

## Chapter 9 Automix

### I. Dynamic Automation

With the VS-1680, you can record the present status or condition of the mixer as a **Scene**. However, you cannot change a Scene while the song is playing. If you want to store mixer settings which change as the song plays, use **Automix**. Automix allows both static (snapshot) and dynamic changes in mixer settings during song playback. Automix information includes mixer settings, fader movements, and other settings. This is convenient when mixing a song with elaborate fader movements that are difficult to reproduce manually. The following mixer settings can be recorded in Automix.

*\* Items printed in bold are those that can be adjusted directly with the faders or knobs. You can record the time-based movements of the faders by moving the faders during playback of a song.*

INPUT Channel / TRACK Channel:

**Faders**

Panning

EFX 1 Lev (Effect 1 Send Level)

EFX 1 Pan (Effect 1 Send Pan)

EFX 2 Lev (Effect 2 Send Level)

EFX 2 Pan (Effect 2 Send Pan)

EFX 3 Lev (Effect 3 Send Level)

EFX 3 Pan (Effect 3 Send Pan)

EFX 4 Lev (Effect 4 Send Level)

EFX 4 Pan (Effect 4 Send Pan)

AUX Lev (AUX Send Level)

AUX Pan

STEREO IN:

**Fader**

Balance

EFFECT RETURN:

**Effect 1 Return Level**

Effect 1 Return Balance

**Effect 2 Return Level**

Effect 2 Return Balance

**Effect 3 Return Level**

Effect 3 Return Balance

**Effect 4 Return Level**

Effect 4 Return Balance

MASTER BLOCK:

**Master Level**

Master Balance

**Monitor Level**

Monitor Balance

Master Effect 1 Send Level

Master Effect 1 Send Balance

Master Effect 2 Send Level

Master Effect 2 Send Balance

Master Effect 3 Send Level

Master Effect 3 Send Balance  
Master Effect 4 Send Level  
Master Effect 4 Send Balance  
Master AUX Send Level  
Master AUX Send Balance

**EFFECT:**

EFX 1 (Effect 1 Program Number)  
EFX 2 (Effect 2 Program Number)  
EFX 3 (Effect 3 Program Number)  
EFX 4 (Effect 4 Program Number)

## II. Using Automix

To begin using Automix, press [AUTOMIX]. The button indicator lights, indicating that Automix mode is on.

Graphic p 154 top left column

After turning on Automix, all the SELECT buttons and the EDIT/SOLO button begin blinking. In a new song, Automix record is enabled for all inputs, tracks, effect returns, and for the Master fader.

To disable individual channels for Automix, press and hold [AUTOMIX], and press the Input SELECT, Track SELECT, or the [EDIT/SOLO] button. While holding down [AUTOMIX], each time you press a SELECT button, the status changes as follows:

graphic p 154 left column middle.

<b>Indicator blinking:</b>	Automix Record Enable and Playback.
<b>Indicator off:</b>	Automix Disabled. Manual fader control.
<b>Indicator on:</b>	Automix Playback enabled.

You may, for example, find it convenient to leave the Master fader on manual control while recording Automix on the Track mixer. To do so, hold [AUTOMIX] and press [EDIT/SOLO] so the indicator is off.

### **Adjust the Display for Automix**

While recording Automix, it is helpful to change the display to view Fader and Panning positions.

1. Press [PLAY(DISPLAY)].
2. Press [PAGE] so you see "F/P" above [F5].
3. Press [F5 (F/P)]. The Fader / Pan display appears.
4. Press [F1(LMTrk)] to view fader and panning positions for the Track Mixer.
5. Press [F2(LM In)] to view fader and panning positions for the Input Mixer.
6. Press [F3(LMAux)] to view fader and panning positions for the Effect Sends and Aux Send.

## III. Real-time Automix

With real-time Automix, actual physical fader movements you make during song playback are recorded and stored as marker data. This type of automation is also known as dynamic automation, as dynamic fader movements are recorded and stored.

*\* If you want to create dynamic panning changes, you can do so by a combination of Snapshot and Gradation Automix. See "Snapshot Automation" (p. xx).*

### **1. Real-time Automix of Track Faders**

1. Locate to the point in the song where you wish to record real-time Automix.
2. Confirm that Automix mode is on. The AUTOMIX button should be lit.
3. Decide which track fader's movement you want to record using Automix. While pressing [AUTOMIX], press the Track SELECT button for the Tracks you want to automate so they are blinking.
4. Hold [SCENE] and press [REC]. The AUTOMIX indicator blinks, indicating Automix Record enable.
5. Make sure the FADER / MUTE indicator is set to "TR" for Tracks.
6. Adjust the track faders for the beginning fader levels as desired.

*\* If Fader Match (p.xx) in System Parameters is set to "Null", and the current physical fader positions do not match the actual volume levels, you must first move the physical faders to match the position of the recorded fader. This is referred to as "crossing the null". When the display is set to view Faders and Pan, the position of each physical fader is represented by a black dot, and the actual level that is recorded using Automix is represented by a white circle. Before beginning Automix, slide each physical fader all the way up and then all the way down so the black dot disappears.*

7. Press [PLAY] to begin playback.
8. While the song is playing, move the track faders to adjust the mix of your song as you like. New automix data will only be recorded for those faders that are moved during song playback.
9. When the song is finished, press [STOP]. Automix markers will appear in the Playlist display where automix data was created.

#### **If "!!! Lack of EVENT!!" Appears in the Display**

If you do a lot of recording or make numerous edits using functions such as Track Copy, the remaining number of Events may fall below 1000. When this happens, you will not be able to continue recording Automix data in real time. Please refer to "About Events" (p. xx). In addition, when planning to record for an extended period with Automix, check the remaining number of Events frequently, as described in "Checking Remaining Drive Space" (p. xx).

## **2. Real-time Automix of Input Faders**

For a song which incorporates both recorded tracks as well as additional sources (such as outputs from MIDI sound modules), you may decide to automate both the Input mix as well as Track Mix. It doesn't matter which mixer you automate first, and it is possible to even simultaneously automate both the Input mix and the Track Mix. If you wish to automate the Input mixer, use the following steps:

1. Move to the location in the song where you wish to record real-time Automix.
2. Confirm that Automix mode is on. The AUTOMIX button should be lit.
3. Decide which input fader's movement you want to record using Automix. While pressing [AUTOMIX], press the Input SELECT button for the Inputs you want to automate, so they begin blinking.
4. Hold [SCENE] and press [REC]. The AUTOMIX indicator blinks, indicating Automix Record enable.
5. Make sure the FADER / MUTE indicator is set to "IN" for Inputs. This assigns the physical faders to the Input mixer.
6. Adjust the faders for the beginning fader levels as desired.
7. Press [PLAY] to begin playback.
8. While the song is playing, move the faders to adjust the mix of your song as you like. New automix data will only be recorded for those faders that are moved during song playback.
9. When the song is finished, press [STOP]. Automix markers will appear in the Playlist display where automix data was created.

## **3. Automating the Master Stereo Mix and Monitor Output**

Just as it's possible to automate the Input Mixer and the Track Mixer, you can also automate the Master Stereo Mix as well as the Monitor Output level.

1. Move to the location in the song where you wish to record real-time Automix.
2. Confirm that Automix mode is on. The AUTOMIX button should be lit.
3. While pressing [AUTOMIX], press [EDIT/SOLO] so it blinks, indicating Automix Record enable for the Master Fader.
4. Hold [SCENE] and press [REC]. The AUTOMIX indicator blinks, indicating Automix Record enable.
5. Adjust the Master fader and the Monitor knob for the beginning level as desired.
6. Press [PLAY] to begin playback.
7. While the song is playing, move the Master to adjust the level of your song as you like. Use the MONITOR knob to make changes to the Monitor Output level.
8. When the song is finished, press [STOP]. Automix markers will appear in the Playlist display where automix data was created.

#### **4. Automating Effect Returns**

Just as it's possible to automate both the Input Mixer and the Track Mixer, you can also automate the Effect Returns.

1. Move to the location in the song where you wish to record real-time Automix.
2. Confirm that Automix mode is on. The AUTOMIX button should be lit.
3. Confirm the SELECT button for EFFECT 1/3 RTN is blinking. If it is not blinking, hold [AUTOMIX] and press the SELECT button for EFFECT 1/3 RTN so it blinks, indicating Automix Record Enable for Effect 1 Return.
4. Confirm the SELECT button for EFFECT 2/4 RTN is blinking. If it is not blinking, hold [AUTOMIX] and press the SELECT button for EFFECT 2/4 RTN so it blinks, indicating Automix Record Enable for Effect 2 Return.
5. To automate Effect 3 Return, press [SHIFT]. Confirm the SELECT button for EFFECT 1/3 RTN is blinking. If it is not blinking, continue to hold [SHIFT], then hold [AUTOMIX] and press the SELECT button for EFFECT 1/3 RTN so it blinks, indicating Automix Record Enable for Effect 3 Return.
6. To automate Effect 4 Return, press [SHIFT]. Confirm the SELECT button for EFFECT 2/4 RTN is blinking. If it is not blinking, continue to hold [SHIFT], then hold [AUTOMIX] and press the SELECT button for EFFECT 2/4 RTN so it blinks, indicating Automix Record Enable for Effect 4 Return.
7. Hold [SCENE] and press [REC]. The AUTOMIX indicator blinks, indicating Automix Record enable.
8. Press [FADER / MUTE] so "IN" is lit.
9. Press [PLAY] to begin playback.
10. Use Fader 13/14 to control Effect 1 Return levels when "IN" is lit.
11. Use Fader 15/16 to control Effect 2 Return levels when "IN" is lit.
12. Hold [SHIFT] and use Fader 13/14 to control Effect 3 Return levels when "IN" is lit.
13. Hold [SHIFT] and use Fader 15/16 to control Effect 4 Return levels when "IN" is lit.
14. As the song is playing, continue to move the faders to adjust the Effect Return levels as you like.
15. When the song is finished, press [STOP].
16. Press [ZERO] to rewind to the beginning of the song, and then press [PLAY].
17. To watch the Effect Return Fader Levels change as a result of Automix, press the EFFECT 1/3 SELECT button to see the "Stereo In / Effect Return" display.

## **IV. Snapshot Automation**

Static mixer settings can be recorded with Automix. This type of Automix is called taking a mixer **Snapshot**. When you play to the point in the song where the Snapshot was recorded, all mixer settings stored with the Snapshot are instantly re-created. This is convenient for making instantaneous level changes in the middle of a song, or for changing Effects on a guitar solo. To record a mixer Snapshot, follow the procedure below.

1. Make sure Automix is On. The AUTOMIX button should be lit.
2. Play or locate to the point in the song where you want the snapshot to occur.
3. Press [STOP].
4. Select the mixer channels whose settings you want recorded in the snapshot. Any SELECT button blinking will be recorded. If the SELECT button is not blinking for a channel you wish to record, hold [AUTOMIX] and press the SELECT button so it blinks.
5. Make all mixer settings, including panning, fader positions, effect send levels, etc., for each channel.
6. Hold [SCENE] and press [TAP]. A marker is placed at the current time location. A Snapshot of all mixer settings is recorded and stored with the marker. Any marker which stores Automix data will appear in the display followed by an "A".

Graphic p 154 right column top

*\* If a marker already exists within 0.1 seconds before or after the location of the new snapshot, the snapshot information will be stored at the previously existing marker location. A new marker will not be created.*

## V. Automating Effect Changes

Use Snapshot automation to program effect patch changes "on the fly". Use the following steps to create effect-change snapshots.

1. Make sure Automix is On. The AUTOMIX button should be lit.
2. To automate the effect changes for Effect 1 and Effect 2, make sure the Effect 1/3 and Effect 2/4 SELECT buttons are blinking. If the Effect SELECT button is not blinking, hold [AUTOMIX] and press the SELECT button so it begins blinking.
3. To automate the effect changes for Effect 3 and Effect 4, hold [SHIFT] and make sure the Effect 1/3 and Effect 2/4 SELECT buttons are blinking. If a SELECT button is not blinking, continue to hold [SHIFT], hold [AUTOMIX] and press the SELECT button so it begins blinking.
4. Locate to the point in the song where you want the effect to change.
5. To change the effect preset, hold [SHIFT] and press [F3(EFX A)]. Here you can change the settings for Effect 1 and Effect 2.
6. Press [F1(EFX1)] to select Effect 1.
7. Press [F2(Sel)] to select a different preset.
8. Use the TIME / VALUE dial to choose the Effect.
9. Press [F4(Exec)].
10. Hold [SCENE] and press [TAP].
11. Repeat steps 3 - 10 for each effect change you want to store.
12. When you're done, press [ZERO] and [PLAY] to hear the Effect snapshots.

## VI. Gradation

After creating two snapshots, you can have the VS-1680 automatically create a smooth crossfade between two snapshots using **Gradation**. Gradation is used to create fade-ins and fade-outs, as well as dynamic panning sweeps. Follow the operation as described in "Snapshot Automation" to record two snapshots.

1. Place one snapshot at the point you want the crossfade to begin.
2. Place a second snapshot at the point you want the crossfade to end.
3. From the position of the second of the two snapshots, hold [SCENE] and press [PREVIOUS].
4. "Gradation \*\*\* - \*\*\* Sure ?" appears in the display. "\*\*\*\*" indicates the automix marker number.
5. Press [YES].

**When the time line is positioned between two snapshot markers.**

Press either [SCENE] and [NEXT] or [SCENE] and [PREVIOUS]. The gradation will take place between the two adjacent snapshot markers.

Graphic p 155 left column top

**When the time line is positioned at a snapshot marker:**

If you press [SCENE] and [NEXT], the gradation will occur between the present snapshot marker and the next one.

If you press [SCENE] and [PREVIOUS], the gradation will occur between the present snapshot marker and the previous one.

Graphic p 155 left column middle

**Gradation Example 1: Crossfade between Stereo Tracks**

When creating your own original CD, you may decide you want one song to fade out and the next to fade in simultaneously. You can dictate the length of the crossfade by determining the time between two snapshots. Here are the steps to creating a seven second crossfade from Tracks 9/10 to Tracks 11/12 using Snapshot Gradation.

1. Make sure Automix is On. The AUTOMIX button should be lit.
2. Make sure the Track 9/10 SELECT and Track 11/12 SELECT buttons are blinking. If either SELECT button is not blinking, hold [AUTOMIX] and press the SELECT button so it begins blinking.
3. Locate to the point in the song where you want the cross-fade to begin.
4. Bring the fader for Track 9/10 to the 0 dB position. Bring the fader for Track 11/12 all the way down.
5. Hold [SCENE] and press [TAP].
6. Press [FF] slowly seven times to advance exactly seven seconds on the timeline to the position where you want the crossfade to end.
7. Bring the fader for Track 9/10 all the way down. Bring the fader for Track 11/12 to the 0 dB position.
8. Hold [SCENE] and press [TAP].
9. Hold [SCENE] and press [PREVIOUS].
10. Rewind to a point before the start of the cross-fade. Press [PLAY] to hear the crossfade.

**Gradation Example 2: Fade Out at End of Song**

Another way to use Gradation is to create a smooth fade out at the end of a song. Here are the steps for programming a 10 second fade out at the end of a song.

1. Make sure Automix is on.
2. Make sure the [EDIT / SOLO] button is blinking. This indicates Automix Record enable for the Master Fader. If it is not blinking, hold [AUTOMIX] and press [EDIT/SOLO].
3. Locate to the end of your song by holding [SHIFT] and pressing [FF(Song End)].
4. Pull the Master fader all the way down.

5. Hold [SCENE] and press [TAP]. The current position of the Master fader is stored as a snapshot.
6. Press [REW] ten times. Each time you press [REW], the play line backs up by exactly one second.
7. Put the Master fader up to 0 dB.
8. Hold [SCENE] and press [TAP].
9. Hold [SCENE] and press [NEXT].
10. "Gradation \*\*\* - \*\*\* Sure ?" appears in the display. "\*\*\*\*" indicates the automix marker number.
11. Press [YES].
12. Rewind back to before the beginning of the fade out, and press [PLAY].

## VII. Updating Automix

When using Automix, it is not necessary to mix all Track faders simultaneously. You can mix just the first eight tracks, and then go back and mix the next eight tracks. Or, select the combination of faders which is most comfortable. After the first Automix pass, you can go back and update the mix, either on a channel by channel basis, or based on a section of the song.

### **1. Updating Automix for a Selected Group of Faders**

If after recording Automix data for a song, you go back and listen to the song and realize everything about the mix sounds great, except for Track 3, you can easily update just that track, or any combination of tracks you want. All you need to do is disable Automix Record for the channels you are satisfied with.

1. Press [ZERO] to rewind to the beginning of the song.
2. Confirm that Automix mode is on. The AUTOMIX button should be lit.
3. Hold [AUTOMIX], and press the Track SELECT button for the Tracks whose Automix data you are satisfied with, so they are lit, but not blinking. The SELECT buttons for the track or tracks you want to update should be blinking, indicating Automix Record Enable.
4. Hold [SCENE] and press [REC]. The AUTOMIX indicator blinks, indicating Automix Record enable.
5. Make sure the FADER / MUTE indicator is set to "TR" for Tracks.
6. Adjust the track faders track you wish to update as desired. Since the other track faders are now set to Automix Playback, you don't need to touch them at all.
7. Press [PLAY] to begin playback.
8. While the song is playing, move the track faders to adjust the mix of your song as you like. New automix data will only be recorded for those faders that are moved during song playback.
9. When the song is finished, press [STOP]. Automix markers will appear in the Playlist display where automix data was created.

### **2. Updating Automix for a Section of a Song**

To update Automix data for a section of a song, you must first change the Fader Match setting from "Jump" (the default setting), to "Null". See the section below "Understanding Fader Match".

1. Change the Fader Match setting to "Null". See "Understanding Fader Match" (p. xx).
2. Move to the location in the song where you wish to re-record real-time Automix.
3. Confirm that Automix mode is on. The AUTOMIX button should be lit.
4. Decide which track fader's movement you want to record using Automix. While pressing [AUTOMIX], press the Track SELECT button for the Tracks you want to mix, so they are blinking.

5. Hold [SCENE] and press [REC]. The AUTOMIX indicator blinks, indicating Automix Record enable.
6. Make sure the FADER / MUTE indicator is set to "TR" for Tracks.
7. While watching the Fader / Panning display for Track Faders, slowly raise the physical faders until they match the stored fader level.
8. Press [PLAY] to begin playback.
9. While the song is playing, move the track faders to adjust the mix of your song as you like. New automix data will only be recorded for those faders that are moved during song playback.
10. When the song is finished, press [STOP]. Automix markers will appear in the Playlist display where automix data was created.

## VIII. Understanding Fader Match

During Automix playback, or when you use [FADER / MUTE] to reassign the physical faders from Track channels to Input channels, there will be times when the physical fader positions may not correspond to their actual stored volume settings. In such instances, the position of each fader is represented by a black dot, and the actual level that is set is represented by a white circle. Use the following procedure when you wish to have the volume change as soon as the faders are moved.

Graphic p 181 bottom

1. Hold [SHIFT] and press [F5(SYSTEM)]. The System menu icon is displayed. If the System menu icon does not appear, press [F6(EXIT)].
2. Press [F1(SYSPM)]. If "SYSPM" does not appear above [F1], first press [PAGE] until "SYSPM" appears, and then press [F1(SYSPM)].
3. Use [←], [→], [↑], and [↓] to move the cursor to "Fader Match". If "Fader Match" is not displayed, press [F1(Prm1)].
4. Use the TIME / VALUE dial to change the setting for Fader Match.
 

**Jump:** The actual stored fader value will change the instant the physical fader is moved. The stored value will instantly update to match the physical fader position. (Default setting)

**Null:** The stored fader value will change only after the physical fader matches the position of the stored value. The physical fader must be moved to the stored fader position before the value will change.
5. When you are done setting Fader Match, press [PLAY(DISPLAY)] to return to the Playlist display.

## IX. Editing Automix Data (Micro Edit)

You can check and directly change the values for settings pertaining to all Automix data.

1. Hold [SHIFT] and press [F5(UTIL)]. The Utility menu icon appears.
2. Press [F5(A.Mix)]. If "A.Mix" does not appear above [F5], press [PAGE] and then press [F5(A.Mix)].
3. Press [F2(Micro)]. The Micro Edit screen appears in the display.

Graphic p 156 right column center

4. Press [←]. The cursor moves to "Edit Target". Use the TIME / VALUE dial to select the Automix channel you want to edit.
5. Press [↑] and [↓] to move the cursor. Use the TIME / VALUE dial to make changes to each of the settings.



*\* The only thing that can be edited here is Automix data. If you want to change markers, then refer to "Editing Marker Values" (p. xx).*

6. Repeat steps 4 and 5 for any other Automix data you wish to edit.
7. When you have finished editing, press [PLAY(DISPLAY)] to return to the Playlist display.

## X. Disabling Automix on Specified Channels

1. Locate to the point where you want to disable Automix
2. Confirm that Automix is on.
3. Select the channels for which you want Automix disabled. Hold [AUTOMIX] and press the Input SELECT, Track SELECT or SOLO/EDIT buttons.
4. Hold [SCENE] and press [CLEAR]. Automix is disabled on the selected channels.

## XI. Erasing Automix Data

You may end up recording Automix data, only to immediately decide you want to try it again. Do not try to use the UNDO button to erase Automix. Erase Automix using one of two methods explained below.

### **A. To quickly erase all Automix data, including Snapshots**

1. Hold [SHIFT], and hold [CLEAR], and press [TAP].
2. "Clear All Tap Marker ?" appears in the display.
3. Press [YES]. Or, if you wish to cancel the operation, press [NO].

### **B. To erase selected Automix data**

1. Hold [SHIFT] and press [F5(UTIL)]. The Utility menu icon appears.
2. Press [F5(A.Mix)]. If "A.Mix" does not appear above [F5], press [PAGE] and then press [F5(A.Mix)].
3. Press [F4(Erase)]. The Automix Erase screen appears in the display.
4. Press [←], [→], [↑], and [↓] to move the cursor, and use the TIME / VALUE dial to change settings.

Graphic p 157 left column

**Erase Mode:** Selects the automix data to be erased

**Event:** Only Automation events are erased. Markers will remain in place.

**Marker:** Both regular Markers as well as Automation Markers are erased.

**Erase From:** Specify the beginning Marker number of the range that you want erased.

**Erase To:** Specify the ending Marker number of the range you want erased.

5. Press [F4(Exec)].
6. "Erase \*\*\* - \*\*\* Sure?" appears in the display. "\*\*\*\*" indicates the automix marker number. Press [YES]. Or, press [NO] if you wish to cancel the operation.

## XII. Saving and Exiting Automix

In some cases, you may want to temporarily switch back to manual mixing, even after you've recorded Automix data. The easiest way to do this is to simply press [AUTOMIX] to turn Automix off. Later, you can press [AUTOMIX] again to turn Automix back on, and your previously recorded automix data will play back. Since all recorded Automix data is stored when you use Song Store, you can be confident your automated mix is only a button touch away.

If you perform Song Store when Automix is on (i.e. [AUTOMIX] is lit), the next time you select the song, it will load and Automix will be on.

If you record Automix data, then turn Automix off (i.e. [AUTOMIX] is not lit), and then use Song Store, the next time you select the song, Automix will be off. However, you can press [AUTOMIX] to turn it on, and your previously recorded Automix data will be in place.