Chapter 12
Song Mode and the Song Editor

Getting Started with the Sequencer

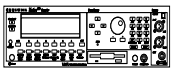
The K2600's sequencer is a powerful and versatile tool for songwriters, composers, and anyone else who wants to record and play back songs. As with any tool, however, it's best to start with the basics. This section begins with a tutorial where you will record a song, then shows some of the mixing capabilities of the sequencer. If you are familiar with other sequencers, you will have no problem using Song mode in the K2600. Read through this section, however, to learn about the features that make the K2600's sequencer unique.

What is a Sequencer?

A sequencer is similar in some ways to a multi-track tape recorder: you can record and play back all sorts of music and sounds, layer sounds on top of other sounds, and change or manipulate things that you've previously recorded. Unlike a tape recorder, however, you do not actually record sounds with a sequencer. Rather, you are recording commands that cause sounds to be played. Nonetheless, we will sometimes explain sequencer features by drawing analogies to familiar tape recording techniques such as splicing and overdubbing.

There are several advantages to recording a song by sequencing. For one thing, sequencer commands take up much less disk space than digitally recorded music would, so you can get a lot of information (that is, music) on a single floppy disk. Furthermore, you can easily make changes to your sequences. For example, you can change individual notes, transpose parts, or change instrumentation. Lastly, you can share the sequences you create with other musicians.

A Word about the Local Keyboard Channel



Before you being sequencing, we'd like to remind you about the Local Keyboard Channel parameter on the MIDI-mode RECEIVE page (described on page 10-7). Local Keyboard Channel is especially important for sequencing with the K2600R, since it enables you to record on different tracks without constantly switching transmit channels on your controller. Regardless of which K2600 model you own, you should do the following whenever the K2600 is going to receive MIDI information from an external source:

- Set the Local Keyboard Channel on the MIDI-mode RECEIVE page to a specific channel (1–16).
- Set your MIDI controller (keyboard, percussion controller, etc.) to transmit on the same channel.

Performing the above two steps means that you'll be able to hear the individual channels (each of which is assigned by default to a separate recording track) as you scroll through the different recording tracks in the K2600's Song mode. Local Keyboard Channel performs a *rechannelizing* function that makes this happen.

Patch Through

There's one more use for Local Keyboard Channel. With any model of the K2600, the Local Keyboard Channel parameter lets you patch through (also known as soft through) to external sound modules. When Local Keyboard Channel is enabled, the K2600 takes the rechannelized information and sends it out the MIDI port. This lets you hear an external module while you are recording a track assigned to that module.

Tutorial: Recording a song

In this tutorial, we'll record a song by using the steps described below. Bear in mind, though, that this is just one approach to sequencing a song. This example includes:

- Assigning programs to channels
- Recording a drum loop
- "Unlooping" the drum track and adding the remaining instruments
- Mixing the song

Assign Programs to Channels

Start by deciding what instruments you want to use in the song. Suppose you want to record a bass /drums / organ rhythm track with a lead instrument on top. You've decided to use the following programs:

- **54 Jazz Kit II**
- **30 Warm Bass 1^2**
- **22 Gospel Organ**
- **79 Modulead**

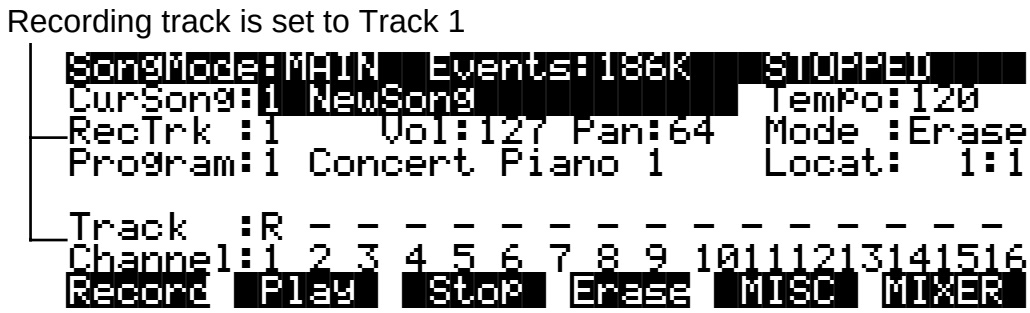
Set up your K2600 so that each of these instruments is on a separate MIDI channel. Since Song mode automatically assigns each channel to a separate sequencer track (1-16, consecutively), you'll then be all set when you start laying down tracks, and won't have to go scrolling through the program list. Don't worry about changing your mind later, though, since you can always make changes after you've recorded your initial tracks.

If you use a KB3 program in a song, make sure that the channel to which you assign it is the KB3 channel; otherwise it won't play. You could always change the KB3 channel to match the channel you want to use for recording the KB3 program, but we recommend deciding on a channel that will always be the KB3 channel, and keeping it that way. Also keep in mind that KB3 programs require one voice of polyphony for every two tone wheels in the program. Since most KB3 programs use at least 79 tone wheels, that leaves only eight voices free for other programs.

Aside from the KB3-channel issue, it doesn't really matter which channel you use for the programs you want to record. In this example, we're going to put the drums on Channel 1 and the bass, organ, and lead on Channels 2, 3, and 4.

Follow these steps to assign the programs to separate channels:

1. Press the **Song** mode button to enter Song mode. The display will look something like this:



   Notice that the sequencer is ready for you to record a new song, and the recording track (RecTrk) is set to track 1. If **1 NewSong** doesn't appear as the value for the CurSong parameter, press the **MISC** soft button, then press the **New** soft button on the MISC page. You'll return to the MAIN page, and CurSong will say **1 NewSong**.

2. Use the **Down** cursor button to move the cursor to the Program parameter.

3. When this parameter is highlighted, type **54** then press the **Enter** button. You've now assigned **Jazz Kit** to channel 1.

4. Press the **Up Chan/Bank** button. This changes the RecTrk parameter to 2, but leaves the Program parameter highlighted. Notice how the R in the Track region moves from Track 1 to Track 2. Also notice how each of the sixteen tracks has a default channel associated with it. You could change this if you wanted to, but most people find it easiest to associate track 1 with channel 1, track 2 with channel 2, and so on.

   Incidentally, when you're assigning programs on this page, you could use the **Up/Down** cursor buttons to highlight RecTrk, then change the recording track and select the Program parameter again, but the **Chan/Bank** button method is more convenient.

5. On Recording Track 2, select Program **30 Warm Bass 1^2**.

6. Repeat the above two steps to assign **22 Gospel Organ** to Channel 3 and **79 Modulead** to Channel 4.

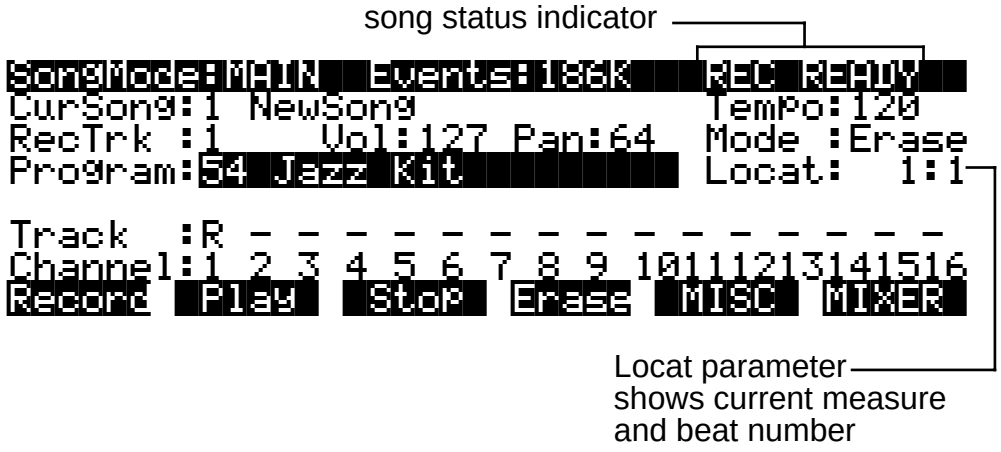
You've now chosen the programs for your first sequence. It's important to realize, though, that you have not recorded anything yet. The programs will be there when you need them, but they have not yet been included in a song. Also, don't forget that you can change the program assignments any time before or after you record the song.

Record a Drum Loop

Our song will be based around a four measure drum loop that we'll record now. Later on, we'll "unloop" the drum track for additional recording.

The length of the drum loop is determined by the current *endpoint*, so we'll start by recording four measures of silence to set the endpoint.

1. Set RecTrk to **1** then press the **Record** soft button. The Song Status indicator (top right-hand corner of the display) flashes REC READY.



2. Press the **Play** soft button. The Song Status indicator now reads RECORDING.

   The K2600's built-in metronome begins clicking, and the Song-mode LED blinks in time with the current tempo.

   Notice the Locat parameter on the right side of the display, which shows the current Bar and Beat number. When you begin recording, the K2600 provides you with a four-beat countoff, during which time Locat's Bar and Beat number are preceded by a minus sign.

You can change the length of the countoff by changing the value of the Countoff parameter on the MISC page.

Since we are recording four measures of silence, press the **Stop** soft button as soon as Locat reads **5:1**.

*NOTE: The sequencer will truncate to the nearest downbeat, so as long as you press Stop before Locat reads **5:2** (but after it reads **4:4**) you'll be OK. Don't worry about this too much, though, since in the next step we'll show you how to check (and change, if necessary) the endpoint.*

When you press **Stop**, you'll be asked to if you want to save this song. Even though you've just recorded four measures of silence, go ahead and save it; this makes it an official song object. By the way, it's pretty easy to rename the song at this stage. Just press the Rename soft button during the Save Song dialog

For the purposes of this example, we'll assume that you pressed **Stop** a few beats too late. You'll see how easy it is to correct this sort of thing in the Event Editor.

3. On the Song-mode MAIN page, make sure that the cursor is highlighting any parameter other than the Program parameter, then press the **Edit** button. The COMMON page appears. (If the Program parameter had been highlighted when you pressed **Edit**, you would have entered the Program Editor, which is not what you want to do right now.)

```
EditSong:COMMON                    <>Track:1
Tempo      :120      StartStep   :1
TimeSig    :4/ 4     TempoControl:Song
EffectChan:1         TriggerChan :1
ChainTo    :0 None   TriggerCtl  :ON
TrackDest  :---- ---- ---- ----
DrumTrack  :---- ---- ---- ----
<more  EVENT  TRACK  STEP  ARRANG  more>
```

4. Now press the **EVENT** soft button to bring up the Event Editor, which looks something like this:

```
EditSong:EVENT   (Ch 1)            <>Track:1

  1:1      1:1.000 CTRL BANK    0
  1:1      1:1.000 PCHG   54
  1:1      1:1.000 CTRL VOL   127
  1:1      1:1.000 CTRL PAN    64
 Cut   Copy  Paste  View  AllOn  Done
```

The Event Editor gives you access to an editable list of all note events, controller events, and other MIDI events that Song mode uses to describe your sequence. While you're looking at the Event Editor, notice the data that the sequencer records, even when no notes are played.

5. Use the Alpha Wheel to scroll to the bottom of the event display.

The last event listed is the endpoint, which should correspond to the first beat of the Bar following the last Bar in the song. For our four measures of silence, then, the endpoint should be **5:1**. The display below, however, shows that five measures have been recorded:

Fortunately, it's quite easy to change the endpoint from **6:1** to **5:1** to remove the extra measure that's been accidentally recorded. (If your endpoint is at **5:1**, you won't need to change it now. If, however, your endpoint is less than or greater than **5:1**, you should proceed with the next step.)

6. Check the endpoint, and change it if necessary.

   To change the endpoint from **6:1** (or any other incorrect value) to **5:1**, press the **Right** cursor button to position the cursor in the Bar:Beat:Tick column (**6:1.000** in the above example). Type **51000** then press the **Enter** button. The endpoint is changed, and the song is now four measures long.

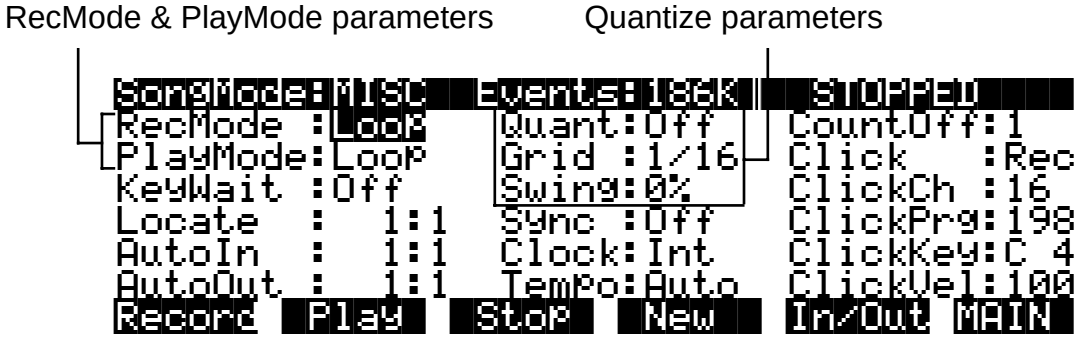
   Press the **Done** soft button to return to the COMMON page in the Song Editor. If you changed the endpoint while in the Event Editor, save the song now (you may have to press one of the **more** soft buttons to see the **Save** soft button).

7. Press **Exit** to return to the MAIN page in Song mode.

8. Make sure that the RecMode and PlayMode parameters are set to **Loop**.

   From the MAIN page, press the **MISC** button. Set the RecMode parameter on the MISC page to **Loop**.

   The PlayMode parameter should already be set to **Loop**. If it isn't, turn the Alpha Wheel until **Loop** is highlighted.



9. Turn on input quantization.

While you're on the MISC page, take a look at the quantize parameters (Quant, Grid, and Swing) in the middle column of the page. Quantization is a very useful feature, especially if you're having a bad rhythm day. When you quantize a track, the sequencer moves the elements of that track closer to a grid based on the time signature of the song. You can use quantization to tighten up a rhythm track subtly, or to create a precise, unwavering mechanical rhythm.

For our drum loop, we'll try the total quantization experience, so position the cursor over the Quant parameter, and turn the Alpha Wheel until the value is set to **100**%. Move the cursor down to the Grid parameter. The default value of **1/16** indicates that quantization will move the notes you play to the closest 16th-note division in the Bar. Try double-pressing the **Plus/Minus** buttons below the Alpha Wheel to move through a range of useful grid values. Note that some of the values have **tr** or **t** appended to them. These are grid settings that allow you to maintain a triplet feel. We'll use a setting of **1/16**, so return to this value if you've changed it, then press **Exit** or the **MAIN** soft button to return to the MAIN page in Song mode.

***NOTE**: The K2600's sequencer also provides a full range of advanced quantization features that you can apply to previously recorded tracks. To learn about these, check out the Quantize and Reference Quantize functions on the TRACK page in the Song Editor See page 12-47.*

10. Make sure you are in Merge mode (it's the default, so you'll be in Merge mode unless you've changed the value of the Mode parameter). This is important, because you want to be able to overdub on the track as it loops. (In Erase mode, you would erase all existing notes every time the loop came around.) To activate Merge mode, go to the MAIN page and set the Mode parameter to a value of **Merge**.

11. Begin recording drums.

    Press the **Record** soft button (observe the REC READY indicator on the top line) then press the **Play** soft button when you're ready to begin. Remember to wait for the four beat countoff before you start to play.

    Since you are in Merge mode, you don't need to do everything at once. A common approach to making drum loops is to record a different voice each time the loop comes around. For example, on the first loop you could record snare hits on the back beats (1:2, 1:4, 2:2, 2:4, etc.). Then you could add kick drum to the snare when the loop comes around again; you'll be able to hear the previously recorded part, as well as the new part. On the third pass you might record ride cymbal, followed by hi-hat or other percussive accents. Keep it simple at first, because you can always save the part while it's basic (but correct), then make additions later. To keep track of where you are, watch the flashing Song-mode LED or the Locat parameter on the MAIN page.

12. Press the **Stop** soft button when you've finished recording the drums.

    Save the changes to your song by pressing the **Yes** soft button followed by the **Replace** soft button.

Record a Bass Line

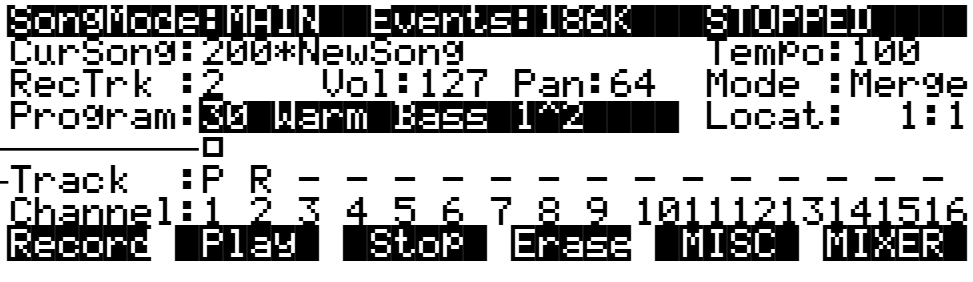
When you are satisfied with your drum loop, you can begin using it as the foundation for a song. What we'll do here is set RecMode to **Unloop** while leaving PlayMode set to **Loop**. This means that the drum loop will keep playing while we record new unlooped material of any length. The endpoint of the song will change to reflect the length of the newly recorded material.

1. Press the **MISC** soft button to bring up the MISC page.
2. Set the RecMode parameter to **Unloop**. Leave the PlayMode parameter set to **Loop**.

   Depending on the type of song you are recording, you may also want to turn quantization off before you record your bass part.

3. Press the **MAIN** soft button to return to the MAIN page.
4. Set the recording track (RecTrk) to Track 2.

This track already has material recorded on it.



Track status indicators: track 1 is set to Play, track 2 is set to Record. Tracks 3 through 16 are empty.

Since you previously assigned **Warm Bass 1^2** to channel 2, it should appear in the Program parameter when you set Track 2 as the recording track. Note, too, that the track status indicator for Track 1 changes to **P** (for **Play**) when you select Track 2 for recording. The small square above the track status indicator tells us that material is contained on that track.

5. Press the **Record** soft button to enter REC READY mode.
6. Press the **Play** soft button, then begin laying down a bass track.

Remember that by default there is a four-beat count off, during which time the Locat value is preceded by a minus sign (-). No material is recorded during the count off, though anything you play during the countoff gets quantized to the first Beat of the song. As you are recording the bass track, your drum loop will keep playing. Play for as long as you want; the sequencer will lengthen the song as needed.

7. Press the **Stop** soft button when you are done recording the bass.

   You will be given the usual save options. To keep what you've just recorded, press the **Yes** soft button followed by the **Replace** soft button.

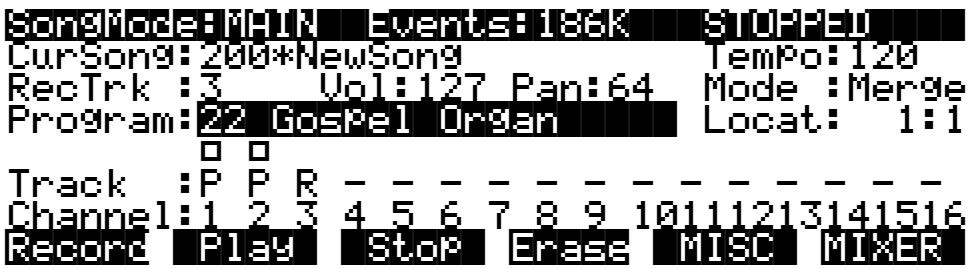
   Since you unlooped the drum track when you recorded the bass, you've changed the endpoint of the song to be wherever you stopped the bass track. You can check the endpoint (and change it, too, if you want) using the Event Editor, as described earlier.

Record the Remaining Instruments in Your Song

Now that you've defined your song with the bass and drum tracks, you can put the organ and lead (or whatever instruments you've chosen) into your song.

1. Set the recording track (RecTrk) on the MAIN page to Track 3.

   Notice the small squares above the track status indicators for Tracks 1 and 2, reminding you that you've now got material on two tracks.



2. Press the **MISC** soft button to bring up the MISC page.

3. Set RecMode to **FixLen**.

   Since you've defined the length of your song with the bass track, setting RecMode to **FixLen** means that the song will play through only once each time you record a new part.

4. Record the organ in the same way that you recorded the bass track in the previous section.

   Notice that you can do this from the MISC page, without returning to the MAIN page.

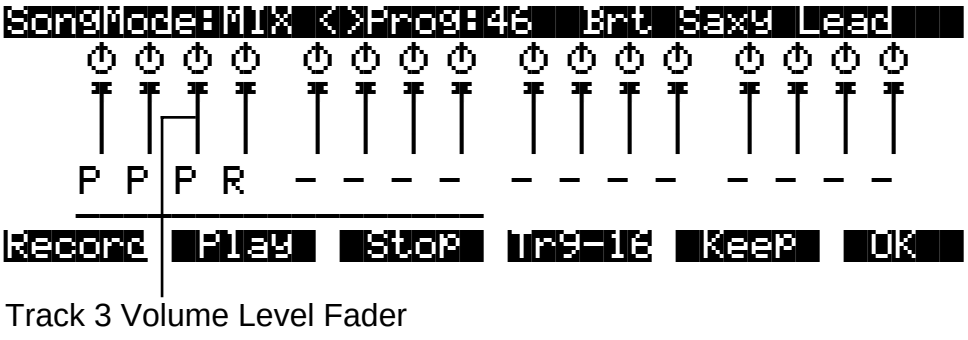
5. Continue recording instruments until you have played all the parts of your song.

Mix Your Song

The MIX page lets you change the panning and volume levels for the tracks in your song. Needless to say, this is one of the most important steps in the completion of your song production, and potentially one of the most creative. This example will keep things simple by showing you how to change the volume level of one of your instruments. We'll also take a quick look at the track mute feature.

1. Press the **MIXER** soft button to bring up the MIX page.

   The icons that represent pan-position knobs and volume-level faders resemble the controls on a traditional mixing board. Manipulating them should be quite intuitive. Simply position the cursor over a pan position knob or volume level fader, then turn the Alpha Wheel to set the level you want. On keyboard models, the sliders control the volume of the current bank of channels (as indicated by the line near the bottom of the display). In the diagram below, the sliders would control the volume on Channels 1–8.



Track 3 Volume Level Fader

   For example, suppose you want to turn down the organ on Track 3:

2. Use the **Right** or **Left** cursor button to position the cursor over Track 3's volume level fader on the MIX page.

   Although the tracks aren't numbered on the MIX page, they're laid out logically: left-to-right, from 1 through 16 consecutively. Track 3, then, is the third track from the left.

3. Use the Alpha Wheel to turn down the volume of the track by changing the position of the volume slider.

4. Press the **Keep** soft button and save the change.

   Now when you play back the song, Track 3's volume starts playing at the newly set level.

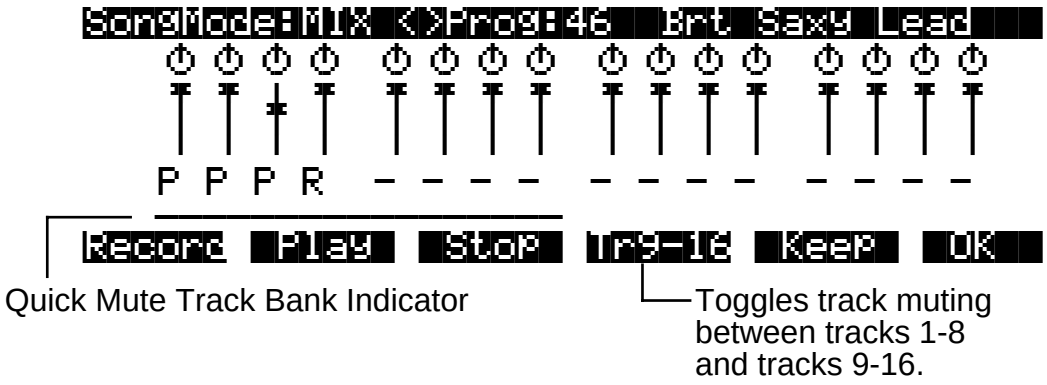
   You can also record real-time volume and pan changes from the MIX page or enter numeric values for these parameters on the MAIN page.

Using the Mode Buttons to Mute a Track

Finally, we'll take a quick look at the track mute feature, which lets you use the K2600's mode buttons to mute individual tracks. This can be invaluable during mixdown.

You may have noticed a horizontal line underneath the sliders for Tracks 1 through 8 on the MIX page. As the illustration below shows, this is the "Quick Mute Track Bank Indicator," showing which bank of eight tracks will respond to the eight track-mute buttons. The eight mode buttons

(Program, Setup, etc.) double as track-mute buttons while you're on the MIX page; press one or more of them and the corresponding tracks are muted Press them again to bring the track back into the mix.



Use the **Tr 1-8** / **Tr 9-16** soft button to toggle between banks of eight tracks, either 1–8 or 9–16. When you press this soft button, the horizontal bar repositions itself below the affected tracks. Table 12-1 shows the K2600's mode buttons, and which tracks they mute when you're on the MIX page:

Available Buttons	1-8	9-16
Program	1	9
Setup	2	10
Quick Access	3	11
Effects	4	12
MIDI	5	13
Master	6	14
Song	7	15
Disk	8	16

Table 12-1 Track Muting in Song Mode

Let's listen to our song with and without drums:

1. On the MIX page, press the **Play** soft button. The song, with all of its instruments, begins to play.
2. Press the **Program** mode button on the front panel. The Program-mode LED lights, and Track 1 (the drum track) is muted.
3. Press the **Program** mode button again to unmute the drum track.

   Using your K2600's front panel buttons, you can mute one or more tracks at once, or even mute eight tracks at a time.

Tutorial: Arrangements

The Arrangement Editor gives you a variety of ways to record and play songs. The following tutorial is designed to walk you through the steps of creating songs using the Arrangement Editor. Here are some typical tasks:

- Record two or more songs, then string them together in any order, as steps in an arrangement.
- Record additional tracks over the steps in an existing arrangement, saving the new tracks in the arrangement song.
- Use up to 32 tracks for recording and playback.
- Trigger songs or arrangements by striking keys (or triggering notes from any MIDI controller)—an excellent feature for live situations.

Creating an Arrangement

This involves recording and saving each section of your final piece of music as a separate song, then using an arrangement to string together the sections in any order you choose. There are a couple reasons you might want to do this.

First of all, many pieces of music tend to be composed in sections. If your music tends to feature various sections repeated in varying order, using the Arrangement Editor can be easier than copying those sections and pasting them into a single song.

The second reason has to do with memory requirements. No objects (aside from samples) can be larger than 64k (10,000 to 16,000 notes, depending on the amount of controller information you record). You may need to use arrangements to accommodate the size of long musical pieces.

When you're recording songs that you intend to combine into arrangements, it can be helpful to name the songs Part 1, Part 2… or Chorus, Verse… That way, when you are putting together the arrangement, you can quickly identify each section. You might also want to organize the IDs of the songs. For example, you could start numbering the songs at the second ID in a memory bank (**301**, **302**…), then save the arrangement song at the first ID in the bank (**300**, in this example). That way, you can create a file containing the arrangement song and its constituent songs, and when you load it into the K2600, the arrangement (the one you're likely to want to play) will be the first song in the bank.

Once you have your songs, you're ready to create another song to use as the arrangement.

1. In Song mode, select **1 NewSong** as the value for the CurSong parameter. This is important, because the arrangement song should not contain any note or controller information.
2. Press **Edit**, and set the Tempo parameter to match the tempos of the songs you'll be adding to the arrangement. (This assumes they are all the same tempo. We'll cover how to deal with different tempos later on.)
3. Press either **more** soft button, then press **Save**. The save dialog gives you the opportunity to rename the song and give it the ID of your choice. Press **Save** again when you've made the changes you want.
4. Press the **ARRANG** button (you're still in the Song Editor). The top line of the display tells you that you're looking at Step 1 of a song that contains one step. Cursor down to the Song parameter and select the song you want to use for the first step in the arrangement.

5. Press **Add** to add another step to the arrangement. Select the song you want for the second step. Continue adding steps and selecting songs as needed. If you need to get rid of a step, select the step and press the **Delete** soft button.

   If you press the **Play** soft button while on this page, you'll hear the currently selected step. (If the step's Mode parameter is set to Next, the K2600 will play the next step when the current step finishes.) Once you have more than one step in an arrangement, you can use the **Chan/Bank** buttons to scroll through the steps.

6. Save, then press **Exit** to return to the MAIN page in Song mode. Notice that there are now three dashes below the Program parameter. Press **Play**, and the dashes change to indicate the current song, and the current step. The Locate parameter shows the bar number of the arrangement, not the bar number of the current step. In other words, if the first step in an arrangement has 16 bars, then when Bar 1 of Step 2 is playing, Locate will show **17:1**, not **1:1**.

Arrangement Parameters: the ARRANGE page

Mutes

The Mutes parameter has 16 values, in groups of 4. By default, tracks are unmuted (active), as represented by the dashes. To mute a track, move the cursor to highlight the dash corresponding to the track you want to mute, and press either **Plus/Minus** button to change the dash to **M**. This mutes the track.

Muting tracks is a good way to make several different-sounding steps out of the same song. If you create a multi-step arrangement in which each step uses the same song—with different tracks muted in each step—you can bring different parts in and out in each step.

Xpose

You can transpose any step up or down. This allows you to transpose the song without having to edit the actual song data. Every track in the step gets transposed.

This is great for many sounds, but not so useful for steps containing programs that have different timbres assigned to different keys—like drum programs. Fortunately, you can designate any track as a drum track, which prevents it from getting transposed when you transpose the step. You must designate drum tracks in the individual songs that are used as steps in the arrangement, not in the arrangement song.

To designate a drum track, go to the COMMON page for the song containing the track in question. Find the DrumTrack parameter, and move the cursor to highlight the dash corresponding to the track in question. Press either **Plus/Minus** button to change the dash to a **D**. Don't forget to save.

Times

You can set any step to play from 1 to 120 times before stopping or continuing to the next step in the arrangement.

Mode

This is normally set to **Next**. In this case, the arrangement will play the next-highest-numbered step once the current step is finished. If the last step is set to **Next**, the arrangement will repeat Step 1. To make the song stop after the last step, set the last step's Mode parameter to **Stop**.

Arrangement Parameters: the COMMON page

Start Step

This determines the step number where the song will start. Normally this is **1**, but it can be any step in the arrangement.

Tempo Control

You can choose whether the tempo is controlled by the arrangement song itself or by each song in the arrangement. When set to **Song** it will use the tempo and time signature set in the arrangement song itself. When set to **Arrange**, it will use the various tempos and time signatures used in the arrangement's constituent songs.

Timing Issues

You might encounter timing problems when using the Arrangement Editor; notes can be delayed when the arrangement switches from step to step. Here's how to avoid the problem.

Each time you record a track for the first time, the K2600 places four events right at the beginning of the track: Bank Change, Program Change, Volume, and Pan. If you go into the Event Editor, you'll see these four messages appearing at 1:1:000. Normally they'll be the first four events you will see.

By the time you have recorded several tracks, these events start to become a large number of events all occurring at the exact same point in time. The K2600 processes these events sequentially, and if enough events happen at the same time, some of them get delayed. For example, if you have 10 tracks, then you will have 40 of those initial events, in addition to any note and controller info that also exist at 1:1:000 in a track.

To prevent the delays caused by too many events, you can delete unneeded events. Typically, you are probably not changing the Program, Volume, and Pan settings for each track when you switch from step to step. For example, quite often you might have the same program on a MIDI channel for all the steps. In this case, all of the program and bank change messages after the first step are not needed, and can be deleted. You can edit each step in the arrangement this way (don't remove these events from the first step, however).

There are two different methods you can use to get rid of these messages in a track. The simplest way is to go into the Event Editor. Use the **Chan/Bank** buttons to select the track whose events you want to edit—you can select each track individually, or select All to view the events from every track in the step. To remove an event, highlight it and press **Cut**.

The second way is to use the Erase function in the Track Editor. Again, choose the track with the **Chan/Bank** buttons. Set the From parameter to **1:1** and the To parameter also to **1:1**. Of course, you won't want to have Events set to All, or you'll eras any note events that occur at 1:1, as well as the unwanted events. If you set Events to **Program Change** and press **Go**, you'll erase the Program and Bank change events. You can then set it to **Controllers**. At this point, if you leave Ctl set to **All**, you can delete both the Pan and Volume events with one operation. But if you have other controller info that occurs at 1:1 (such as Mod Wheel or sustain pedal) then you would also be erasing those events. So you can use the Ctl parameter to select just Volume and just Pan, pressing **Go** after each selection.

In general, the Event-editor method is quicker if you are working on one track at a time. But if you have many tracks and know that you want to erase these events from all of them, using the Track Editor with all tracks selected is faster.

Of course, if you are changing the program changes, pan, or volume in a track when the song changes from step to step, you need to leave those events in, but typically you might be doing that in only one track, while six or seven other tracks stay the same.

Timing problems can also occur between steps due to improperly-located endpoints. If you have a timing problem, you should check in the Event Editor to make sure the end point of each step falls on the first beat of the bar *after* the last bar of the step. For example, if your step is 8 bars long, the end point should be at 9:1:000.

Removing Initial Events from Step One

Since you almost always want to have initial Program, Bank, Volume, and Pan events in an arrangement to make sure it plays properly, it makes sense to have those events in each track of the song used for the first step on the arrangement. But what if that same song is used in a later step, or Step 1 plays a number of times? In this case, as soon the step restarts, you have unneeded events that could contribute to delays.

In this case, the solution is to delete those initial events from the Step 1 song, and record them into the arrangement song. In the arrangement song, select a recording track, press **Record**, then highlight the Program parameter and select the program you want for the track. You can also select the Pan and Volume parameters if you want to set them to a specific volume. Once you have these parameters set, press **Stop**. You need to do this for each track that you are using in the song.

Recording Additional Tracks

So far, all of the recording we've described has been done in the individual songs used as steps. The arrangement song we created has no data in it.

But you can also record tracks in the arrangement song. For example, you might want to record a series of rhythm section grooves: just bass, drums, and maybe some comping parts. Now you can use those grooves as step in an arrangement, then record lead lines through the entire arrangement.

1. Follow Steps 1 through 6 of *Creating an Arrangement* on page 12-12 to create an arrangement song, using some different grooves you have created.

2. Start recording new tracks in the arrangement song. Remember that each MIDI channel can have only one program assigned to it. Therefore you may want to select the tracks you record in the arrangement song so that their MIDI channel assignments are different from those of the tracks in the step songs.

Maximizing Track Use

If you extend the previous example, you'll realize that you can actually make use of 32 MIDI channels—by creating an arrangement containing steps that use all 16 channels, then recording 16 channels of music in the arrangement song itself. Both the step songs and the arrangement song can play back through the K2600, through another instrument connected to the K2600's MIDI Out port, or through both.

It is important to remember that there are still only 16 MIDI channels, and any one MIDI channel can play only one program. Therefore there is no way to have more than 16 different programs playing at the same time on the K2600. But there are two reasons why you would want to use more than 16 tracks.

First, you can have two or more tracks assigned to the same MIDI channel. For instance, if you were recording drums, you might want to put different drums from the same program on different tracks, to make recording and editing easier. On the bottom line of the display on the MAIN page in Song mode, there are 16 channel parameters, one for each track. The numbers don't represent *tracks*; they represent the track's MIDI channel assignment. (The dashes—or

other characters—above the numbers represent the tracks. The dashes and characters are the values for the Track parameter.) You can assign any track to any MIDI channel.

The second way you can use more than 16 tracks is if you have an external sound module in addition to the K2600. Each track can be assigned to play only the K2600's internal sounds (local), or to be sent only to the MIDI Out, to play the external instrument. To assign the track for local or MIDI playback, go into the Song Editor and on the COMMON page you'll see 16 Track Destination parameters. If the value is a dash, the track is going to both the K2600 and its MIDI Out port. **L** means local, and plays the K2600 only. **M** means that the track goes only to the K2600's MIDI Out port. A value of **x** means that the track is muted.

In the following example, all the tracks in the step song play the K2600, while all the tracks in the arrangement song go to the MIDI Out port. You can also have the step songs and arrangement song set to the same track destinations, as long as it's OK for them to play the same sounds.

1. Create a song with multiple tracks and save it.
2. On the COMMON page in the Song Editor, set the TrackDest value for each track of this song to **L**. Save, then press **Exit** to return to the MAIN page in Song mode.
3. Using the Cursong parameter, call up **1 NewSong**, and press **Edit**, then **ARRANG**.
4. Using the Song parameter, call up the song you just recorded. This makes your song a step in the arrangement song, which you're currently editing. Press **Done** to return to the COMMON page.
5. Set the TrackDest parameter for each track to M, so that the arrangement song won't also play the K2600.
6. Save, then press **Exit** to return to the MAIN page in Song mode.
7. Record additional tracks as part of the arrangement song. You might have to record programs changes in each track of the arrangement song to set up the external instrument properly.

Triggering Arrangement Steps From the Keyboard

Each step in an arrangement can be triggered by playing a key (or triggering a note from any MIDI controller). This can be great for live performance, because you can repeat each step as many times as you like.

1. Go to the TRANSMIT page in MIDI mode, and assign a control setup that has a value of **On** for the Sync parameter on the COMMON page of the Setup Editor. Create one if you need to, and name it **SongSetup**. We'll explain why shortly why you need to use this control setup.
2. Go to Song mode, and create an arrangement, following Steps 1 through 6 of *Creating an Arrangement* on page 12-12.
3. Go to the COMMON page in the Song Editor. There are two parameters on this page for use with key triggering of steps:

   TriggerChan: Notes on this MIDI channel can trigger the current step. Notes on any other channels will not trigger the step. Set this to match the MIDI channel of the K2600 or whatever controller you're using to trigger the steps.

TriggerCtl: This determine if the keys will trigger the steps. Set this parameter to **ON**, so when you hit the appropriate note on the trigger channel, the step will start playing. If you set it to a MIDI Controller number that has a physical controller assigned to it, then the keys will trigger the step only when the controller is on (for switch controllers) or above its halfway point (for continuous controllers).

4. Press **ARRANG**, then press the **Chan/Bank Down** button until you see Step 1 in the top line of the display. Set the Mode parameter to a value of **Stop**.

5. Note the values for the LoKey and HiKey parameters, then set them to **E 1** and **E 2** by doing the following:

   - Press the **SetRng** soft button
   - Strike E 1 on the K2600 or your MIDI controller
   - Strike E 2

   Note the new values for LoKey and HiKey. Now the current step starts playing when you strike E 1. Strike another note (say E 2) while the step is playing, and on the first beat of the next bar, the step repeats, and all the tracks that aren't drum tracks get transposed up a corresponding number of semitones (in this case, an octave). Generally, when you're triggering steps using keystrikes, you'll hit the triggering key somewhere in the last bar of the current step. This causes the new step to start right after the end of the current step.

   You can also cause steps to start as soon as you hit the triggering note. To do this, go to the TRANSMIT page in MIDI mode, and assign a control setup that has a value of **Off** for the Sync parameter on the COMMON page of the Setup Editor.

6. Set the Latch parameter to a value of **On**. Now the steps will continue playing after you've released the triggering note.

7. Set the VelTrk parameter to a value of **Off** if you want the step to play back at the level at which you recorded it. Set it to **On** to vary the playback level according to the velocity of the keystrikes that trigger the step.

RAM Tracks

If you have the K2600 sampling option, you can create RAM Tracks, which combines Song mode with the sampler. The RAM Tracks feature enables you to create a sample during song playback, then have the K2600 do the work of building a program out of the sample. The K2600 also inserts the sample into the song so that it plays back in sync with the song.

Possibly the best feature of RAM Tracks is how it affects polyphony. By sampling the K2600's audio output, you can condense an entire song into a single track that uses only two voices of polyphony.

Two Important Concepts

RAM Tracks and Song Playback

You don't have to be *recording* a song to create a RAM track. The idea behind RAM tracks is that you can make a quick sample during playback of a song, then integrate that sample into the song. Of course, you *can* create a RAM track while recording a song, but it's often best to take one step at a time.

A Matter of Timing

The song must *already be playing* when you start sampling. There are several ways you can do this:

- Start the song, then at the appropriate location in the song, press **Record** on the SampleMode page, and start the sample input.
- Set the Thresh parameter on the SampleMode page to a dB value—one you know you'll exceed with your sample input signal. Start the song, then start your sample input at the appropriate location in the song. This method makes it easy to sync your sample with the song.
- Set Thresh to **Key**. Start the song, then at the appropriate location, then trigger the sampler by striking a key either on the K2600 keyboard (or on a MIDI source that's controlling the K2600), and start the sample input. You must send the trigger on the K2600's current MIDI channel.

Creating RAM TRacks

1. Start by configuring the sampler: go to Program mode, and press the **Sample** soft button to go to the SampleMode page. Set the Input parameter to **Analog**, and set the Source parameter: **Ext** for an external source, **Int** if you want to sample the K2600's output. Set the Time parameter to give you enough time to record the sample you want. Set the Mon parameter to **On** if you want the K2600 to play the sample input through its audio output. Set the Mode parameter to Mono (L), Mono (R), or Stereo, depending on your input signal. Adjust the Gain parameter to bring the signal level as close to 0 dB as possible.
2. Go to Song mode, and call up a song that has at least one empty track. If you plan to start sampling right at the top of the song, you might want to set the Click parameter (on the MISC page) to a value of **Cnt**, which gives you a countoff before the song starts playing (the value of the CountOff parameter—also on the MISC page— sets the number of bars of countoff).
3. Set the RecTrk parameter to an empty track.
4. Start the playback of the song. On keyboard models, press the **Play/Pause** button. On rack models, press the **Left** and **Right** cursor buttons at the same time.
5. Press **Record** to start sampling. When you have the sample, press **Stop** (if you run out of time or sample memory before you press **Stop**, the K2600 stops sampling automatically). Either way, the song stops its playback as well.
6. The K2600 prompts you to strike a key to set the sample root. Strike any key (or trigger any note) that you want, or press **Default** to set the root at C 4. The K2600 shows you the maximum signal level, or if the sample clipped, it shows you the number of clips. It also prompts you to save the sample.
7. Press **Yes** if you like the sample, and the save dialog appears. We recommend naming the sample now, to make it easy to keep track of it. The name you give the sample will also be the default name for the song, when the time comes to save the song.
8. Once you've saved the sample, the K2600 asks you if you want to place the sample into the current song. When you press **Yes**, the K2600 asks you to pick the track you want to use for the sample's playback. Pick any empty track: the track must be empty because the

K2600 will eventually create a new program for the sample, and that program must be on its own MIDI channel. Press **OK** when you've selected a track.

9. The K2600 creates a program, and shows you the new program's ID. It then prompts you to strike a key to specify a note for triggering the sample during the playback of the song. It can be any key; the K2600 automatically handles the transposition required to ensure that the sample plays back at the right pitch.

10. Go to the MAIN page in Song mode, and on the recording track you set in Step 3, you'll see the new program. The program assigned to this track has the same name you gave the sample when you saved it. If you look at the events on this track (on the EVENT page in the Song Editor), you'll see a PCHG event that selects your new program, and a note event corresponding to the key you struck to set the sample trigger.

11. Repeat Steps 5 through 9 to create additional samples and insert them into the song. You can use the same track, or a different, empty track. For this example, we'll use the same track. In this case, when you press **OK**, the K2600 asks you if you want to add the sample to the program that's already being used for the track (the program you created when you pressed **OK** in Step 8. Press **Yes**. The K2600 prompts you to strike a key, as in Step 9. If you strike a key that's already being used by one of the samples in the program, the K2600 alerts you, and lets you to assign a different key (press **No**) or the same key (press **Yes**—although if you do this, then the song will trigger all samples that share the same trigger key, every time the trigger key gets played).

12. If you use the same track, the K2600 creates another layer in the program on that track, and assigns the sample to it. You can record up to 32 samples on this track, since a VAST program can contain up to 32 layers. If you use a different track, the K2600 creates another new program when you place the sample into the song.

When you've recorded all the tracks you want, you can edit the programs assigned to those tracks, using all the features available for VAST synthesis.

***Note**: There's no way to synchronize sample playback exactly to MIDI. While the K2600 handles the synchronization extremely accurately, it's possible for the sample to drift away from the song playback, at a rate of up to .5 milliseconds per minute of playback. That's a minuscule amount, but it might matter to you. If you need to be more precise, we recommend that you keep your sample time short, and record a relatively large number of short samples, as opposed to a small number of long samples. This will virtually eliminate the risk of your samples drifting out of sync with the song playback.*

Using Song Mode

Selecting a Song for Playback

Select the Song parameter with the cursor buttons, then use any data entry method to scroll through the list of songs. Press the **Play** soft button, and the song will begin playing. Press the **Stop** soft button, and the song will stop and "rewind" to the beginning. If you press **Play** while the song is playing, the song will stop and the play pointer will revert to the Locate parameter, and will show your current location in the song. At this point you have two options. If you press the **Play** button again, the song will continue from its current location. If you press the **Stop** soft button, the song will return to 0:0.

The K2600 automatically selects programs for playback based on the MIDI channel(s) and the programs assigned to them at the time the song was recorded. When you start playback, the

K2600 sends program changes, on all relevant channels, to its sound engine and to the MIDI Out port if the PChng parameter on the MIDI-mode TRANSMIT page is turned on.

If you want to use a different program for playback than the one originally recorded, you have two alternatives. First, you can edit the song, changing each individual Program Change event (PCHG) to reflect the desired program IDs. This is done on the EVENT page in the Song Editor. Or you can set the RecTrk parameter to the track on which you want the program change, highlight the program parameter, press **Record**, select the desired, program, and press **Stop**.

Another alternative is to defeat the song's recorded program changes, and manually set each MIDI channel used by the song to play the desired program. Start by setting the ProgLock parameter to a value of **On**. The ProgLock parameter is found on the MIDI-mode CHANNELS page; you can set it independently for each of the 16 MIDI channels. When a channel's ProgLock parameter is set to a value of **On**, the K2600's sound engine will ignore all program changes it receives on that channel, whether it's via MIDI or from the K2600's front panel, or from within the song.

When you've set the ProgLock for each of the channels used in the song, go to Program mode, select the MIDI channels used by the song, and assign the programs you want to use. When you return to Song mode and play the song, the automatic program changes are defeated, and the song plays the programs you assigned. When you set ProgLock back to Off, the originally-recorded program changes take effect again.

Effect Selection During Recording and Playback

When you're recording or playing back a song, the setting for the FX Chan parameter (on the Effects-mode page) determines which studio (plus FXMods) gets applied to the song. Only one studio can be applied at a time, even for multi-part songs using more than one program. Depending on the combination of values for the FX Mode and FX Chan parameters in Effects mode, the FX channel may automatically track the current MIDI channel. In this case, if you change the current MIDI channel during playback (or during a MIDI recording) the current FX channel (and consequently the current effect) will change also, which might not suit your needs. Consequently, there's a way to force the FX channel to remain constant during playback or MIDI recording, even if you move to another mode during the playback or MIDI recording and change the current MIDI channel.

This is done by setting the FX Mode parameter to a value of **Auto**, and the FX Chan parameter to a value of **Current**—which is the most generally useful combination of settings for these parameters. In this case, while you're in Song mode—even if you move to another mode during playback or MIDI recording—the value of the FX Chan parameter automatically changes to match the song's effect channel (the value of the EffectChan parameter on the COMMON page in the Song Editor). Therefore the effects applied to the song are determined by the program assigned to the song's effect channel, and will not change, even if you change the current MIDI channel during playback or MIDI recording.

Of course, changing MIDI channels during playback or MIDI recording will not change the FX channel if the FX Channel parameter is set to a value from **1** to **16**, or if the FX Mode parameter is set to a value of **Master**.

Synchronizing Songs

The K2600 has an internal MIDI clock, which is always running at a speed set by the Tempo parameter (on the MAIN page). When you're in Song mode and the Clock parameter (on the MISC page) is set to a value of Internal (**Int**)—and the Sync parameter (also on the MISC page) is set to **Xmit** or **Both**— songs will sync to the K2600's internal clock. At this setting, the clock signal is sent to the K2600's MIDI Out port. This is standard MIDI Sync, and any device that accepts MIDI Sync will play in sync with the K2600.

If you set the Clock parameter to external (**Ext**), the K2600 expects to receive MIDI clock at its MIDI In port. Make sure that the Sync parameter on the MISC page in Song mode is set to **Recv** or **Both**, to enable the K2600 to receive sync messages as well as MIDI clock.

To play back a song, press **Play**, and the K2600 starts as soon as it receives both MIDI clock and a Song Start message. Or if you want to record, press **Record**, and the K2600 starts recording as soon as it receives both MIDI clock and a Song Start message.

If Sync has a value of **Off** or **Xmit**, the K2600 still uses the external clock, but you can't trigger recording or playback remotely; you have to use the K2600's soft buttons.

If you're using Song mode to capture a sequence that you've recorded on an external sequencer, you'll want to consider the Clock parameter's setting before you record via MIDI. If you have the Clock parameter set to **Ext**, the K2600 will follow the clock of your external sequencer. As a result, the notes in the song you create will fall regularly on the beats (unless your externally recorded sequence uses a time signature other than 4/4). This will make it easier for you to find the notes in the Song Editor. If you set the Clock parameter to **Int**, the notes in the song will not necessarily align with the beats of the measures in the song, but the song will play back exactly as you recorded it on the external sequencer—including tempo changes you may have incorporated into the externally recorded sequence. If the Clock parameter is set to **Ext**, tempo changes will not carry over to the K2600, and will not be heard when you play back the song.

Finally, keep in mind that when the Clock parameter is set to **Ext**, programs that use one or more of the Clock control sources (see Chapter 6 of the *Reference Guide*) will sync to the external MIDI signals. If no external clock signal is received, the Clock control sources are disabled.

Songs and Effects: A Brief Tutorial

On page 12-20 we discussed how to keep the effects constant during song playback and MIDI recording. For more complete control over the effects used in a song—including real-time control—we recommend dedicating one track of the song to effects control. Here's how to do it.

1. Go to Effects mode, and make sure that the value of FX Mode is **Auto**, and the value of FX Channel is **Current**.
2. Go to the MAIN page in Song mode, and call up a song.
3. Press **Edit**, which takes you to the COMMON page in the Song Editor.
4. Set the EffectChan parameter to the channel you want to use for effects control. Choose a channel that isn't being used for any of the existing tracks in the song. Channel 16 is the default click-track channel, so you probably don't want to use Channel 16. For this tutorial, we'll use Channel 15.
5. Save the song and exit the Song Editor. You're back on the MAIN page in Song mode.
6. Set the recording track (the RecTrk parameter) to match the effects channel that you set in Step 4—in this case, Channel 15. Note the **R** in the Track status indicator line.
7. Move the cursor to highlight the current program. This is where you select the program to be used for the current recording track. Since you aren't going to record any notes on this track, the program assignment doesn't matter. On the other hand, if you already have a program that uses a studio and FXMods that you like, use it here.
8. Press **Edit**, and since the cursor was highlighting an editable object (the program), you'll enter the Program Editor.
9. Go to the KDFX page, and choose a studio. Assign any FXMods that you want to use.

10. Save the program (we recommend renaming it as well), then press **Exit** to return to the MAIN page in Song mode.

So far, so good. Your song uses Channel 15 for effects control, and the effects for the song are determined by the studio used in the program on Channel 15. That is, every program in the song directs its output to this studio, according to the value of the Pair parameter on the OUTPUT page in the Program Editor.

You'll recall that a studio has four inputs, each of which can be responsible for a different effect (or no effect at all). You may want to edit each program in the song, to send its output to the desired studio input. There's a quicker way, however, that doesn't involve editing programs: you can determine program output (and consequently studio input) based on MIDI channels. For example, you can send Channel 1 to KDFX-A, in which case any program on Channel 1 will send its output to KDFX-A, regardless of the program's output settings.

1. Press the **MIDI** mode button to enter MIDI mode, and press the **CHANLS** soft button. This takes you to the CHANNELS page.

2. Press the **Chan/Bank Up** or **Down** button to display the settings for one of the channels you've used in your song. (the top line of the display shows you the current channel).

3. Change the value of the OutPair parameter. Any value other than **Prog** means that the output settings are determined by the *channel*, not by the program assigned to that channel.

4. Change the value of the OutPair for the other channels that you've used in the song.

Now you have all the outputs directed to the right studio inputs. Keep in mind, though, that the output settings are customized for the current song. You'll need to repeat this process for each song—unless you set OutPair back to **Prog** for every MIDI channel.

Next you'll need to make sure that the song always calls up the right studio.

1. Go to the MAIN page in Song mode, and make sure that the recording track is still the one that uses Channel 15. Also make sure that the program on that track is the one containing the studio you want to use for the song.

2. Record a couple of bars. This automatically puts a Program Change command at the beginning of the track. Each time you play the song, the K2600 selects that program—and consequently the studio and FXMods associated with that program.

That's it. If you want the song's effects to change during playback, use this track to record movements of the controllers that are designated as FXMods.

With one small difference, this approach to effects control also works if you're using an external sequencer. When you're recording in Song mode, the EffectChan parameter (on the COMMON page in the Song Editor) determines the channel used for effects control. When you're using an external sequencer, it works a bit differently.

1. Press the **Effects** mode button to enter Effects mode.

2. Set the value of the FX Mode parameter to **Program**.

3. Set the value of FX Channel to whatever channel you want to use for effects control.

4. Create a program that uses the studio and FXMods you want, and use that program on the channel you chose as the FX Channel.

Memory Limits

While there's no actual time limit to the length of the songs you record, their size is limited to 64K (or to the maximum amount of available free RAM space you have, if it's less than 64K). However, you can create longer songs by recording each section as a separate song, then putting it together with the Arrange feature. If you run out of RAM space while recording a song, the recorder stops and prompts you to save the song. It's a good idea to check your free RAM space before you begin recording a song, and to check the "Used" field as you record. If you've used all the available RAM for recording, you may find that when you go to the Song Editor to delete a song or edit its tempo, the K2600 tells you that there's not enough memory to edit. In this case you won't be able to edit any object greater than 4K in size. Objects smaller than 4K can still be edited, because the K2600 always reserves a minimum of 4K of RAM.

If you want to delete a song and the K2600 won't let you enter the Song Editor, select the default song (**1 NewSong**). Since it's smaller than 4K (as long as you haven't saved any changes to it), you'll be able to enter the Song Editor. Press the **Delete** soft button, then use the Alpha Wheel to select the program you want to delete. Press the **Delete** button again, and the song will be erased, freeing up enough RAM to edit other songs. (You could also delete the song in Master mode—by pressing Object, then Delete, to get to the file deletion dialog.)

Loading MIDI Files From Disk

If you have a Type 0 or Type 1 MIDI sequence file stored on an MS-DOS disk (720K or 1.4 M) or a SCSI device, you can load it into one of the RAM banks, and the K2600 will be able to play it from Song mode.

Recording Multi-timbral Sequences via MIDI

You can record sequences from an external MIDI device using Song mode. Program numbers and MIDI channel assignments of multi-timbral sequences are recorded with the notes. To record via MIDI, connect the MIDI Out port of your sequencer to the K2600's MIDI In port. Select Song mode, and set the Clock parameter to External. This will sync the K2600 with the MIDI clock of the external sequencer.

You will probably want to set the Local Keyboard Channel parameter to **None** when recording from an external sequencer, since the rechannelizing effect of that parameter could have unintended results.

To record all your tracks in one pass, set the RecTrk parameter to **Mult** and make sure that for each channel of information on your source sequence, you have a track enabled to record and a unique channel assigned to that track. (The default setting of all tracks enabled to record on channels 1–16 will always work.)

You can also record individual tracks from your source sequence by setting the RecTrk parameter to a specific track. The K2600 will record only information coming in on the channel that the RecTrk parameter is set to.

Press the **Record** button, and the K2600 will wait for the first clock start from the sequencer. Make sure that your sequencer is set to send MIDI clock signals, and start the sequence. The K2600 will begin recording when it receives the first MIDI clock start from the sequencer. When the sequencer has finished its playback, press the **Stop** soft button, and the K2600 will stop recording and ask if you want to save the song.

Song Mode: The MAIN Page

The Song-mode MAIN Page allows real time recording and playback, song and track selection. From this page you can view and edit the tracks' channel, program, volume and pan settings, as well as other useful items.

Parameter	Range of Values	Default
Current Song (CurSong)	Song ID & Name	1 NewSong
Recording Track (RecTrk)	1 – 16, None, Mult	1
Program	Program ID & Name	Current Program
Setup	Setup ID & Name	Current Setup
Track Status	- (Empty), R, M, P	- (Empty)
Channel	1 – 16	1 – 16
Volume	0 – 127	127
Pan	0 – 127	64
Tempo	1 – 255 BPM	120 BPM
Mode	Merge, Erase	Merge
Location (Locat)	1:1 – 9999:9	1:1

The Events field on the top line displays the number of events that you can store in RAM. 375 K in the above example represents maximum available memory with P/RAM installed. The maximum is 121 K without P/RAM. Note that this figure shows the number of free *events*, each of which takes up about four bytes of RAM. That's why the number you see here is typically about 25% of the free RAM (in *kilobytes*) you see in the Samples field in the top line of the Disk- and Master-mode pages.

When the Song Status is REC READY or RECORDING, the Events field changes to Used, and indicates the percentage of the recording buffer that you have filled, instead of the free event space.

Song Status, also on the top line of the display, is always one of the following:

STOPPED The default sequencer status; also appears when you press the **Stop** or **Pause** button.

PLAYING Appears when the **Play** button is pressed, but only if the following conditions are true: the **Record** was not pressed prior to pressing Play, the Key Wait parameter is set to **Off**, and the Clock parameter is set to **Int** (or Clock is **Ext** and MIDI clock is detected).

REC READY Appears when the **Record** button is pressed while Song Status is STOPPED. REC READY flashes, indicating that the sequencer is waiting to start recording.

RECORDING Appears when the **Play** button is pressed while REC READY is flashing (unless Key Wait is **On** or the Clock is set to **Ext**). RECORDING also appears if the **Record** button is pressed while Song Status is PLAYING.

KEY WAIT Appears when the **Play** button is pressed, while Song Status is STOPPED or REC READY, if the KeyWait parameter on the MISC page is set to **On**. KEY WAIT flashes, indicating that recording or playing will begin when you strike a key.

EXT. CLOCK Appears when the **Play** button is pressed, while Song Status is STOPPED or REC READY, if the Clock parameter on the MISC page is set to **Ext**. EXT. CLOCK flashes to show that the K2600 is waiting for an external MIDI clock message to start recording or playing.

Current Song (CurSong)

This shows the ID and 16-character name of the song currently selected for recording, playback, or editing. When a song is selected, Program Change, Volume, and Pan information is sent to all MIDI channels assigned to tracks that have data on them, and the internal clock is set to match the setting of the Tempo parameter.

Tempo

Controls tempo for the selected song. You can make temporary changes, record real time tempo changes, or set an initial tempo for the current song.

Whatever the tempo is set to when you record your first track will be the song's initial tempo. Temporary changes may be made during playback, but the tempo will reset to the initial tempo when the sequencer is STOPPED.

To change a song's initial tempo, press **Record** (the Song Status will change to REC READY), set the tempo desired, then press **Stop**. The initial tempo can also be changed with the Tempo parameter on the COMMON page in the Song Editor. The song will always start playback at the initial tempo, even though this tempo marker does not get recorded as a tempo event on any track.

If the sequencer is RECORDING, any tempo value changes will be recorded in real time. Unlike the special case of setting the initial tempo, any tempo changes recorded in real time are recorded as tempo events.

Fractional Tempos

You can use fractional tempos (120.5, etc.) in your sequence. However, the initial tempo can not be fractional, and you cannot enter a fractional number in the tempo parameter on the MAIN or COMMON pages. You must first record a real time tempo event, then go to the Event Editor and change it to a fractional amount.

To do this, press **Record**, then **Play**. The sequencer starts recording. Use any data entry method to choose a tempo. The value is unimportant since you will be changing it in the EVENT Editor. Next press **Stop** and save the song. Now when you go to the EVENT Editor (see page 12-44), you will see a tempo event. You can now edit the value to a fractional amount. To have the song start immediately with the fractional tempo, edit its location to 1:1:000.

Recording Track (RecTrk)

Determines which track is record enabled. Set the record enabled track to **Multi** to record more than one channel simultaneously or to use a setup in your song.

When RecTrk is set to a single track (**1**–**16**), Record (R) is displayed for that track in the Track Status Indicator region (above the Track and Channels region). Conversely, with one exception, when any track's Status Indicator is changed to Record (R), that track is shown as the value for the RecTrk parameter.

The exception is when RecTrk is already set to **Mult**, you can select the record enabled tracks by toggling the Track Status Indicator to Record (R), and the RecTrk will remain set to **Mult**.

When **Mult** is initially selected, all of the empty tracks will be record enabled. Tracks containing data will remain set to play (P), but you can manually set them to record (R).

The parameter(s) below RecTrk change according to the value of RecTrk and in one case, the mode from which you enter Song mode. If RecTrk is set to a single track (**1-16**), Program is displayed and you can select the program to be assigned to that track.

If you change RecTrk to **None**, the display changes to show the Channel parameter followed by the Program parameter (although the Program parameter's *name* doesn't appear, just its *value*). If you switch through the channels, the program also changes, showing the program currently assigned to that channel.

A setting of **Mult** makes the parameters below RecTrk dependent on the mode from which you entered Song mode. If you enter Song mode from Program mode, the Channel and Program parameters appear below RecTrk. If you enter Song mode from Setup mode, only one parameter, Setup, appears.

Program

Scroll through the programs in memory to select the program before initially recording each track of your song. Any MIDI program changes on the current RecTrk or Chan cause the ID and name of the track's program to change during playback.

This parameter's name is not visible when RecTrk is set to **None** or **Mult** (to make room for the Chan parameter); just its value appears.

You'll see the Setup parameter instead of the Program parameter when you've entered Song mode from Setup mode. The Setup parameter functions similarly to Program.

Programs selected in Program mode or from a Quick Access bank are selected as the program on the current RecTrk when you return to Song mode.

To change a track's program quickly, press **Record**, select the program, then press **Stop**. Or you could press **MIXER** to go to the MIX page, change the program as desired, then press **Keep**. This preserves all changes you have made to any other tracks: volume, pan, tempo, etc.

Channel (Chan)

This parameter determines the control channel and is available only when RecTrk is set to **None** or **Mult**. When RecTrk is Mult, this parameter appears only if you have entered Song mode from Program mode. In this case, the Channel parameter gets squeezed onto the same line as the Program parameter, which is why you don't see the Program parameter's name, just its value.

Setup

Displays the ID and name of the setup to be recorded. This parameter is available when RecTrk is **Mult**, and you enter Song mode from Setup mode. The display diagram below shows an example of the Song-mode page with the Setup parameter replacing the Channel and Program parameters.

Using setups in Song mode takes a bit of extra planning. Since each zone in a setup uses a separate MIDI channel, you need to make sure that each setup zone has a corresponding track and channel allocation. It's important to know how many channels, and consequently how many tracks, are needed for recording a particular setup. Each setup can have up to eight zones that can respond to your playing differently, depending on what range of the keyboard is being played, or if certain velocity and/or controller values determines when a particular zone will respond. Be aware of the behavior of each setup you intend to record so that you can allocate the proper tracks and channels needed in your song.

Volume (Vol)

You can set an initial volume level for the playback and recording of each track as a value between **0** and **127**. If the channel of the RecTrk (or the control channel, if RecTrk is set to **Multi** or **None**) contains any recorded volume change (controller code 7), the change will be reflected as the Vol parameter's value in real time.

To change a track's initial volume quickly, press **Record**, change the value of Vol, then press **Stop**.

Pan

You can set an initial pan position (the balance between the Left and Right audio channels) for the playback and recording of each track as a value between **0** and **127**. A value of **64** is center. If the channel of the RecTrk or the control channel contains any panning data (controller code 10), the Pan parameter's initial value for the current track is modified in real time.

To change a track's initial pan position quickly, press **Record**, change the value of Pan, then press **Stop**.

Mode

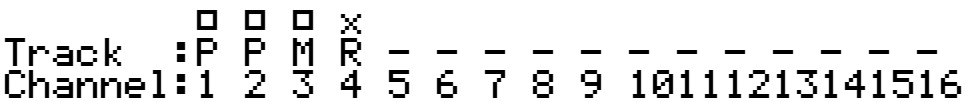
If Mode is set to **Merge** you will be able to overdub when recording on a track containing previously recorded data. You'll usually want to set Mode to **Merge** when RecMode (on the MISC page) is set to **Loop**. Otherwise, each time through the loop, the previously recorded information will be erased.

If you set Mode to **Erase**, the previously recorded data on the record enabled track will be replaced with the new data only during the Bars and Beats you are actually recording, and the previously recorded data before and after the newly recorded Bars and Beats will be preserved.

Location (Locat)

The Bar and Beat displayed as the Locate value changes relative to current location of the song during playback and recording. You can set this to a negative Bar and Beat location to start playback a set length of time before the beginning of the song.

Whenever you set the Locate point, that location will be used as the return point when **Stop** is pressed. Simply press **Stop** again to reset the song to the top (**1 : 1**).



Mode Indicators (+ and x):

Mode Indicators appear only for tracks that already contain data.

A plus sign (+) appears above the Track Status Indicator of a track set to record (R) when the Mode parameter is set to **Merge**.

An (x) appears above the Track Status Indicator of a track set to Record (R) when the Mode parameter is set to **Erase**.

Activity Indicators (□)

A small square (□) above the Track Status Indicator of a track set to **Play** (P) or **Mute** (M) means the track contains data.

During playback and recording, the indicators above tracks containing any MIDI data will flash a small, filled-in square when any MIDI activity is detected. The filled-in square also flashes over a track any time that there is incoming MIDI data on that track's channel, even while the sequencer is STOPPED.

Track Status Indicators

Using the **Up**, **Down**, **Left**, and **Right** cursor buttons to position the cursor onto a Track Status Indicator, you can toggle an empty track (-) into Record (R) with the Alpha Wheel or **Plus/ Minus** buttons.

Once a track contains data, it will have a (P) as a Track Status Indicator, and it will be played during playback. You now will be able to toggle between Play (P), Mute (M), and Record (R).

The track selected as the RecTrk will display an (R), designating it as the recording track. If the RecTrk is set to **Mult**, initially all empty tracks will have Record (R) as a Track Status Indicator, any of which can be switched back to empty (-) if at any time recording on specific tracks is not desired.

If there isn't a track with an (R), the RecTrk parameter's value will be **None**. (The exception is when the RecTrk is set to **Mult** and you have switched all of the tracks out of record enable.)

Track Channels

Each track has a MIDI Channel that it uses to receive and transmit data. By default, tracks 1–16 of a new song are assigned to Channels 1–16 respectively, although a track can play or record on any channel and the same channel can be used for more than one track. Keep in mind, however, that only one program can be assigned to a channel at a time, so if you have more than one track assigned to the same channel, they'll play the same program—the one on the higher-numbered track, since that's the most recent Program Change command received on that channel.

Soft Buttons on the MAIN Page

These buttons are similar to the transport controls on a tape deck. Some of those decks require you to press Play and Record simultaneously to begin recording. The K2600's transport buttons aren't like that, however. It's important that you press only one of these soft buttons at a time to insure proper recording start points, and to always be sure of the current sequencer status.

Record changes the Song Status to REC READY if the current Song Status is STOPPED. If the current Song Status is PLAYING, it will be switched to RECORDING when you press **Record**.

If the RecTrk is set to None, pressing **Record** will select the first available empty track for recording, thus setting the RecTrk to the newly record-enabled track number and placing an (R) in that track's status display. Song Status will change to REC READY or RECORDING, depending on the previous Song Status as described above.

Play plays back any recorded data when pressed while the song status is STOPPED. Playback will begin from the bar and beat specified in the Locate parameter.

When the Song Status is REC READY, pressing the **Play** soft button will begin recording.

Pause and **Play** share the same soft button. **Pause** appears only when the Song Status is PLAYING or RECORDING. Pressing **Pause** while the song is playing will stop the playback (soft button switches to **Play**), and the location remains at the current bar and beat, allowing you to continue from that location by pressing **Play** again.

Pressing **Pause** while recording will stop the recording process as if you had pressed **Stop**.

Stop halts the playback or recording, and resets the song's location to either the default Bar 1, Beat 1 value, or to whatever location you defined with the Locate parameter. If the location is defined as something other than Bar 1, Beat 1, press **Stop** twice to return to **1:1**.

Pressing **Stop** when the Song Status is RECORDING will always prompt the "Save changes to this song?" dialog (described below), and provides you with the opportunity to listen to the **new** song and compare it with the **old**, previously saved, song before answering **Yes** or **No**.

Here are some useful alternatives to using these button presses:

- Keyboard models have dedicated front panel buttons for **Record**, **Play**/**Pause**, and **Stop**. You'll find them just below the eight mode buttons.
- Footswitches can be assigned to **Play**/**Stop** and **Record**/**Stop**. On the MIDI-mode TRANSMIT page, assign either footswitch to controller number 102 or 103. Using controller 103, you can even record from within the Song Editor.
- Double button presses allow Song **Play**, **Pause**, and **Stop** soft button functions from most places where these buttons are not available. Use the cursor **Left**+**Right** double-press for **Play**/**Stop**, and use the cursor **Up**+**Down** double-press for **Play**/**Pause**.

Erase removes all channelized data from the track on which the cursor is currently positioned (on either the Track or Channel parameters) or from the record-enabled track if the cursor is positioned elsewhere. As described on page 12-32, a dialog appears that allows you to verify your intentions before permanently erasing any data. Once you've confirmed the erasure, it takes place immediately, so be sure you really want to erase the track before pressing the **OK** soft button. You will not be able to revert to a version of the song that includes the erased tracks—unless you've saved the earlier version to another ID. So before you start removing data that you may not want to lose permanently, you should also check out *Delete* on page 12-53, and *Song Editor: Track Functions* on page 12-51.

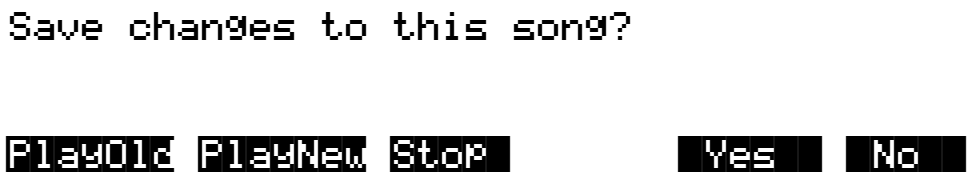
The Erase function doesn't show a dialog or erase any data if an empty track is selected.

MISC accesses more sequencer control parameters found on the Song-mode MISC page. These miscellaneous controls include record- and play-mode settings, auto punch-in points, quantization on input settings, tempo, and click attributes, as documented later in this chapter, starting on page 12-32.

MIXER lets you view a graphic representation of knobs and level faders for each track on the MIX page. You can modify program changes, volume and pan position on this page. Record status can also be selected here. The section on the Mixer begins on page 12-39.

Save this song? Dialog

The following dialog appears after you have recorded a track and pressed **Stop**, or if you have entered the Song Editor and made changes, then pressed Exit, or if you press **Save** in the Song Editor.



PlayOld appears along with the **PlayNew** soft button in the "Save this song?" dialog after the recording process has been stopped. Pressing **PlayOld** will play the current song, minus the last, but not yet saved, recorded data. The exception is when there is no previously recorded data (that is, recording the first track of a NewSong), then you will only have a **Play** soft button to audition the recorded data just entered.

PlayNew/**Play** soft buttons allow you to play all of the recorded data, including data on the track(s) you have just recorded.

Stop halts the playback of either the Old or the New version of the song you are currently auditioning. Press the **Stop** soft button to stop the playback or recording, and reset the song's location to either the default Bar 1, Beat 1 value, or to whatever location you defined in the Locat parameter.

Yes saves the data on the track(s) you just recorded. Whatever was played back when you pressed **PlayNew** will be the version of the song to be saved when you press Yes. The "Save New Song?" Dialog (shown below) will be displayed.

No returns you to the Song-mode page in which you were last recording, without saving any unsaved changes to the current song.

Save New song? Dialog

Saving a song requires that you assign it an ID and this is where you do so. If you select an ID of an existing song object in RAM, the **Save** soft button will become **Replace** and **Replace existing Song** will appear on the display as a warning and a chance to change your mind.

There are only 20 IDs available for song objects per bank in banks 100 - 900. In the zeros bank, there are 75, IDs 1–75. In the 200s bank there are IDs 200–219, in the 300s bank, IDs 300–319, and so on.

Object accesses some useful database functions while still in Song mode, before you actually save the current song. Pressing **Object** jumps you directly to the Object Utility, described on page 11-13. When you press **Done** on the Utility page, you will be returned to the "Save New Song" dialog.

The Rename, Save, and Cancel soft buttons function the same as they do in all other editors.

Erase Track Dialog

This dialog asks you if you are sure you want to erase a specific track. The track number will correspond to the track currently selected by the cursor position. When RecTrk is set to Multi or None, the Erase track function looks to the cursor position to determine the track to erase. If the cursor is positioned somewhere other than the Track or Channel parameters, Erase will have no effect. Erasing a track will not alter the song's End point, nor will it remove any tempo events, since these elements are common to all tracks in the song.

Yes erases all data on the selected track and returns to the MAIN Song mode. The song will keep the erased track record enabled, but it will be an empty track.

No aborts the erasing of the selected track and returns to the MAIN Song mode with all previously recorded tracks intact.

Song Mode: The MISC Page

This page contains parameters that determine how the sequencer behaves during playback and recording, and when the K2600 is connected to another MIDI sequencer. Most of these settings are stored in the Master Object, (all except the Auto punch-in points) and none of these are saved with the song.

Parameter	Range of Values	Default
Record Mode	Linear, Fixlen, Loop, Unloop, Auto	Linear
Play Mode	Linear, Loop, List, Chain	Loop
Key Wait	On, Off	Off
Locate	-25:2 – 999:4	1:1
Auto In	1:1 – 999:4	1:1
Auto Out	1:1 – 2500:	1:1
Input Quantize	Off, 1% – 100%	Off
Grid	1/1 – 1/384	1/8
Swing	-99% – 125%	0%
Sync	Both, Xmit, Recv, Off	Off
Clock	Int, Ext	Int
Tempo	Auto, Fixed	Auto
Countoff	Off, 1, 2, 3	1
Click	Off, Rec, On, Cnt	Rec
Click Channel	1 – 16	16
Click Program	1 – 999	198
Click Key	C-1 – G9	C4
Click Velocity	1 – 127	100

The top line displays the amount of free event space and the current sequencer state, which is one of the following: STOPPED, PLAYING, REC READY, RECORDING, KEY WAIT, or EXT. CLOCK.

RecMode

When recording the first track of a new song, you will be able to record as if you had an endless length of “tape” no matter what the recording mode is set to.

When you record the first track, all recording modes operate the same way. This is because until you define the length of a new song, its End point is the default setting of Bar 8001, the maximum amount of Bars in a song. The End point is referenced and modified in different ways depending on the RecMode.

The End point of a song is defined when:

1. The **Stop** button is pressed to end the recording of the first track. The new End point is aligned to the nearest downbeat of the (empty) Bar immediately following the last Bar you were recording when **Stop** was pressed.

2. **Stop** is pressed while recording any track past the previously set End point in Linear or UnLoop recording mode. Again, the new End point is aligned to the downbeat of the (empty) Bar immediately following the last Bar you were recording when **Stop** was pressed.

3. The AutoOut Bar and Beat is set past current End point, after recording in Auto RecMode, and when the first track is recorded in Auto RecMode, the AutoOut Bar and Beat becomes the End point.

4. A new End point is entered on the EVENTS page.

5. Using the Track-edit functions Copy, Insert, and Delete to alter the song's length.

The End point of a song is used as a loop point in Loop and UnLoop modes, and it defines the Fixed Length of a song when you record in FixLen mode.

Linear: Record as if you had a nearly endless length of "tape."

FixLen: The song will not continue recording past the End point of the song when the RecMode is set to **Fixed Length**. Recording will automatically stop at the End point.

Loop: While RECORDING, the song will play the data between 1 : 1 and the End point over and over, allowing you to overdub in each pass if the Mode parameter on the MAIN Song-mode page is set to **Merge**. Make sure the Mode parameter is set to **Merge** if you intend to overdub in Loop Record, or else each consecutive pass in Loop RecMode will erase the data recorded on the previous pass. While you are still recording in Loop mode, you may selectively erase individual note events by pressing and holding the **Enter** button and depressing the desired notes on the keyboard during the times you would like them erased. Once the song is saved, you can not use this feature to erase individual notes.

UnLoop: When recording in UnLoop RecMode, any existing tracks will be played back as if they were looping from Bar 1 : Beat 1 to the End point, but they are actually being re-recorded linearly over absolute Bars and Beats until you press **Stop**. UnLoop allows you to record a linear track over a short looping section without first having to copy the section over and over again to achieve a new desired Song length. The End point of the Song is extended to the downbeat of the (empty) Bar immediately following the last Bar you were recording when **Stop** was pressed.

For example, let's say you've a recorded a four-bar drum loop and now want to record an eight-bar bass line. This would be a situation where UnLoop would come in handy. While the drum track keeps looping, the bass track will record in linear fashion, and the end point will be moved to the point at which you press **Stop**. Actually, the drum track will also change. It will play through its loop twice, but while the information is repeating in the loop, it will be recorded to the track. So now if you look at the drum track, you will see information in bars 5-8 (a duplicate of the information in bars 1-4).

Auto: Set RecMode to **Auto** to punch-in record, (either in merge or erase mode), on a track between the Bars and Beats Defined in AutoIn and AutoOut. To punch in and continue recording until you press **Stop,** set the AutoOut point before the AutoIn point.

PlayMode

The PlayMode setting, along with the End point, determine how the song or songs are played back. The song's PlayMode setting will be ignored when the song is included as a step in an arrangement; See *Song Editor: The ARRANGE Page* on page 12-63.

Linear: Set the PlayMode to **Linear** to hear the current song played only once, from the song position set in the Locate parameter to the End point. The song will be returned to the Locate Bar and Beat when it reaches the End point.

Loop: The Loop PlayMode will loop the current song from the End point back to Bar 1, Beat 1 continually during playback until **Stop** is pressed.

List: song objects in memory can be played back to back in numerical ID order starting from the current song followed by the song with the next highest ID. Once the current song reaches its End point, immediately the CurSong parameter is updated to the next highest song object ID and it will play from Bar 1, Beat 1 to its End point. When the song with the highest ID in

memory has played through to its End point, the sequencer will stop and that song will be the new **CurSong**.

Chain: For every song, there is a parameter called ChainTo found on the COMMON page that determines what other song, if any, will immediately follow this song's playback when PlayMode is set to **Chain**. When the current song ends, the ChainTo song will replace the previous CurSong, and if its ChainTo parameter is set to any value other than **0 None**, then the Chain PlayMode will continue playback with the next song being chained. When the last song in the chain has played through to its End point, the sequencer will stop and that song will be the new CurSong.

The most common use for the Chain PlayMode is to construct a set list of different songs. Since the songs chained together are played immediately after one another, we recommend that you include a few measures of silence either at the end or the beginning of each song in the Chain.

When you want to string songs together more seamlessly, you can create an arrangement with the Arrangement Editor. See page 12-63 and page 12-12.

KeyWait

KeyWait specifies whether the sequencer will wait for a Note event before going into PLAYING or RECORDING status. With the KeyWait On, press the **Play** soft button while the sequencer is STOPPED or REC READY and the new status, KEY WAIT, will flash in the Song Status Field until a key is played. You can override the KEY WAIT status by pressing the **Play** soft button twice.

Locate

The Locate Bar and Beat will change in real time during play back and recording to reflect the song's current position. It can be set to a Bar and Beat before (negative values) or during a song. Once a song's length is defined, the End point is the maximum value for the Locate parameter. If Locate is not set to 1 : 1, the count off, if any, is disabled during play back or recording.

This parameter is identical to the Locate parameter on the MAIN page.

AutoIn

When you are in Auto record mode, AutoIn is the Bar and Beat when the recording will begin. If AutoIn is not set to 1 : 1, the count off, if any, is disabled. The AutoIn setting will not have an effect on recording unless the RecMode is set to **Auto**. When this parameter's value is highlighted, pressing the **In/Out** soft button updates only the AutoIn parameter; it doesn't update the AutoOut parameter.

AutoOut

When you are in Auto record mode, AutoOut is the Bar and Beat when the recording will stop. Set the AutoOut location earlier than the Bar and Beat defined as the AutoIn point in order to record to the very end of a song. The AutoOut setting will not have an effect on recording unless the RecMode is set to **Auto**.

Input Quantize (Quant)

This parameter determines how much Note events are moved towards grid locations upon the initial input of the events. If set to **Off**, no Quantizing will occur while you record, and the exact timing of your performance will be preserved during play back. If set to **100**%, every recorded Note event will be aligned to the closest grid location, defined by the Grid setting. Input

Quantize is used to quantize your performance as you record it in. However, you may wish to record without quantization and go back and quantize at a later point. To do this, use the Quantize function in the Track Editor, as described on page 12-54.

Grid

This setting determines the size of the Input Quantize grid expressed as a fraction of a Bar with a 4/4 meter. Set Grid to **1/1** for whole note grid, **1/16** for sixteenth notes. All of the standard note durations and every fractional Bar divisions in between (including triplets, for example, 1/12 = 1/8tr, 1/24 = 1/16tr, and so on) are available as the size of the Input Quantize grid. You can select commonly used Grid values by double-pressing the **Plus/Minus** buttons.

Swing

The Swing percentage is applied to the quantize grid. Zero percent swing is straight time, **100**% produces a swing (triplet) feel. A positive Swing value determines how close every other grid location is moved to a point 1/3 of the way towards the next grid point. Negative Swing moves every other grid location closer to a point 1/3 of the way towards the previous grid point.

Sync

The Sync parameter is used in conjunction with Clock. It controls transmission and reception of MIDI sync messages except actual clock. These are the messages it controls: Song Start, Song Stop, Song Continue, Song Select, and Song Position Pointer.

Song Select

Song Select is a command similar to a Program Change command; it enables you to select songs via MIDI. Like other MIDI messages, Song Select has 128 values. That's about half the number of songs you can store in the K2600, so if you have a lot of songs, you can't use Song Select to select all of them.

The K2600 maximizes the number of songs you *can* select by remapping Song Select values of 0–127 so they match the way songs are stored in the K2600's RAM banks (75 in the Zeros bank and 20 in each of the other nine banks). If you want to use Song Select extensively, you should number your songs according to the song IDs listed in the following table. Songs in the Zeros, 100s, and 900s banks are not available for selection with Song Select.

Song Select Value	Song ID
0–19	200–219
20–39	300–319
40–59	400–419
60–79	500–519
80–99	600–619
100–119	700–719
120–127	800–807

Song Position Pointer

The K2600 sends a Song Position Pointer message via MIDI when you start a song. The message indicates the location (Bar and Beat) at which the song starts playing—often that's the start of the song (1:1), but you can set the Locate parameter anywhere you want, and start the song from

there when you press **Play**. The K2600 also responds to Song Position Pointer messages received from an external source.

When you have the K2600 synced to another sequencer, the Song Position Pointer message shifts the auxiliary sequencer's start point correspondingly. This is normally an extremely convenient feature, but there's one thing to avoid.

The K2600 lets you set a negative value for Locate, which gives you a countoff before the song starts (if you do this, set the Countoff parameter on the MISC page to **Off**, so you don't repeat the countoff). Keep in mind that the Song Position Pointer message doesn't support negative values, so your auxiliary sequencer might lose sync if you use a countoff. The safest approach is never to start a song with a Locate value less than **1:1**.

Clock

Specifies the source clock as being internal or external. When the Clock is set to external (**Ext**), the K2600 will wait to receive MIDI clock data, via its MIDI In port, from another device capable of generating MIDI clock data before playback and real-time recording can begin.

Tempo

The Tempo parameter, when set to **Fixed**, provides a tempo lock feature to override any real-time tempo changes recorded into a sequence. If set to Auto, tempo changes will be respected.

CountOff

Selects the number of bars of countdown, if any, before playback or recording starts. This works in conjunction with the click, so if the Click parameter is set to **Off**, the CountOff setting will have no effect. If the click is set to record only, then the CountOff will happen only when RECORDING.

Click

The Click parameter controls the click behavior. Set to **Off**, there is no click, and consequently no CountOff. When it is set to **On**, a click is present during playback and recording. To have a click only while RECORDING, set the Click to **Rec**. A value of **Cnt** generates a click only during RECORDING CountOff, if any.

ClickCh

Specifies which MIDI channel will be used for the metronome click.

ClickPrg

If click is in use, ClickPrg specifies which program will be used as the metronome click's sound. The click channel will be locked on to this program internally, and this program number will be transmitted via MIDI on the click channel to external any device(s) when playback or record is started. The default click program is **198 Click**, which uses the Clave keymap.

ClickKey

The ClickKey is the note to be used for the metronome click.

ClickVel

ClickVel determines the attack velocity to be used by the metronome click. The first beat of each measure gets played at exactly this velocity level while the other beats scaled to about 90% of this value as a way to provide an accent.

If there's not enough of a distinction between Beat 1 and the other beats, you can do the following to extend the dynamic range of the click program:

1. Go to Program mode, and select Program **198 Click**, then press **Edit**.
2. Press the **more>** soft button, then the **F4AMP** soft button.
3. Select the Velocity Tracking (VelTrk) parameter, and increase its value. The more you increase it, the more difference you hear between Beat 1 and the other beats. Don't go too high, though. This may cause Beats 2, 3, and 4 to drop too low. When you save, we recommend using a different program name and ID, or at least a different ID.
4. Go back to Song mode, select the new program's ID as the value for the ClickPrg parameter, and start recording.

Soft Buttons on the MISC Page

Record, **Play(Pause)**, and **Stop** work the same as they do on the MAIN page, described on page 12-24.

New selects **1 NewSong** as the current song and jumps back to the MAIN page. The tracks in the new song will be empty, but all initial program, volume and pan settings, and all parameters in the MISC page remain set the same way they were in the previous song.

In/Out provides a quick way to enter the Auto punch-in points in real time, based on your current location in the song. When you press **In/Out**, the K2600 updates either the AutoIn or AutoOut parameter (or both), depending on their current values and the value of the Locate parameter.

Typically, you'll start song playback, press **In/Out** when you reach the desired punch-in point, then press it again when the song reaches the desired punch-out point.

More specifically, the first time you press **In/Out**, the K2600 sets AutoOut to match the current value of Locate. Press **In/Out** again, and the K2600 shifts the current value of Auto Out to the value of Auto In, and updates AutoOut to match the current value of Locate.

If the value of AutoIn or AutoOut is highlighted when you press **In/Out**, the K2600 updates only the selected value.

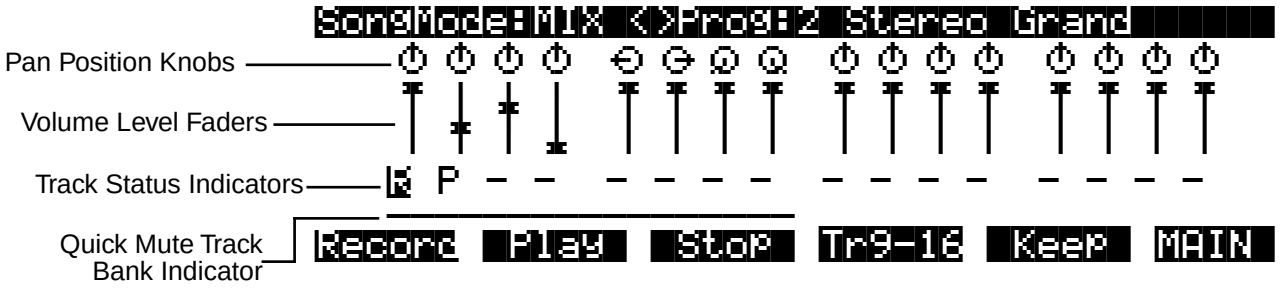
The AutoIn and AutoOut parameters display only Bars and Beats. However, the actual In and Out points will be precise to the Tick occurring at the time the **In/Out** button was pressed.

MAIN returns you to the MAIN page.

Song Mode: The MIX Page

The MIX page allows you to set and keep new initial settings for all sixteen tracks' program changes, volumes, and pan positions. You can set these three parameters for each track, then press the **Keep** button, prompting a dialog that asks if you really want to update these settings. Press **Yes** to make the changes. Another way to set these initial settings is to press **Record** to put the sequencer into REC READY status, make any desired changes, then press the **Stop** soft button.

You can also record real-time changes by changing the value of the highlighted fader or knob while recording on that track. If you do make recording changes in real time, though, make sure that RecMode is set to **Merge**, or else the data previously recorded on the track will be erased.



The top line of this page displays the program number and name for the currently highlighted track. The different tracks are selected by moving the cursor with the **Left** and **Right** cursor buttons. The program for each track can be changed in the MIX page with the **Chan/Bank** buttons. Pressing the **Chan/Bank** buttons at the same time will jump to the next bank of 100 programs.

Pan Position

Position the cursor over any one of the sixteen Pan Position "knobs" on the display and turn the Alpha Wheel to change the panning for the selected track. The graphic display will move smoothly between the left and right settings and these changes can be recorded in real time. Use the alphanumeric buttonpad to enter in a value between **0** (hard left) and **127** (hard right) if you want to have a track jump immediately to a new pan position. The default pan position is **64** (straight up).

Volume Level

Position the cursor over any one of the sixteen Volume Level "faders" on the display and turn the Alpha Wheel to change the MIDI Volume for the selected track. The graphic display will move smoothly, setting volume changes that can be recorded in real time. Use the alphanumeric buttonpad to enter in a value between **0** (no volume) and **127** (maximum volume) if you want to have a track jump immediately to a new volume level. The default value is **127** (maximum volume).

On keyboard models, you can use the sliders to adjust the volume of the currently selected bank of eight tracks.

Track Status Indicators

Using the **Up**, **Down**, **Left**, and **Right** cursor buttons to position the cursor onto a Track Status Indicator, you can toggle an empty track (-) into Record (R) with the Alpha Wheel or **Plus** or **Minus** buttons.

Once a track contains data, it will have a (P) as a Track Status Indicator, and it will be played during playback. You now will be able to toggle between Play (P), Mute (M), and Record (R).

The track selected as the RecTrk will display an (R), designating it as the record-enabled track. If the RecTrk is set to **Mult**, then all of the empty tracks will have Record (R) as their Track Status Indicator. If RecMode is not set to **Mult** and there isn't a track with an (R), the RecTrk parameter's value will be **None**. If you are in Multi record mode, and have turned all record-enabled tracks (R) back to empty (-) so that there isn't a track with an (R), the RecTrk remains set to **Mult**.

Quick Mute Track Bank Indicator

This parameter appears as an underscore directly below the graphics for either the bank of Tracks 1–8 or Tracks 9–16. It indicates which bank of eight tracks will respond to the Quick Mute feature, described with the **Tr 1-8**/**Tr9-16** soft buttons, below. It also indicates which tracks respond to the keyboard model's sliders for adjusting track volume.

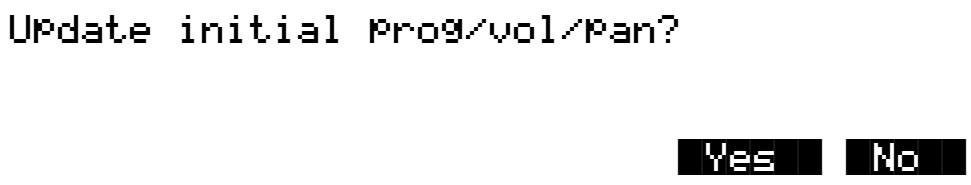
Soft Buttons on the MIX Page

Record, **Play(Pause)**, and **Stop** work the same as they do on the MAIN page, described earlier.

Tr 1-8 / (Tr 9-16): The eight mode select buttons to the left of the display are used as Track Mutes when on the MIX page. For example, press the **Setup** button to mute Track 2; notice that its track status indicator changes to **M**. Each of these buttons has an LED to indicate that the corresponding track is being muted, but since there are sixteen tracks and only eight buttons, this soft button will select, and display, the bank of eight tracks that can be muted in this fashion.

Press the **Tr 1-8** soft button to toggle the Quick Mute Track Bank Indicator under tracks 1 -8 or tracks 9 - 16, selecting which bank of eight tracks will respond to the Quick Mute feature.

Keep: If you have made any changes to the initial program, volume or panning of a track on the MIX page, press **Keep** to prompt this dialog:



Press **Yes** if you are sure you want to update the initial program change, MIDI volume, and pan settings for tracks already containing data in the current song, to the new values you just made on the MIX page. The settings will be modified and you are returned to the MIX page. Press **No** to abort the updating of the initial program change, MIDI volume and pan settings for the current song.

MAIN returns you to the MAIN page.

The Song Editor

In general, you'll get to the Song-editor pages by pressing the **Edit** button any time you're in Song mode. There's one exception: if the Program parameter is currently highlighted on the display, you'll enter the Program Editor when you press **Edit**.

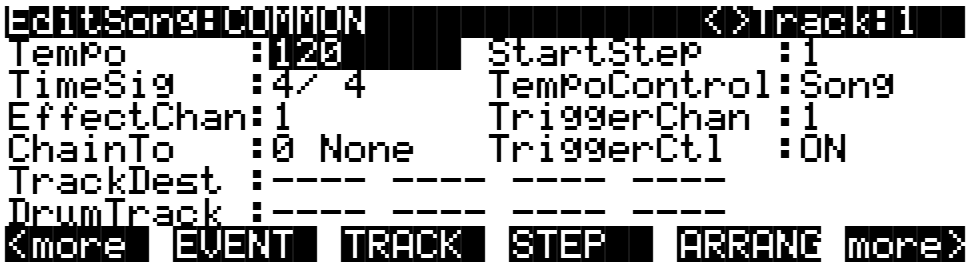
There are a few conventions shared by all of the Song-editor pages (except the ARRANGE page). Displayed at the top of each Song-editor page is the name of the page and the currently selected track (1–16, or all tracks). All of the values for the parameters found in any of the Song-editor pages are saved in the song object.

Soloing the Current Track

On all of the Song-editor pages, you can solo the current track by pressing either the **Setup** or **Quick Access** mode buttons (you can press the **Program** mode button to mute the current track). This in effect mutes all other tracks in the current song. Using the **Chan/Bank** buttons allows you to select the current track for editing and/or soloing. You can select the track to solo even if you are already in solo mode.

Song Editor: The COMMON Page

Press the **Edit** button on the front panel of the K2600 to display the COMMON page and begin editing a song. This is where you will find parameters common to all tracks, such as tempo and time signature, control parameters for effects and arrangements, and soft buttons for switching to other Song-editor pages.



Parameter	Range of Values	Default
Tempo	1 – 255 BPM	120
Time Signature	1 – 99 / 1, 2, 4, 8, 16	4/4
Effects Channel	1 – 16, None	1
Chain To	0 None, Song ID	0 None
Track Destination	-, L, M, X	-
Drum Track	-, D	-
Start Step	None, 1 – 255	1
Tempo Control	Song, Arrangement	Song
Trigger Channel	1 – 16, None	1
Trigger Control	Control Source list	On

The top line of this page displays the selected track or tracks. Select the available current track for editing by using the **Chan/Bank** buttons. Press both of the **Chan/Bank** buttons together to select all tracks.

Although the current track information is displayed on the top line, the COMMON page's parameters are global settings for the song and do not directly affect individual tracks.

Tempo

This is another place where the song's initial tempo can be set or modified.

TimeSig

Affects the click, playback looping, and locate function as well as some editing operations. Does not change the recorded data.

EffectChan

If the FX Mode and FX Chan parameters in Effects mode are set to **Auto** and **Current**, this parameter specifies which channel will control effects (studio and FXMods) while in Song mode and during playback of a song. In this situation, you'll hear the studio assigned to the program that's on the channel designated as the EffectChan will be heard.

Every song can have its own setting for EffectChan. This makes it convenient to change studios every time you change a song, but you'll need to pay more attention to which programs are controlling the studios—especially if you're creating arrangements with lots of steps. If you want to limit changes in studios as you change songs, you can do it easily. See *Effect Selection During Recording and Playback* on page 12-20 for more information.

ChainTo

The ChainTo setting is only used when the PlayMode parameter on the MISC page is set to **Chain**. Another song object is selected as the ChainTo value and will playback immediately after the current song has played for its entire length.

Parameters Used with the Arrangement Feature

The remaining parameters, as well as the Drum Track parameter, are used in conjunction with the Arrangement feature (via the **ARRANG** soft button). This feature allows you to create a song by arranging it in a series of sections, called steps. You can save the various sections of your sequence as separate songs, then assemble them using the Arrangement Editor. This method allows you to save memory, since you can repeat steps without having to duplicate the actual song data.

Another great feature within the Arrangement Editor gives you the ability to trigger steps by striking a specific note or group of notes on your controller. See page 12-63 for more information on arrangement features.

StartStep

The value for this parameter determines which step in this song's arrangement is played first. If set to **None**, the playback of the arrangement, using the transport buttons, will be disabled, though steps can still be triggered from Note events.

TempoControl

When the current song is composed of other songs entered as steps in the Arrangement Editor, the TempoControl parameter determines whether the current song's tempo setting or the arranged songs' tempo settings will be the tempo(s) used for the playback and recording of the arrangement.

Set TempoControl to **Song** if you want to use the current song's tempo as the master tempo. All of the steps' songs will playback at the same tempo, ignoring the tempos originally set for each song when you recorded or edited them.

Use the **Arrangement** setting for TempoControl if you would like the current song (containing arrangement data) to playback and record at the tempos originally defined in each arrangement step's song, ignoring its own tempo setting. The master tempo will change to the tempo of the current step's song.

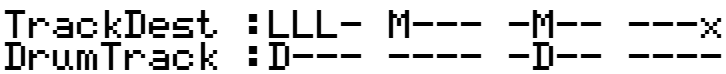
TriggerChan

This parameter controls the MIDI channel used to trigger arrangement steps via key presses as defined in the Arrangement Editor.

TriggerCtl

This parameter specifies the global control source used to enable the triggering of arrangement steps via key presses as defined in the Arrangement Editor. For example, suppose you set this parameter to a value of **MIDI 29**, which by default is the destination of Panel Switch 2 (Button 10). When Panel Switch 2 is on, striking any key in the trigger range (specified by the LoKey and HiKey parameters on the ARRANGE page). If you set this parameter to **ON**, striking a key in the trigger range always triggers a step.

TrackDest



The MIDI data on each track has a destination assignment selectable with the TrackDest parameter. There are four possible indicators:

–: This is the default setting for all tracks in a new song. It means that MIDI data on the track are transmitted both locally to the K2600, and out the MIDI Out Port on the track's channel to any external devices.

L: The track's MIDI data will be transmitted locally only, to the K2600's internal sound generator. None of the track's MIDI data will be sent to the MIDI Out Port.

M: The track's MIDI data will be transmitted only to MIDI Out.

x: Disable the transmission of the track's MIDI data either locally or to MIDI. This is a quick way to mute a track more permanently without erasing it.

DrumTrack

Any of the song's tracks can be defined as Drum Tracks so that their Note events do not get transposed when a transposition is applied in the Arrangement Editor.

This feature is particularly useful when a drum kit program (or any other nonpitched program) is used in a song, assigned to a step of an arrangement, which is being triggered over a range of

keys, and you want the sounds produced by each note number in that program to be preserved in each transposition. If in the song being used as a step in an arrangement (NOT the arrangement song itself), there is a (D) designating the track playing the drum program as a Drum Track, the originally recorded Note events on that track will remain unchanged.

The Drum Tracks' settings do not have any effect on edits made on the TRACK page in the Song Editor. Any tracks defined as Drum Tracks are transposed when a transposition is applied to these tracks from the TRACK page.

Soft Buttons on the COMMON Page

EVENT: Accesses an Event-list style editor. On the EVENT page in the Song Editor, you can scroll through, modify, add, or delete any or all of the tracks' MIDI events. The EVENT page is described on page 12-44.

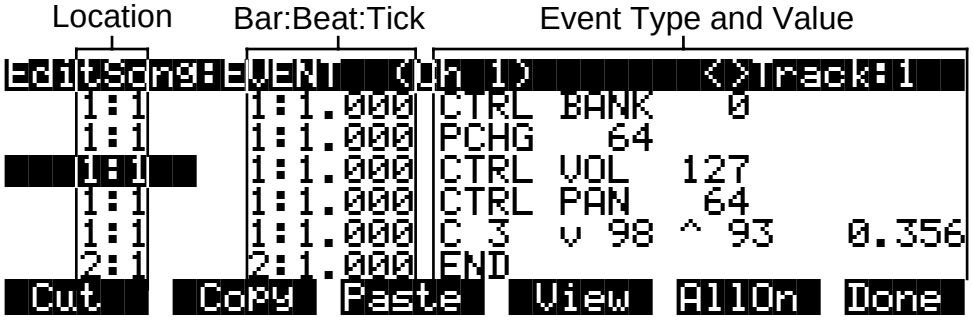
TRACK: Brings you to the TRACK page. This page accesses useful track based edit functions. There is a selectable edit function that can be applied to the selected track or all tracks in your song. The TRACK page is described on page 12-47.

STEP: Brings up the STEP page, from which nonreal-time note/rest entry is performed. The term STEP is used here to refer to step recording, and does not refer to the steps on the ARRANGE page. The STEP page is described on page 12-60.

ARRANG: Enters the ARRANGE page, gaining access to a group of arrangement specific parameters. The ARRANGE page is described on page 12-63.

Song Editor: The EVENT Page

Every type of recorded MIDI event is visible from this page. You can view and change these events if necessary.



To scroll through the events, make sure the location (Bar and Beat, in the first column) is highlighted. Use the Alpha Wheel, the **Up** and **Down** cursor buttons, or the **Plus/Minus** buttons. As you scroll through the events, each event is executed by the sequencer. In the case of note events, you will hear the note played, although the duration will be short. If you have scrolled through a Sustain (MIDI Controller 64) message with an On value then you will hear the note sustain as if the sustain pedal was depressed. The note will continue to sustain until you scroll through a Sustain message with a value of Off.

You can also jump directly to a specific bar and beat by typing the bar number and beat number, then pressing **Enter**. Keep in mind if you have controller or program data previous to the point that you jump to, those events may not have been executed and you may hear unexpected

results. For example, if you have program changes at bar 1 and bar 8, then if you jump from bar 1 to bar 9 any notes you scroll through will be played with the program change from bar 1.

The channel of the selected event is displayed on the top line of the page. When all of the tracks are being viewed in the Event list, the track of the selected event is displayed along with its channel. Use the **Chan/Bank** buttons to select an active track to view and edit the MIDI events recorded on it. You can view the data on all tracks by pressing both **Chan/Bank** buttons at the same time (or press **Chan/Bank Up** or **Down** until you scroll past the highest- or lowest-numbered track in the song). As you scroll through each event, the track and channel for the selected event appear in the top line of the display.

Location

The first column represents the Bar and Beat Locations of the different events in a song. Scroll through the events on the selected track(s) with the Alpha Wheel or enter in a specific Bar and Beat on the alphanumeric buttonpad to jump to events occurring on that Beat. A quick way to jump to the End point in a track is to press **9999** and then **Enter** on the alphanumeric buttonpad.

Bar, Beat, and Tick

Bar, Beat, and Tick are editable parameters for each event. They determine when an event happens relative to the other events within the song. To enter values with the alphanumeric buttonpad, first position the cursor in this column and then simply enter up to three digits if you only want to adjust the Tick value, four or five digits in order to change the location to a new Beat and Tick within the current Bar, or enter in the complete Bar, Beat, and Tick value to relocate the event to another Bar. No punctuation is necessary when entering any of these values.

Event Type and Value

The Event Type and Value region displays the MIDI event type (and related information) at each Event-list location in the song. Different event types display different kinds of information, and have different editable values. You can't change the type of an event, but you can change the values associated with that event type.

For example, you can't change a CTRL message to a PCHG message, but for any control message, you can change both its destination and value. A Note On is always a Note On—but you can change the values for its note number, attack velocity, release velocity, and duration. Incidentally, you won't see the event type for Note Ons, just the editable values.

Table 12-2 lists the ranges of the editable event values.

General MIDI Events	The PCHG, BEND, MPRS, SYSX, TMPO, and END events will show their values in the display region directly to the right of the Event Type region. All of their values can be edited. Here are the ranges of values for each event type:	
	Program Change (PCHG)	0–127
	Pitch Bend (BEND)	-8192–8191
	Mono Pressure (MPRS)	0–127
	System Exclusive (SYSX)	The message in hexadecimal form
	Tempo (TMPO)	1.00–255.00 bpm
	End Point (END)	Any Bar: Beat: Tick setting
MIDI Note Events	Note events have four editable values: Note Number, Attack Velocity (indicated by a “v”), Release Velocity (indicated by a “^”), and Note Duration.	
	Note Number	C-1 – G9
	Attack Velocity	v1 - v127
	Release Velocity	^1 - ^127
	Note Duration	Beats: Ticks
MIDI Controller Events	Controller events have two editable values: Controller Type and Controller Value. Defined controllers are referred to by their names.	
	Controller Type	0 - 127
	Controller Value	0 - 127

Table 12-2 MIDI-event Value Ranges

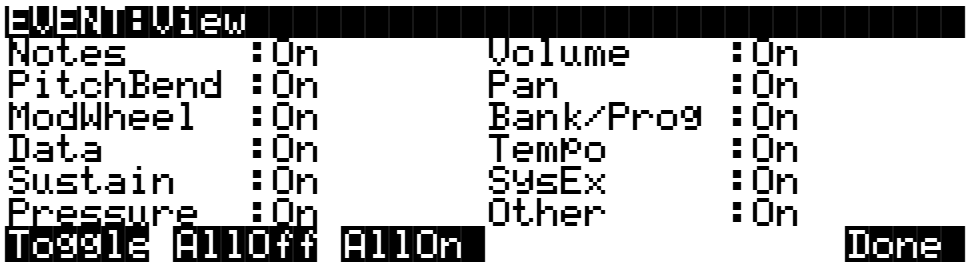
Soft Buttons on the EVENT Page

Cut: Removes the currently selected event from the Event list and temporarily stores it in a memory buffer so that you can immediately paste it into a new location.

Copy: Makes a duplicate of the currently selected event and temporarily stores it in a memory buffer so that you can immediately paste it into a new location.

Paste: Inserts the most recent cut or copied event into the Event list at the currently selected Bar: Beat: Tick location. The pasted event will share the same location with the event that already existed at that location in the Event list, but it will appear before the pre-existing event.

View: Brings you to the View page where you can set the view filter parameters for the Event list.



The View page determines which events you see when you're on the EVENT page. If you set a parameter on the View page to **Off**, you won't see any of the corresponding events on the EVENT page, and the events won't be executed as they normally are when you scroll through the Event list. For example, if you turn Sustain off, then as you scroll through the list none of the notes normally affected by sustain will be sustained. However, if you exit the editor and play the song, all events will be executed regardless of the View filter settings.

When all of the parameters in the View page are set to **On**, the Event list on the EVENT page will display all of the recorded MIDI data on the selected track(s). If at least one of these view parameters is set to **Off**, the **View** soft button on the EVENT page will be in brackets (as shown below) indicating that you might not be seeing all of the recorded MIDI data on the selected track(s). If you press **AllOn**, the brackets disappear, and you'll see all event types.

Press the **Toggle** soft button to switch all View filter parameters to the opposite of each one's currently set value.

AllOff: Available only on the View page. Sets all View filter parameters to Off. The only item viewable on the EVENT page will be an END point.

AllOn: Available on both the EVENT page and the View page. Sets all View filter parameters to On. This enables you to view all of the MIDI events that are on any or all tracks. If you're on the View page, the **Done** soft button returns you to the EVENT page. The view filter settings will be applied to the Event list.

Done: On the View page, returns to the EVENT page. On the EVENT page, returns to the COMMON page.

Song Editor: The TRACK Page

This page allows you access to useful track-based edit functions. These functions are:

Erase	Shift
Copy	Transpose
Bounce	Change
Insert	Thin
Delete	Remap
Quantize	Grab
Reference Quantize	

For each function, there is a set of parameters to control how the function operates, and on what region of the selected track(s). As usual, the top line of this page displays the selected track or tracks. Select the available current track(s) for editing by using the **Chan/Bank** buttons. Press both of the **Chan/Bank** buttons together to select All tracks.

Below is an example of the TRACK page for the Bounce function.

You will notice that the page is divided into two halves, with the right half being a separate box This is called the Region/Criteria box. The parameters in this box are used to select the range of events (from a start Bar and Beat to and end Bar and Beat) for modification, as well as which types of events function will affect.

The parameters in this box will generally be the same for most functions. For some functions, however, some parameters may not apply. For example, Quantize and Transpose apply only to notes, while Remap applies only to Controllers. In addition to the Region/Criteria box parameters, the Locate parameter is also found on each function.

Since these parameters are common to most Track functions, we will define them first. Then we'll describe the individual functions along with the parameters specific to each, which are normally found on the left side of the page. Two functions, (Quantize and Reference Quantize) have a unique parameters in their Region/Criteria boxes. We'll describe those parameters along with the functions.

Once you've chosen a function and set the parameters to your liking, press **Go**. This executes the editing function. You can then play the sequence to hear the results of your edit. If you don't like your edit, simply exit the editor and press **No** when you are asked if you want to save. If you do like your edit, you can press **Done** and use the **more** buttons to get to **Save**, or just exit the editor and save the changes. Or, you can go to another edit function. Keep in mind though, that if you choose to perform more than one edit without saving, and you are not satisfied with one of the changes you make, you will have to exit the editor without saving and then redo each of the changes you made. That's why it's usually best to save after each successful edit.

Common Parameters for Edit Song: Track Functions

Locate

This parameter is available for every function on the TRACK page.

The Locate Bar and Beat will change in real time during play back and recording to reflect the song's current position. It can be set to any Bar and Beat, including negative values. Play back begins at, and Stop resets the song to the Locate Bar and Beat.

Region / Criteria Box Parameters

From and To

From and To are available in most TRACK edit functions to define a range of time on the selected track(s).

The From value defines the first Bar and Beat in a range of time selected for editing. Although From is always expressed in Bars and Beats, and will be aligned exactly on the Beat when adjusted manually, it is possible for From to represent a value with finer resolution when a range of time is defined in real time using the **FromTo** soft button.

The To value defines the Final Bar and Beat in a range of time selected for editing. Although To is always express in Bars and Beats, and will be aligned exactly on the Beat when adjust manually, it is possible for the To value to represent a value with finer resolution when a range of time is defined in real time using the **FromTo** soft button.

Events

Any and all types of MIDI events are available for editing, selectable in this parameter. Some events will provide you with settings for a range of values, or other MIDI event specific criteria. Available Values are: All, Notes, Controllers, MonoPress, PitchBend, ProgChange, PolyPress, SysEx, and Tempo.

When Events is Set to All

All MIDI events on the track(s) you are editing, that occur in the region of time between the From and To settings, will be affected by the edit function.

When Events is Set to Notes

Note Number and Key Velocity ranges can be set for Note events.

LoKey

Determines the lowest note in a range of notes to be affected. This can be set to any MIDI note value; the default is C-1.

High Key (Hi)

Determines the highest note in a range of notes to be affected. This can be set to any MIDI note value; the default is G9.

LoVel

An attack velocity range can be specified as criteria for selecting Note events for editing. The LoVel parameter sets the lowest velocity a Note needs to have in order to be edited. Notes on the selected track(s) with a attack velocities lower than the LoVel will not be affected by the edit. The available values are 1–127; the default is 1.

High Velocity (Hi)

The Hi parameter sets the highest attack velocity a Note needs to have in order to be edited. Notes on the selected track(s) with attack velocities higher than the value of Hi are not affected by the edit. The available values are **1–127**; the default is **127**.

When Events is Set to Controller

If your song contains any MIDI Controller data, the Ctl parameter is used to select particular controller data to be edited. Refer to the Control Source list in Chapter 6 of the *Reference Guide*.

LoVal

You may further specify a particular range of values to edit by setting a high and low value. LoVal will define the lowest modifiable value in the selected controller's recorded data. Value ranges are not definable when Ctl is set to All. Available Values are **0–127**.

High Value (Hi)

Hi defines the highest modifiable value in the selected controller's recorded data. Value ranges are not definable when Ctl is set to All. Available Values are **0–127**.

Soft Buttons on the TRACK Page

FromTo is a quick way to define the region of time you intend to edit. There are a couple of ways to use this feature when the sequence is playing back in real time, and both ways will set the temporal boundaries of the region to a finer resolution than Bars and Beats.

One way is to first position the cursor over the From parameter in the Region/Criteria box and then press the **Play** soft button. During playback, every time you press **FromTo**, the K2600 updates the value of From to match the current playback location. Position the cursor over the To parameter to change the value of To in a similar fashion.

If you haven't selected either the From or To parameter, pressing **FromTo** during playback updates From or To—or both—depending on the current playback location (the value of the Locate parameter) at the time you press **FromTo**. If you press it while the Locate value is earlier in the song than the current To value, the K2600 updates the From value. If you press FromTo again (without stopping playback) while the Locate value is later than the current From value, the K2600 updates the To value.

Play will start the playback of the song from the Bar and Beat set in the Locate parameter. When the song is playing, this soft button becomes **Pause**.

Stop stops the playback of the song and return to the Bar and Beat set as the Locate value.

Go performs any of the Track-based edit functions described above.

Done will return you to the EditSong : COMMON page.

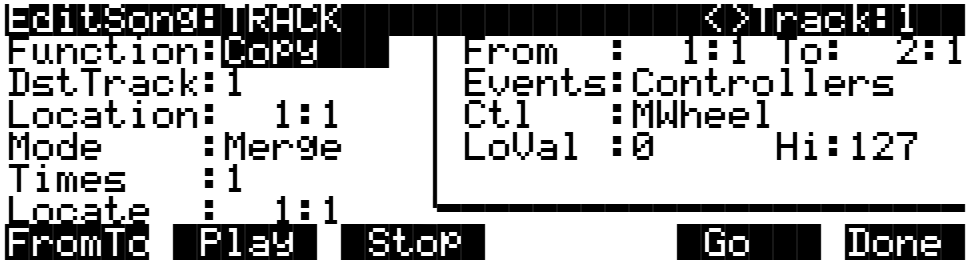
Song Editor: Track Functions

Erase

This function erases specified events from a region of time, but it doesn't delete the region of time. The result is like erasing a section of recording tape. If you want to completely remove a segment and shorten the length of the track, you can do it with the Delete function.

Copy

Use the Copy function to duplicate the selected events from the current track and place them in the same track or on another track, either merging with or overwriting existing data.



If you do not want to copy all of the MIDI events in the defined range of time on the current track, use the Events parameter in the Region/Criteria box to select a specific MIDI event type you would like the edit function to affect. Some event types provide you more criteria selection parameters. It is often a good idea to set Events to **Notes** when copying, and then add any necessary controller or other data to the track at a later time.

DstTrack: 1 – 16 / All

Select a destination track for the copied events with the DstTrack parameter. All selected events described in the Region / Criteria box will be placed in the destination track(s) at any Bar and Beat you specify.

If the currently selected track is All tracks then the destination track will be All tracks as well.

No matter what channel the current track (source track) is set to when you use the copy function, the events will be played on the destination track's channel.

Location: 1 : 1

Specify a Bar and Beat location in the destination track where the copied data will be placed with the Location parameter. If the length of the copied region extends from the Location point beyond the song's existing End point, a new End point is defined.

Mode: Merge / Erase

The Mode setting determines whether the copied events merge with, or erase existing events on the destination track from the location point to the end of the copied region.

Times: 1 – 127

The value selected for the Times parameter determines how many copies of the selected region are placed, one after another, in the destination track.

Bounce

Use the Bounce function to move the selected events from the current track to another track, either merging with or overwriting existing data on the destination track. The Bounce function differs from the Copy function in that the original data is not preserved in the original track. As on a multi-track tape recorder, Bounce will always put the data in the same timeline on the new track that it was on the old track.

DstTrack: 1 - 16

Select a destination track for the events to be moved to with the DstTrack parameter. All selected events described in the Region / Criteria box will be placed in the destination track at the data's original location.

No matter what channel the current track (source track) is set to when you use the bounce function, the events will be played on the destination track's channel.

Mode: Merge/ Erase

The Mode setting determines whether the bounced events merge with, or erase existing events on the destination track from the location point to the end of the copied region.

Insert

The Insert function is used to add blank time to the current song, modifying the song's End point appropriately. The Insert function will affect all tracks. This is similar to splicing a piece of blank tape to an existing segment of recording tape.

Location: 1 : 1

The insertion point for the blank time being added is selected as a Bar and Beat Location value. Events that occurred at or after this Bar and Beat, before you insert time, are not erased when you perform this function, rather they are offset by the length of the blank time being added to a Bar and Beat later in the song.

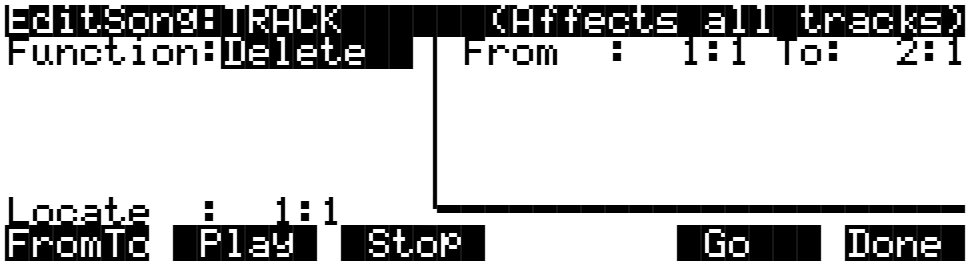
Amount: 1 : 0

The length of the blank time being added is defined as a number of Bars and Beats in the Amount parameter.

There are no Region / Criteria parameters available for the Insert function.

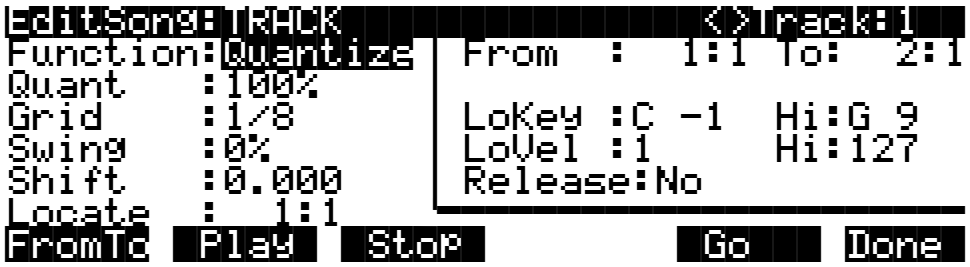
Delete

The Delete function is used to remove a region of time from the current song. This function is different from the erase function because not only does it remove the events from the selected time, it will delete the entire selected range of time from the song, modifying the song's End point appropriately (on all tracks). This is similar to cutting a section out of a tape and splicing the ends.



Quantize

Use the Quantize function to adjust the timing of Note events. Keep in mind that only Note events are quantized; other types of events, such as controllers, are not quantized.



Quant: Off / 1% – 100%

The Quantize parameter determines how much the selected Note events are moved towards grid locations. If set to **Off**, no aligning of previously recorded notes to grid locations will occur. If set to **100**%, every recorded Note event will be aligned to the closest grid location, defined by the Grid setting. Notes will be moved to a position half way between the grid location and the original Note-event location if Quant is set to **50**%.

Grid: 1/1 – 1/384

This setting determines the size of the Quantize grid, expressed as a fraction of a Bar with a 4/4 meter. Set Grid to **1/1** for whole note grid, **1/16** for sixteenth notes. All of the standard note durations and every fractional Bar divisions in between are available as the size of the Input Quantize grid. Press the **Plus/Minus** buttons simultaneously for quick selection of grid values.

Swing: -99% – 125% (defaults as 0%)

The Swing percentage is applied to the quantize grid. **0**% swing is straight time, **100**% produces a swing feel (triplet feel). A positive Swing value determines how close every other grid location is moved to a point 1/3 of the way towards the next grid point. Negative Swing moves every other grid location closer to a point 1/3 of the way towards the previous grid point.

Shift: -26.020 – 26.020 (Beats and Ticks, 480 Ticks = 1 Beat)

In addition to quantizing the selected note events to specified grid locations in varying amounts, the Quantizing function allows you to offset the original note locations forward and backward in time any number of ticks (1/480th of a Beat) up to 26 Beats, before aligning them to grid locations. Shift is used to compensate for any notes played too early or late.

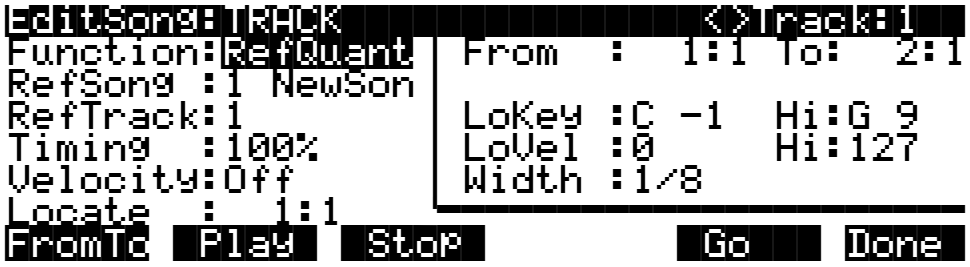
Region / Criteria Box

Release: Yes / No

Set the Release parameter to **Yes** if you would like each quantized note event's Note Off message to be aligned to the grid location nearest to the time the key was originally released.

Reference Quantize

The Reference Quantize function is similar to the Quantize function in that it aligns Note events to a grid. The difference is that the grid locations are not mathematically perfect divisions of a Bar. Instead, Reference Quantize defines the grid based on the timing of note events from a previously recorded reference track.



RefSong: 1 NewSong

Use this parameter to select a song from which you'll then select a reference track. Select the song containing the desired reference track as the RefSong value.

RefTrack: 1 – 16

Use RefTrack to select the track to be used as the reference track. The timing of this track's note events is used as the quantization grid that's applied to the current track when you use Reference Quantize.

Timing: Off / 1% – 100%

The Timing parameter determines how much the selected note events are moved toward grid locations. If set to **Off**, no aligning of previously recorded Notes to grid locations occurs. If set to **100**%, every recorded note event gets aligned to the closest grid location, defined by the timing of note events from the reference track. Notes are moved up to the limit set by the value of the Quant parameter—for example, a value of **50**% for Quant means that notes get moved half the distance from their current location to the nearest grid point.

Velocity: Off / 1% – 100%

In addition to referencing the timing of note events on the reference track, you may also scale the attack velocities of the note events being quantized to velocity values closer or identical to the velocities played on the reference track.

Leave the Velocity parameter set to **Off** if you want to reference only the note event timing when using Reference Quantize. Set Velocity to **100**% to have the velocity values of the note events being quantized exactly match the velocity values of the note events on the reference track. A setting of **50**% changes the velocities to values halfway between the velocity values originally recorded and the values on the reference track.

Region / Criteria Box

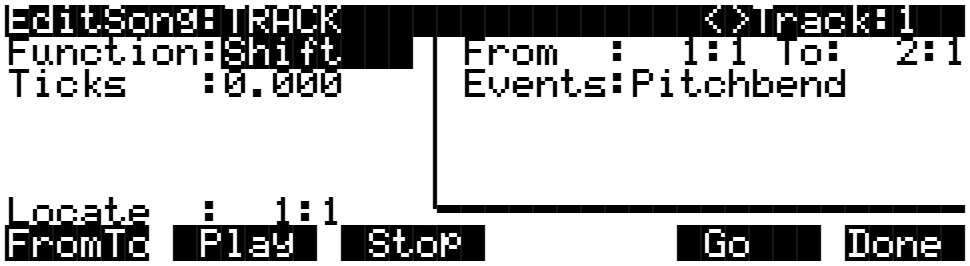
Width: 1/1 – 1/384

The Width setting determines the duration of a window of time centered around each of the referenced grid locations. If a note event on the track being quantized happens during this window of time, it will be moved closer to the referenced grid location according to the Timing percentage. Note events occurring outside this window of time remain unquantized.

Shift

The Shift function allows you to offset the existing MIDI events forward or backward in time any number of ticks (1/480th of a Beat) up to approximately 26 Beats. This function does not affect the End point.

Events can not be shifted beyond the End point or before Bar 1 : Beat 1. The events can be shifted only as far as these temporal boundaries. All events that can't be shifted the full Ticks amount will be placed at the boundary location.

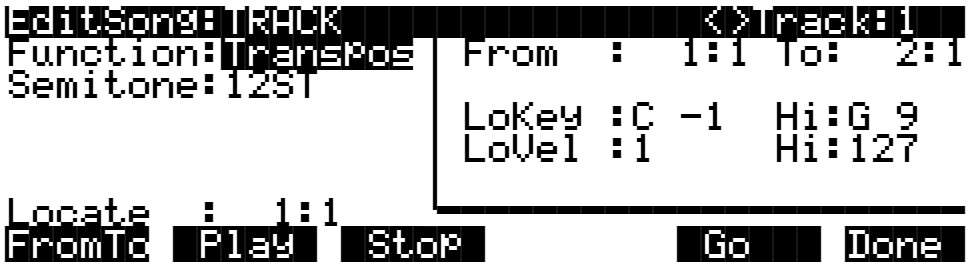


Ticks: -26.020 – 26.020 (Beats and Ticks, 480 Ticks = 1 Beat)

The Ticks parameter specifies the number of Beats and Ticks that the MIDI events, from within the selected region, are moved forward or backward in time relative to their original locations.

Transpose

Use the Transpose function to change the MIDI Note numbers of the selected Note events.



Semitone: -128ST – 127ST

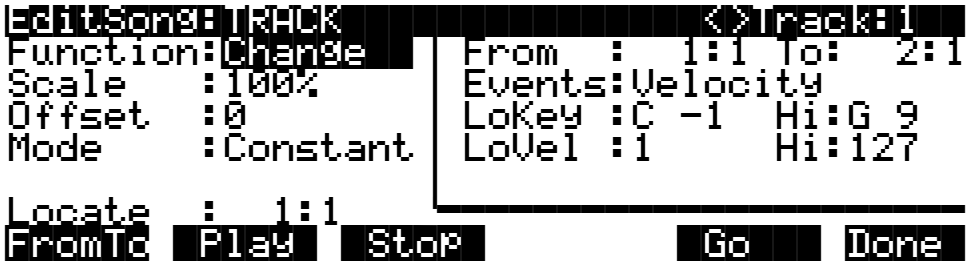
An increment of one semitone represents a change of one MIDI Note number. You can transpose Note events only within the range of MIDI Note numbers 0 to 127.

Change

The Change function is used to modify attack velocities, release velocities, or the values of any existing controller data on the current track. A static change of values can be made as well as having the change take place over a region of time.

Change can not modify or add data that doesn't exist on the current track. If you hear note events played back on a track, then you know there is an attack and release velocity value for each one, and the effect of the Change function can usually be easily detected. Controller values

are sometimes more difficult to change since there can be inconsistent gaps of time between each controller event.



Scale: 0% – 20000%

The selected velocity or controller events' values can be changed to a percentage of the original values determined by the Scale parameter. A setting of **100**% has no affect. Values are scaled lower with a Scale percentage set from **0**% to **99**%. Low values can be set higher using a Scale percentage above **100**% on up to **20,000**%, although the maximum value of 127 can not be exceeded for any velocity or controller type.

Offset: -128 – 127

Offset can be used alone or in conjunction with Scale to add or subtract a set amount to or from the original (or scaled) values. Values for velocities can not be less than 1 or greater than 127. Values for controllers can not be less than 0 or greater than 127.

As an example, to set all Velocities to a value of 55, you would set Scale to **0**% (multiplies all original values by zero) and set Offset to **55** (adds 55 to the product of the Scale parameter).

Mode: Constant / PosRamp / NegRamp

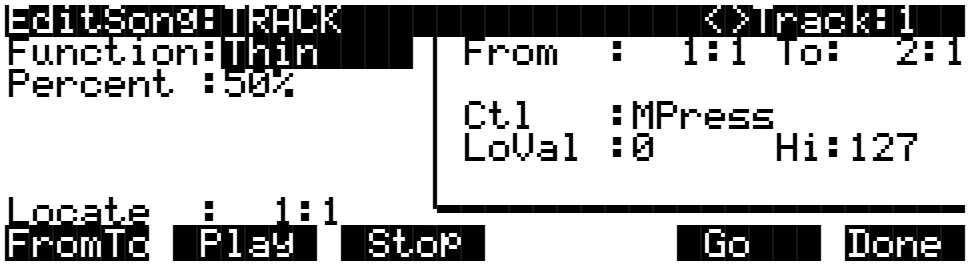
Set Mode to **Constant** to have values modified in a uniform fashion, as determined by the Scale and Offset settings, for the entire selected region of time and range of values.

When the Change function is applied with Mode set to **Positive Ramp**, the selected velocity or controller values will gradually change over the region of time, defined by the locations set for the From and To parameters, from the original value to the new value determined by the Scale and Offset settings. The first events being modified within the region will have little or no change from their original values. The amount of Scale and Offset applied will increase as the song approaches the Bar and Beat defined in the To parameter, where the full amount of described change will occur.

You can set Mode to **Negative Ramp** to achieve the opposite dynamic effect of **Positive Ramp**. **Negative Ramp** works in the same way, but the amount of Scale and Offset applied will decrease from the full amount of change described by Scale and Offset to little or no change as the song approaches the Bar and Beat defined in the To parameter.

Thin

Use the Thin function to reduce the number of actual controller events used for any controller type on the current track. Sometimes a controller can produce the same noticeable effect by using fewer events to describe its change, which in turn will save memory and possibly prevent timing delays caused by an excess of MIDI data.

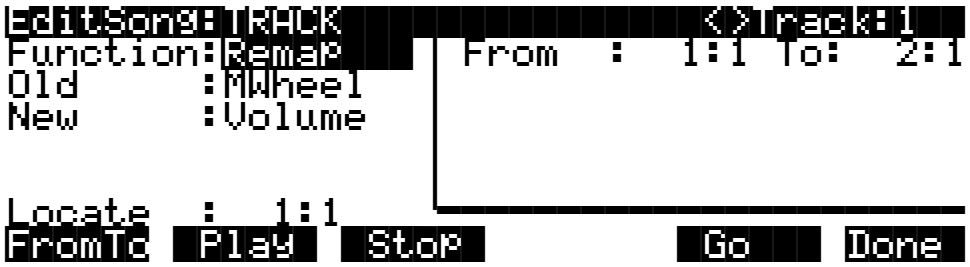


Percent: 0% – 100% (defaults as 50%)

The Percent value determines how much effect the Thin function will have on a stream of controller data. With this value set to **0**%, there will not be any reduction of data when Thin is applied. Set Percent to **100**% to eliminate most of the specified controller's events from the current track. Even at **100**%, certain controller messages will not be eliminated; these include all pitch bend messages with a value of 0 and the initial settings of some controllers, such as volume, pan, etc.

Remap

Use the Remap function to apply the values of any one type of controller data, already recorded on a track, to another controller type. The effect the real time changes of the "Old" controller had will be replaced by the effect the "New" controller has by using the exact same controller values.



Old: Controller Codes (0 – 120)

Defined controllers are referred to by their names.

The "Old" controller is set to the controller type that you wish to remap. This controller data must already exist on the current track in order to apply it to the "New" controller type.

New: Controller Codes (0 – 120)

Defined controllers are referred to by their names.

The "New" parameter is set to the controller code you wish to have use the existing values, once used by the "Old" controller, to produce a different effect.

Grab

Grab is similar to the Copy function, except that the Grab function allows you to copy selected data from tracks that exist in other songs in memory.

SrcSong: 1 NewSong

The Source Song parameter is set to the ID and name of the song in RAM that contains the desired track data you wish to grab in order to use it in the current song. The source track is determined by the Track parameter displayed on upper right hand side of the page, selectable with the **Chan/Bank** buttons.

DstTrack: 1 – 16 / All

Select a destination track for the grabbed events with the DstTrack parameter. All selected events from the source song and track described in the Region / Criteria box will be placed in the destination track(s) at any Bar and Beat you specify.

If the currently selected track is All tracks then the destination track will be All tracks as well.

No matter what channel the current track (source track in the source song) is set to when you use the grab function, the events will be played on the destination track's channel.

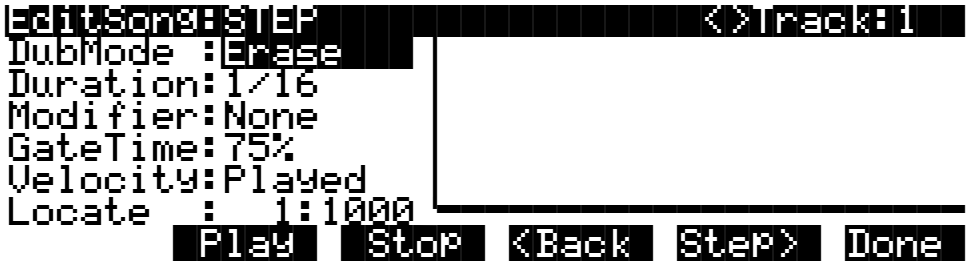
Location: 1 : 1

Specify a Bar and Beat location in the destination track where the grabbed data will be placed with the Location parameter. If the length of the grabbed region extends from the Location point beyond the song's existing End point, a new End point is defined.

Times: 1 – 127

The value selected for the Times parameter determines how many copies of the selected region are placed, one after another, in the destination track.

Song Editor: The STEP Page



Parameter	Range of Values	Default
Dubmode	Merge, Erase	Merge
Duration	1/1 – 1/64	1/8
Modifier	None, Triplet, Dotted, DotDot	None
Gatetime	0 – 250%	75%
Velocity	Played, 1 – 127	Played

The Step Editor allows for nonreal-time entry of note events and rests of varying durations and attack velocities at any location within a song. The Step Editor can be used to enter the first note events into a new song, but it will not set the song's End point. Initial program changes, volume and pan settings are remembered as if you recorded the first track using one of the real-time recording modes. The End point will be modified if tracks already containing data are step-edited beyond the current End point.

The top line displays the currently selected RecTrk and can then be switched to any other track. When All tracks are selected, the step edits are performed on the currently selected RecTrk.

Recording With the Step Editor

Recording using the Step Editor is easy. Set the parameters to your desired settings and make sure the Locate parameter is set to the bar and beat at which you wish to start recording. Then just strike a key. The note you play will be displayed in the box on the right along with its velocity or duration. If the Velocity parameter is set to **Played**, then it will reflect the actual velocity you played. Otherwise, it will be specific amount determined by that parameter. The duration of the note is determined by a combination of the Duration and Gate Time parameters.

Once you release the key, the Locate parameter will advance in time, by an amount determined by the Duration parameter. If you want to enter a rest, press the **Step>** soft button without striking a key, and once again the Locate parameter will advance the selected amount.

You can enter note events longer than the selected duration by holding a key and pressing the **Step>** button. You will see the duration of the current note change in the box on the right. This can be a quicker method of entry than changing the Duration parameter if you need a note that is twice or three times as long as the duration. For example, if the Duration is set to **1/8**, you can quickly enter a quarter note by holding the note and pressing **Step>** once. This adds an extra eighth-note duration to the eighth-note duration created by triggering the note. Enter a half note by pressing the **Step>** button three times (adding three eighth-noted durations). Note that if you are using this method and the Gate Time parameter is set to less than **100**%, the truncated duration is applied to the step created by triggering the note. All other steps get the full

duration. For example, if you have a Duration of **1/8** and a Gate Time of **75**%, then striking a note will produce a duration of 180 (75% of 240). But if you hold the note and press **Step>**, then the duration will be 420 (180 + 240), instead of 360 (75% of 480).

You can strike more than one note at a time to enter chords. You can also strike several notes one at a time (holding on to the previous notes) to create a chord. As long as you do not release all of the notes, the Locate parameter will stay at the same point and the notes will be entered as a chord. If you want to create a chord where certain notes have longer durations than others, strike the notes of the chord, then release the notes you wish to be shorter and press the **Step>** button. The box on the right will change to show only the notes you are still holding with their longer durations.

If you make a mistake while entering notes, you have two ways to fix it. With Dub Mode set to **Merge**, if you're still holding the note, you can press the **<Back** soft button. If you set the Dub Mode to **Erase**, you can press the **<Back** button to erase the previous event, then strike the correct note. Or you can set the Locate parameter to the proper spot and strike the correct note.

DubMode

DubMode determines if the note events entered in the STEP page will merge with, or erase all other existing MIDI events located on the selected track, and in the Bars and Beats being step-edited.

You would set DubMode to **Erase** to replace all existing track data just in the Bars and Beats you edit. Data before and after the edited locations will be preserved. Set to **Merge** to add note events to existing track data.

The DubMode value will reflect the last value given to the Mode parameter on the Song-mode MAIN page, and if the DubMode in the Step Editor is changed, the Mode parameter on the MAIN page will be changed to the same value.

Duration

The actual duration of a note event entered in step time is determined by the values given for the Duration, Modifier, and GateTime parameters.

The Duration parameter sets the base note duration where **1/1** is a whole note, **1/2** is a half note, **1/32** is a thirtysecond note, and so on. The setting for this parameter, along with its Modifier, determine the size of the jump from the current song location to the next step entry location. The double button press of the **Plus/Minus** buttons is one method of selecting a step's duration.

Use the alphanumeric buttonpad to quickly select a note duration and modifier whenever the cursor is positioned over the Duration parameter. These are the buttonpad duration settings:

1	whole note
2	half note
3	thirtysecond note
4	quarter note
5	sixtyfourth note
6	sixteenth note
7	applies a dotted modifier to current duration
8	eighth note
9	applies a triplet modifier to current duration
0	removes any modifier

Modifier

The Modifier parameter allows you to change the Duration value with three standard modifiers. Set to **None** if you do not chose to use a modifier.

Use the triplet modifier for a resulting duration 2/3 of the value set in the Duration parameter. (For example, an eighth note = 240 ticks, an eighth note triplet = 160 ticks.)

A Dotted modifier adds half of the current Duration value to that duration, and a DotDot modifier will add 3/4 of the current Duration value to itself. (For example, an eight note = 240 ticks, a dotted eighth note = 360 ticks, and a double dotted eighth note = 420 ticks.)

GateTime

GateTime determines the percentage of the note duration, (set with the Duration and Modifier), that is actually played. The value given for the GateTime parameter does not affect the size of the jump from one step to another, but only the length of time that the note(s) entered for each step are sustained. You can use a value greater than 100 for a legato feel, but keep in mind that when two identical notes overlap you may get unexpected results. This is because the Note Off command from the first (overlapping) note will also cut off the second note (when it is identical).

Double-press the **Plus/Minus** buttons to increment this value in 20% intervals.

Velocity

Each note event entered in step-edit mode is assigned an attack velocity either by setting the Velocity parameter to a value between **1** and **127**, or by setting the value to **Played**, where the velocity at which you actually enter notes is used for each step.

Locate

The Bar, Beat and Tick displayed as the Locate value is the location where the next step entry will placed in the song, and once the step is entered, Locate will advance an amount of time determined by the Duration and Modifier settings. The Bar and Beat, but not the Tick, will update during playback. It can be set to any Bar and Beat, including negative values, so that playback begins at, and Stop resets the song to the Locate Bar and Beat.

If the Bar and Beat value is set beyond the current End point, and no notes are entered before you press Play, then that location will be ignored when you begin playback and the song will start from Bar 1 : Beat 1. If set to a negative Bar and Beat, no step entry is possible.

Soft Buttons on the STEP Page

Play starts the playback of the song from the Bar and Beat set in the Locate parameter. When the song is playing, this soft button becomes **Pause**.

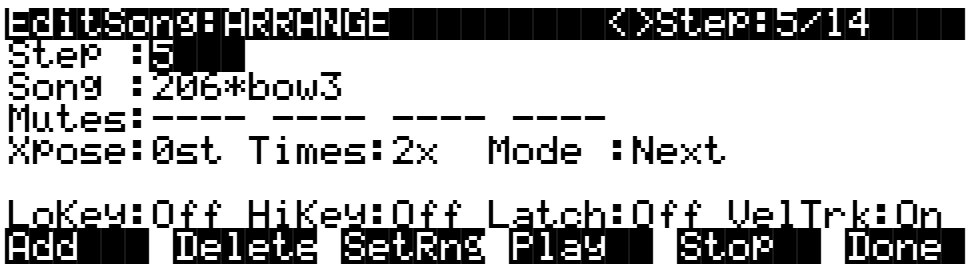
Stop halts the playback of the song and return to the Bar and Beat set as the Locate value.

<Back / Step> moves the current location of the song backward and forward in time, as reflected in the Locate Bar, Beat, and Tick. How far the location is changed from its current setting is determined by the Duration and Modifier settings.

Done returns to the COMMON page when you are finished step editing.

Song Editor: The ARRANGE Page

This page allows you to create a song by arranging other songs together in the order you specify. The other songs become sections (called steps) of the current song, which can be repeated, transposed, etc. You can even trigger steps by striking specific keys on the controller.



You can also create an arrangement of other songs to play back simultaneously with the current song. This gives you up to 32 tracks: 16 tracks in the current song plus 16 in the song or songs called by the arrangement (which are specified by the ARRANGE page's Song parameter). Alternatively, the current song might not contain any normal song data, but could include only the arrangement data, by which the pieces of a composition are assembled. One thing you can't do, however, is "nest" arrangement songs. In other words, if you include a song with arrangement data in another song with arrangement data, it won't work.

More often than not, you would want to start using the Arrange feature from a new song that doesn't have any track data recorded yet. Press the **ARRANG** soft button on the COMMON page to enter the ARRANGE page, gaining access to a group of arrangement specific parameters. All songs have these parameters for creating complex arrangements of existing song objects, using ranges of the keyboard and realtime performance controls for triggering steps, but not every song will use them.

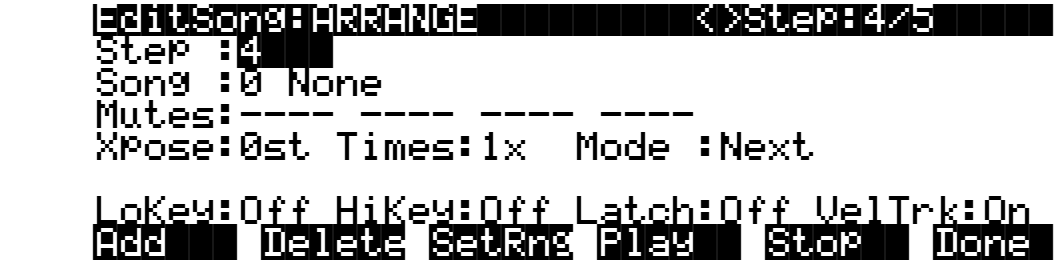
When a song containing an arrangement is selected as the CurSong on the MAIN page, three dashes (---) appear above the Track parameter name to indicate that the current song has been saved with arrangement information.

These three dashes show that the song includes arrangement information.

When you play a song that includes arrangement information, dashes are replaced by the play indicator (>), song ID number, and step number.

When an arrangement is PLAYING, the three dashes on the MAIN page are replaced with the ID of the song currently being played (or triggered) in the arrangement, and the number of the current step.

The square Track Status Indicators will flash when MIDI data is present on the tracks during play back of an arrangement. The actual track data playing back is supplied by the songs entered into the steps of an arrangement.



Parameter	Range of Values	Default
Step	1 – 99	1
Song	Any song In Memory	0 None
Mutes	– , M	– (Not Muted)
Xpose	-128ST – 127ST	0ST
Times	1x – 120x, Infinite	1x
Mode	Next, Stop	Next
LoKey	C-1 – G9, Off	Off
HiKey	C-1 – G9, Off	Off
Latch	On, Off	Off
VelTrk	On, Off	On

The first number displayed in the **Step** field on the top line is the current step. The second number is the total amount of steps in the arrangement. The current step in the display above, for example, is the fourth step in an arrangement consisting of five steps. Use the **Chan/Bank** buttons to select the current step for editing.

Step

The number of steps in an arrangement defaults to 1. All other steps are then added when needed. The step of the arrangement selected for editing is displayed as the step. Use the **Chan/Bank** buttons to select the different steps in your arrangement. StartStep on the COMMON page (see page 12-41), as well as the key ranges of the steps, control what steps are played. The behavior and control of each step is defined with the parameters described below.

Song

The Song is the ID and name of a song object in memory that will play back in proper numerical order with the other steps in an arrangement or will respond to any triggering from a defined keyboard range in that step. This song's (up to) 16 tracks will play in addition to any tracks in the current song.

Mutes

The possible sixteen tracks of the current step's song can be individually muted. Tracks displaying an (M) for the Mutes parameter are muted during playback of the song in the arrangement.

Xpose

Each step in an arrangement can impose a transposition on the song selected for its Song parameter during playback. Xpose determines how many semitones a step's song is transposed above or below the song's original key during playback. All tracks of the step's song will be transposed, except for those tracks defined as drum tracks in the COMMON page of the step's song. See page 12-43 for a discussion of drum tracks.

Times

Times sets the number of times that an arrangement step plays before the arrangement moves on to its next step. You can set this value to play the step up to 120 times before the next step is

played, or you can specify an infinite loop (**Inf**), in which case the arrangement will play that step until **Stop** is pressed.

Mode

The Mode setting found in the Arrangement Editor determines whether an arrangement plays the next step or if the sequencer will stop after playing the current step. Unless you want the arrangement to loop (that is, return to step one after playing the song's final step) set the final step's mode to stop.

Triggering Steps from a Key

You can play and transpose the steps in your arrangement with the keys on your keyboard. This is a good way to try out arrangement or composition ideas, and also has some exciting live performance applications. If you were suddenly struck by inspiration at a gig, for example, you could spontaneously repeat or transpose sections of an arrangement. See page 12-63 for more information.

The four parameters along the bottom of the ARRANGE page let you set up real-time control of the steps in an arrangement. Make sure that the TriggerCtl parameter, found on the COMMON page (see page 12-43), is set to **ON**, which is the default, or to the global control source that you are using to enable this feature. TriggerChan, also on the COMMON page will need to be set to the current MIDI channel; the default is channel **1**.

The control setup's Sync parameter (on the COMMON page in the Setup Editor) affects how steps begin—immediately, or at the beginning of the next measure—when you trigger the steps from a key. See page 7-36 for a description of the Sync parameter.

LoKey

The first parameter, LoKey, is the setting for the lowest note in a keyboard range, that when played by the TriggerChan, will trigger the start of the current step. Triggering a step from the LoKey will play back its song in its original key transposed the number of semitones set in the Xpose setting. As you play up the keyboard chromatically, the step will transpose its song in semitone increments. All tracks of a song being transposed by keyboard triggering will be transposed accordingly, except for tracks defined as Drum Tracks on each song's COMMON page.

HiKey

The highest note of the keyboard range designed to trigger the current step is set in the HiKey parameter. HiKey defines the largest transposition of a step from the key of the song triggered by the LoKey. The HiKey must be a higher note value than the LoKey in order to trigger any step from the keyboard.

Latch

If Latch is set to **Off**, any step you trigger with keystrikes continue to play only as long as you hold down the key that triggered it. Set Latch to **On** if you want to trigger the step with a keystrike, and have it continue playing after you release the key. In this case, the step plays for its entire length, or until you either press **Stop** or retrigger the step.

VelTrk

Turn the VelTrk parameter **On** to make your real-time arrangements more dynamically controllable. The original attack velocity of every Note event in the triggered step's song will be scaled to values determined by the attack velocity of the note you play when triggering.

Soft Buttons on the ARRANGE Page

Add adds another step to the arrangement. The new step will be inserted as the step number directly after the current step. You would add a step to place a new section into a song arrangement or to define another keyboard range for triggering.

Delete removes the current step.

SetRng lets you quickly define the keyboard range for triggering the current step from the MIDI keyboard. This dialog will appear:

Strike low key…

Play the lowest note of the range you wish to define, then:

Strike high key…

Play the highest note of the range you wish to define. At any time you may abort the range setting procedure by pressing the **Cancel** soft button, which returns to the ARRANGE page.

Play lets you audition your arrangement from the ARRANGE page, starting playback from the currently selected step.

Stop halts the playback of an arrangement from the ARRANGE page.

Done exits the ARRANGE page and returns to the COMMON page.