

VoxPro[®]

AUDIO RECORDER AND EDITOR
VoxPro 7.1

USER GUIDE

 *Wheatstone Corporation*

600 Industrial Drive, New Bern, North Carolina 28562 (tel 252-638-7000 / fax 252-637-1285)

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Addendum

What's New In VoxPro 7.1

Hotkeys

Hotkeys have been extensively overhauled. Multiple hotkeys panels may now be open simultaneously, each to a different page of hotkey cells. Remote access to hotkeys and all hotkey functions allows producer/talent teams to work together from different computers, one prepping and loading hotkeys, the other playing them to air. Hotkeys may now be looped and paused. A hotkey cell may be unloaded (cleared of audio), leaving other settings in place. A new Settings/Hotkeys dialog provides controls for customizing hotkey layout and performance, and for setting default values for attributes like fade-out time, pad and mono-mix.

Hotkeys windows may be opened from the View menu, or by right-clicking the Hotkeys button (bonfire icon) to the lower left of the waveform editor. Hotkey windows may be dragged to a secondary display monitor. All hotkey tab pages are accessible from all hotkeys windows.

Administrator may restrict which audio playback devices are allowed to be displayed in a hotkey cell's Playback Device dropdown menu, and may provide optional labels for those devices which do appear in the menu. These controls are accessible from the Audio Devices and Formats dialog, in the Settings menu.

Shortcuts

Users may now assign a variety of functions, effects and their own FX Macros to the five hot keys on the VP control panel (the buttons which are normally used to trigger audio Hotkeys). These functions are accessed by pressing the Control, Option and Shift buttons on the controller, in conjunction with the hot key. Users may optionally elect to display any bank of shortcuts permanently, making these functions accessible at all times with a simple press of the corresponding hot key.

Default File Names

In order to accommodate file naming conventions imposed by various automation systems, users now have more control over the format of default file names. (The default name is the name which is automatically given to a newly recorded file, like "Untitled_32", or "Phone67" or "COM0138".) Any "root" name may be used, and leading zeros may now be specified. Optionally, file names may be numerical only, e.g. "0016".

Miscellaneous

VoxPro now waits for Auto-Import files to stop growing in size before importing. Auto-imported files may now be automatically gain adjusted or normalized during the import process.

The headroom display setting (in Settings/Playback) is now incorporated into the zoom controls in the right margin of waveform editor.

A new command allows the Administrator to rebuild all users' file databases.

It is no longer necessary to install the WNIP PC Driver in order to use WNIP routing commands. Users' routing preset settings are now restored at login. Non-intersecting routes may be toggled on/off.

It is no longer necessary to install the Sentinel HASP driver if the Keylok dongle is being used. An improved installer allows the HASP driver to be uninstalled if not needed.

The peak volume meters are now hidden when the Waveform Editor is hidden.

The QuickSearch panel now remains at upper right corner of the File List at all times.

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VoxPRO 7.1

Introduction

VoxPro 7.1 is used for recording, editing, playing, sharing and managing audio files, particularly in broadcast contexts where two-channel (stereo) recording is the norm. A robust file storage system allows files to be stored anywhere on the LAN, accessed from any VoxPro computer on the LAN, and shared with any VoxPro user on the LAN. Users may keep files around for years and still access them easily at any time for immediate playback or further editing. The optional hardware control panel gives experienced users a powerful tool for making lightning-quick edits in real-time situations where every second counts.

If during installation or setup you find that you need assistance or advice, please feel free to contact our technical support engineers at (252) 638-7000 or email us at: techsupport@wheatstone.com.

VoxPro 7.1 Software and Control Panel come with a one year warranty.

VoxPro 7.1 User Guide

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Chapter 1. Overview of Main Window Controls

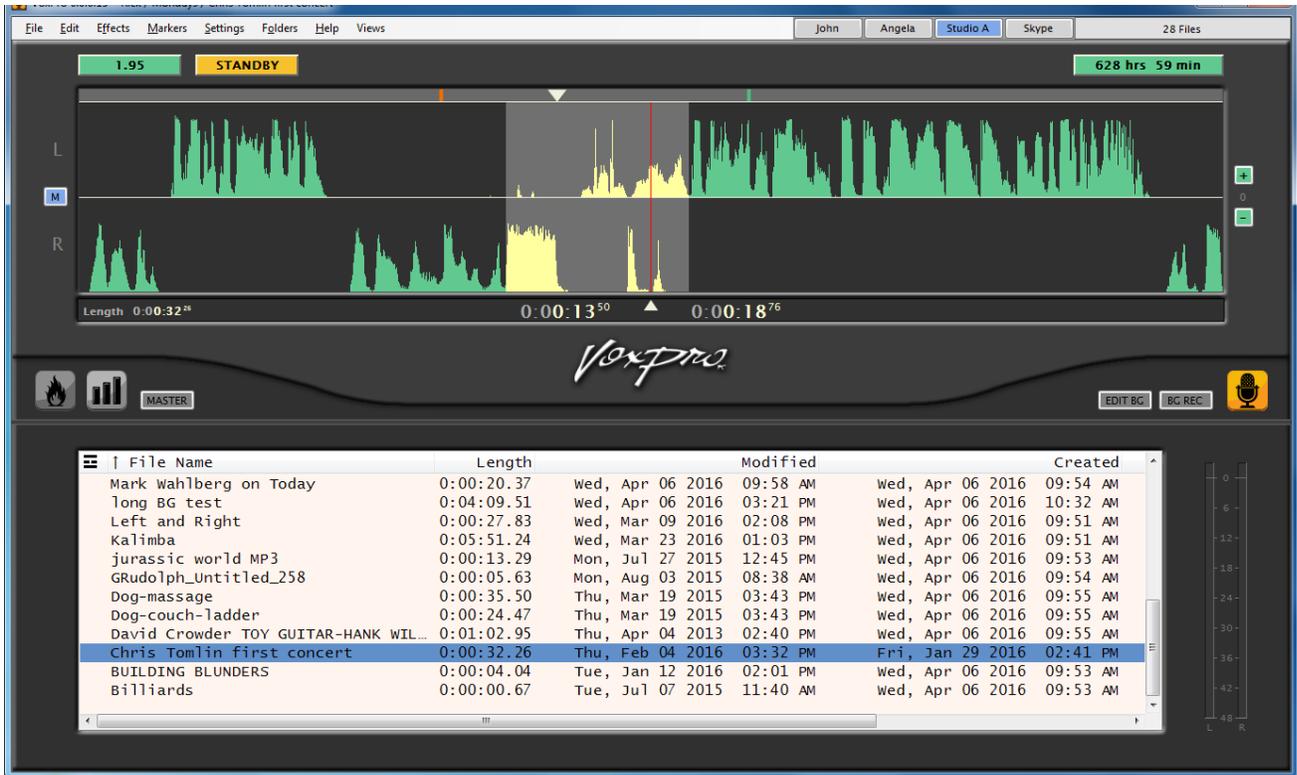


Figure 1.1 – Main VoxPro7.1 window in Classic mode.

Figure 1.1 shows the main VoxPro7.1 window in “classic” mode, with the waveform editor filling most of the upper half, and the file list in the lower half. In this particular case, a short region of the file in the middle of the display has been selected for editing, and is therefore highlighted with a pale yellow waveform on a light gray background.

Let’s now take a closer look at the various controls.

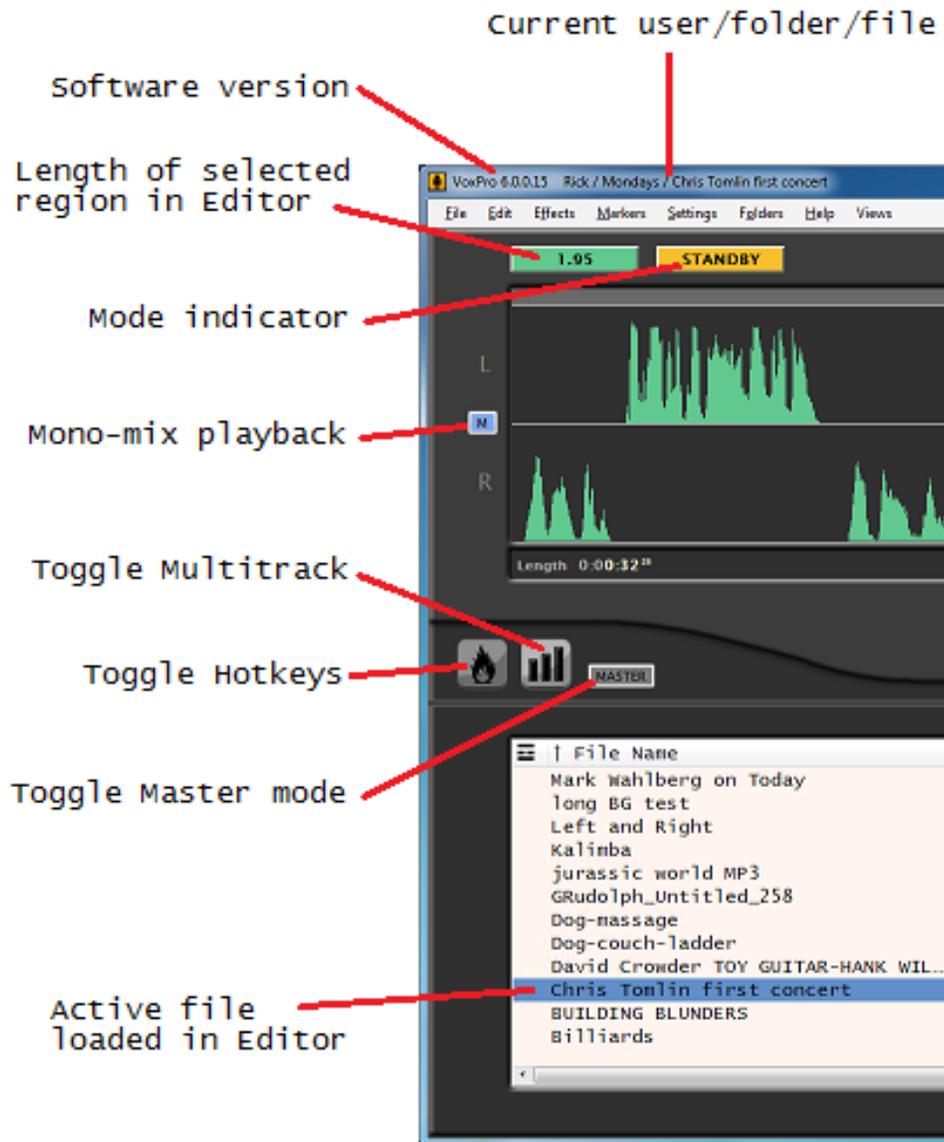


Figure 1.2 – Main window controls, left side.

On the left side of the window (Figure 1.2), we see the length of the selected region in the Editor (1.95 seconds), we see that mono-mix playback is enabled, and that Hotkeys, Multitrack and Master mode are all toggled off. We also see that we are in Standby mode (the other possibilities being Playing, Recording or Scrubbing); and in two places we see the name of the file loaded in the Editor: in the title bar at the very top of the window, and as a selected item in the File List.

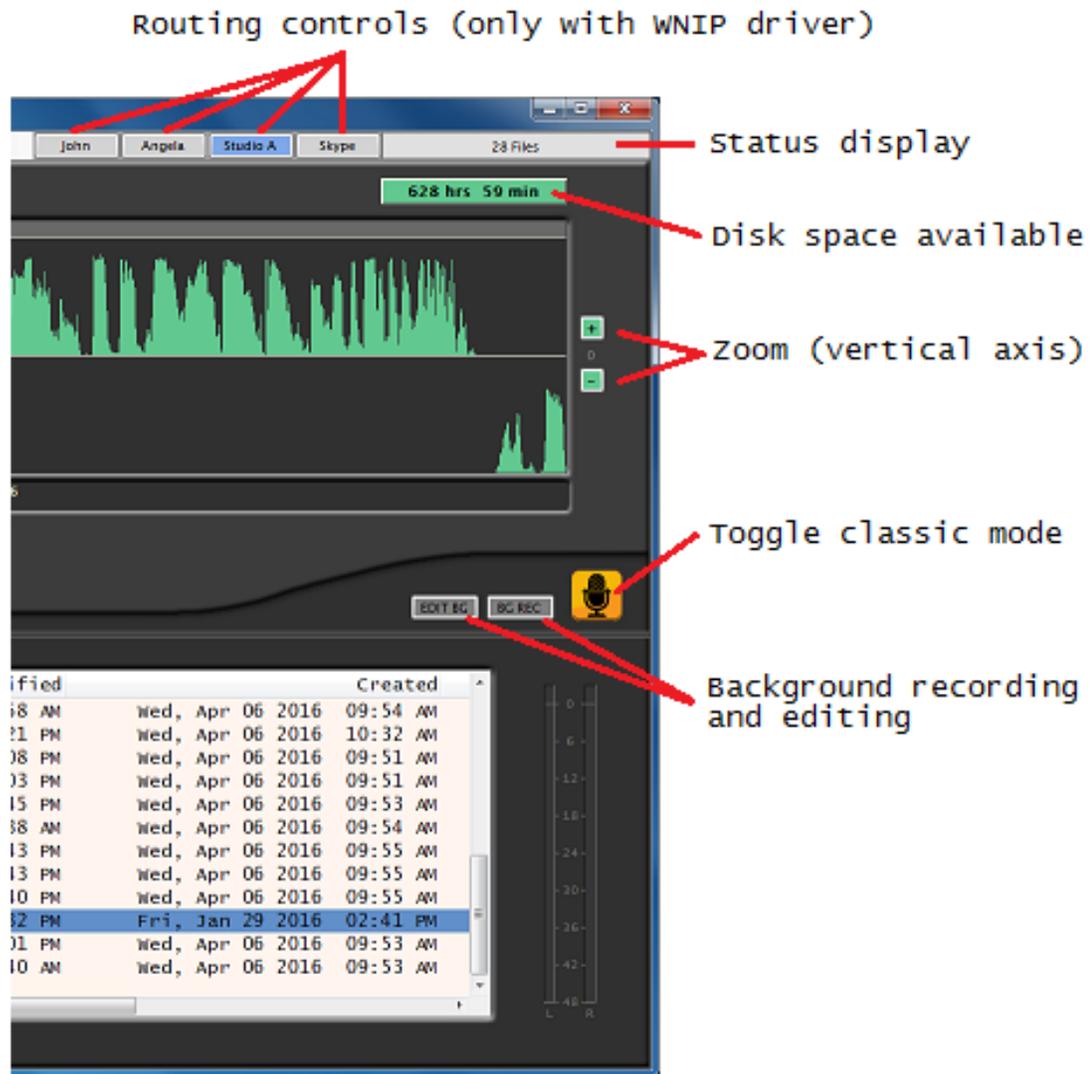


Figure 1.3 – Main window controls, right side.

On the right side of the window (Figure 1.3), we see a status display in the top right corner. If nothing else is going on, it simply gives us a count of the files in the current folder. If importing or exporting a file, this display informs us of the progress of that operation, as well as any errors encountered. Immediately beneath the status display is an indicator telling us how much total disk space on the current volume is available for new recordings, file imports, etc. Zoom controls in the right margin of the waveform Editor are useful for seeing low-level signals better. The classic mode button returns us to this particular layout (2-track editor above, file list below) from any other window arrangement, and we see that it is engaged. Controls for background editing and recording are located next to the classic mode toggle, and are discussed later in this manual.

Finally, at the top of the window to the left of the status display, we see four routing controls defined (from a total of eight). These are available only when a WheatNet AOIP driver (WDM/DirectSound version) has been installed on the computer. They are usually used to select from different sources for recording, but can, in fact, reconnect any source to any destination within a WheatNet-IP network, and can also be used to fire Salvos. See the *Wheatnet-IP BLADE3 Audio Over IP Network* manual for further information.

Taking a closer look at the area around the waveform editor (Figure 1.4), we see a Timeline tracker immediately above the editable area of the waveform display. The Timeline represents the time span of the file which is in the Editor from beginning to end – it is thus a relative scale. It contains a current position indicator (the inverted white triangle) as well as any position Markers that might have been inserted (more on these later). You may click with the mouse on the current position indicator and drag it left or right to relocate your position within the file. Conversely, you may click any place within the Timeline to jump immediately to that relative location within the file.

The vertical red cue line in the middle of the waveform Editor represents the current play position within the file. Beneath it and to either side are two clocks. The one on the left displays the current file position, while the one on the right displays the time remaining to the end of the file.

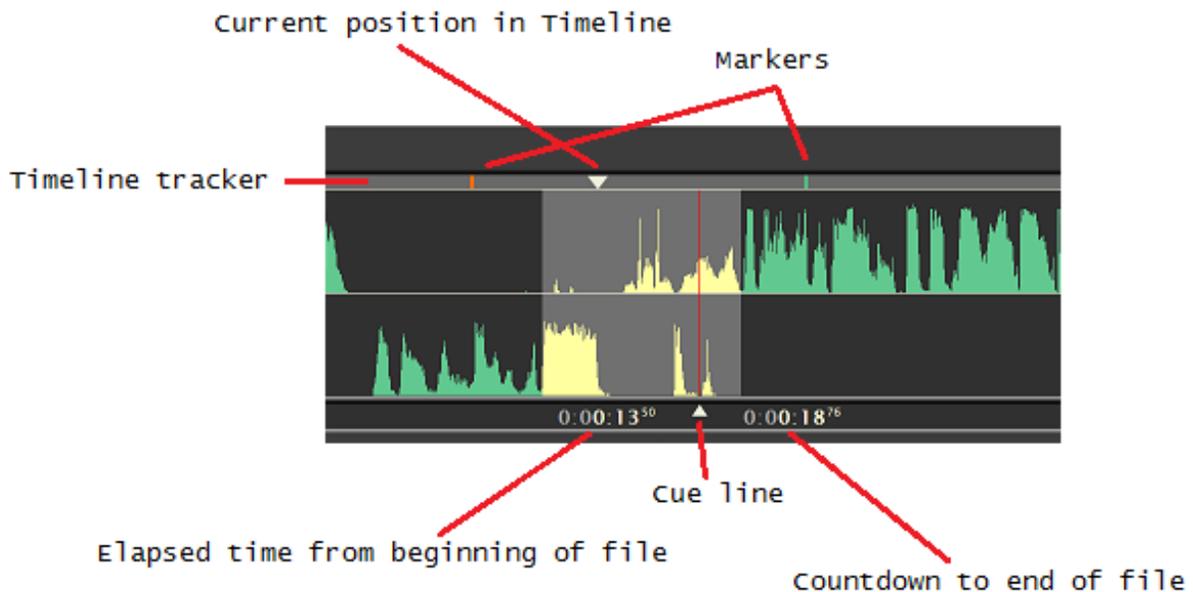


Figure 1.4 – Area surrounding middle portion of waveform Editor.

Chapter 2. Basic Operations



Most editing, playback, scrubbing and recording commands are available on the VoxPro 7.1 hardware control panel as well as the computer keyboard. The mouse and main menu also provide access to many operations. Basic editing and transport commands are described below. Detailed lists of all control panel and keyboard commands can be found in the Appendix.

Playing

There are three flavors of playback: **Play from Beginning**, **Play Selection**, and **Play from Current Position**. Each of these functions is assigned to a dedicated button on the control panel. On the keyboard, the **P**, **S** and **<spacebar>** keys perform the same functions, respectively. While a file is playing, it can be stopped with either the **PLAY** button or **STOP** button on the control panel, or the **<spacebar>** key on the keyboard.

The **Playback Options** dialog box, accessible from the main **Settings** menu, allows you to customize a number of features related to playback. You may **enable mono-mix** playback as the default setting. (Your default setting may be overridden at any time using the mono-mix button in the left margin of the Editor.) You may **hide** the mono-mix button in the Editor, thus removing the ability to override the default setting. **Playback direction** refers to which way the scrolling waveform in the Editor moves as the file plays, right-to-left being the default. **Display headroom** is a cosmetic visual setting which affects the scale along the vertical axis of the waveform displayed in the Editor. The effect is to zoom in on the vertical axis as the headroom value is increased. [Now the technical explanation: the headroom value represents the potential dynamic range available above the top edge of (each channel of) the waveform display. A headroom value of 6dB means that a signal which peaks at the top edge of the waveform display is still 6dB away from saturation or clipping. By default, the full dynamic range is displayed, with the top of the display at 0dB full scale.]

Scrubbing

Scrubbing is the process of moving through a file, either to log what is there, or in search of the precise location to perform an edit. In the center of the control panel is an array of six buttons used for scrubbing at different speeds. The top pair is **fast forward/reverse**, the middle pair is **normal forward/reverse**, and the lower pair is **slow forward/reverse**. These buttons may be held down in combination to toggle between speed and direction. For example, you might be holding the fast rewind button to locate a position, and pressing the normal speed forward button at various points in order to momentarily hear normal playback.

To the left and right of the fast forward/rewind buttons on the control panel are the **GoToBeginning** and **GoToEnd** buttons. And finally the **jog wheel** on the right side of the control panel can be used across a range of speeds to move quickly or slowly through the file in either direction.

On the keyboard, the **<left-arrow>** and **<right-arrow>** keys perform the basic fast-forward and fast-rewind functions. They can be used in combination with the **<shift>** key for normal playback, and with the **<ctrl>** key for slow playback.

Holding down the **<ctrl>** key on the keyboard, click and drag the mouse right or left within the waveform view to scroll the waveform itself by the same amount.

Scrub behavior in VoxPro 7.1 may be customized to each user's preference. Open the **Scrub Settings** dialog box from the **Settings** menu. At the very top is an option which makes **fast forward/reverse always audible** (at 3x normal speed) for as long as one of these functions is engaged (or until you reach the beginning or end of the file). If the always audible option is not enabled, then you have an option for a two-stage scrub, in which **fast forward/reverse is audible at the beginning** (at 3x normal speed), and then jumps after a specified length of time to a much faster speed which simply scrolls through the file without audio playback. Finally, the speed of the non-audible phase of the scrub function may be specified by adjusting the **fast forward/reverse speed** control.

The **Scrub Settings** dialog box also lets you invert the combination of **<ctrl>** key and **mouse click-drag** in the waveform, giving you the option to scroll through the waveform using the mouse without requiring that the **<ctrl>** key be held down.

Recording

Press the **Record** button on the control panel, or **R** on the keyboard, to start recording. This operation always creates a new file; it never overwrites an existing file. To stop recording, press the **RECORD** or **STOP** buttons on the control panel, or the **R** or **<spacebar>** keys on the keyboard. At this point a dialog box will appear allowing you to name the new file (or accept the generic name) and save it, or cancel it (which just puts it in the **Deleted Files** folder). From the control panel, the **OKAY** and **CANCEL** buttons perform these functions. On the keyboard, the **<enter>** and **<esc>** keys do the same. Note that you can cancel a recording at any time by using the **CANCEL** button or **<esc>** key, in which case the file is closed and moved to the **Deleted Files** folder immediately.

Insert-Recording

Insert-record is a specialized function allowing you to insert new audio content into an existing file, sliding the remainder of the file back from the insertion point. (The existing content is not overwritten, it is only moved back by the length of the new content.) Insert-

recording commences from the cue line, and can be started while playing, scrubbing, or stopped. To start, press the **INSERT-RECORD** button on the control panel, or the **I** key on the keyboard. To stop, press the **INSERT-RECORD** or **STOP** buttons on the control panel, or the **I**, **<spacebar>** or **<enter>** keys on the keyboard. An Insert-Record may be cancelled using the **CANCEL** button on the control panel, or the **<esc>** key on the keyboard. A cancelled Insert-Record cannot be recovered.

Background Recording

In certain cases, you might need to start recording while VoxPro7.1 is already engaged in file playback, or you might want to access a recording while it's in progress (for example, a long sporting event) in order to extract highlights for immediate broadcast, sharing, uploading, etc. In both of these cases, you will be playing and editing in the foreground, while simultaneously recording in the background.

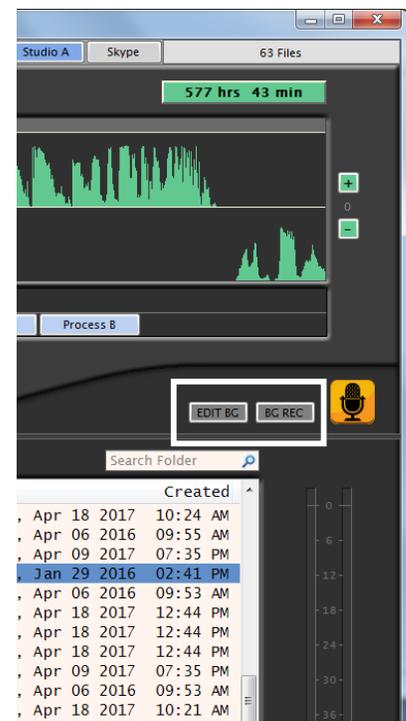
While VoxPro7.1 is playing a file, you may start a recording in the background by pressing the **BG REC** button in the lower right corner of the Editor pane. Now you may continue playback, stop and play other files, fire off Hotkeys, scrub, edit, import and export files; all while VoxPro7.1 continues recording in the background. The only operations you may not perform are Record and Insert-Record (because you're already recording).

While VoxPro7.1 is recording a file (in the foreground), you may put the recording process in the background by pressing the **BG REC** button. The file currently being recorded is displayed in the Editor (now in "playback green"), rolled back 10 seconds from the point where the recording was backgrounded, and the **EDIT BG** button is lit.

As long as the **BG REC** button is lit (red), it means you have a recording running in the background. When the **EDIT BG** button is lit (green), it means that the file displayed in the Editor is the file which is currently being recorded (in the background). As such, you cannot actually edit the file – because it is still being written to the disk! However, you may place **Markers** (see Chapter 6) in the file at any location, and you may copy any portion of the file into a different file or a brand new file (using **copy/paste** or the **New Edit from Selection** command), which you may then edit and export as you wish. All the while, recording continues uninterrupted in the background.

If you select another file in the File List, that file is loaded into the Editor for playback and editing, turning off the **EDIT BG** button. Click the **EDIT BG** button again to re-load the file being recorded in the background.

A background recording cannot be stopped until it is returned to the foreground, where it becomes a normal recording which can be stopped and named in the normal manner. Click the **BG REC** button while a background recording is in process to bring it into the foreground, displaying the incoming signal in the Editor in the usual "recording red" color. Stop and name the file at this point if desired, or put it in the background once again by clicking the **BG REC** button.



Additional Record Options

Default File Names

When you make a new recording, the file starts its life with a generic name, something like “Untitled52.” Of course you have the option to name the file anything you like, but some users might actually want to use a generic name of some sort. For example, many automation systems use the file name as a means of classifying the audio type and assigning an asset number. For this purpose, VoxPro lets you control the rules used to generate the generic name given to a file when it is first created. These rules and a few other options are available in the **Record Options** dialog box, which is accessible from the **Settings** menu.

At the top of this dialog you set up the rules for creating a generic, default name for files. The root file name can be something like “Phone” or “PHO” or “COM”. After the name, digits will be added in numerical order. You may choose to pad the digits with leading zeros, for example “Phoner0019” rather than “Phoner19.” Optionally, you may have an underscore between the name and the digits (“Phoner_0019”), or not use the name at all, so that it is composed only of digits (“00019”).

Automatic Gain Control

If your VoxPro 7.1 administrator has configured and enabled **Automatic Gain Control**, then you may disable or enable that process when recording in your own account using the **Enable AGC** switch.

Auto-Record

Auto-Record is a feature designed for fast call-in contests, when you want every caller in a separate recording, but you don't have time to name each one. Enable **Auto-Record** at the very top of the **Settings** menu. Now each time you start press **RECORD** (or **R** on the keyboard) the current recording is stopped, given the default name, and a new recording is started, creating an automatic “chain” of recordings, all of which appear as separate files in the File List. To stop **Auto-Record**, press **STOP** (or **<spacebar>** on the keyboard) at the end of your last call. The record function returns to its normal operational mode, so you'll need to re-enable **Auto-Record** if you want to start another chain of recordings. You may keep **Auto-Record** enabled at all times by unchecking the **Disable after stopping** option in the **Record Options** dialog in the **Settings** menu.

Chapter 3. Editing

In VoxPro 7.1, editing operations are applied to the selected region of the active file displayed in the Editor, meaning that if nothing is selected, then you have nothing to edit. This goes as well for the effects listed in the **Effects** menu, most of which are really just various kinds of specialty edits. The selected region may be of any size, up to and including the entire file. (The **Insert Silence** effect and the **Paste** function are the only edit operations which do not require a prior selection, since both are applied regardless of length at the location of the cue line.)

Selection

To select a region, use scrub controls to position the waveform so that the left or right boundary of the desired region is positioned at the cue line. Press the **MARK LEFT** or **MARK RIGHT** buttons on the control panel, or the [and] (square-bracket) keys on the keyboard. Reposition the waveform so that the opposite boundary is at the cue line, and place the opposite mark. Conversely, you may use the mouse to **click-drag** in the waveform Editor directly. The selected region is highlighted by displaying the waveform in pale yellow over a light gray background, and the length of the selected region is displayed in the indicator in the top left corner of the Editor. Note that you may adjust the left or right boundary of the selected region by relocating the waveform relative to the cue line and reapplying the left or right mark, as appropriate. Using the mouse, you may **right-click** within the waveform to change the location of the closest boundary of the selected region to the location of the mouse cursor.

You may play the selected region using the **PLAY SELECTION** button on the control panel or the **S** key on the keyboard.

The selected region may comprise the entire file. To select the entire file from the control panel, apply **Mark Left** at the beginning of the file, and **Mark Right** at the end. From the keyboard, simply type **<ctrl>A**, or select the **Select All** command in the **Edit** menu.

You may create an entirely new file from the selected region using the **New Edit from Selection** command in the **File** menu.

The currently selected region may be deselected by pressing the **DESELECT** button on the control panel, the **K** key on the keyboard, or by using the **Deselect** command in the **Edit** menu.

Note that you can click the mouse within the waveform to initiate selection, and then drag it beyond the left/right margins of the Editor to continue selecting and scrolling in that direction. Press and release the **PLAY** button while scrolling to hear where you are while continuing to extend the selection region.

There are two additional options which modify selection behavior, both of which are available in the **Selection Options** dialog in the **Settings** menu. The first option causes playback to stop if you are playing a clip when you place a left mark or right mark. (The default behavior is to continue playing the clip when left or right mark is inserted.) The second option is a shortcut which automatically places a left mark at the beginning of the file if a right mark is inserted by itself without a pre-existing left mark (thus selecting back to the beginning). This behavior is disabled by default.

Basic Edits

The selected region may be **deleted** by pressing the **DELETE** button on the control panel, or the **** key on the keyboard.

The selected region may be **copied** (to the clipboard for later pasting) by pressing the **COPY** button on the control panel or the **C** key on the keyboard.

The **cut** operation is a combination of **Copy** and **Delete**. It first copies the selected region to the clipboard, then deletes it from the current edit. Press the **CUT** button on the control panel, or the **X** key on the keyboard.

As long as a region has been copied into the clipboard (using either the Copy or Cut functions), then you may paste that region into any file, including the one it came from. The paste function is always applied at the current location in the file, that is, at the cue line. From the control panel, press the **PASTE** button, or the **V** key on the keyboard.

Undo/Redo

Whether applying basic edits or complex effects, all changes may be taken back by pressing the **UNDO** button on the control panel, or the **Z** key on the keyboard. The Undo function is effectively infinite – you can continue to undo your changes (in reverse order) all the way back to the original state when the file was first recorded or imported. (It is not possible to undo an early edit without also undoing every edit back to that point.)

You may **Redo** any Undo or sequence of Undos, returning the file back to state of your most recent edit. From the control panel, hold down the **OPTION** button and press **UNDO**, or from the keyboard with the **Y** key.

Master Mode provides a quick shortcut to get back to the original audio data in the file, ignoring all edits, undos and redos, and providing access to all audio data in file, including anything pasted in from another file, insert-recorded, or processed through the Pitch/Time effect or one of the Advanced Signal Processing effects. Click the **MASTER** button in the lower left corner of the Editor to toggle Master mode on and off. (Some older models of the control panel also have an **EDIT/MASTER** button which does the same thing.) While in Master mode, you may not perform any edits or apply any effects, but you may select and copy any region for pasting either into the same file (when toggled back out of Master mode), or into another file.

Zoom

Press the **ZOOM** button on the control panel (or the **Q** key on the keyboard – think “magnifying glass”) to toggle between 1x, 4x, and 10x zoom along the horizontal (time) axis in the waveform Editor. For maximum zoom at the sample level, press both the **CONTROL** and **ZOOM** buttons on the control panel, or type **<ctrl>Q** from the keyboard. Selecting another file automatically resets Zoom to 1x.

Chapter 4. Effects

We use the term “effects” somewhat loosely. Some of the functions in the **Effects** menu – for example **VoiceSlip™**, **Insert Silence**, or **GapBuster** – are really nothing more than specialized editing operations. Other functions, like flanging, echo and reverb, are true special effects which change the character of the sound. The **ClipCleaner** effect is actually a full suite of signal processing functions including a de-esser, 6-band parametric EQ, and dynamics processor (compressor, expander, limiter, noise gate). All of these with the exception of **Insert Silence** require a selected region in order to be applied. Although the effects are listed in the menu in alphabetical order, let’s group them by function instead and take a closer look.

Mute, Fade, Normalize, and Adjust Volume

Effects Which Change Volume

Four of the effects can be used to apply volume changes. Probably the most commonly used of these is **Mute**, which is usually applied to one of the channels, rather than both simultaneously. The mute effect is most commonly used for editing phone calls, where you want to delete only the caller or only the jock within the selected region. This use of mute is so common that there is a shortcut for it built into the control panel: hold the **CONTROL** button down (this is one of the four buttons in the top left corner of the control panel), displaying five Effects in the LCD above the hotkeys. The first two hotkeys may be pressed to mute the left or right channel, respectively.

The **Adjust Volume** effect opens a dialog box which is used to adjust the volume of the selected region up or down by 30dB. The volume adjustment will be applied equally to both channels if the link button between the left and right trackbars is enabled; otherwise each channel may be adjusted independently.

The **Fade** effect may be used to fade the selected region either up or down. The effect may be applied to both channels simultaneously, or to only one. A cross-fade effect can be achieved by applying **Fade-In** to one channel and **Fade-Out** to the other over the same selection region.

The **Normalize** effect is used to bring the volume of one or both channels to a pre-determined maximum level. It is most commonly applied over the span of the entire file (either to one channel or to both). The keyboard shortcut **<ctrl>O** applies your most recent normalization setting to the selected region.

Bleep and Reverse

Effects Which Mask Content

Two of the effects are used to mask content (for example, words or lyrics which may not be broadcast over the airwaves). **Bleep** is the most commonly used of these, and has two shortcuts. From the control panel, hold the **CONTROL** button down, displaying five effects in the LCD, then press the middle hotkey to apply Bleep to both channels. From the keyboard, simply type the **B** key.

The **Reverse** effect is a more subtle effect than Bleep. It simply reverses the audio waveform in the selected region, in either channel or both. It is often used in musical contexts since it can obfuscate a particular word without changing the pitch or interjecting a 1kHz sine tone.

VoiceSlip, BackSlip, and Channel Paste

Effects Which Change the Temporal Order of Events

Three effects allow you to manipulate the original temporal relationship between the left and right channels; that is, to move one of the channels independently of the other. The most common of these is **VoiceSlip**, which solves the problem of **host/caller talk-over** by sliding one of the channels past the other. Figure 4.1 shows a selected region in which the caller (left channel) and host talk over each other.

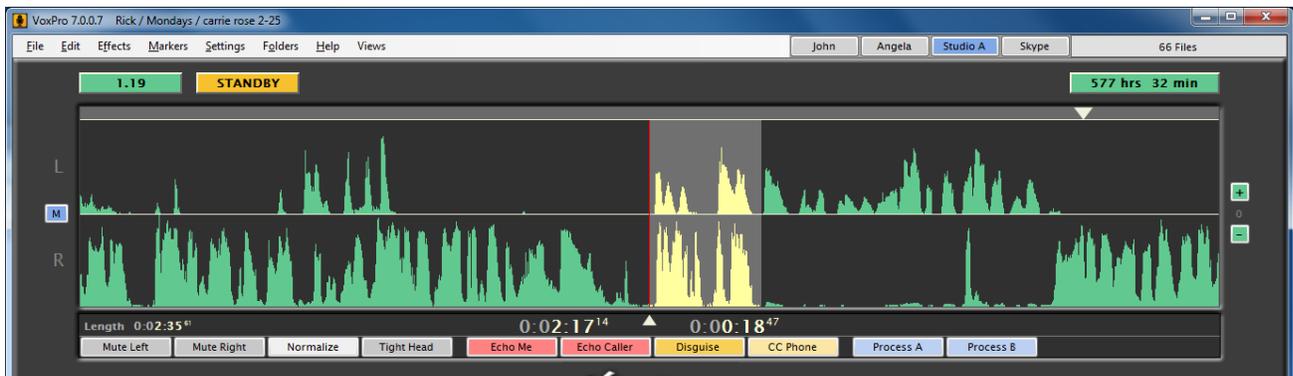


Figure 4.1 – Selected region highlighting host/caller talk-over.

VoiceSlip may be used to slide the left channel behind the right, or the right channel behind the left. In this case, we choose the “right before left” option, resulting in the altered version shown in Figure 4.2.

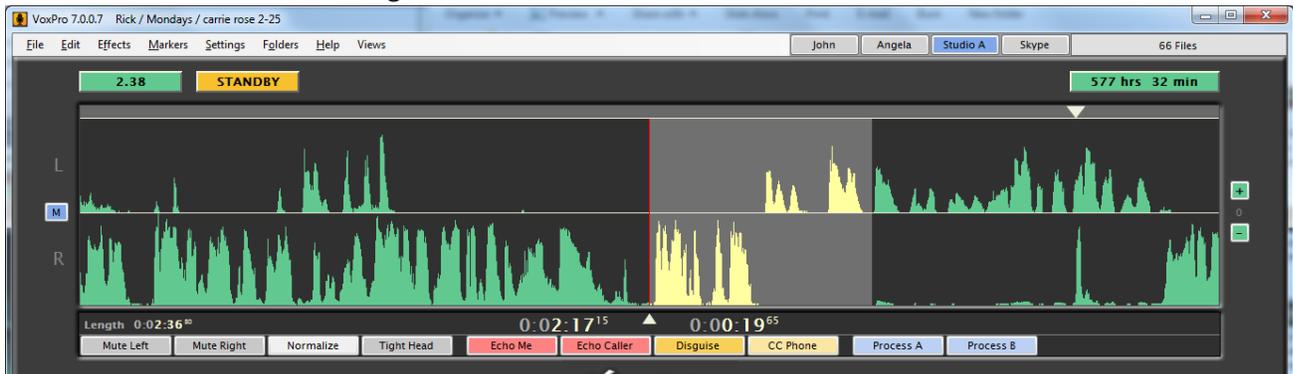


Figure 4.2 – After applying VoiceSlip to host/caller talk-over.

The **VoiceSlip** effect is also available as a control panel shortcut. After selecting the region where you want to apply VoiceSlip, press and hold the **CONTROL** button to display the five effects shortcuts in the control panel LCD. The two right-most hotkeys apply VoiceSlip: **Left before Right** and **Right before Left**.

The **BackSlip** effect is the opposite of VoiceSlip. It creates talk-over where it did not originally exist. (Your witty comeback can come sooner.) Consider the example in Figure 4.3. The region encompassing the area in question has been selected:

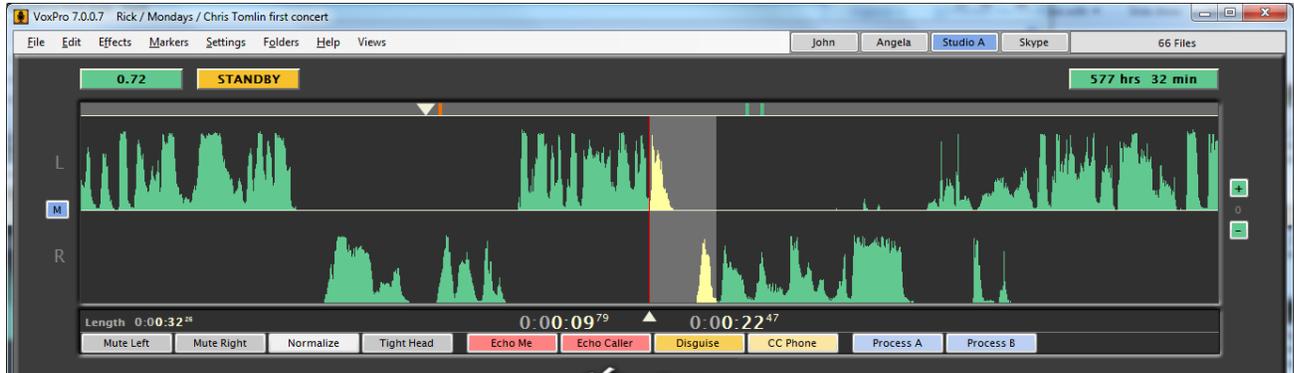


Figure 4.3 – Selected region highlighting the area where BackSlip is desired.

BackSlip can slide the left channel back past the right, or the right channel back past the left. In Figure 4.4, we choose to slide the right channel back:

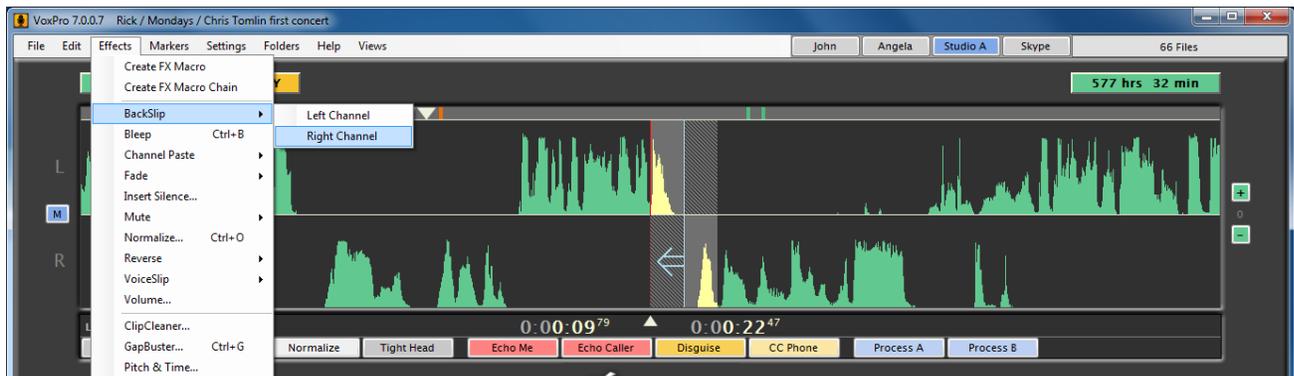


Figure 4.4 – Choosing which channel to slide back.

After applying the effect, the host (right channel) sounds like he interjects his comment even before the caller has finished speaking, as seen in Figure 4.5:

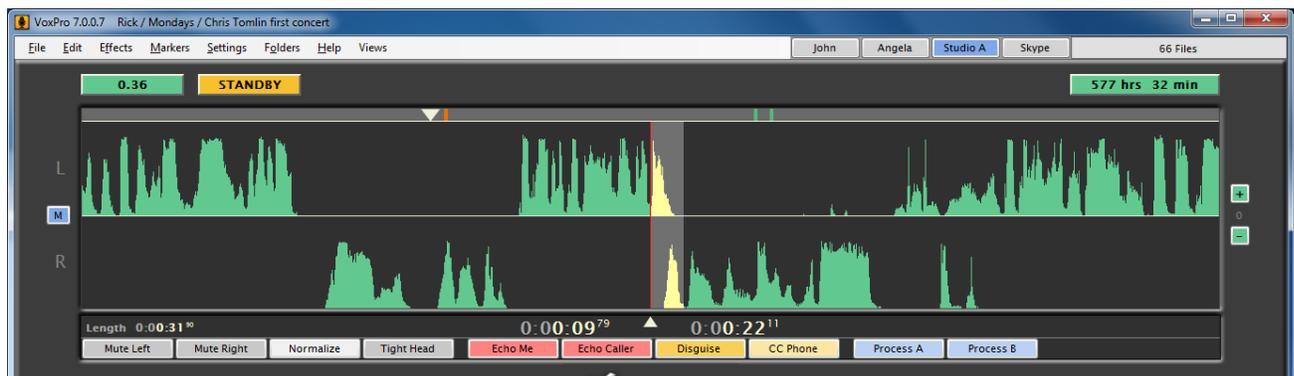


Figure 4.5 – Creation of host/caller talk-over after applying BackSlip effect.

Finally, the **Channel Paste** effect can be used to copy a single channel of audio from a given region, then paste it – into the same channel or into the opposite channel – at another location within the same file. In Figure 4.6, a music tag at the end of a file has been selected as the source. Note that both channels are selected, even though we will be copying and pasting just one of them.

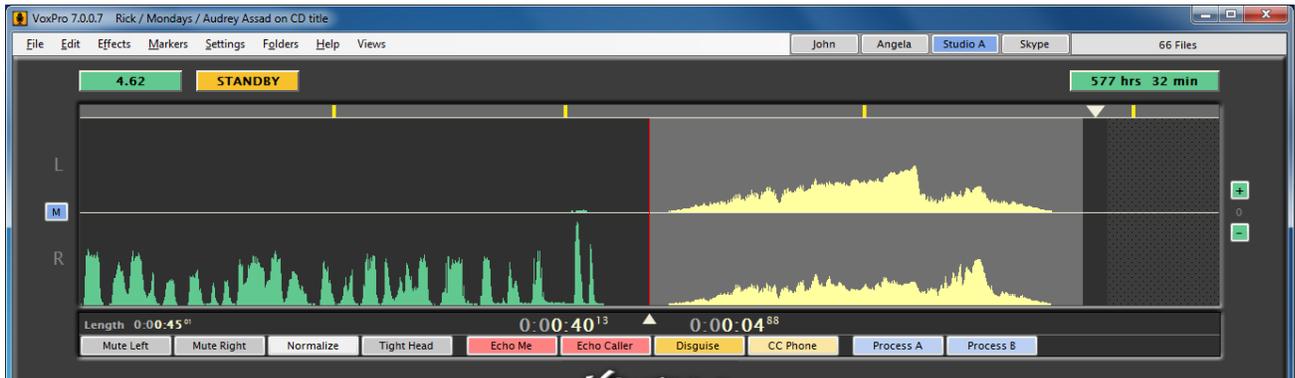


Figure 4.6 – Selected region to be used in Channel Paste operation.

We now relocate the file to the desired insertion point at the cue line, and select the desired paste operation (Figure 4.7). In this case, we will paste the content from the left channel of the source into the right channel of the destination.

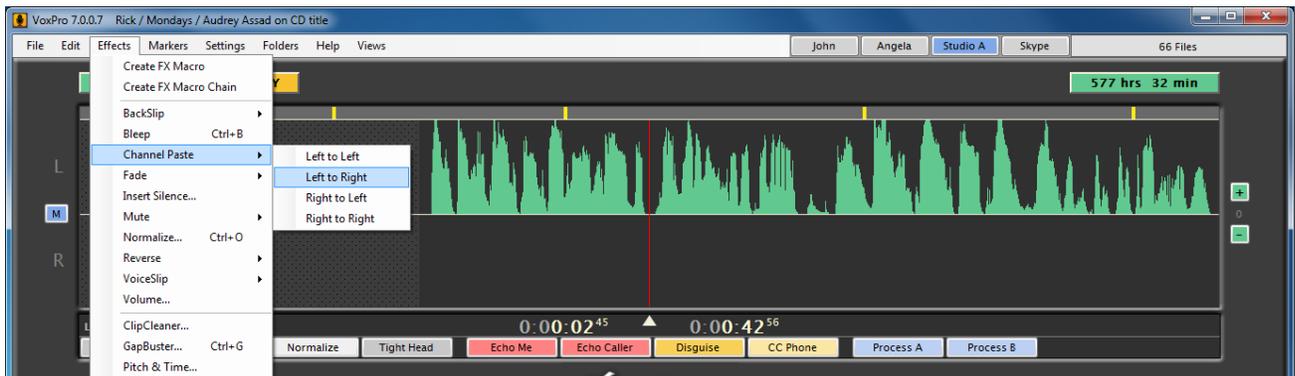


Figure 4.7 – Choosing the Channel Paste operation to be applied at the cue line.

After applying the operation, we see the original left channel of the source is now in the right channel of the destination, Figure 4.8:

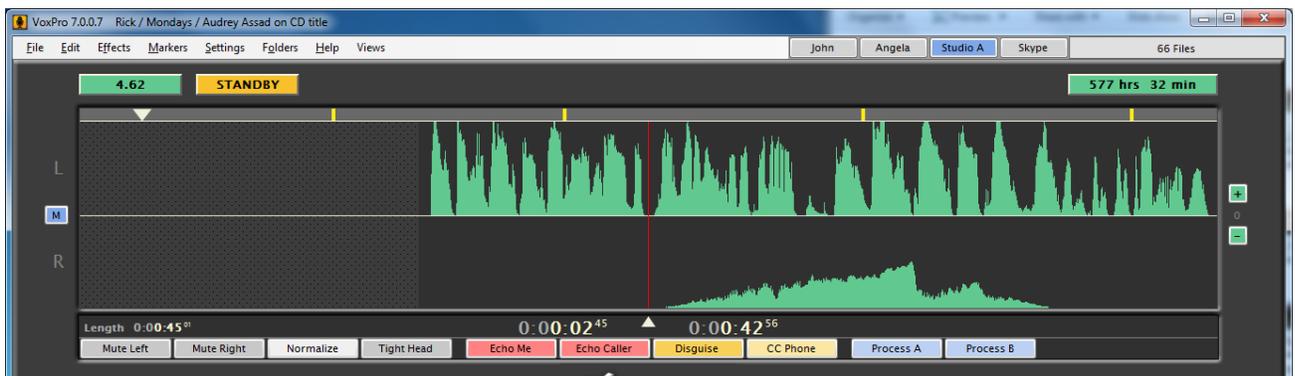


Figure 4.8 – After applying Channel Paste at cue line. Note left channel remains unchanged.

Silence Removal (GapBuster) and Pitch/Time Manipulation

Special Purpose Effects

The **GapBuster** effect is used to automatically remove gaps (silences) in a conversation or interview, saving you the time and effort editing them out manually. The dialog box allows you to define what constitutes a “gap”. By default, it is a span of time at least a quarter of a second in duration during which the signal never exceeds a certain volume level called the silence threshold. You may adjust these values to your own style and ambient noise conditions of the recording. A smaller gap (say 100ms) will sound tighter, while a longer gap (500ms) allows quite a lot of breathing room. A silence threshold too high will clip off parts of words, while a threshold too low will not remove pauses in conversation which contain significant background noise. If the auto-detect option is selected, VoxPro will try to determine the optimal silence threshold automatically.

There are two keyboard shortcuts for **GapBuster**. The <ctrl>+G combination is equivalent to selecting **GapBuster** from the effects menu: it opens the dialog box which allows you to adjust the gap length and threshold. You may also simply type **G** alone to apply the most recently used **GapBuster** settings to the selected region.

The **Pitch and Time** effect can be used for a variety of purposes. It can be used to compress or stretch a recorded bit in order to fit it perfectly into a particular span of time. (For example, speed up an 18 second ad so that it fits into a 15 second slot.) It can also be used as a special effect to raise or lower the pitch of a recording without changing the speed. And it can combine these operations, changing both pitch and time simultaneously.

ClipCleaner

Signal Processing and Filtering

The **ClipCleaner** effect is intended for cleaning and enhancing the quality of noisy phone calls, but of course it can be used for other purposes (e.g. special effects) as well. ClipCleaner offers a full suite of signal processing tools which may be configured independently for each channel.

When you first open ClipCleaner from the Effects menu, the short-form interface is displayed, as shown in Figure 4.9. A full range of factory presets is available, and a different preset may be selected for each channel. Often the studio microphone is already being processed in hardware before it is even fed to VoxPro, so you might choose to keep the Mic channel on Bypass so as not to interfere.

Use the drop-down combo box to choose a preset configuration of DSP settings for that channel. The presets beginning with “DJ” are intended for the jock’s mic, and the presets beginning with “PH” are intended for the caller (phone), but any preset may be used in either channel.

Use the **Preview** button to hear the effect of the selected preset(s). Click **Commit** to write the effect to disk and close the dialog.

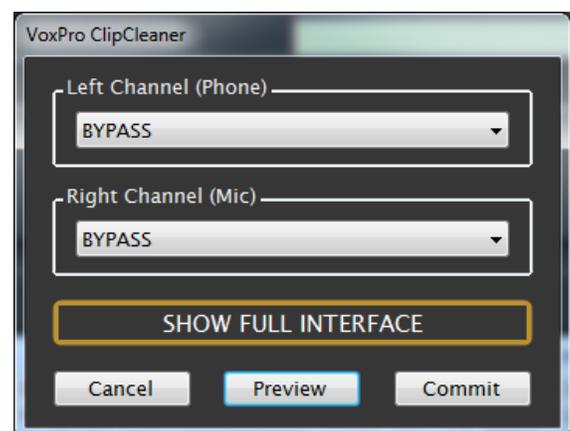


Figure 4.9 – ClipCleaner short-form dialog.

Adventurous users may wish to explore the full capabilities of ClipCleaner by opening the **Full Interface**, shown in Figure 4.10.

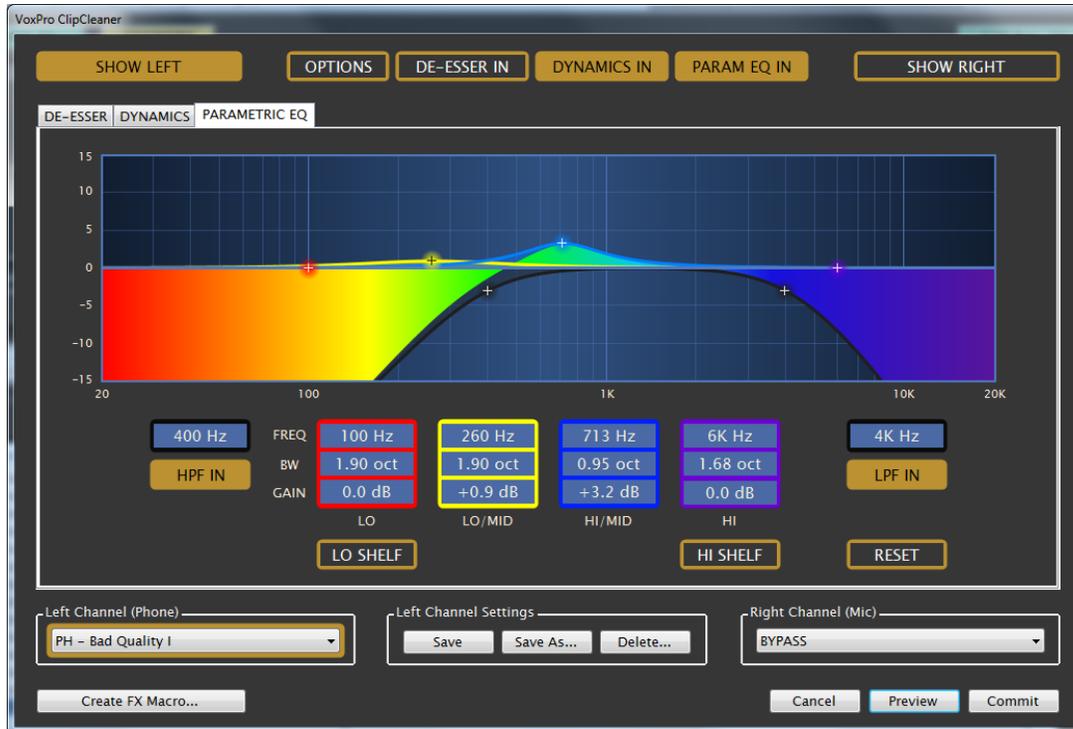


Figure 4.10 – ClipCleaner full interface.

The two buttons in the top left and right corners are used to toggle the display between left and right channel settings. Between them are three buttons which enable/disable the different processing stages (DeEsser, Dynamics and Parametric Equalizer), as well as a menu of Options, including the option to return to the short-form display.

Occupying the center of the ClipCleaner interface are the three tab pages with controls for the three processing stages. Note that the order in which the processing occurs (the signal flow) corresponds to the left-to-right order of the tabs themselves, and that you may change the processing order by dragging a tab left or right. The processing order may be different for the left and right channels.

At the bottom of the ClipCleaner window are controls for selecting the preset for each channel, as well as controls for saving new presets. Whenever you change any parameter, in any of the processing stages, the label above the active channel preset is bookended with asterisks (“*”) to indicate that the current settings differ from the displayed preset.

Let’s now examine each processing stage in detail.

Parametric EQ

There are six filters in the Parametric EQ section, four of which are fully parametric (meaning all values may be adjusted), as well as a high-pass filter (HPF) and a low-pass filter (LPF). Note that there are six color-coded “control points” (the fuzzy circles with the “+” symbol in the middle), one for each filter. The values of the filters can be changed in three ways:

By using the mouse, clicking in a numerical box and typing a value.

By using the mouse and dragging the control point to visually set the EQ.

By using the mouse wheel within a filter control point to adjust filter Q-factor.

High Pass Filter (HPF IN) – When engaged, the **HPF** reduces frequencies below the specified “corner” frequency. This filter can help eliminate rumble and other low frequency room noise. Note that the filter’s control point is fixed at the -3dB mark and that neither the Q-factor nor the gain may be adjusted.

Low – The first equalizer is labeled **LO**. This equalizer is shaded on the graph in red. There are three options to adjust this control. **FREQ** sets the center frequency of the equalizer. **BW** (or **Q**) sets the bandwidth control (or how wide or narrow the adjustment will be) and **GAIN**, which increases or decreases the level of the equalizer.

Low Shelf – When engaged, the **LO SHELF** option changes the first equalizer from a true parametric to a shelving equalizer. It should be noted that the **BW/Q** control is NOT available if the **LO SHELF** option is on.

Low-Mid – The second equalizer is labeled **LO/MID**. This equalizer is shaded on the graph in yellow. There are three options to adjust this control. **FREQ** sets the center frequency of the equalizer. **BW** (or **Q**) sets the bandwidth control (or how wide or narrow the adjustment will be) and **GAIN**, which increases or decreases the level of the equalizer.

High-Mid – The third equalizer is labeled **HI/MID**. This equalizer is shaded on the graph in blue. There are three options to adjust this control. **FREQ** sets the center frequency of the equalizer. **BW** (or **Q**) sets the bandwidth control (or how wide or narrow the adjustment will be) and **GAIN**, which increases or decreases the level of the equalizer.

High – The fourth equalizer is labeled **HI**. This equalizer is shaded on the graph in purple. There are three options to adjust this control. **FREQ** sets the center frequency of the equalizer. **BW** (or **Q**) sets the bandwidth control (or how wide or narrow the adjustment will be) and **GAIN**, which increases or decreases the level of the equalizer.

High Shelf – When engaged, the **HI SHELF** option changes the fourth equalizer from a true parametric to a shelving equalizer. It should be noted that the **BW/Q** control is NOT available if the **HI SHELF** option is on.

Low Pass Filter (LPF IN) – When engaged, the **LPF** reduces frequencies above the specified “corner” frequency. This filter can help eliminate hiss and other high frequency noises (such as room noise or telephone line noise) that may show up in a recording. Note that the filter’s control point is fixed at the -3dB mark and that neither the Q-factor nor the gain may be adjusted.

TIP: When adjusting the equalizers, some users may be more familiar with how the **BW** (bandwidth) control works when the value is changed to the **Q** factor. You can change the value from **BW** to **Q** on all four equalizers. Touching the **BW** text changes the value to **Q**. To switch back to **BW**, just tap **Q** with your mouse.

De-Esser

The De-Esser helps to control audio spikes generally above 2KHz that are a result of the pronunciation of sibilants such as “S”, “SH”, “CH”, “Z” and sometimes the plosives “T” and “D”. It is essentially a frequency-controlled ducker.

Sibilant Filter – This graph and the associated controls below set the range of the audio spectrum controlled by the De-Esser. You can set the **Frequency** and **Q** factor of the filter to customize the De-Esser to your needs.

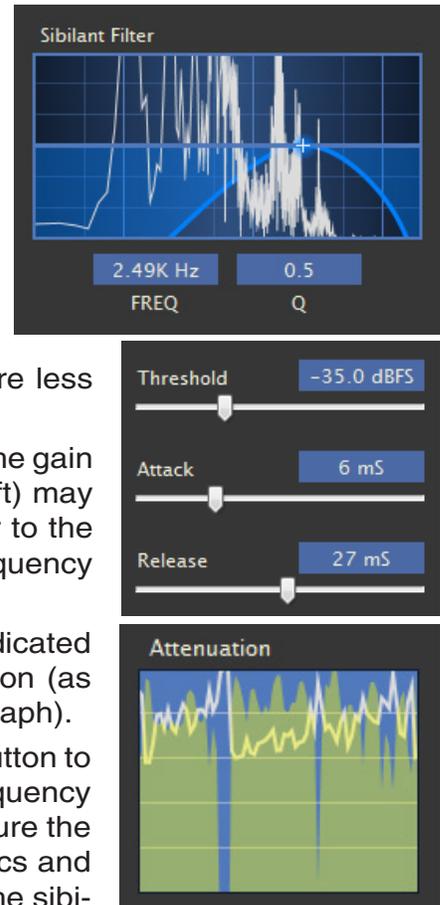
Threshold – Sets the level at which the De-Esser will activate. If audio is above the threshold level and in range of the **Sibilant Filter**, the De-Esser will activate.

Attack – Determines how fast the De-Esser will reduce audio when it is above the threshold. Faster settings (slider to the left) yield more control, but with noticeable operation. Slower settings (slider to the right) yield less control and are less audible.

Release – Determines how fast the De-Esser will return the gain to normal after a correction. Faster settings (slider to the left) may sound edgy while maintaining highs. Slower settings (slider to the right) may sound smoother with the potential for some high frequency loss if set too slow.

Attenuation – This graph shows the audio level (as indicated by the green shaded area) and the amount of gain reduction (as indicated by the white line descending from the top of the graph).

TIP: To set the de-esser parameters, click the Preview button to start playback, and use the spectral display to gauge the frequency range where the sibilants occur. (You’ll also need to make sure the DeEsser is enabled, and you might want to disable Dynamics and Param EQ in order to focus on the effect of the de-esser.) The sibilant range will be slightly different for every speaker, and generally higher for females than for males. Use the filter **Frequency** and **Q** controls to shape the filter around this range. (You may also use the mouse to click and drag the filter control point right or left to adjust center frequency. Use the mouse wheel to adjust the filter’s Q-factor.) Now turn the threshold all the way down, to the left. As you preview the effect, you’ll hear that the sibilants are virtually gone. Gradually turn the threshold up until you hear the sibilants once again. Use the attack and release settings to fine-tune how quickly the control signal “kicks in”, and how gradually it releases after the sibilant energy dissipates.



Dynamics

The Dynamics section adds expansion, noise gating, compression and limiting to your audio. These controls help reduce background noise and level the audio to make the volume more consistent.

Expander

The **expander** reduces the input gain to a level predetermined by the user when no useable audio is present. There are a number of controls to tailor the effect of the

expander. To engage the **expander**, make sure the IN box is checked and shaded.

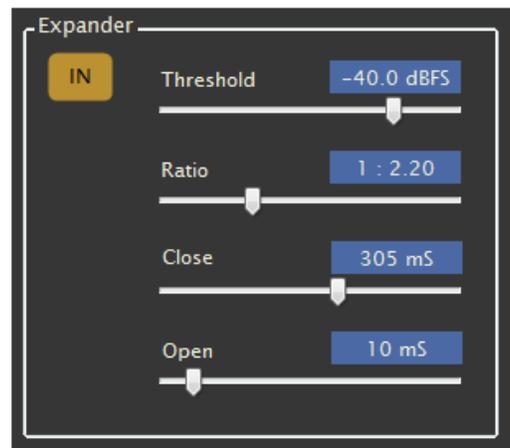
Threshold – The **threshold** control sets the audio level for the **expander** to engage. Audio that falls below the set value will be subject to expansion.

TIP: When setting up the **Dynamics** section, make sure the **threshold** setting for the **expander** is LOWER than the **threshold** setting for the **compressor**. A 5dB difference between the **expander** and **compressor** is a good rule of thumb (i.e., if the **compressor threshold** is -25dB, the **expander** should be -30dB or lower).

Ratio – The **ratio** control determines how quickly the **expander** will work when audio falls below the **threshold** level. Higher **ratios** lead to faster (yet more audible) reduction while lower **ratios** work slower but yield a smoother result.

Close – Sets the wait time for the **expander** to close once audio has fallen below the **threshold**. Longer wait times (slider towards the right) can make the transition to **expansion** less noticeable with the risk of background noise being momentarily amplified.

Open – Sets the wait to for the **expander** to open once audio is above the **threshold**.



Noise Gate

The **noise gate** “turns off” the audio once it falls below the user defined **threshold**. As a rule of thumb, the **noise gate threshold** should be at least 15-20dB lower than the **expander threshold** set above. If the **noise gate threshold** is set too high (slider to the right), risk of undesired audio “dropouts” are possible. To activate the **noise gate**, make sure the IN box is checked and shaded.

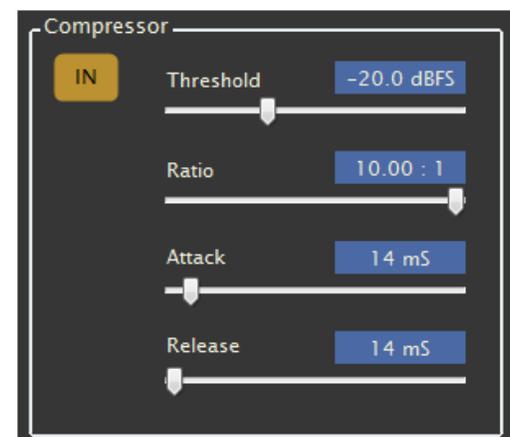


Compressor

The **compressor** is a tried and true audio tool that helps minimize the level differences between softer sounds and loud sounds. It can add body and punch to the audio and improve intelligibility. Unlike a **limiter**, the **compressor** does allow overshoot but will also minimize peaks. There are four tools to help you set the **compressor** for the best results. To engage the **compressor**, make sure the IN box is checked and shaded.

Threshold – The **threshold** control sets the audio level for the compressor to engage. Audio above the set value will be subject to **compression**.

TIP: When setting up the **Dynamics** section, **compressor** is HIGHER than the **threshold** setting for the **expander**. A 5dB difference between the **expander** and **compressor** is a good rule of thumb (i.e., if the **compressor threshold** is -25dB, the **expander** should be -30dB or lower).



Ratio – Determines the amount of gain change when audio is above the **compressor threshold**. For instance, if your **compression ratio** is set to 4:1, every 4dB of input gain ABOVE the **threshold** setting will yield only 1dB of output gain after **compression**. With that in mind, you can see how higher ratios will yield a more compressed sound, while lower ratios will yield a more natural sound.

Attack – Determines how quickly the compressor will reduce audio once the threshold has been met. Lower numbers yield better control at the expense of audible side effects. Higher numbers sound better, yet will have less control.

TIP: For a more natural sound, try matching the **delay** setting to the **compressor attack** time. This can help keep the audio sounding natural while still maintaining control, especially if the **attack** time is set to higher numbers.

Release – Determines how fast the **compressor** will return the gain to normal after a correction. Faster settings (slider to the left) may sound edgy and dense if high **compression ratios** and fast **attack times** are used. Slower settings (slider to the right) may sound smoother with the potential for dullness if fast **attack times** and high **compression ratios** are used.

Limiters

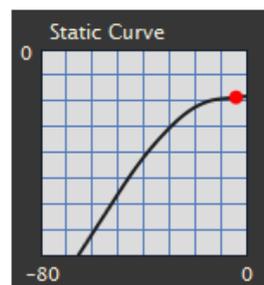
The **limiter** slider sets the absolute peak value of the audio. Because of the extremely high ratio and fast attack time of the **limiter**, audio peaks are completely controlled and not allowed above the set value of the **limiter**. A little bit of limiting is usually not noticeable. If you start to hear “pumping” in the audio, you are probably too deep into limiting and should move the control to the right until the artifacts disappear. To engage the **limiter**, make sure the IN box is checked and shaded.



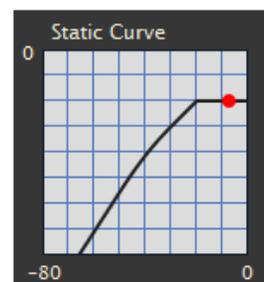
Static Curve

The static curve display shows the transfer function of the raw audio from unprocessed to compressed or limited. It also indicates the threshold of the noise gate. The following images show the static curve display and what various settings would look like.

The figure at right shows **SOFT KNEE** compression with a threshold of about -20dB. The red dot indicates the momentary amplitude of the audio. Once the audio has reached the -20dB threshold of the **compressor**, the audio is processed and any further amplification is stopped. Note the curve has a very smooth transition. This allows the audio to have a smooth transition into compression for good level control without noticeable **compression** artifacts.



Compare the **SOFT KNEE** with this image. Same **compressor** settings as the image above, but the knee has been changed to **HARD KNEE** and the **limiter** has been engaged. The crest is no longer a curve; instead the audio hits a flat line “brick wall”. Depending on the attack and release time settings of the compressor, this type of setup can effectively control peaks and still sound quite pleasant.



The last image has the same **compressor** and **limiter** settings as the image above, however we have activated the **NOISE GATE**. When the audio signal (as represented by the red dot) falls and reaches the **noise gate** “cliff”, the audio will mute. Care should be taken to set the **noise gate** so that it does not prematurely mute on DESIRED audio.

Knee – The knee control changes the shape of the **compressor** from **hard** (peak detecting) to **medium** (peak and average detection) or soft (RMS, or average level detecting only). In **hard**, the audio will have a more edgy sound once the **compression threshold** has been reached. **Medium** is a good setting for most as it evaluates audio on the peak AND average level. The **soft** setting looks at the average level only, sounds smoother but with less level control and a tendency to be softer.

Delay – The **delay** setting delays the audio with respect to the dynamic envelope which is being calculated from the signal itself. For audio that has a lot of peaks and dynamic range, setting the **delay** signal to match the **attack** time in the **compressor** can yield more accurate results from the compressor algorithm.

Make Up Gain – If deep gain reduction is performed by the **compressor** and **limiter**, the **make up gain** control can compensate for the loss in amplitude on the finished product by increasing the output level of the dynamics processor.

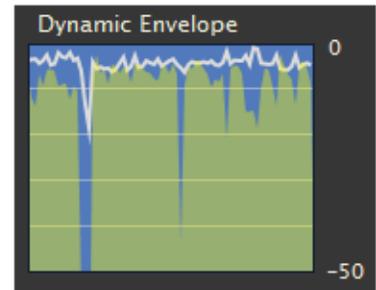
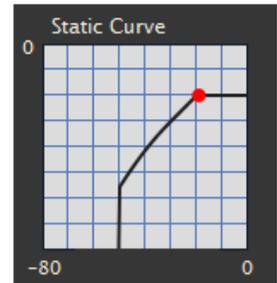
Dynamic Envelope

The **dynamic envelope** displays for the dynamics section is similar to the attenuation graph in the de-esser. This graph shows the audio level (as indicated by the green shaded area) and the amount of gain reduction (as indicated by the white line descending from the top of the graph).

Stereo Processing

The default processing mode for ClipCleaner is Dual Mono, meaning that each channel is processed separately and independently of the other (or not processed at all if it is on BYPASS). However, if you select the same preset in both channels, then two additional options are available in the Options menu.

Coupled stereo means that both channels are combined to form the level detection side-chains in the De-Esser and Dynamics stages. Uncoupled stereo means that the two channels are NOT combined for the detection side-chains. However, in either of the stereo modes, both the Show Left and Show Right buttons are enabled, and any change to any parameter affects both channels equally.



Chapter 5. Effects (FX) Macros

Effects Macros provide a method by which you can put commonly used effects on a dedicated button, which can then be applied to the active file in the Editor with a mouse click or with the function keys **F1-F12**. Once you have defined at least two macros, you may chain them together in sequence, creating an **FX Macro Chain**. Like single macros, macro chains are assigned to a dedicated button which appears in a strip underneath the waveform editor.

As an example, let's suppose that you commonly perform a particular sequence of operations on a phone call after it is recorded: normalize caller, apply favorite ClipCleaner preset on caller, run GapBuster (which affects both channels) to tighten it up. You could assign each of these individual effects to a macro button, and then create an addition button which performs all three in sequence.

Like Hotkeys and tracks in the File List, macro buttons can be color-coded according to your own needs. They may also be re-arranged within the macro strip by clicking and dragging them to the left or right. Macro buttons may be edited or deleted using the right-click pop-up menu.

There are two ways to create an FX Macro. For “complex” effects (those which require a dialog box for their settings and application), the **Macro** button at the bottom of the dialog provides one method, transferring the current effect settings to a **Macro Creation** dialog for that effect. Here you provide additional information about your macro: its name, color (optional), which channel(s) and portion of the active file it is to be applied to.

The other way to create an FX Macro is to select that command at the very top of the **Effects** menu. Select the effect you want to create a macro for from the drop-down list. Click Next to open the Macro Creation dialog for that effect.

FX Macro Chains are created using the second command at the top of the **Effects** menu. Your existing collection of single macros is listed on the left. Add as many single macros to the macro chain as you like by selecting them and clicking the right arrow button. The top-to-bottom order of macros in the macro chain list determines the sequence in which they will be applied to your file. Provide a name and optional color for your macro chain, and you're done. Like single macros, macro chains can be edited and deleted using the right-click pop-up menu.

The Undo and Redo commands can be applied to any edit performed by means of an FX Macro. A single macro can be undone with a single Undo, while undoing a macro chain will require as many taps of the **UNDO** button as there are individual actions in the chain.

FX Macros may also be assigned to the Control Panel soft keys (the five buttons under the LCD). For more information, please read the discussion about **Advanced Shortcuts** in Chapter 8.

Chapter 6. Markers

Markers, or bookmarks, are used to mark locations in your files which have special significance for you, so that you may access them quickly and easily at a later time. (Do not confuse Markers with the Mark Left/Mark Right operations used in selecting an audio region for editing.)

Markers may be inserted at any point into any file by typing the **M** key on the keyboard. (There is currently no way to insert a marker using the control panel.) Markers are always inserted into the file at the current position (that is, at the cue line). In standby mode, inserting a marker brings up a dialog box which allows you to label the marker and assign it a color. The marker is displayed in the Timeline track, its position relative to the length of the file as a whole.

Markers may be inserted during recording and playback as well. In these cases, the dialog box for the label and color assignment appears, but disappears after a few seconds if ignored, leaving a blank marker at the location where the **M** key was initially pressed. (You can always add a label or change the color later on.) Alternatively, you may disable the **Insert Marker Shows Dialog** option (in the **Markers** menu, or by typing **<ctrl>M** on the keyboard), allowing you to insert markers during playback or recording without being prompted to assign a label and color for each and every one.

Markers inserted into a file are displayed in the **Markers** menu, whence they may be edited or deleted. You may also reposition a marker to a precise location by using the **Go To Marker** sub-menu. VoxPro 7.1 jumps to the location of the selected marker and displays its position in the file as a fuzzy vertical line through the waveform. Click and drag this line left or right to relocate the position of the marker, then click the small **OK** button which pops up to confirm the change.

Navigating directly from one marker to the next is easy. From the control panel, press and hold the **OPTION** button while using the **Fast Forward/Fast Rewind** buttons to page forward and backwards through the file's markers. On the keyboard, the **<page down>** and **<page up>** keys perform the same function.

Marker labels in VoxPro 7.1 now support the **Unicode** standard, meaning that markers may be labeled in any language, using any script (Chinese, Cyrillic, Symbols, etc.). However, this standard is not completely compatible with earlier versions of VoxPro. VoxPro 7.1 files containing Unicode markers will open correctly in earlier versions of VoxPro, but the labels will be illegible and essentially lost. To maintain compatibility with earlier versions of VoxPro (at the price of being able to use only 7-bit ASCII characters in marker labels), unselect the **Unicode Labels** option in the **Layout** dialog box accessible from the **Settings** menu.

The Insert-Marker function, as well as the Go-to-Next- and Go-to-Previous-Marker functions, may also be assigned to Control Panel soft keys (the five buttons under the LCD). For more information, please read the discussion about **Advanced Shortcuts** in Chapter 8.

Chapter 7. Hotkeys

Hotkeys are another way to prepare and organize files for immediate, one-button playback. In the Figure 7.1 below, the **Hotkeys** panel has been opened by clicking on the **Hotkeys icon** (the orange & red bonfire button on the left). If a hardware control panel is attached, the active bank of Hotkeys is outlined in gold. The titles to the Hotkeys in the **active bank** are displayed in the control panel LCD, and they can be triggered using the corresponding soft key button. The bank scroll buttons in the top left corner of the control panel are used to move the active bank up and down. Hotkeys may also be started and stopped with a mouse click, or a finger tap if you have a touch-screen.

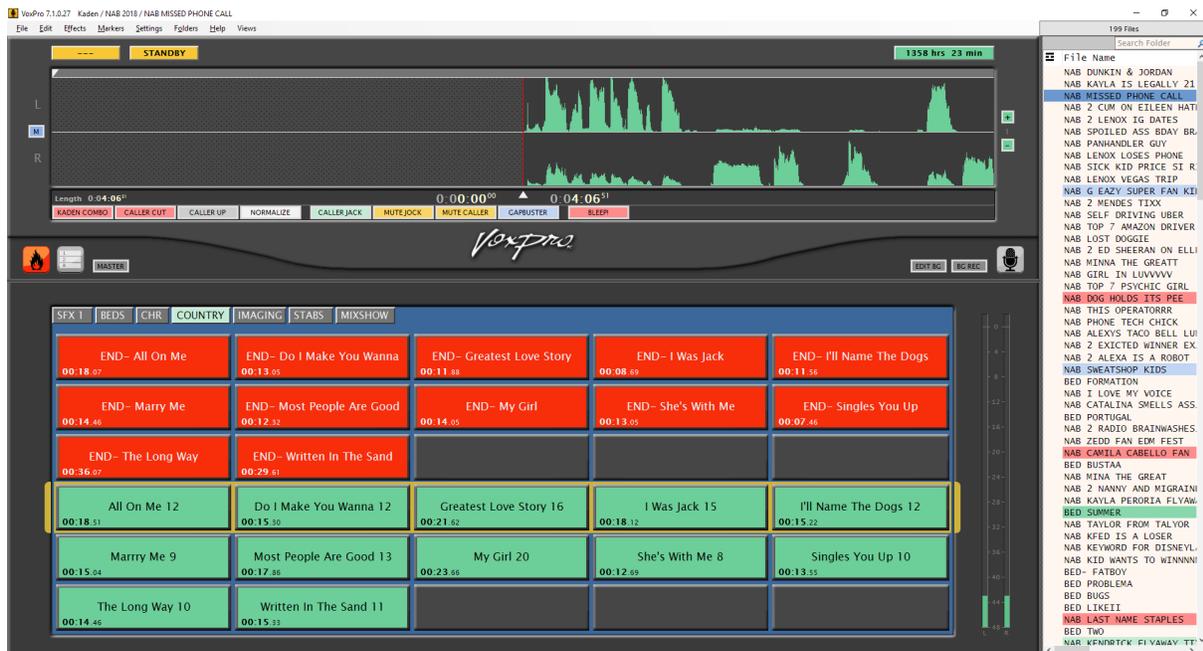


Figure 7.1 – Hotkeys panel open in main window, File list moved to the right.

Hotkey Basics

To **load a file** from the File List into a Hotkey cell, simply click and drag the file from the List to the desired Hotkey. VoxPro creates a separate copy of the file and stores it in a hidden folder before loading it into the Hotkey. Thus, any change made to the audio loaded into a Hotkey cell affects the Hotkey itself and not the original source of the audio. Changing attributes and editing Hotkey audio is discussed further below.

To **load a file** from the File List *without changing the active file displayed in the Editor*, press and hold the **<alt>** key on the keyboard before clicking and dragging the desired file from the List. Files loaded into Hotkeys may be any of length, from less than a second to several hours.

Drag a loaded Hotkey to an **empty** Hotkey to move the **loaded** Hotkey. **Drag** a loaded Hotkey to another loaded Hotkey to **exchange** their positions. **Drag** a loaded Hotkey up to a **page tab** to open that tab, allowing the file to be moved to any Hotkey cell on that page.

A **left-click** on an **empty** Hotkey prompts you immediately to choose a file from anywhere on the local computer or the LAN and load it.

A **right-click** on an **empty** Hotkey displays a pop-up menu with a full range of import options. For example, you can import the active file (in the Editor) either as a mono mix or as a stereo file, and if there is a MultiTrack mix loaded, you may import the entire mix or just the title track.

A **left-click** on a **loaded** Hotkey starts the file playing from the beginning. If you click again before the file reaches the end, it will fade out, stop and rewind. The next click will start it playing from the beginning. Otherwise the file simply plays to the end, then rewinds in preparation for the next start.

A **right-click** on a **loaded** Hotkey displays a pop-up menu which lets you modify various attributes of the cell, and perform various functions. Each Hotkey cell has the following attributes:

- Pad – for controlling the cell’s playback volume.
- Mono-Mix – turns a stereo file into mono during playback.
- Allow Pause – stopping the cell does not rewind it, starting it again starts up where it was last stopped. Places a small “pause” icon in the top left corner of the cell. Use the Rewind function to relocate playback position back to the beginning.
- Looped – cell will continue to play in a loop until stopped. Places a “loop” icon in the top right corner of the cell.
- Fade-Out Time – controls the length of the fade-out applied when the cell is stopped.
- Color – choose from a palette of 32 colors for easy visual identification.

Functions include **edit**, **rename**, **copy**, **paste**, **clear**, and **unload**. (Paste is enabled only if you have previously copied another Hotkey.)

The **edit** function opens the floating **Side Editor**, shown in Figure 7.2.

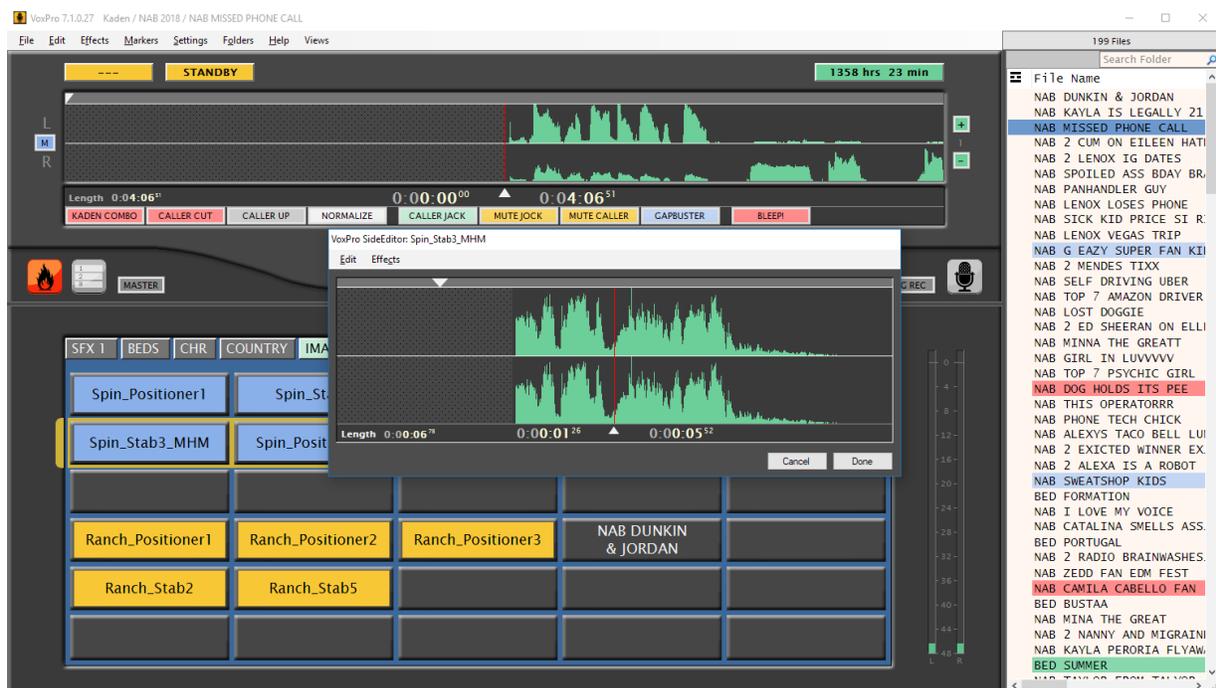


Figure 7.2 – Editing a Hotkeys using floating Side Editor.

While the Side Editor is open, all keyboard and control panel commands are routed to it, rather than to the main window. The Edit and Effects menus in the Side Editor replicate most of the same functions familiar from the corresponding menus in the main window. Any edit applied to a Hotkey affects that Hotkey only and not the original source it was copied or imported from.

There is a distinction between **clearing** a Hotkey and **unloading** a Hotkey. Clearing a cell resets all attributes in addition to deleting the associated audio file. Unloading a cell simply delete the audio file, leaving the other attributes in place. This allows a cell to be used as a “socket” into which you may drag or import a different audio file without affecting the cell’s attributes (color, pad, fade time, etc).

Hotkey cells are arranged on **Tab Pages**, of which there are always at least two. To add a new Hotkeys tab page, right-click on any existing tab label and select the **Add Tab** command from the pop-up menu. Similarly, you may **rename** or **delete** a tab. Clearing a tab page unloads and resets all cell attributes on that page. Unloading a tab page deletes the audio from all cells on that page, but leaves other attributes as they are. Tabs may be **alphabetized** in order, or they may be **manually reordered** by clicking and dragging any tab left or right.

Advanced Hotkey Concepts

In Figures 7.1 and 7.2 above, the Hotkeys panel is embedded in the main window, forcing the File List to move to the right. The File List may optionally be displayed on the left instead, from the **Layout** dialog in the **Settings** menu. Using the **Views** menu, you may completely hide both the **File List** and the **Editor**, leaving only the Hotkeys panel to occupy the entire VoxPro window.

Additional Hotkeys windows may be opened through the **Views** menu, or by right-clicking the Hotkeys icon. You may have as many Hotkeys panels open as you like; they can be positioned on any monitor and can be sized arbitrarily, which is very handy for multi-monitor configurations. Each Hotkey panel may be open to a different tab page, giving you immediate access to potentially hundreds of Hotkeys. You might conversely choose to return the main window to “Classic” mode (Editor and File List only), and display Hotkeys in a separate window on a second monitor. Whatever layout you choose, it will be saved and restored the next time you log into your account.

All Hotkey windows are “instances” of the same “master” Hotkey panel, so, for example, if you create a new tab page in one panel it will appear in all of them, if you load a cell in one panel you’ll see it in all the other panels, and so on.

Notice that if you have you have a VoxPro hardware Control Panel and have more than one Hotkeys window open, that only one of the Hotkeys panels will be “active” – that is, only one will display the gold outline indicating the active bank of cells which can be triggered from the soft keys on the Control Panel. (Nonetheless, any Hotkey cell, in any window, may be triggered with a mouse click or equivalent finger tap.) To select a different Hotkey panel as the “active” one, click anywhere in the gray margin surrounding the Hotkeys tab pages in that window.

Several important Hotkey options may be customized in the **Hotkeys Settings** dialog, which can be opened from the **Settings** menu. Here you can specify how many rows of Hotkeys there will be on each tab page (up to a maximum of 12), as well as the preferred **font size** for cell labels. Here you may also set the default settings for Fade-Out time,

Pad and Mono-Mix. All newly created cells will have these default attributes, and clearing a cell will reset these attributes to the selected settings.

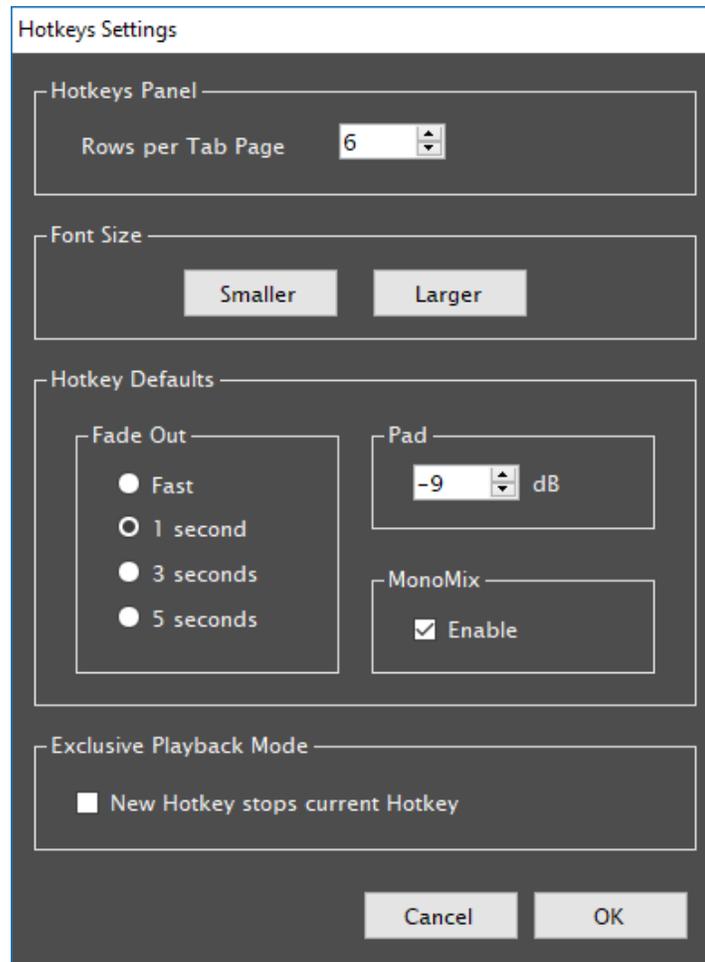


Figure 7.3 – Hotkey settings and default values.

The Hotkey Settings dialog also contains an option for an **Exclusive Playback Mode**. Normally you may play as many Hotkeys as you like, simultaneously and independently. To change this behavior, enable the **new Hotkey stops current Hotkey** option in the **Playback Options** dialog box which is accessible from the **Settings** menu. When this option is enabled, any currently playing Hotkey will stop playing whenever a new Hotkey is started.

Hotkey cells may be directed to **play out** of any audio device on your computer, which effectively means that they can be given their own fader on the studio console. The Administrator may have already specified a default Hotkeys playback device and routed it to a separate fader on the console (see Section 2 of the VoxPro Admin Guide). Additional devices may be selected from the **Playback Devices** menu of a loaded cell's right-click pop-up menu, to allow special routing or processing independent of the main audio output.

Teamwork

Many radio shows are built around, or rely heavily on, pre-prepared audio snippets that can be called up at a moment's notice. VoxPro's Hotkey feature is designed with this job in mind. Built in to the Hotkeys are features that make it easy for production teams to work together – so, for example, a producer or call-screener/editor can be seated at a computer in a production booth, logged into the air talent's account, creating Hotkeys; while the talent, in the studio, is logged into the same account, is then able to play those same Hotkeys. The producer changes the color of a Hotkey cell, the talent sees it. Producer adds a new tab page, talent sees it. Any change either party makes to any Hotkey or Hotkey Tab Page is immediately visible and accessible to any other user logged into the same account on a different computer.

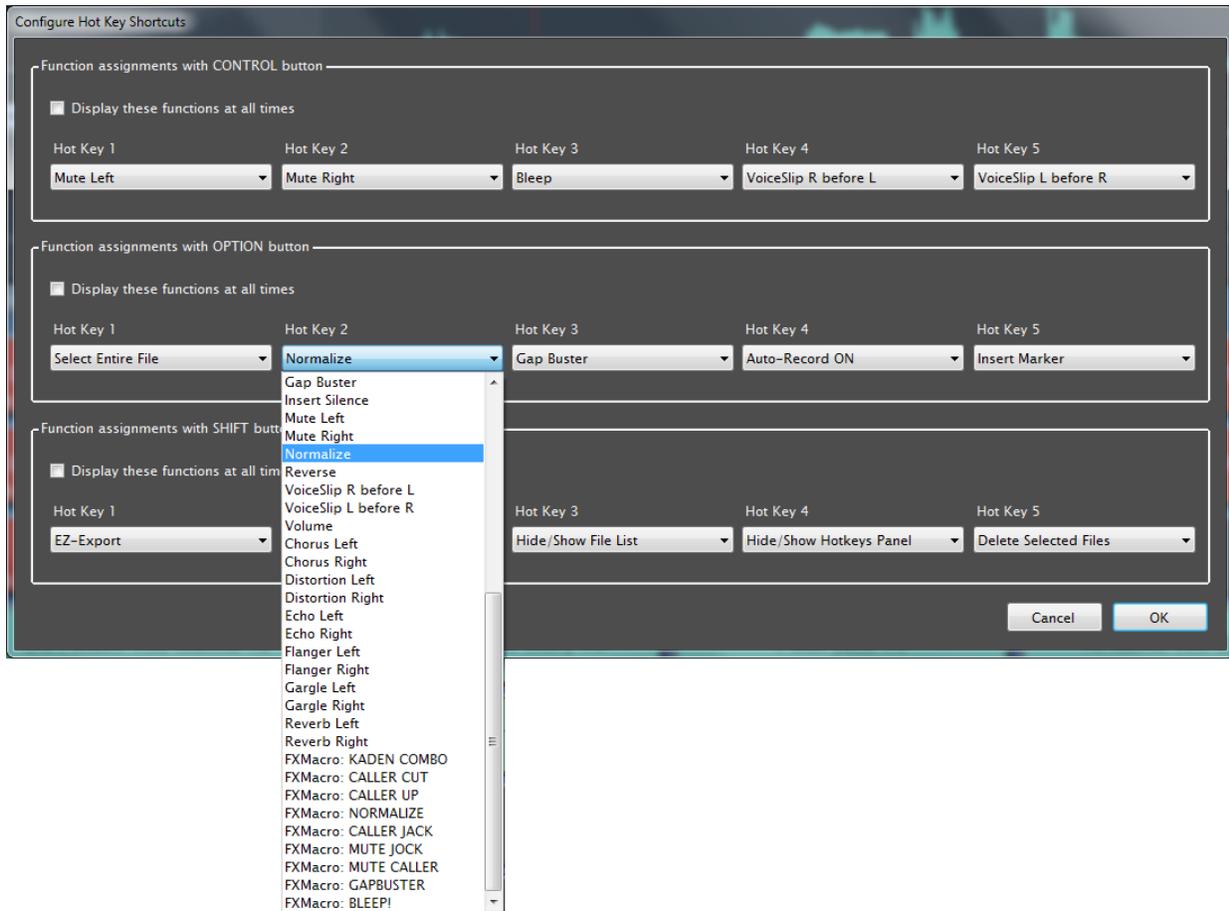
Nor are you are not limited to just two computers sharing the same remote account. Three or more computers, all logged into the same account, is also possible. Note that each user, on each computer, can have a different number of Hotkey windows open, in different configurations, accessing different tab pages, playing different Hotkeys, all independent of one another. Thus a producer might be populating one tab page while the on air talent is playing Hotkeys from another page.

Chapter 8. Advanced Shortcuts

We’ve seen in Chapters 4 and 7 how the five soft keys under the Control Panel’s LCD can be used for triggering Hotkeys as well as shortcuts for the most common Effects. Starting with VoxPro 7.1, these soft keys may be customized and used in other ways as well.

Hold down the **Control** button on the Control Panel, and you’ll see five Effects shortcuts displayed in the LCD. Press the **Option** button and you’ll see five more functions – a few effects, and a few non-effects, like selecting the entire file or toggling Auto-Record. Press the **Shift** button to see a third rank of functions displayed.

So there are three ranks of five functions each which are available as soft key shortcuts. You may customize these functions by using the Shortcuts dialog from the Settings menu. Each soft key in each of the three ranks may be assigned any of the functions in the associated drop-down list. There are three categories of functions available: general operations at the top of the list, followed by effects, followed by any FX Macros you might have created.



Any of the three ranks of functions may optionally be made active at all times, meaning that these functions are available without having to press the corresponding Control, Option or Shift button. The other ranks are still accessible by pressing their corresponding “escape” button.

NOTE: If any of the “Display these functions at all times” options is selected, the soft keys cannot be used to trigger audio Hotkeys.

One additional remark should be made concerning soft keys which are assigned to Effects and FX Macros. For the Effects, if there is no selected region highlighted in the waveform Editor, then activating the soft key shortcut to that Effect will have, well, no effect. (Insert-Silence being the one exception to that rule.) However, FX Macros can be constructed such that they will apply automatically to the entire file if no region is selected, thus they will function exactly like their corresponding on-screen button counterparts (see Chapter 5, FX Macros).

Chapter 9. MultiTrack Editing

Click the **MultiTrack** button to toggle the Editor into MultiTrack view (Figure 9.1). The active file is now displayed in the top track, also called the **title track**. The width of the display represents the length of the title track from beginning to end. In this example, a second **support track** has been added: a music intro. Note that its position in the composite mix precedes the beginning of the title track.

In the File List, an icon now appears in the left-most column next to the file name; this indicates that the file contains MultiTrack content. Even if the Editor is toggled back to the normal 2-track mode, the composite multitrack mix will be played when the file is played.

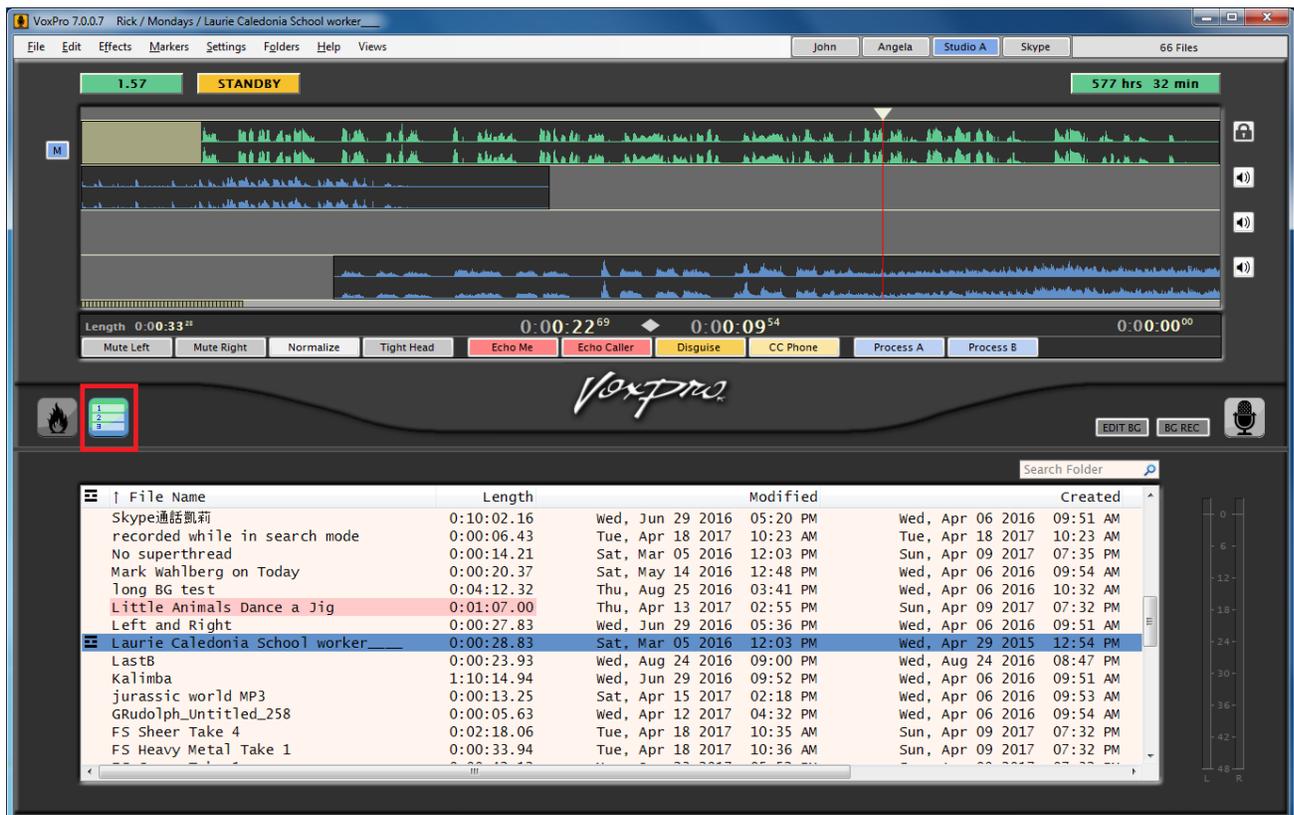


Figure 9.1 – The Editor in MultiTrack mode. A music intro starts before the main voice track.

To add support tracks, press and hold the **<alt>** key on the keyboard while dragging a file from the File List into the MultiTrack view. Alternatively, **right-click** in any blank area of the MultiTrack view to open a file import dialog. You may also drag Hotkeys directly into the MultiTrack view.

Click and drag support tracks to the left or right to realign them within the composite mix. In this example, the music intro has been dragged to the left, past the beginning of the title track, thus inserting an automatic delay before the title track begins to play.

Left-click any support track to play it by itself. Click again to stop.

Right-click any support track to display a pop-up menu of options. You may **pad** the track in 1dB increments, you may **nudge** the track left or right in 50ms increments, you may **delete** the track, and you may **edit** it in the same manner as Hotkeys, in the floating

Side Editor. As with Hotkeys, changes made to support tracks do not affect the original files they are derived from.

Individual physical tracks in the MultiTrack view may be muted using the **mute switches** located in the margin to the right of each track. The **lock switch** to the right of the title track locks the entire composition, preventing any inadvertent changes you might make without noticing. Note that the mono-mix indicator still appears in the left margin next to the title track, and functions identically as in 2-track mode.

If you need more physical tracks for a particular composition, use the **Add Support Track** command in the main **Edit** menu. If you would like to change the default number of physical tracks displayed in MultiTrack view, change the **Support Tracks** value in the **Layout** dialog box accessible from the **Settings** menu.

A MultiTrack mix may be bounced to a single file by using the **Render Multitrack Mix** command in the **File** menu. The file is given the same name as the title track (appended with “mix”) and appears in the File List next to the original.

A MultiTrack mix may also be exported using the normal **Export** command in the **File** menu. Support tracks will be **included in the mix** if this option is selected in the Export dialog box.

If the Hotkeys panel is open, then the MultiTrack mix may also be imported directly into any Hotkey using the **right-click pop-up menu** of the Hotkey itself.

Chapter 10. Import and Export

You may **import** audio files (MP3s, Waves, etc) created outside of VoxPro using the Import command in the main **File** menu. If you discover a file format which cannot be imported, contact your system administrator and ask for the **Combined Community Codec Pack** to be installed. This is a set of freely available codecs which provide Windows with the native ability to import many different file types. You can find a link to the CCCPack on the Wheatstone website.

Use the **Import in Background** command in the **File** menu if you have many long files to import and you need to continue working in VoxPro7 while the import process takes place. This can take an especially long time if a format conversion is required in order to render the file correctly using VoxPro 7.1's default sample rate. (See the *VoxPro7.1 Admin Guide* for details on audio device and format settings.)

Auto-Import is a feature which automatically imports audio files which appear in a specified folder on your local computer or on the LAN. Configure and enable Auto-Import from the **Import & Auto-Import** dialog available from the **Settings** menu, specifying both the source folder which VoxPro7 is to monitor, as well as your own destination folder into which the files will be copied. Use a UNC path for the source folder if you will be using the Auto-Import feature from remote VoxPro workstations.

Files imported using the Auto-Import function may also be automatically processed, allowing volume to be adjusted either an absolute amount or a relative amount via normalization. Optionally, the left or right channel may be muted. These functions are available by clicking the **Additional Audio Processing** button in the Import & Auto-Import Settings dialog.

You may **export** files to Wave or MP3 format using the **Export** command in the main **File** menu. Note that you have a range of choices in how to export the file, including swapping channels, condensing to a mono mix, leaving out one channel, etc. You may export a file to any folder on your local computer or on the LAN.

EZ-Export is a useful feature if you find yourself continually exporting files to a particular destination and in a particular format. Configure EZ-Export from the **Settings** menu. You specify a destination folder as well as a format. Henceforth, you can export any selected file to that location with one mouse click, either by using the **EZ-Export** command in the main **File** menu, or by right-clicking the file in the File List.

You may use the **Archive** command in the **File** menu to copy the selected file(s) to a backup location on your LAN. This is different from exporting because the actual VPW file that VoxPro7 uses is copied, thus maintaining the entire edit history.

Chapter 11. Files and Folders

Every VoxPro user account comes with three standard folders in which files are (or may be) stored. These are the **Default** folder, where you'll be working unless you specify otherwise; the **Transfer** folder, which is your "in-box", the place where files appear which are sent to you by other users; and the **Deleted Files** folder, which is where cancelled recordings and deleted files go until you really, truly, irrevocably delete them.

To create additional folders use the **Add Folder** command in the **Folders** menu. Use the same menu to switch between folders, and to delete and rename folders.

Right-click on any file in the File List to bring up a menu with options for various commands related to the file as a whole. The **Copy** command creates a copy of the file within the same folder. The **Copy To** command lets you make a copy of the file to any of your other folders, or to any other VoxPro user on the local computer or the LAN. Files copied to other users appear in the **Transfer** folder of that user. The **Move** command can be used to move the file to any of your other folders. The **Delete** command simply moves the file to your **Deleted Files** folder. **Delete**, **Export**, **EZ-Export**, **Rename** and **New Edit from Selection** are convenience commands which are also found in the main **File** menu. The **Color** command allows you to apply a highlighter-like color behind the file's name and length, as a convenient visual reference.

VoxPro uses a semi-proprietary file format called **VoxPro Wave**, or **VPW**. The VPW format is identical to the standard RIFF Wave format, except for the inclusion of an additional RIFF chunk in which VoxPro stores information about the edits (changes) you've made to the file. In extraordinary circumstances (for example if something in the file get corrupted and VoxPro is unable to open it as a VPW file), then you can change the extension on the filename from ".vpw" to ".wav" and then import it as a standard Wave file. Note that this has the effect of ignoring all edits that might have been made to the file: you are, in effect, returning the file to its original state.

At times you or a co-worker may use Windows File Explorer or a similar utility to delete files from one of your folders, or to add files from elsewhere, without going through the "proper channels" within VoxPro. In these cases, the database that VoxPro maintains for that folder will be out of sync with the actual contents of the folder. Thus, for example, a file which appears in the File List might not actually be on the disk, or a file which is physically present in the folder might nonetheless not appear in the File List. To resolve these conflicts, use the **Rebuild File Database** command in the main File menu to re-synchronize the database for the current folder.

Keep in mind that the more files there are in a folder, the more time required to list them and to maintain a coherent database. We recommend around 2000 files per folder as a good working limit. More than that and you'll probably start to notice how much longer it's taking to log in, or to switch to that folder. We have seen one user with over 12,000 files in one folder, however, so the actual limit is probably quite high.

You may use the **Search** command in the **File** menu (or type <ctrl>**S** on the keyboard) to locate files within your own folders as well as other users' folders. The Search function also lists Hotkeys which match the search parameters. Files for which you do not have write permission are highlighted in light red.. Otherwise, you may copy, move, delete, rename or edit any file returned in the list. **Double-click** any file in the list to play it. Additionally, the **QuikSearch** panel at the top right corner of the file list (in Classic mode) lets you quickly search through the current folder for files containing the sequence of characters you type in.

Chapter 12. Miscellaneous Settings

Meters

Several options pertaining to the location and operation of the peak program meters are available in the **Meters** dialog box in the **Settings** menu. The **meter style** (LED or continuous) and **dynamic range** can be customized, as well as an option to **deactivate meters** when not playing or recording. The meters may be displayed vertically, to the right of the File List (the default, classic arrangement); or horizontally, beneath the waveform display in the Editor.

Touch Controls

An option to display **on-screen touch controls** for Play/Stop/Record/Scrub functions is available in the **Layout** dialog box in the **Settings** menu. These controls are intended for operation on **tablets** and other **touch-screen devices** where other options for basic control are limited.

Font Size

The size of the font used in the File List and on Hotkeys may be increased or decreased from within the **Layout** dialog box in the **Settings** menu.

Password

You may password-protect your VoxPro user account by assigning a password using the **Change Password** dialog box in the **Settings** menu.

VoxPro Control Panel

Normally there is only one hardware control panel attached to the computer, but you may actually connect up to four controllers to a single VoxPro computer – useful in situations where two or more team members run a show sharing a single computer with multiple monitors.

If the control panel appears not to be functioning (but the software itself is), open the **Control Panel** dialog box in the **Settings** menu. If a control panel is present, the option to **use the control panel** should be checked. Check the **serial control panel attached** option only if there is a serial (RS-232) controller connected to a COM port. (These are increasingly rare on modern computers.) If closing the dialog box using the **Reset and Close** option does not revive the connection, try it again using the **Cycle Ports** option. Allow a couple of seconds after this maneuver for the connection to the control panel to be re-established. If the controller is still unable to connect, contact your VoxPro administrator.

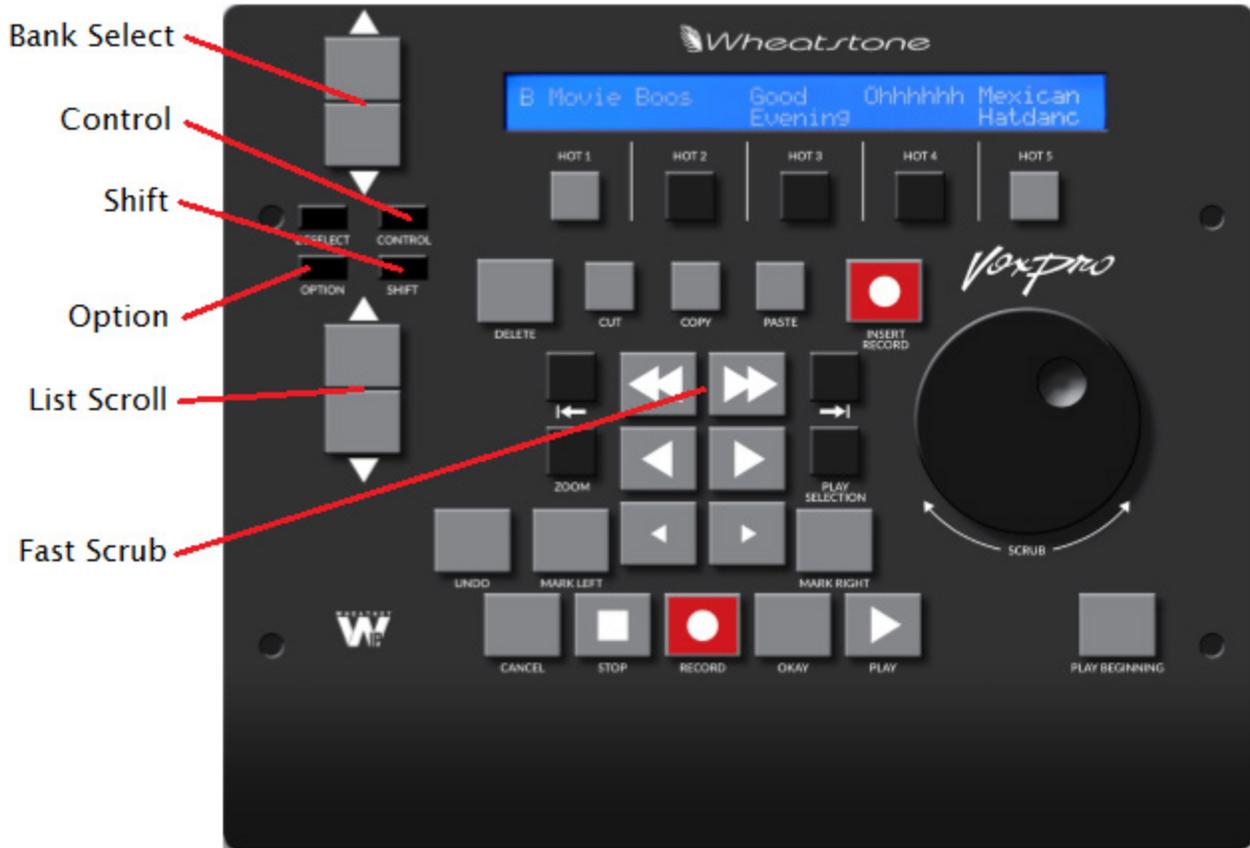
The **Control Panel** dialog box also provides two options to **reassign** certain **buttons** on the controller so that they perform different functions. These options are intended for an older version of the control panel called the RC-400, which had a different button layout than the current RC-500 control panel.

Disable Remote Control

If your administrator has enabled remote control functions of any sort, you may disable them from the **Remote Control** dialog box in the **Settings** menu. There are separate options to **disable contact closures** detected at the control panel's D-sub (DB-9) port, and to **disable software logic** signals, both incoming and outgoing.

Appendix 1. Control Panel Button Combos

The buttons on the control panel are for the most part well marked except for the Bank Select buttons, which are primarily used to change the active Hotkey bank, and the List Scroll buttons which provide the primary means of scrolling through the File List.



Several of the buttons on the control panel perform special functions when used in combination.

Fast Scrub buttons

- with Shift: cycle through tab pages in Hotkeys Panel
- with Option: go to next/previous Marker.

Bank Select buttons

- with Shift: cycle through tab pages in Hotkeys panel.

Control button

- press and hold to display Effects shortcuts in LCD (only with selected region in Editor).

Undo button

- with Option: Redo.

Zoom button

- with Control: set waveform display to maximum zoom.

Go To Beginning button

- with Option: Go to End (used on older control panel models).

Go To End button

- with Option: Go to Beginning (used on older control panel models).

Appendix 2. Keyboard Shortcuts

KEY	FUNCTION	FUNCTION WITH CONTROL KEY
A	Select entire file (All)	Select entire file (All)
B	Bleep selected region	Bleep selected region
C	Copy selected region	Copy selected region
D		Delete selected file(s)
E		Export selected file(s)
F		EZ-Export selected file(s)
G	Apply GapBuster	Open GapBuster dialog
H		
I	Insert-Record	Import
J		
K	Deselect	Deselect
L		Logout
M	Insert Marker	Toggle Insert-Marker-Shows-Dialog
N		New Empty File
O	Toggle mono-mix playback	Normalize selected region
P	Play from beginning	
Q	Cycle through zoom	Maximum zoom
R	Record	Rename active file
S	Play selected region	Open Search dialog
T		Empty deleted files folder (Trash)
U		
V	Paste selection	Paste selection
W	Toggle Master mode	Toggle Master mode
X	Cut selection	Cut selection
Y	Redo	Redo
Z	Undo	Undo
[Mark Left (selection region)	
]	Mark Right (selection region)	
> (.)	Fade out selected region	
< (.)	Fade in selected region	

KEY	FUNCTION	FUNCTION WITH CONTROL KEY
Escape	Cancel (recording or dialog box)	
Home	Go to beginning of active file	
End	Go to end of active file	
Page Up	Go to previous Marker	
Page Down	Go to next Marker	
Delete	Delete selected region	
Left Arrow	Fast forward	Slow forward (normal with shift key)
Right Arrow	Fast reverse	Slow reverse (normal with shift key)
Up Arrow	Scroll up in File List	
Down Arrow	Scroll down in File List	
Backspace	Delete Selected Region	
Space	Play from cue, stop	
Enter	Play from cue, stop	

These key shortcuts are available from the number pad (numpad), with NumLock engaged:

9	Fast forward
8	Fast reverse
6	Normal speed forward
5	Normal speed reverse
3	Slow speed forward
2	Slow speed reverse
/	Mark Left (selected region)
*	Mark Right (selected region)
-	Go to end / Go to beginning
+	Record
Enter	Play from cue, stop
.	Delete selected region
7	Play from beginning
4	Play selected region
1	Cancel
0	Insert-Record