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Our Mailing and Shipping Address:

White Instruments Div. C Van R, Inc.
1514 Ed Bluestein Blvd., Suite 201 (for U.S. Mail)
Austin, TX 78721 U.S.A.
Phone: 512-389-5358
Fax: 512-301-3932
Main Email Address: cvanr@whiteinstruments.com
World Wide Web Site: <http://www.whiteinstruments.com/>

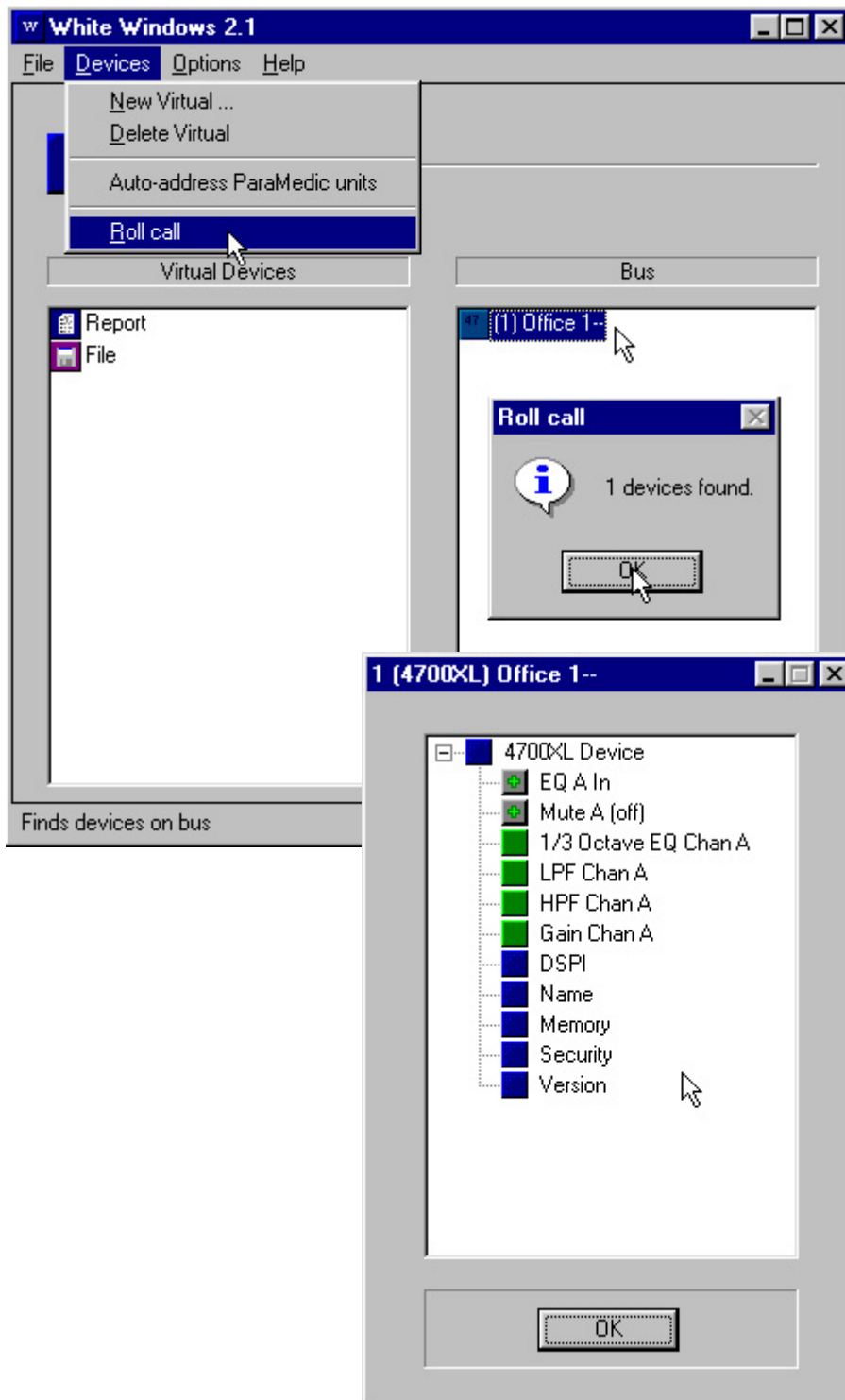
Note: Repairs and packages should be shipped to Suite 202

Section 8: 4700XL and 4700-2XL Digitally Controlled One-Third Octave Equalizers

RS-232 Interface - Network and Single Unit

- Only **ONE** 4700XL or 4700-2XL can be controlled from a PC running White Windows 2.X by attaching its RS-232 interface to the computer's COM port with an industry standard serial cable. The 4700 Series unit **MAY NOT** be added to a ParaMedic network.

Roll Call and Opening the Device



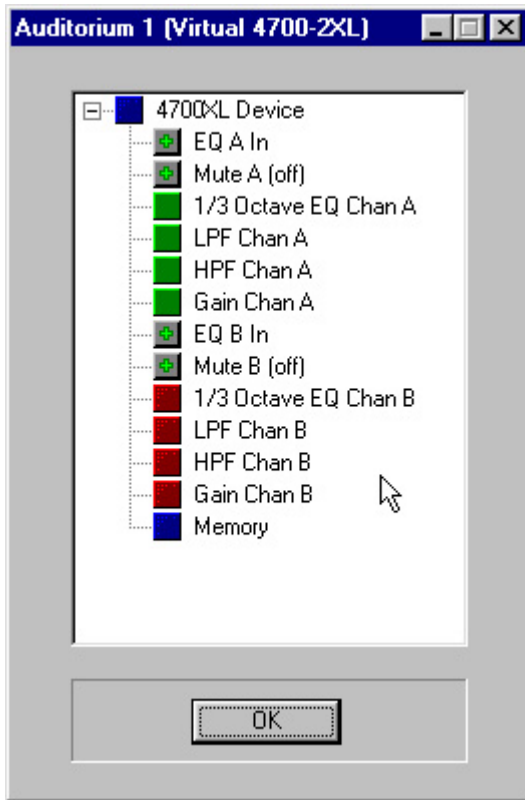
The 4700XL is recognized by the PC and White Windows 2.X by initiating a Roll Call from the Main Screen.

- [**click**] on the Devices Menu on the Main Screen. [**click**] on Roll Call.
- White Windows 2.X will find every device on the RS-232 Network and report on the number of devices found. [**click**] OK
- The found device will appear in the Bus Panel of the Main Screen. To open the device [**double click**] on it. This will cause the Function Screen to open.

Function Screen

Every aspect of the 4700XL or 4700-2XL is controlled from a window that is opened from the Function Screen or a button on the Function Screen.

This is a 4700XL's single channel Function Screen. A dual channel 4700-2XL's Function Screen is shown on the next page.



EQ In/Out

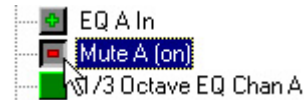
- The EQ IN/Out Button toggles the channel's One-Third Octave Filters between being *engaged* or *bypassed*.



A safety is built into this button to prevent the accidental bypassing or engaging the filters. That is it must be **DOUBLE CLICKED**.

Mute

- The Mute button works the same as the EQ IN/Out Button.



Low-Pass and High-Pass Filters

The 4700XLs feature 12dB/Octave Low-Pass and High-Pass Filters on each channel. The *corner frequency* (-3dB point) can be adjusted as follows.

High-Pass Filter

10Hz - 160Hz in seven steps

10, 32, 51, 62, 75

100, 130, 160 Hz

Low-Pass Filter

32kHz - 6kHz in seven steps.

6k, 7k, 9k, 11k, 13k

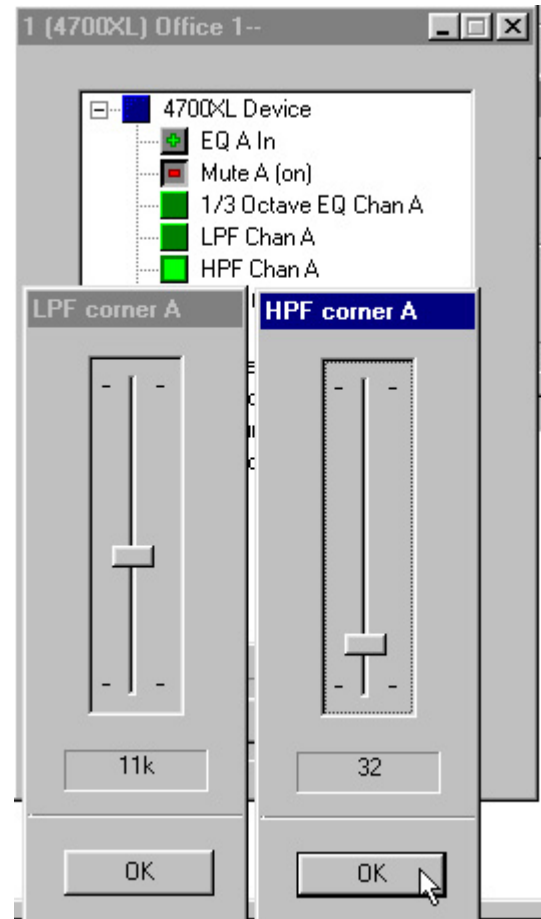
15k, 23k, 32k

Each filter is controlled from its own window that is opened from the Function Screen by [**double clicking**] on its button.

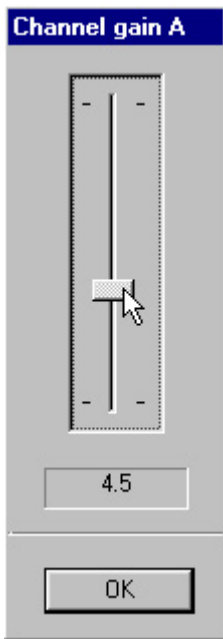
Once either window is opened and selected, the frequency value of the filter can be adjusted by [**dragging**] the *slide control* with the mouse. It can also be adjusted using the UP or RIGHT, and DOWN or LEFT cursor keys, or using the PAGE UP and PAGE DOWN keys on the keyboard.

The cursor keys will increment the frequency UP and DOWN, one step at a time. The page keys will set the frequency at its extreme UPPER or LOWER limit.

Once either frequency is set [**click**] OK. The setting will be stored and the window will close.



Gain



12dB of Gain in 0.5dB steps is available to each channel of a 4700XL and is placed on the output. Each channel's gain is adjusted with its own window that is opened from the Function Screen by **[clicking]** on a Gain Button.

Once either window is opened and selected, the gain can be adjusted by **[dragging]** the *slide control* with the mouse, using the UP and DOWN cursor keys on the keyboard or using the PAGE UP and PAGE DOWN keys on the keyboard.

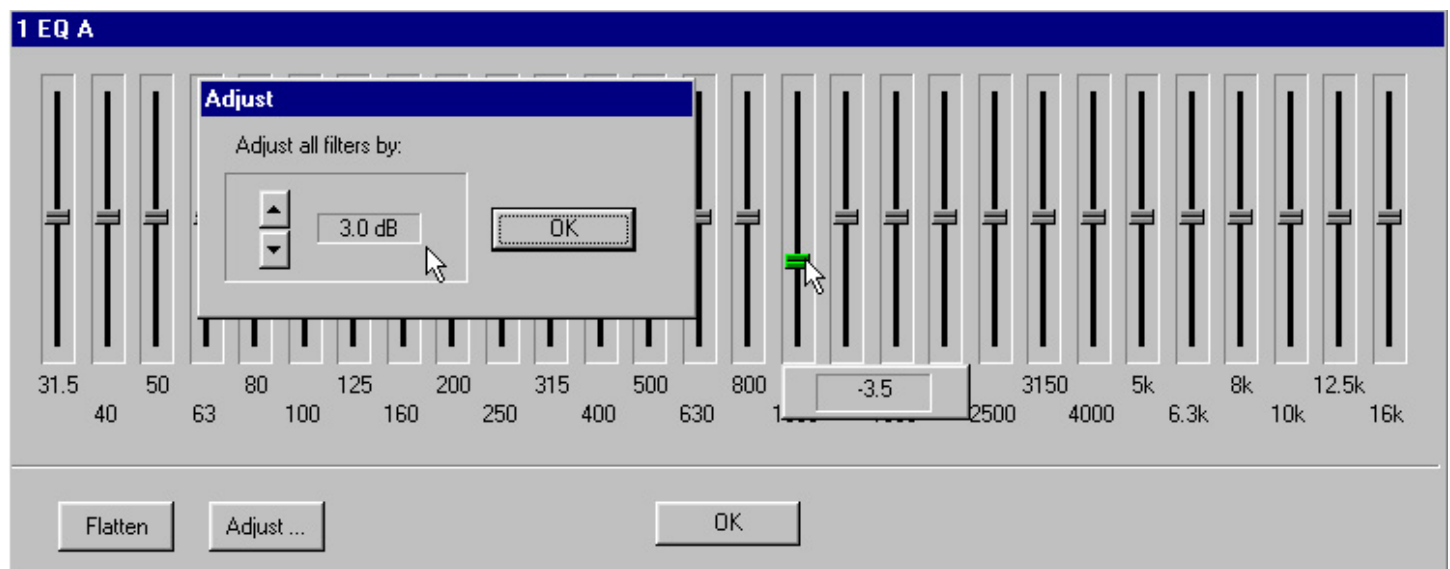
The cursor keys will increment the gain UP and DOWN in 0.5dB increments. The page keys will increment in 5dB steps.

Once the gain is set **[click]** OK. The setting will be stored and the window will close.

DSPI

The DSPI button is an IQ remnant that was easier to leave in the software than take out. It has absolutely no function in the 4700XLs.

One-Third Octave Filters



The 4700XL Equalizers feature 28 One-Third Octave filters per channel. These filters may be adjusted over a range of ± 12 dB in 0.5dB steps.

Open the Filters Window by **[double clicking]** on the 1/3 Octave Filter Button.

Before a filter can be adjusted it must be Selected by **[clicking]** on one of the Slide Control Handles. When selected the Handle will turn green. Note that only one filter can be selected at a time.

The amplitude of the selected filter is adjusted down and up by:

- **[clicking]** and **[dragging]** the filter with the mouse.
- Incrementing the filter in 0.5dB steps with the UP and DOWN Cursor keys on the keyboard.
- Incrementing the filter in 2dB steps with the PAGE UP and PAGE DOWN keys on the keyboard.

Note that the selected filter's amplitude is indicated in the parameter box.

Flatten All Filters

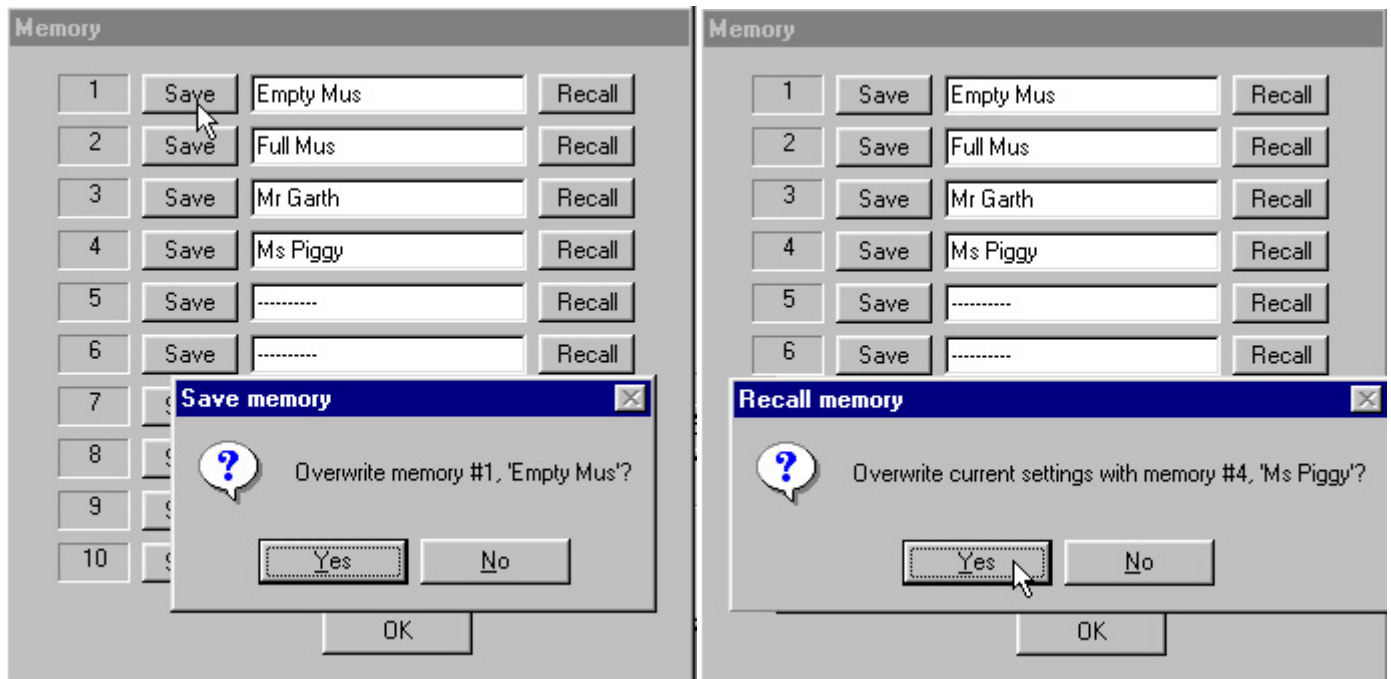
[click] the Flatten Button and **[click]** OK in the confirmation window that appears.

Adjust All Filters by the Same Amount

[click] the Adjust... Button. The Adjust Screen appears. Set the desired amount of amplitude with the UP and DOWN Buttons and **[click OK]** The window will close and all filters will be raised or lowered by the same amount.

Memory

The 4700XLs feature 10 non-volatile Storage Memories. Each Storage Memory holds the complete setup parameters of the unit whether it is a single or dual channel model. Memories are Stored, Recalled and Named (labeled) from the Memory Screen that is opened from the Function Screen by [**double clicking**] on the Memory Button.



Memory Name (label)

A Memory can be *named* or *labeled* with up to 9 alpha/numeric characters by simply [**typing**] the Name or label.

Save Memory

The Current Operating Parameters can be saved in one or more of the 10 Storage Memories by [**clicking**] on one of the ten Save Buttons. The parameters stored in the Storage Memory will be overwritten by the Current Operating Parameters. [**click YES**] to confirm the overwrite or [**click NO**] to escape the process.

Recall Memory

Likewise the Current Operating Parameters can be overwritten by the contents of one of the Storage Memories by [**clicking**] on one of the ten Recall Buttons. [**click YES**] to confirm the overwrite or [**click NO**] to escape the process.



Security

The 4700XLs can be protected with a six alpha/numeric character Password.

Note that the Password **must** be 6 characters. The Password is not case sensitive.

Once a password has been set the unit can be *locked*. Locking the equalizer will prevent any access to its settings.

Setting a Password

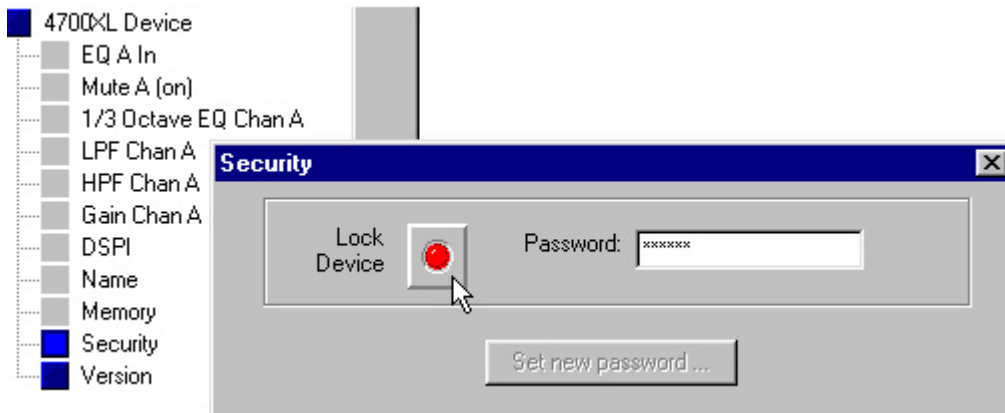
- [**double click**] on the Function Screen's Security Button. The Security Screen will appear.
- [**click**] on the Set new password Button And the Set new Password Screen will appear.
- [**type**] a new six character Password in the New password and the Confirm boxes. [**click**] OK. The Set new password Screen will close.

Lock Device

At this point the unit can be locked by [**clicking**] on the Lock Device Button and [**clicking**] OK on the Confirmation Screen that appears.

UNlock Device

When a *locked* 4700XL is *opened*, all options on the Function Screen will be *grayed out* with the exception of the Security and Version functions.



- [**double click**] on the Function Screen's Security Button. The Security Screen will appear. Note that the Lock Device Button is **red**.
- [**type**] the six character Password in the Password Box and [**click**] on the Lock Device Button.
If the Password entered is correct, the Lock Device button will turn green and the grayed out functions will become active.

Lost Password

See Appendix **(page 76)** for instructions on obtaining help.

Version

[**double clicking**] on the Function Screen's Version Button will reveal the units Firmware version.

Virtual 4700XLs - Copying Settings - Creating Files

White Windows 2.X software allows the creation of Virtual 4700XLs that exist only in the computer's memory while the program is running. Current Operating Parameters and Storage Memory contents can be copied from Virtual Devices to actual hardware (Bus Devices) and back again. Settings can also be stored in files and the files can be copied to Real or Virtual Devices.

These operations work like the PARAMEDICS. Instructions for these operations begin on page 13 of this manual.