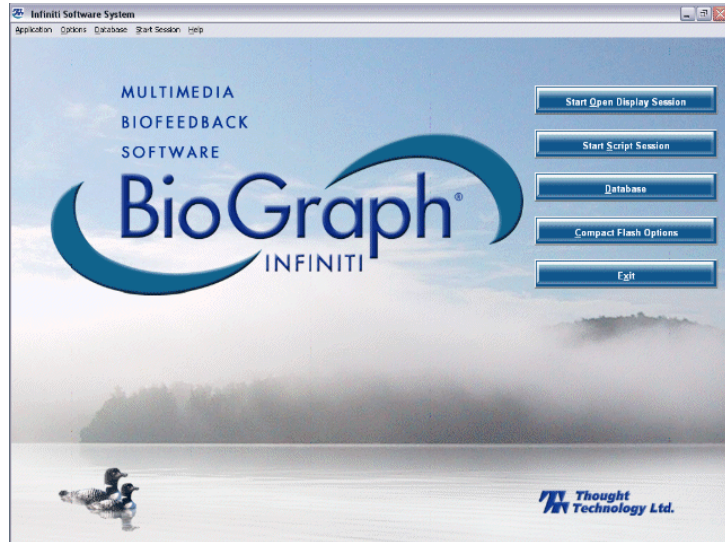


- Double-click on the BioGraph Infiniti icon on the Desktop.



The program always starts in the **Main Menu** window.

From here you can record sessions, replay or review recorded sessions, maintain session and client information, or manage session data recorded on a Compact Flash memory card.



- If you are using BioGraph Infiniti for the first time, read [First Time Run: Entering Key Codes](#) on page 4.
- If you intend to record data on a Compact Flash, see [Using a Compact Flash Card](#) on page 5.
- For information about [Recording an Open Display Session](#), go to page 7.
- For information about [Recording a Script Session](#), go to page 10.
- Information about [Reviewing Sessions](#) begins on page 15.

First Time Run: Entering Key Codes

An encoder key code is associated with a given encoder serial number. An application key code is a number validates a specific BioGraph Infiniti installation. Key codes are unique numbers generated by Thought Technology and provided to you when you purchase your BioGraph Infiniti system.

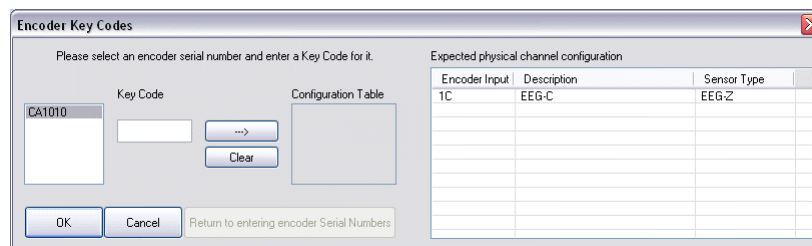
Note: If you purchased your encoder and software separately, the key codes should be inside the cover of the BioGraph Infiniti manual. If you purchased them at the same time, you should find the key codes inside the battery compartment of the encoder **and** the front cover of the manual. If you can't find the key codes, contact [Technical Support at Thought Technology](#) (see page 22 for contact information) with details of your purchase so that we can send you key codes for your system.

If you have upgraded to BioGraph Infiniti 4.0 from an older version of the software, you can no longer use the original key codes for your existing encoders. Your upgrade package should include new key codes for your encoders. If you are missing any key codes, contact Thought Technology or your dealer to receive new ones.

The first time you record a session with your new software, BioGraph Infiniti will check for the key codes and ask you to enter them. You will also be asked to enter key codes if you have uninstalled and reinstalled BioGraph Infiniti, or if this is the first time you are using a specific encoder with your existing installation.

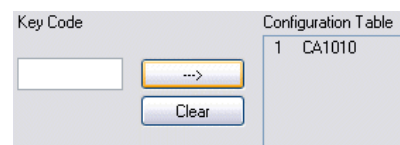
If you are using an Infiniti encoder in one of the Infiniti communication protocols, the program should detect its serial number automatically and you will be asked to enter the Key Codes for your system.

- When the **Encoder Key Codes** window opens, click to highlight your encoder's serial number in the left table (this is the serial number you can see on the back of your unit; in this example, CA1010).



Note: If you are using a ProComp+ encoder, you will have to type in your encoder's serial number before you can enter the Key Codes (please refer to the on-line help – press F1 – for more information on how to do this).

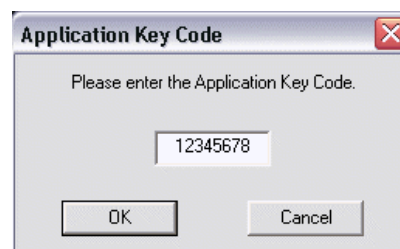
- Type in the **Encoder Key Code** in the **Key Code** text box and click on the arrow button to move the serial number from the left table to the right table. The serial number should now appear in the **Configuration Table**.



If you are using more than one encoder, repeat this procedure for the other encoders in the list.

- When done, click **OK**.
- Enter the **Application Key Code** for your system.
- Click **OK** when done.

Note: Even if you are using more than one encoder, you enter only one **Application Key Code**.



If the key codes have been entered properly and there is no problem with your encoder setup or your sensor connections, you will enter recording mode.

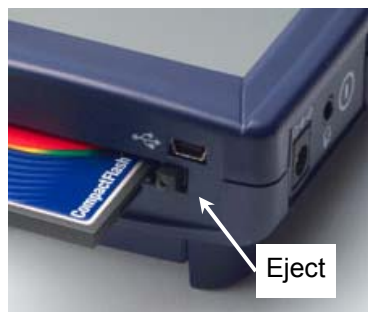
If you are [recording an open display session](#), go to page 7; if you are [recording a script session](#), go to page 10.

Using a Compact Flash Card

You can use FlexComp Infiniti, ProComp Infiniti and MyoTrac Infiniti encoders to record sessions on a Compact Flash card for later download to the BioGraph Infiniti software. Before you can record to a Compact Flash card, the card must be formatted and prepared for use with your encoder.

Note: *The Infiniti encoders are delivered with a protective insert in the Compact Flash slot.*

- To remove the insert, push the button next to the slot once to eject it. The card can then be inserted, as shown on the picture. To protect from incorrect insertion the card can be inserted into the device only one way. When inserted properly it is flush with the device rear.
- Use the same procedure to remove the card when it is no longer required, and reinsert the protective insert.



Compact Flash slot on a MyoTrac Infiniti encoder

Formatting the Compact Flash

- First connect a Compact Flash reader to your computer and insert the card in it.

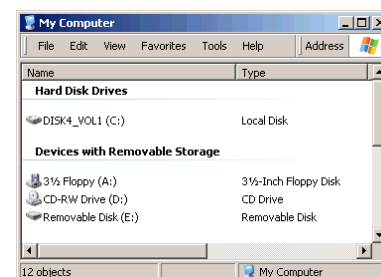
Readers come in different sizes and shapes. This picture shows a typical device.



- Click on **My Computer** on your computer desktop.

You will see a removable disk listed under **Devices with Removable Storage**. This is your Compact Flash card.

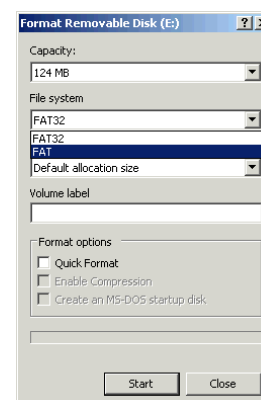
The drive letter will vary depending on your computer's configuration.



- Select the removable disk and right-click on it.
- From the right-click menu, select **Format**.
- In **Format Removable Disk**, select **FAT** from the File system menu, as shown in the picture.
- Select the **Quick Format** check box and then click **Start**.

This formats your Compact Flash card to the proper format.

- When formatting is finished, click **Close**.



Preparing the Compact Flash for Use with your Encoder

Use this procedure to prepare a FAT-formatted Compact Flash card for use with your ProComp Infiniti, FlexComp Infiniti or MyoTrac Infiniti encoder.

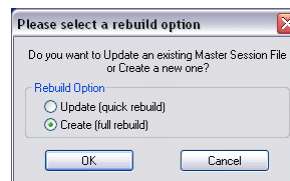
Note: If you have a MyoTrac Infiniti encoder, you can optionally prepare the card for recording sessions using the CF Report Generator Software (available on the MyoTrac Infiniti CD or from our website at www.thoughttechnology.com). See the Report Generator User Guide for more information.

- Connect the Compact Flash reader to your computer and insert the formatted card in it.
- Open BioGraph Infiniti.
- In the **Main Menu** screen, do one of the following:
 - Click **Compact Flash Options**.
 - From the **Options** menu, select **Compact Flash Options**.

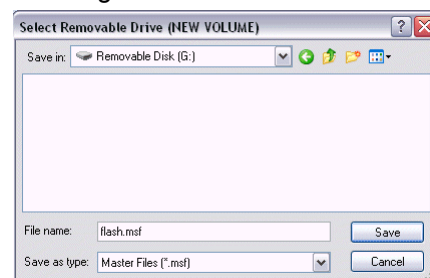
- In **Compact Flash Options**, click **Rebuild Compact Flash**.



- In **Rebuild Option**, select **Create (full rebuild)** and click **OK**.
- At the warning prompt, click **Yes**.



- In the file browsing window, locate and select the removable disk that is your Compact Flash card. The drive letter will vary depending on your computer's configuration.
- In the **Save** browser window, do the following:
 - In **File name**, type **flash.msf**.
 - Ensure that **Save as type** is **Master Files (*.msf)**.
 - Click **Save**.
- At the confirmation prompt, click **OK**.



The system builds the master file on the card.

At the acknowledgement prompt, click **OK** and then click **Close** to exit **Compact Flash Options** and return to the **Main Menu** screen.

Your Compact Flash card is now ready for use. This procedure needs to be done only once.

Note: Once it has been prepared for use with your encoder, the Compact Flash card cannot be used for other purposes (such as file storage).

Recording Sessions

Overview

With the BioGraph Infiniti software, two types of sessions can be recorded: **Open Display** and **Script** sessions. Open display sessions are generally used for biofeedback training, when flexibility is important and you need to be able to rapidly change session parameters depending on the client's reactions. Script sessions, on the other hand, are important for recording assessment or follow-up sessions, where a standardized and constant approach is more appropriate. While both open display and script sessions can be used for trend reports, script sessions generally generate more comparable sessions.

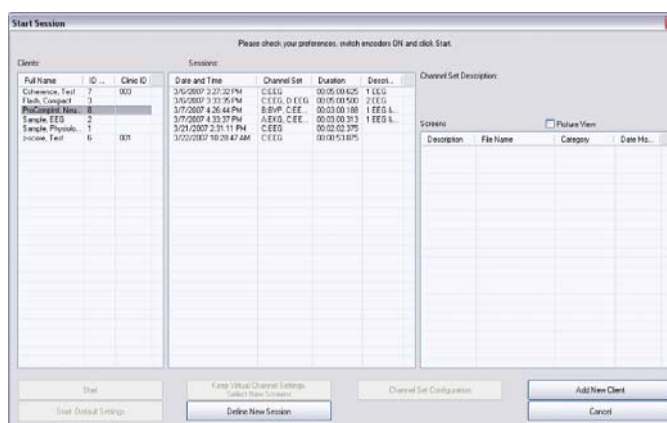
To start recording a session:

- Click on **Start Script Session** or **Start Open Display Session**.
- Select a Client file. This is done from the **Client Database** window.
- Select a previously recorded session and click **Start as Selected** or define a new session configuration. This is done from the **Start Session** window.
- To define a new session configuration, depending on the session type, select a channel set and up to 5 display screens or select a script. This is done from the **Select Screens** or the **Script Database** windows.
- Verify the sensor connections. This is done from the **Channel Set Configuration** window.
- In the recording window, you can:
 - From the **Edit** menu: [set automatic rejection parameters](#) for reviewing the session (page 13); modify channel set parameters.
 - From the **Options** menu: perform an impedance check on your sensors; zero EMG sensors; [check the battery level of your encoder](#) (page 14); view the channel set configuration; or set open display statistics.

Recording an Open Display Session

Click **Start Open Display Session**. This takes you through the process of selecting a client file and setting up the session parameters for biofeedback or data acquisition, and launches recording mode.

When the **Start Session** window appears, you can select the client file for which the session will be recorded by clicking on a name in the leftmost column. When you click a client name, the list in the middle shows you all the uncompressed open display sessions that were recorded for that client.



Note: Even if you aren't going to save the session, you must select a client file.

Note: If the session list is empty, it doesn't mean that no sessions were recorded for that client, only that no open display sessions were recorded for that client.

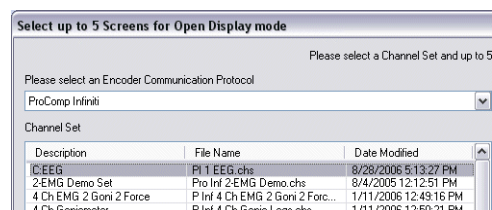
If you select a session, the list on the right shows you the channel set name and all the screens that were used for that session. Click the **Picture View** check box to see thumbnail images of the screens.



- Click **Start** to rapidly start a new session with the same client and channel set settings.
- Click **Start: Default Settings** to start a new session with the default channel set settings instead of the client settings.
- Click **Keep Virtual Channel Settings. Select New Screens** to keep the client's channel set settings but change the selected screens.
- Click **Define New Session** to define completely new session settings.
- Click **Add New Client** if you need to create a new client file. The minimum information you need to enter in the **Client Data** window is the person's first and last name.

Defining new open display session settings

- After selecting a client file, click **Define New Session** to open the session settings.
- In the upper left corner, select the proper communication protocol for your encoder type; in this example, **ProComp Infiniti**.



ProComp Infiniti	ProComp Infiniti or ProComp5 Infiniti OR FlexComp Infiniti in ProComp mode
FlexComp Infiniti	FlexComp Infiniti
MyoTrac Infiniti	MyoTrac Infiniti, Infiniti/U-Control and Dual EMG
MyoTrac 3	MyoTrac 3
Legacy	ProComp+ or ProComp 2 in standard mode OR ProComp Infiniti or FlexComp Infiniti in Legacy mode
OEM	ProComp+ or ProComp 2 in third-party software mode OR ProComp Infiniti or FlexComp Infiniti in Legacy mode

After selecting a protocol, you should see a list of all the channel sets that were designed for this encoder set to this communication protocol.

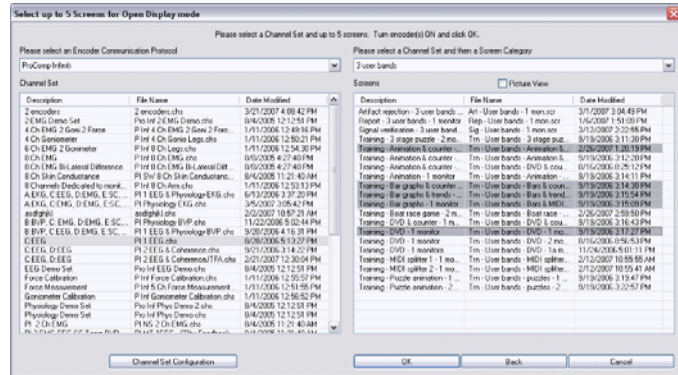
Note: The number and types of channel sets and screens listed in the tables depend on the Application Suites that are installed on your system.

- Click the "C: EEG" channel set to select it.

After selecting the channel set, you can open the drop-down list in the upper right corner and select a screen category. Selecting the "3 user bands" category lists only the screens of that category.

Note: Select "Show all categories" to list all the screens for the channel set.

- Select up to 5 screens from the table on the right by clicking on them. To select more than one screen, press the **[Control]** or **[Shift]** key as you click.

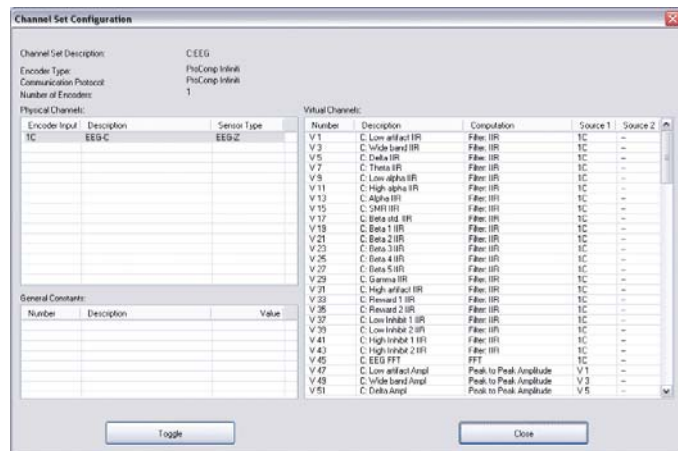


If you have not already done so, at this point, you should connect sensors to your encoder. Click **Channel Set Configuration** to verify the sensor configuration for the channel set you have selected.

A window opens, where you can see a table of encoder inputs (in this example, 1C) with its corresponding sensor type (EEG-Z) and a quick overview of the channel set's virtual channel structure.

Note: Click **Toggle** to switch between EEG-Z, EEG-Z3 and EEG-Pro/Flex sensors if you own an older EEG sensor.

You can also use **Toggle** to switch between MyoScan-Pro 1600 and MyoScan-Pro 400, if your channel set includes these EMG sensors.



- Click **Close** to return to the session settings. Make sure to turn your encoder ON and click **OK** to continue when you have selected the screens you want to use.

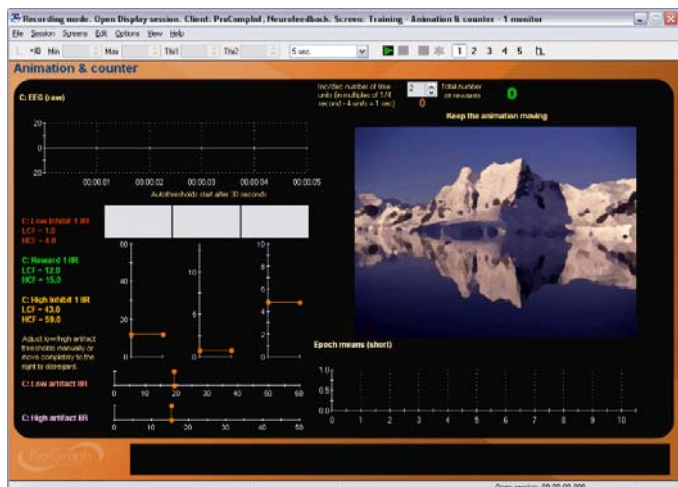
Note: If this is the first time you use your system, at this point you will be asked to enter Key Codes (see page 4 for a [description of Key Codes and how to enter them](#)).

If there are no problems with your encoder setup or your sensor connections, you will enter the **Main Frame** window in recording mode.

- To start recording, click the **Start** button.



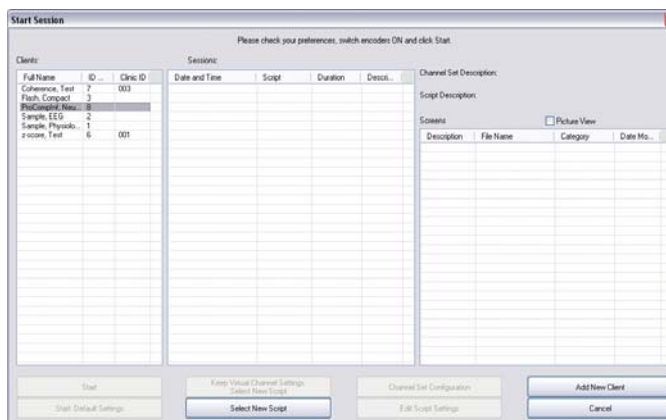
Instructions for [ending a recording session](#) are given on page 12.



Recording a Script Session

Click **Start Script Session**. This takes you through the process of selecting a client file and setting up the session parameters, and launches recording mode.

The **Start Session** window is similar to the one for defining open display sessions. You can select the client file for which the session will be recorded by clicking on a name in the leftmost column. When you click a client name, the list in the middle shows you all the uncompressed script sessions that were recorded for that client.



Note: If the session list is empty, it doesn't mean that no sessions were recorded for that client, only that no script sessions were recorded for that client.

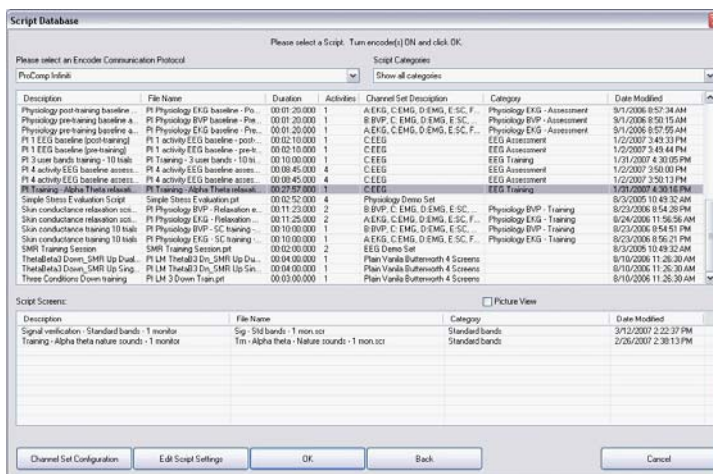
If you select a session, the list on the right shows you the channel set and script names as well as all the screens that were used by the script.

- Click **Start** to rapidly start a new session with the same client and script settings.
- Click **Start: Default Settings** to start a new session with the default channel set settings instead of the client settings.
- Click **Keep Virtual Channel Settings. Select New Script** to keep the client's channel set and settings but change the selected script.
- Click **Select New Script** to define completely new session settings.
- Click **Add New Client** to create a new client file. The minimum information you need to enter in the **Client Data** window is the person's first and last name.
- Click **Edit Script Settings** to modify script step durations and select different screens for selected steps.

Defining new script session settings

- After selecting a client file, click **Select New Script** to open the session settings.
- Select the encoder that you will use for the session from the list in **Encoder Communication Protocol**. (A list of [communication protocols](#) is on page 8.)

After selecting a protocol, you should see a list of all the scripts that were designed for this encoder set to this communication protocol.



Note: The number and types of scripts that are listed in the table depend on the Application Suites that are installed on your system.

- Click the "PI Training Alpha Theta relaxation" script to select it.

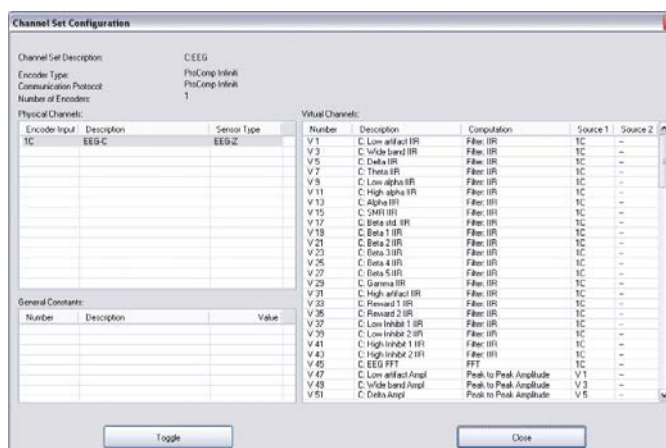
After the script is selected, the bottom section shows you the list of screens that are used by the script. Click the **Picture View** check box to see thumbnail images of the screens.

- If you have not already done so, at this point, you should connect sensors to your encoder. Click **Channel Set Configuration** to verify the sensor configuration for the script you have selected.

A window opens, where you can see a table of encoder inputs (in this example, 1C) with its corresponding sensor type (EEG-Z) and a quick overview of the script's virtual channel structure.

Note: Click **Toggle** to switch between EEG-Z, EEG-Z3 and EEG-Pro/Flex sensors if you own an older EEG sensor.

You can also use **Toggle** to switch between MyoScan-Pro 1600 and MyoScan-Pro 400, if your channel set includes these EMG sensors.



- Click **Close** to return to the session settings. Make sure to turn your encoder ON and click **OK** to continue when you have selected the script you want to use.

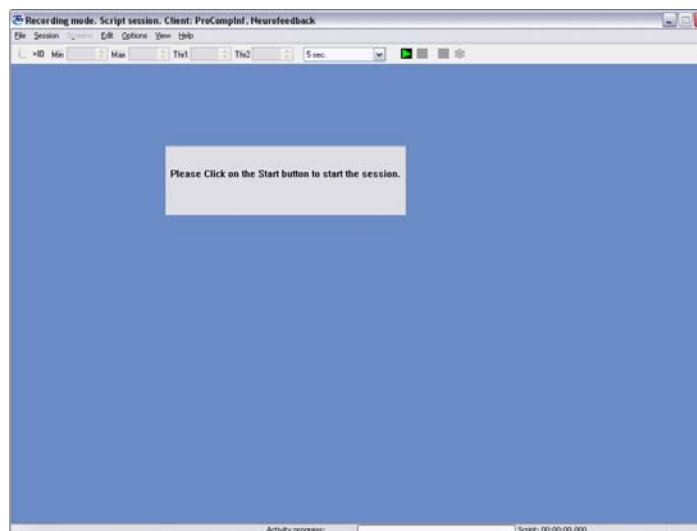
Note: If this is the first time you use your system, at this point you will be asked to enter Key Codes (see page 4 for a [description of Key Codes and how to enter them](#)).

If there are no problems with your encoder setup or your sensor connections, you will enter the **Main Frame** window in recording mode.

- To start recording, click the **Start** button.



Instructions for [ending a recording session](#) are given on page 12.



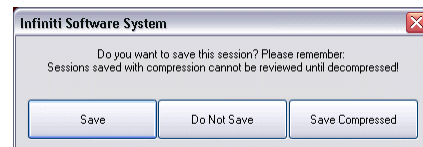
Ending a Session

- To stop recording a session, click the **Stop** button.



When the stop button is clicked, the program asks if you want to save the recorded data.

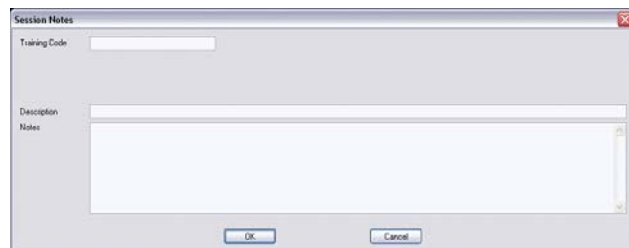
- You can choose to save the session in compressed format, but, unless you have very little hard drive space available or you won't need to review the saved sessions, we recommend that you always **Save**, which uses the non-compressed format.



Note: *Compressed sessions can't be replayed, reviewed or trended until they are decompressed.*

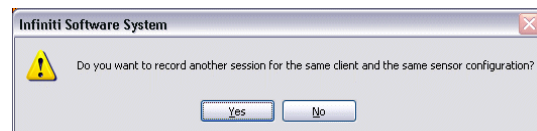
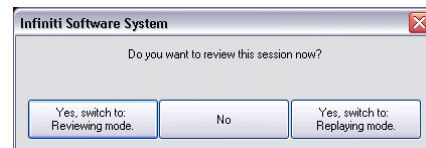
If you choose **Save** or **Save Compressed**, the **Session Notes** window opens so that you can enter, if you want, a treatment code, a session description and other relevant information.

- Click **OK** to continue.

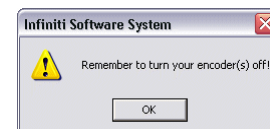


Next, you are asked if you would like to review the session right away.

- If you choose **Reviewing** mode or **Replaying** mode, the program opens the session in the selected mode.
- If you click **No**, the program asks if you want to record another session with the same settings.



- If you click **No**, the program reminds you to turn your encoder off.
- Click **OK** to return to the **Main Menu Screen**.



Other Recording Functions

Setting Review Mode Auto-Rejection Levels

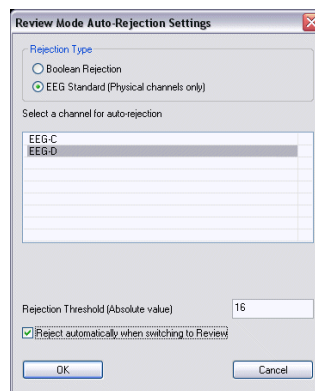
You access **Review Mode Auto-Rejection Settings** from the **Edit** menu. It allows you to define the artifact rejection method you want to use when reviewing sessions. (For a more detailed explanation of [the need for artifact rejection](#), see page 17.)

Depending on the signal types that your channel set includes and whether it includes the proper Boolean virtual channels, you can choose between **Boolean Rejection** or **EEG Standard (Physical Channels Only)**.

If you access this option either prior to recording a session or when switching immediately after recording and saving the session, you can select **Reject automatically when switching to Review**.

Select this check box to run the auto-rejection function automatically when you switch to review mode immediately after recording. This allows you to calculate fairly reliable statistics on the fly. You would use this function if you want the software to perform preliminary artifact rejection on the session data.

You still have the option to perform manual artifact rejection on the data at a later time. Information about [manual artifact rejection](#) is found on page 17.



The following example explains how to set an auto-rejection threshold for an EEG channel. For an [example of auto-rejection using Boolean Rejection](#), see page 17.

- In **Rejection Type**, select **EEG Standard (Physical channels only)**.
- In the table below, select the EEG channel you want to use for rejecting artifacts. Only one channel can be selected. For this example, select the "EEG-D" channel.
- In the **Rejection Threshold (Absolute value)** text box, enter the value over which you can be sure that the signal is definitely an artifact (in this example, 16 micro-volts).
- Select the **Reject automatically when switching to Review** check box.
- Click **OK**.

After you finish recording, when you switch to review mode, the program scans the whole session and automatically places rejection segments over all the sections that fit the definition. If you save the data without switching to review mode, when you do open the session for review at a later time, automatic rejection will be performed using the levels you set here.

Note: *If you modify auto-rejection level or rejection segments during review, the system saves your modifications.*

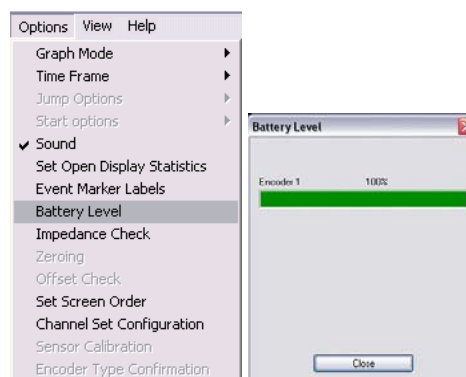
Checking the Battery Level

Before starting to record a session, you can verify the level of your encoder's batteries by selecting **Battery Level** in the **Options** menu.

This opens the **Battery Level** window. If the battery level is green, the level is acceptable and you can click **OK** to continue.

Note: If the battery level is yellow, you can still record a short session, but if it is red, you should change the batteries in your encoder.

Note: It is not necessary to check the battery level for the MyoTrac Infinity.



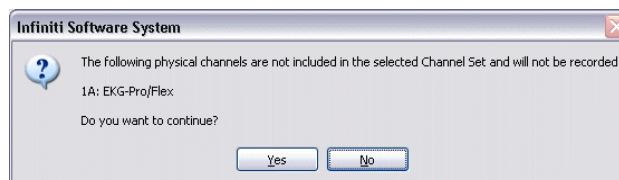
Troubleshooting the Start Sequence

If there are problems with your sensor connections, the program will report those, prior to accessing the recording screen. If, for example, you have sensors that are connected but are not required for this channel set, you will get a warning message.

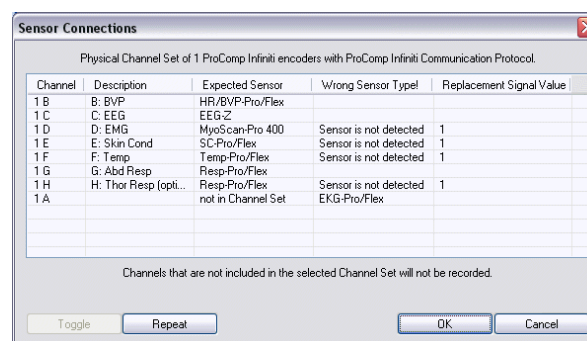
You can remove the sensor if you want, or continue recording by clicking **Yes**. Keep in mind that no data is recorded for sensors that are not defined in the channel set.

If you have connected wrong sensor types, you will see the **Sensor Connections** window. All the sensors that are expected will be listed in the **Expected Sensor** column. The **Wrong Sensor Type** column shows which sensor type was actually detected.

You can remove the wrong sensor or replace it with the right one. Click **Repeat** to check the sensor connections again until the system no longer detects a wrong sensor type. The program will not allow you to record a session with the wrong sensors.



Note: If there are sensor connection problems in addition to extra sensors, this information won't appear as a separate message. It will display in the **Sensor Connections** window.



Note: If the **Wrong Sensor Type** column is empty, the correct sensor has been connected.

If you do not connect all the sensors that are required for the selected channel set, the message "Sensor is not detected" appears in the **Wrong Sensor Type** column. When a sensor is not connected, the program replaces its signal value by a constant value of 1. It is possible to record a session with missing sensors but you need to keep in mind that the corresponding signal will be a flat line and that all calculations performed from that signal will not be reflecting real physiological changes.

Note: If you are using a ProComp+ or a ProComp 2, the sensor recognition function does not work and you have to verify the sensor types yourself.

Please refer to the on-line help for more information on troubleshooting sensor configuration errors.

Reviewing Sessions

Overview

The reviewing mode allows you to perform many important data processing functions that impact directly on your ability to produce valid session and trend reports. With biofeedback therapy, being able to demonstrate clinical effectiveness is most easily achieved by showing that the client is learning and that the effects of the training are being maintained from session to session.

The ability to show a learning curve on a trend report can be an invaluable tool for successful discussions with third-party payers. The Infiniti software's reporting abilities allow you to produce such tools, but it requires that you perform careful artifact rejection on all assessment sessions prior to generating your reports. Without artifact rejection, the statistical calculations may have little or no meaning.

Generally, when reviewing a session, the following tasks are performed:

- Selecting reviewing and reporting screens.
- Scrolling through the session data to identify areas of interest and placing event markers.
- Normalizing the data by performing artifact rejection.
- Calculating statistics and generating session reports.
- Generating trend reports.

Client Database

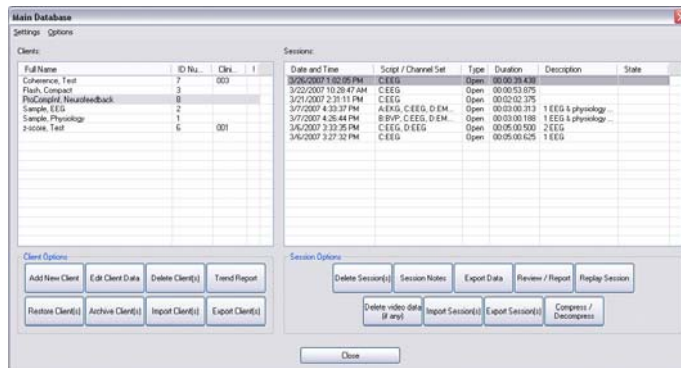
- In the **Main Menu** window, click on the **Database** button or menu option.

This opens the **Main Database** window.

- Select a client file by clicking on a client name in the list on the left.

When a client file is selected, all the sessions that were recorded for that client are shown in the list on the right.

- When a session file is selected, click **Review/Report** or **Replay Session**.



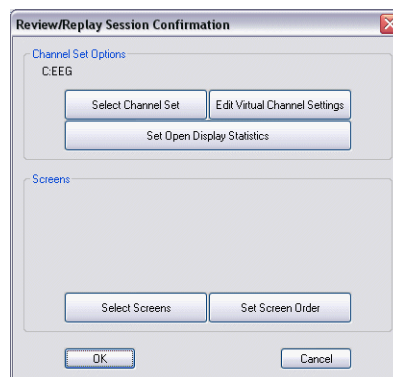
Selecting Review Screens

This Quick Start document describes only the Review/Report functions, using a session from sample client "ProCompInf Neurofeedbacksample" as an example.

When the **Review/Report** button is clicked, the **Review Session Confirmation** screen appears. The options available in it depend on whether you are reviewing an open display session or a script session.

When reviewing or replaying an open display session, you can click on **Select Channel Set** to load a channel set that is different from the one with which the session was recorded.

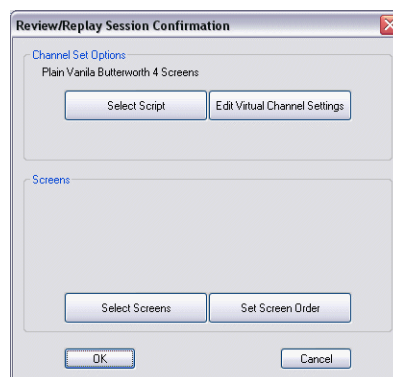
Note: Both channel sets must use the same encoder type and configuration of sensors and inputs. For example, if both channel sets send EEG signals on physical channels C and D to a ProComp Infiniti, you can use one to record the session and the other to review it.



Open Display Session

You will most often review a script session using the same script and channel set as those used to record it.

Note: You can click on **Select Script** to load a different script and channel set. This is not commonly done, because the new script must have an activity and step structure similar to the original script.



Script Session

The first time you select a session for reviewing, you have to select one or more review screens.

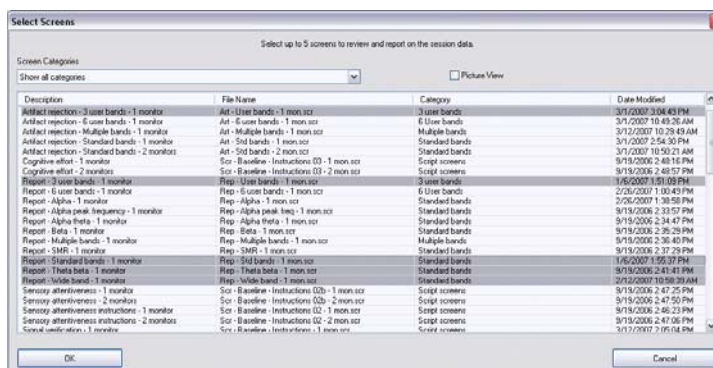
- Click on **Select Screens**.

You can review a session with any of the display screens listed in **Select Screens** for the selected channel set.

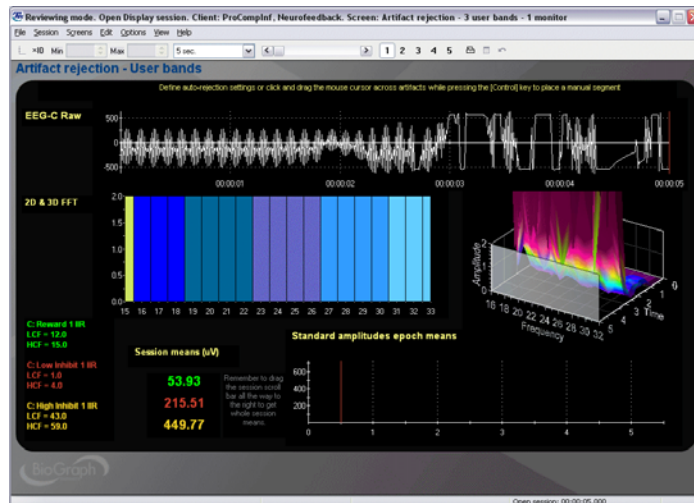
- To select a screen, click on it.

As with recording, you can load up to 5 screens for reviewing. To select more than one screen, press the **[Control]** or **[Shift]** key while clicking.

- Click **OK** to return to **Review Session Confirmation**.
- In **Review Session Confirmation** click **OK** to continue.



The session opens in Reviewing mode; you should see a screen similar to this.



Rejecting Artifacts

The main purpose of reviewing data is to reject artifacts and generate reliable statistics. Session statistics can only be as good as the data from which they are generated. If the recorded signal is of poor quality, the statistics will reveal more about the amount of noise affecting your recording than about any progress your client might be showing. Even with the best recording techniques, noise in the signal cannot be completely avoided. This is why artifact rejection is important.

Artifact rejection can be performed **automatically** by the software, or [manually by the person reviewing the data](#) (see page 18). Once you have reviewed the session and placed artifact rejection segments where required, you can generate statistics and print a session report.

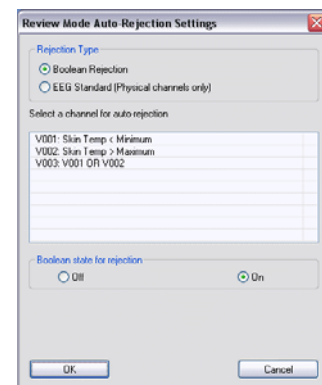
Automatic Rejection of Artifacts

You access **Review Mode Auto-Rejection Settings** from the **Edit** menu. It allows you to define the artifact rejection method you want to use when reviewing sessions. Depending on the signal types that your channel set includes and whether it includes the proper Boolean virtual channels, you can choose **Boolean Rejection** or **EEG Standard (Physical Channels Only)**.

In order for you to use **Boolean Rejection**, your channel set must include one or more comparator virtual channels. These channels are used to define the conditions for rejecting sensor readings.

Note: *In review mode, the **Review Mode Auto-Rejection Settings** window doesn't show you the option to **Reject automatically when switching to Review**. You must run the auto-rejection feature manually.*

For information about [setting auto-rejection options in Recording mode](#), as well as an [example of setting an auto-rejection threshold for an EEG channel](#), see page 13.



When you select **Boolean Rejection**, all Boolean channels in the channel set are listed. Select the channel(s) that best define the artifact condition(s) you want to use. Then, you can define the Boolean state you want to use for the rejection. The state (output) of a Boolean channel is either ON or OFF. If the condition is met, the output is ON, otherwise, it is OFF. By selecting the appropriate state, you reject either all data that fits the condition or all data that doesn't fit the condition.

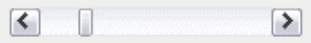
For example, if you are measuring skin temperature, although the "normal" body temperature is 37°C, readings usually vary somewhat from this value. However, readings below 35°C or above 39°C are generally outside the expected temperature range. To define a Boolean rejection condition that automatically rejects these readings, you would start by adding three comparator virtual channels to the channel set. (This is done using Channel Editor.)

V001: Skin Temp > Maximum (where Maximum is equal to 39)	Conditional statement that the reading from the physical channel measuring skin temperature is above a maximum value of 39.
V002: Skin Temp < Minimum (where Minimum is equal to 35)	Conditional statement that the reading from the physical channel measuring skin temperature is below a minimum value of 35.
V003: V001 OR V002	Combines V001 and V002 with Boolean OR into a conditional statement that the skin temperature reading is either above the maximum or below the minimum.

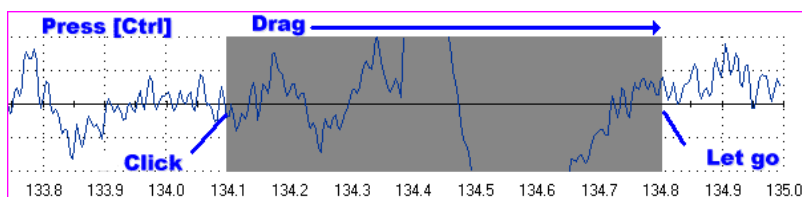
- In **Rejection Type**, click **Boolean Rejection** to select this option.
- From the table below, select the comparator channel you want to use for rejecting artifacts. Only one channel can be selected. For this example, select "V003: V001 OR V002".
- In **Boolean state for rejection**, select **ON**. (This instructs the system to reject any signal that meets the condition.)
- Click **OK** to run the auto-rejection function. The program warns you that any previously placed rejection segments will be deleted. To continue, click **Yes**.

The program will scan the whole session and automatically place rejection segments over all the sections where the skin temperature fell outside the defined range. You can review what was rejected and remove individual segments or all of them at once by right-clicking over a segment and selecting **Undo Rejection Segment** or **Undo All Rejection Segments**. The program will save the rejection settings with the session when you exit review mode.

Manually Rejecting Artifacts

To scroll through the recorded data, click and drag the scroll bar  on the button bar at the top of the screen. When you locate an artifact, you can place a rejection segment over it.

To manually place an artifact rejection segment over a section of noisy data on a single line graph, follow these steps.



- Select the line graph containing the segment to be rejected. (The selected graph will display a magenta border.)
- Press and hold the **[Control]** key.

- Place the cursor over one end of the segment to be rejected.
- Click and hold the left mouse button. (You can release the **[Control]** key at this point.)
- Drag the cursor across the segment to be rejected. The selected segment is highlighted in gray.
- At the end of the segment, release the mouse button.

Note: You can place artifact rejection segments only on single-line graph instruments. If you get an error message, you have to select a different screen for reviewing.

Calculating Statistics

- To calculate statistics for a session, click the **Calculate Statistics** button in the tool bar.



A message confirms that the program is processing session data and then the **Statistics** window opens.

- Click **Close** to close the window.

Note: This is the Statistics window for a script session. The Statistics window for an open display session is similar, but does not display a list of rejection durations for individual activities.

Activity	Activity Description	Step	Step Description	Statistic Description	Value
1	Baseline	3	Baseline	A: EKG HR mean (beats/min)	98.72
1	Baseline	3	Baseline	A: EKG BI std. dev. (SDRR)	27.63
1	Baseline	3	Baseline	A: EKG VLF % power mean	16.86
1	Baseline	3	Baseline	A: EKG LF % power mean	53.06
1	Baseline	3	Baseline	A: EKG HF % power mean	23.97
1	Baseline	3	Baseline	A: EKG VLF total power mean	22.36
1	Baseline	3	Baseline	A: EKG LF total power mean	68.97
1	Baseline	3	Baseline	A: EKG HF total power mean	31.46
1	Baseline	3	Baseline	A: EKG LF/HF (linear)	2.19
1	Baseline	3	Baseline	C: EMG Mean (uV)	2.81
1	Baseline	3	Baseline	D: EMG mean (uV)	1.86
1	Baseline	3	Baseline	E: Skin conductance mean (uS)	1.88
1	Baseline	3	Baseline	F: SC as % of value mean (%)	37.60
1	Baseline	3	Baseline	F: Temperature mean (Deg)	94.26
1	Baseline	3	Baseline	F: Temp as % of value mean (%)	96.19
1	Baseline	3	Baseline	G: Respiration mean (b/min)	15.94
1	Baseline	3	Baseline	AG: (HR max/min) mean (b/min)	4.95
2	Color words	2	Colour Words	A: EKG HR mean (beats/min)	105.30

Activity	Activity Description	Activity Duration	Rejection Durations (sec)	Rejection Durations (%)
1	Baseline	120.00	0.00	0.00
2	Color words	120.00	0.00	0.00
3	Rest 1	120.00	0.00	0.00
4	Math Task	120.00	0.00	0.00
5	Rest 2	120.00	0.00	0.00
6	Stressful Event Recall	120.00	0.00	0.00

Close

Generating Session Reports

- To create a session report, click the **Session Report** button in the tool bar.



This opens the **Session Report** window, where you select components to include in the report for the selected session.

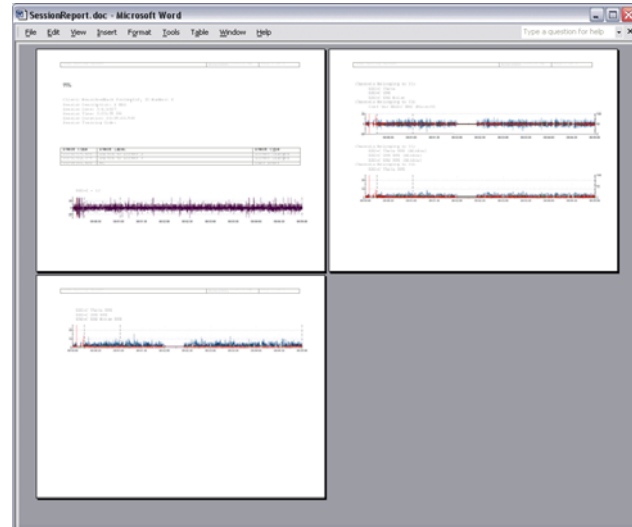
- Select report components by placing a check mark in the desired boxes and click **Generate Report**.

Important: The Infiniti software uses MS Word templates to generate reports. Microsoft Word **must** be installed on your system for this function to work. Note that this function will not work with Microsoft Works!

Session Report	
Session information is always included in the report. Please select optional report settings:	
<input checked="" type="checkbox"/>	Session Notes
<input checked="" type="checkbox"/>	Session Statistics
<input checked="" type="checkbox"/>	Session Markers
<input checked="" type="checkbox"/>	Setting Instruments
<input checked="" type="checkbox"/>	Screen Graphs
Graph Time Frame Options:	
<input checked="" type="radio"/>	Size to session
<input type="radio"/>	Same as screen time frame
<input checked="" type="checkbox"/>	Trend Instruments
Graph Time Frame Options:	
<input checked="" type="radio"/>	Size to session
<input type="radio"/>	Span by span
<input type="button" value="Generate Report"/> <input type="button" value="Cancel"/>	

MS Word opens your report as a document.

You can use Word to save and print the report.



Generating Trend Reports

BioGraph Infiniti also allows you to create trend reports, which can compare statistics across different activities within a single session or across multiple sessions.

- To generate a trend report, go to the **Database** screen, select a client file and click on **Trend Report**.

This example uses sessions recorded for sample client "Sarah Trend".

- Select the type of session to be trended by clicking on the appropriate radio button at the top. For this example, select **Script Session**.

The table on the left lists the scripts (or the channel sets) used to record sessions for this client.

- Choose "SMR Training Session".

The table on the right displays all the sessions recorded with this script.

A screenshot of a dialog box titled 'Select the sessions to create a trend report from.'. It has two radio buttons: 'Script Session' (selected) and 'Open Display Session'. Below them is a note: 'Please remember: Only uncompressed sessions are shown in the session list.' There are two tables. The left table, 'Original Scripts', has columns 'File Name' and 'Description'. It contains one row: 'SMR Training Sessi...' and 'SMR Training Session'. The right table, 'Sessions', has columns 'Date and Time', 'Duration', and 'Description'. It contains four rows of session data. At the bottom are buttons for 'Select Script', 'OK', and 'Cancel'.

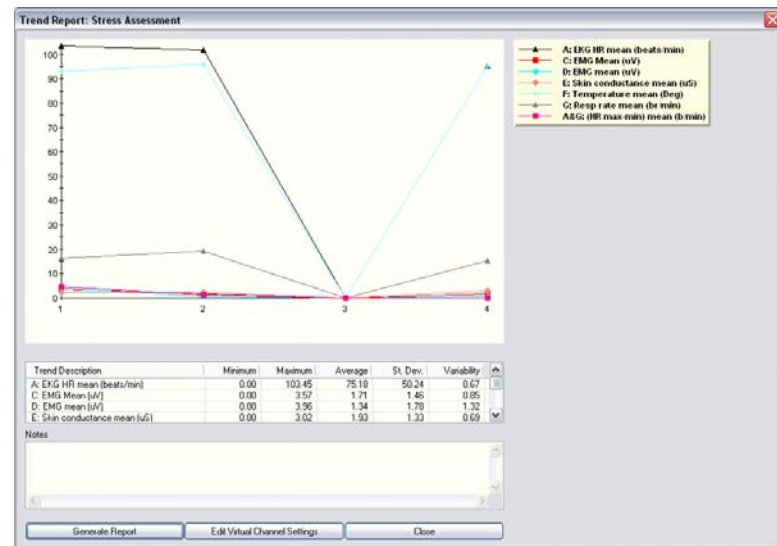
- Pressing the **[Control]** or **[Shift]** key, on your keyboard, select all the sessions you want to include in the trend report and click **OK**.
- In **Select Trend Report**, choose a trend report and click **OK**.

The system creates the trend report and displays it on your computer monitor.

A screenshot of a dialog box titled 'Select Trend Report'. It has a list box labeled 'Trend Report Description' containing three items: 'Mean Theta & SMR during training', 'Percentages of time above thresholds', and an empty row. Below the list box are four buttons: 'Add Report', 'Edit Report', 'Edit trend colors', and 'Delete Report'. At the bottom are 'OK' and 'Cancel' buttons.

- To generate the report as a document in MS Word, click **Generate Reports**. You can use Word to save and print the document.

Note: Microsoft Word *must* be installed on your system for this function to work.



For more information on generating trend reports, consult on-line help (F1).

Reference

Contacting Thought Technology

Returning Equipment

<i>Be sure to call for an authorization number (RA) before returning any equipment!</i>
--

Send the unit(s) postage prepaid and insured, with proof of purchase to one of the addresses below.

If you are shipping from outside Canada or the USA to Canada, mark the package "***Goods to be repaired – Made in Canada***" to avoid unnecessary customs charges.

All customs and duties charges will be billed to you if incurred by sending the unit to the wrong address.

Provide a detailed description of the problem you are experiencing, and your telephone/fax number and email (see form on the last page of this manual).

In the USA, ship insured to:

Thought Technology Ltd.
Cimetra LLC
20 Gateway Drive
Plattsburgh, New York
12901, USA

In Canada and all other countries, contact your dealer or ship insured to:

Thought Technology Ltd.
2180 Belgrave Avenue
Montreal, Quebec
Canada H4A 2L8

Technical Support

For technical support please refer to the Thought Technology Ltd. website at www.thoughttechnology.com for frequently asked questions. If your support issue is not covered please e-mail or telephone at the number below.

☎ (514) 489-8251 ✉ techsupport@thoughttechnology.com

Repair Return Form

Name:

Company:

Address:

Telephone Number:

Fax Number:

Date Purchased:

From:

Model Name:

Serial Number:

Problem:

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