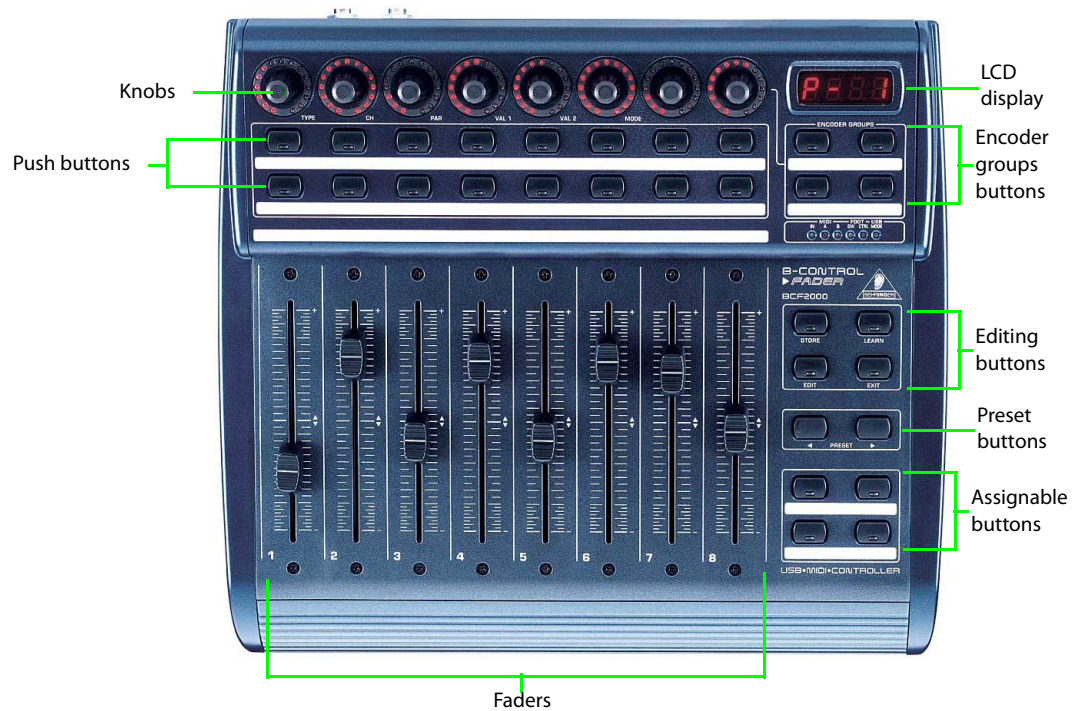


# Overview: Using the Behringer BCF2000 with Vegas Pro

The Behringer BCF2000 is fully supported by Vegas® software and lends a tactile element to your editing sessions.



**Note:** This whitepaper describes using the Behringer BCF2000 only as an emulated Mackie Control Universal device. However, it can also be used as a generic controller. To set up the BCF2000 as a generic controller, please see the full Vegas manual or check the online help (from the Vegas Help menu, choose Contents and Index).

## Overview

The buttons and knobs on the Behringer BCF2000 perform the following functions:

- *Encoder Groups buttons with Editing buttons.* These buttons control the save function, metronome, track effects display, sound device display, automation mode, downmix output, and bus display. *For more information, see [Push buttons](#) on page 6.*
- *Encoder Groups buttons with Push buttons.* These buttons control track functions including mute, solo, track selection, recording, and adding a track to a project. *For more information, see [Push buttons](#) on page 6.*
- *Encoder Groups buttons with Assignable buttons.* These buttons control play, pause, rewind, fast forward, record, and home functions. You can also add markers and regions to your project. *For more information, see [Knobs](#) on page 7.*
- *Encoder Groups buttons with knobs.* These control panning, busses, sound devices, and track effects. *For more information, see [Knobs](#) on page 7.*
- *Faders.* These control the track level and automation envelopes. *For more information, see [Faders](#) on page 8.*
- *Preset buttons.* These controls allow you to move left or right through the BCFview virtual display. *For more information, see [Preset buttons](#) on page 8.*

## Hardware setup

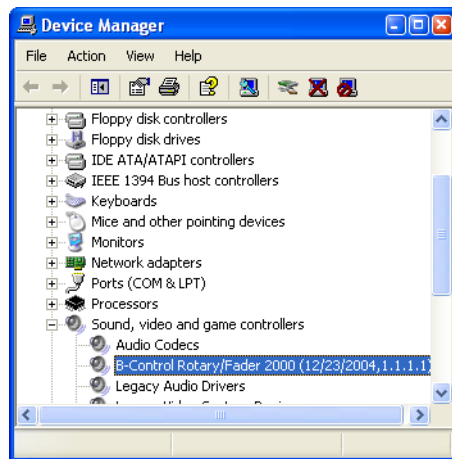
You can use the Behringer BCF2000 with Vegas after you have installed the appropriate USB driver, firmware, firmware update utility, and BCFview virtual display from the Behringer Web site at <http://www.behringer.com/>.

1. Plug the USB cable into the back of the Behringer BCF2000 and into your computer's USB port.

**Note:** In addition to USB mode, you can also use the Behringer BCF2000 in MIDI mode. For more information about MIDI connections, refer to the documentation on the Behringer Web site at <http://www.behringer.com/>.

2. First, open and run the USB MIDI driver .zip file (v1.1.1.1) for BCF2000.

**Note:** After installing the MIDI driver, the B-Control Rotary/Fader 2000 (12/23/2004, 1.1.1.1) will be visible under Sound, video and game controllers in your system's Device Manager.



3. Open and run the BCF2000 Version 1.10 firmware .zip file.
4. Open and run the firmware update utility .zip file.
5. Turn off the Behringer BCF2000 and turn it back on after a few seconds. The LCD display should quickly flash 1.10 to indicate that the firmware has successfully installed. Then the LCD display should read P-1.

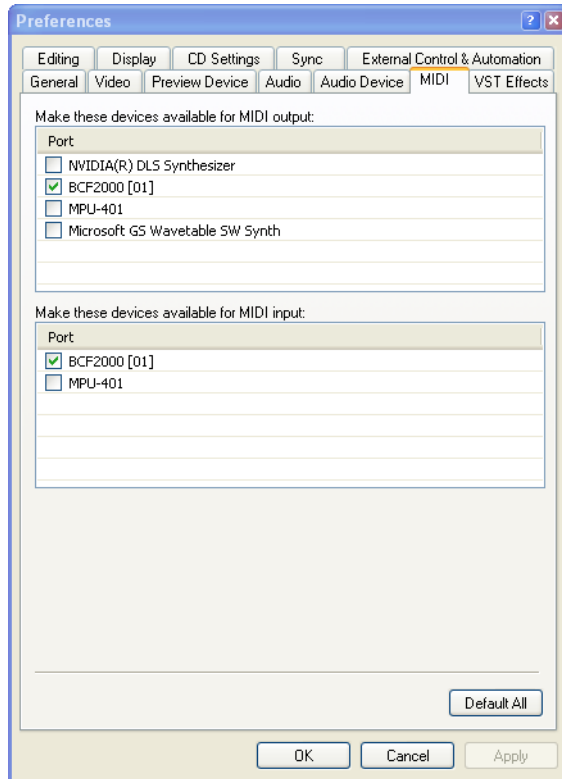
If P-1 is not displayed, turn off the Behringer BCF2000. Press and hold the first push button in the top row of buttons (under the first knob) and turn the unit back on. The LCD display should now read P-1.

6. Press and hold the **Edit** button and press the **Store** button at the same time. The LCD display should read EG (edit global mode).
7. Turn the first rotary encoder (labeled **Type** on the Behringer unit) clockwise slightly until the LCD displays U-1. U-1 indicates USB mode. In the LCD display, U-1 will flash for just a moment and then read EG again.
8. Press the **Exit** button to exit the edit global (EG) mode. The LCD display should read P-1.
9. Turn off the Behringer BCF2000.
10. Press and hold the second push button in the top row of buttons (under the channel knobs) and turn the unit back on. The LCD should now display NC C (Mackie® Control for Cubase).
11. Open and run the BCFview virtual display for BCF2000.
12. Right-click the virtual display and choose **BCF2000**.



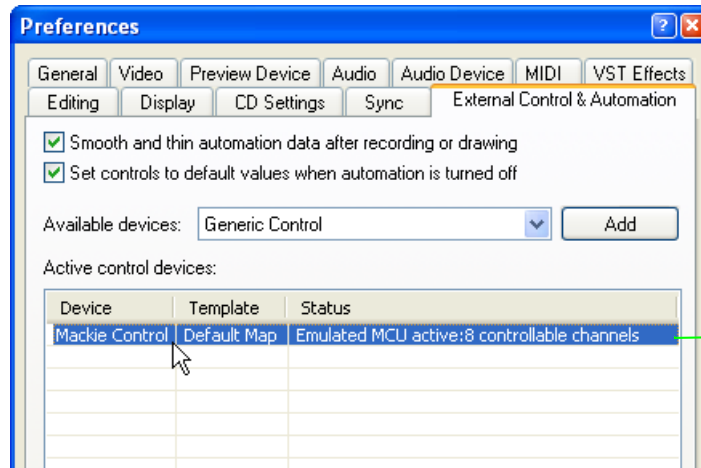
## Configuring Vegas to use the Behringer BCF2000

1. Open your Vegas project.
2. From the Options menu, choose **Preferences** to display the Preferences dialog.
3. Enable your MIDI input and output ports:
  - a. Select the **MIDI** tab in the Preferences dialog.



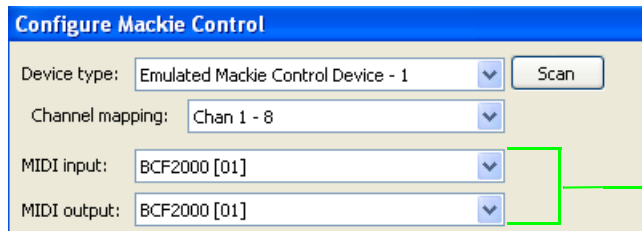
- b. In the **Make these devices available for MIDI output** box, select the BCF2000 check box.
  - c. In the **Make these devices available for MIDI input** box, select the BCF2000 check box.
  - d. Click **Apply**.
  - e. Click **OK**.
4. Choose your control surface:
    - a. Select the **External Control & Automation** tab in the Preferences dialog.
    - b. From the **Available devices** drop-down list, choose **Mackie Control** and click the **Add** button to load the default profile.

- c. Under **Active control devices**, double-click **Mackie Control** to open the Configure Mackie Control dialog.



Double-click Mackie Control to open the Configure Mackie Control dialog.

- d. From the **Device type** drop-down list, choose **Emulated Mackie Control Device**.  
e. From the **MIDI input** and **MIDI output** drop-down lists, choose **BCF2000**.



BCF2000 should be selected under MIDI input and MIDI output.

5. Click **OK** in the Configure Mackie Control dialog to close it.  
6. Click **OK** in the Preferences dialog to apply your changes and close the dialog.  
7. From the Options menu, choose **External Control** to enable the Behringer BCF2000.

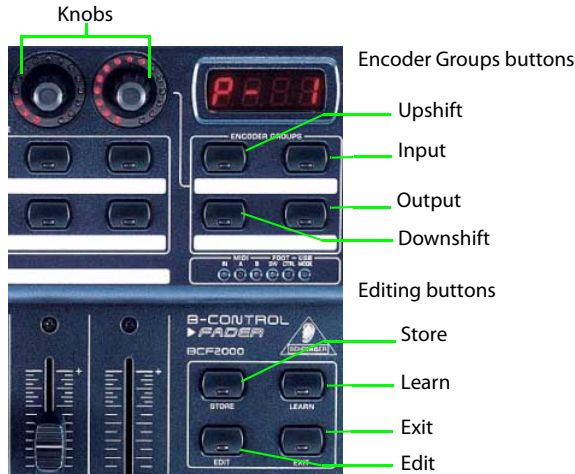
**Note:** *The faders should automatically move into positions that correspond with your Vegas settings.*

# Using the Behringer BCF2000 with Vegas

The following sections describe the default control mapping for the Behringer BCF2000 when used with Vegas.

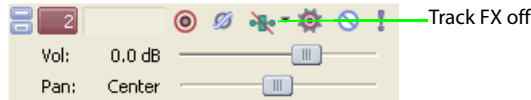
## Encoder Groups buttons

The Encoder Groups buttons – when used alone or with Editing buttons, Push buttons, Assignable buttons – or knobs, allow you to change a variety of settings in your project.



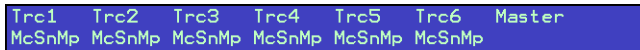
## Editing buttons

Items	Description
Upshift+Learn	Saves your project
Upshift+Exit	Turns the metronome on or off.
Downshift+Store	Bypasses Track FX.




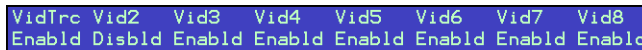
Note: This applies only to audio tracks.

Downshift+Learn	Toggles between the audio and video tracks in the BCFview.
Downshift+Edit	Turns automation mode on or off.
Downshift+Exit	Turns the <b>Downmix Output</b> on or off in the Mixer window and/or Mixing Console.
Input	For audio tracks: Displays the sound device in the BCFview virtual display for each audio track. In this example, Microsoft Sound Mapper (McSnMp) is shown.



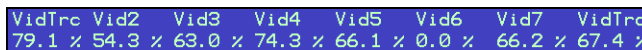
Note: Turning the knobs displays other available sound devices for each audio track. *For more information, see Knobs on page 7.*

For video tracks: In the BCFview, it displays whether the Bypass Motion Blur button  is enabled or disabled. In this example, all the tracks have Bypass Motion Blur enabled except for track 2.



Note: Pressing the knob enables or disables Bypass Motion Blur on the video track header. *For more information, see Knobs on page 7.*

Input+Edit	For audio tracks: Removes the sound device or track information from the virtual track viewer.
	For video tracks: Displays the video's transparency/opacity as a percentage.



**Output** For audio tracks: Displays the tracks with their associated busses in the BCFview virtual display. In the example below, the Master bus is shown.

```
Trc1 Trc2 Trc3 Trc4 Trc5 Trc6 Master
Master Master Master Master Master Master McSnMp
```

Note: Turning the knobs displays all busses in your project. For more information, see [Knobs on page 7](#).

For video tracks: Displays the compositing modes for each track. In this example, track 1 is in Burn mode and track 2 is in Overlay mode.

```
VidTrc Vid2 Vid3 Vid4 Vid5 Vid6 Vid7 Vid8
Burn Overly SrcAlp SrcAlp SrcAlp SrcAlp SrcAlp SrcAlp
```

Note: Turn the track knob to display and select the compositing mode options. For more information, see [Knobs on page 7](#).

**Output+Store** Displays the effects for each audio or video track.

**Output+Edit** For audio tracks: Removes the bus or FX information from the BCFview virtual display.

For video tracks: Displays the video's transparency/opacity as a percentage.

**Store** Displays the effects for each audio or video track.

```
Trc1 Trc2 Trc3 Trc4 Trc5 Trc6 Master
TrNsGt TrNsGt TrNsGt TrNsGt TrNsGt TrNsGt (None)
```

Audio tracks

```
VidTrc Vid2 Vid3 Vid4 Vid5 Vid6 Vid7 Vid8
FlmEff BlanWh ClrCrv GssBlr Sepia Glow (None) (None)
```

Video tracks

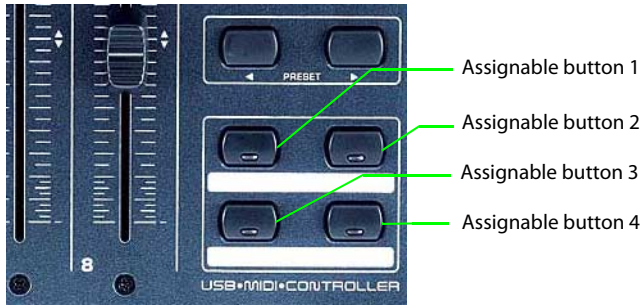
Note: Turning the knobs displays what effects are used on each audio or video track. For more information, see [Knobs on page 7](#).

### Push buttons



Items	Description
Push buttons (top row)	Turns mute on or off for each track.
<b>Upshift</b> +push button (top row)	Turns the solo on or off for each track.
Push button (bottom row)	Selects the track.
<b>Upshift</b> +push button (bottom row)	Arms the track for recording.
	Note: This applies only to audio tracks.
<b>Downshift</b> +push button (bottom row)	Adds an audio track to your project.

## Assignable buttons



Items	Description
Assignable button 1	Rewind. Press and hold to move backward through the timeline.
Assignable button 2	Fast forward. Press and hold to move forward through the timeline.
Assignable button 3	Stop. Press to stop playback and return the cursor to its position before playback started.
Assignable button 4	Play/Pause. Press to start playback. Press again to stop playback and leave the cursor at its current position.
<b>Upshift</b> +assignable button 1	Inserts loop region to the cursor position.
<b>Upshift</b> +assignable button 2	Home. Moves the cursor to the beginning of your project.
<b>Upshift</b> +assignable button 3	Enters or exits edge trim mode.



The red bracket signifies that you are in edge trim mode.

	<p>Tip: Use keyboard shortcuts to trim the selected edge. See the Vegas user manual or the Vegas help for more information.</p> <p>Note: The edge closest to the cursor will be selected.</p>
<b>Upshift</b> +assignable button 4	Record. Adds a track to your project and arms it for recording.
	Note: This applies only to audio tracks.
<b>Downshift</b> +assignable button 1	Inserts a marker to your project.
<b>Downshift</b> +assignable button 2	Inserts a region marker into your project.
<b>Downshift</b> +assignable button 3	Turns selected loop region on or off.
<b>Downshift</b> +assignable button 4	Creates a loop region from the cursor position.

## Knobs

Action	What it controls on the track	Behringer buttons
Rotating knobs	Panning (audio) or fade to color envelope (video)	<b>Downshift+Edit</b> (Turns on automation mode)
	Sound devices (audio) or Bypass Motion Blur (video)	<b>Input</b>
	Busses (audio) or compositing modes (video)	<b>Output</b>
	Track effects	<b>Store or Output+Store</b>
Pressing knobs	Chooses a selection.	

## Faders

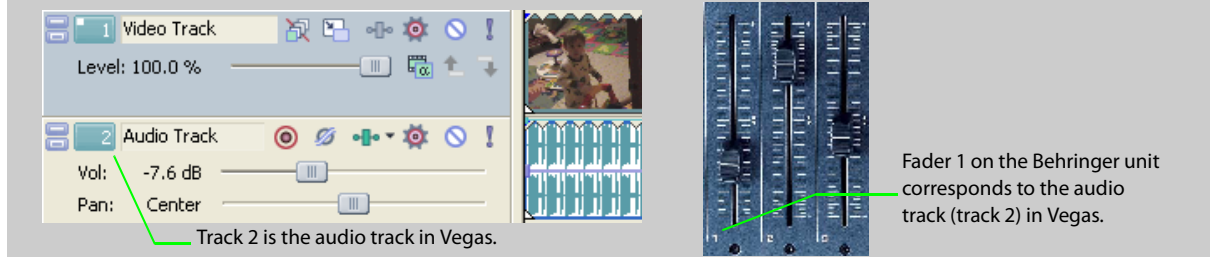
The faders control the following in your project:

- The video track composite level and audio track volume level.
- The automation envelope on the audio or video track (when in automation mode).

**Note:** If a video clip has an audio component, it is displayed on the timeline as two tracks. For example, the video track would occupy track 1 and the audio track would occupy track 2.

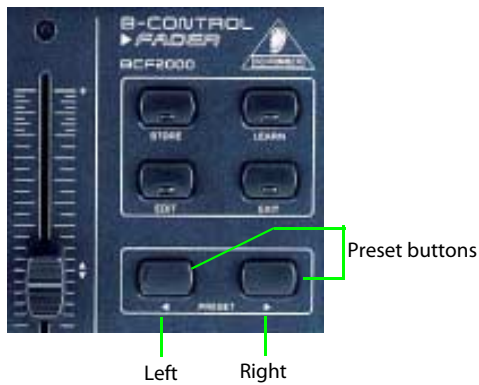
When the BCFview displays the audio tracks, fader 1 on the Behringer unit controls track 2 in the Vegas project. See the example below.

When the BCF view displays the video tracks, fader 1 on the Behringer unit controls track 1 in the Vegas project.



## Preset buttons

The Preset buttons allow you to move left or right through the BCFview virtual display to expose all the tracks in your project. The virtual channel view will display 8 tracks at one time.



Vid1	Vid2	Vid3	Vid4	Vid5	Vid6	Vid7	Vid8
100%	100%	100%	100%	100%	100%	100%	100%

Tracks 1-8 of your Vegas project in the virtual view.

Vid9	Vid10	Vid11	Vid12	Vid13	Vid14	Vid15	Vid16
100%	100%	100%	100%	100%	100%	100%	100%

If you press the right preset button, the next set of tracks in your project will be exposed.

Pressing the left preset will take you back to tracks 1-8.



## In the real world...

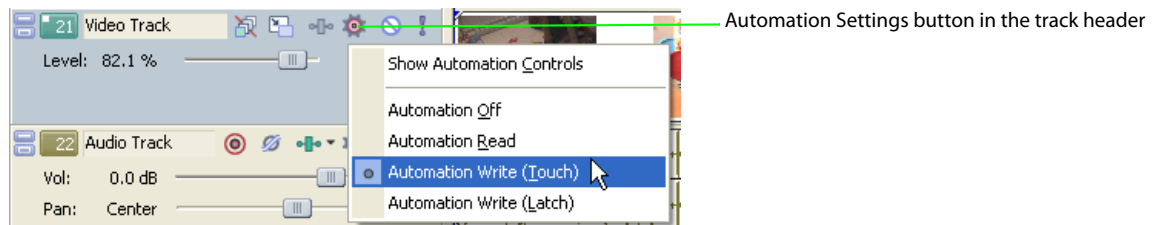
### Adding envelopes and automating them

A couple of common questions when using the Behringer BCF2000 is “How do I add envelopes to a Vegas video track?” and “How do I set up the Behringer to record the envelope’s moves?” The following instructions should guide you through that process.

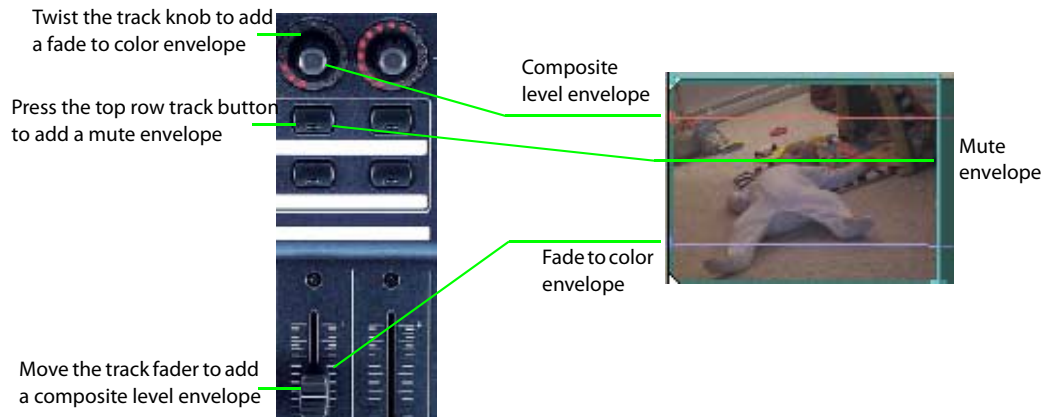
1. Open a Vegas project.
2. On the Behringer unit, turn on the automation mode by pressing **Downshift+Edit**.  
*For more information, see [Encoder Groups buttons](#) on page 5.*

**Note:** You can select multiple tracks at one time by pressing the bottom row of buttons for each track.

3. Press **Downshift+Learn** if the BCFview is not displaying the video tracks.
4. In the video track header, choose **Automation Write (Touch)** or **Automation Write (Latch)** to determine how the automation will be written.



5. To add level, pan, or mute envelope to a video track, do the following:
  - a. To add a composite level envelope (purple), move the track fader.
  - b. To add a fade to color envelope (red), twist the track knob.
  - c. To add a mute envelope (green), press the top row button of the track..



**Note:** To add envelope points, place your cursor where you want to add the point by twisting the track knob (fade to color), pressing the top row track button (mute), or moving the track fader (composite level).

6. After an envelope is added to a track, you can set-up the Behringer BCF2000 to record the composite level, fade to color, and mute envelope’s moves in your Vegas project.
  - a. The Behringer unit should already be in automation mode. If it isn’t, select **Downshift+Edit**.
  - b. Place the cursor at the beginning of your Vegas project.

- c. Use assignable button 4 to play your project. For more information, see [Assignable buttons on page 7](#). As the cursor moves past the envelope points, the faders will move automatically (composite level), the top row button will light red (mute), and the red lights around the track knob will light up (fade to color).

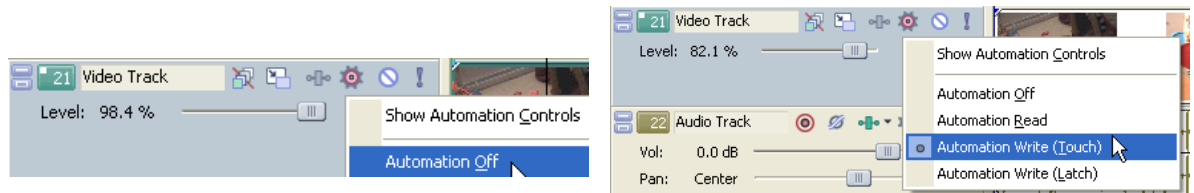
**Tip:** You can add points to the envelope as the project is playing back. For example, by moving a fader, you can add points to a composite level envelope.

**Note:** For more information about envelopes, see the full Vegas Pro User Manual (available on the application disc or the Sony Creative Software Inc. Web site) or check the online help (from the Vegas Help menu, choose **Contents and Index**).

## Fader automation

Another question that comes up often is, “Why aren’t the faders following the envelopes?” There are two quick answers to this question.

1. The Behringer BCF2000 is not in automation mode. To enable automation press **Downshift+Edit**. For more information, see [Encoder Groups buttons on page 5](#).
2. On the track header, **Automation Off** has been selected. To enable automation, choose **Automation Read**, **Automation Write (Touch)**, or **Automation Write (Latch)**.



Automation disabled on the track header

Automation enabled on the track header