

Chapter 11

Master Mode

Press the Master mode button to enter Master mode, which contains parameters affecting the K2500's overall performance.

The Master Mode Page

On the Master mode page you'll find parameters for setting the overall tuning and transposition of the K2500, the MIDI channel to be used for drum programs (explained below), and for several keyboard, audio, display, and programming adjustments. You can also enter the sampler from the Master mode page

```

MasterMode: Samples:8192k  Memory:121k
Tune       :0ct
Transpose  :0ST
DrumChan   :1
VelTouch   :1 Linear
PressTouch:1 Linear
Intonation:1 Equal
Object    Delete  Util  Sample View  Reset
  
```

PARAMETER	RANGE OF VALUES	DEFAULT
TUNE	± 100 cents	0
TRANSPOSE	± 60 semitones	0
DRUM CHANNEL	1 to 16	1
VELOCITY TOUCH	Velocity Map list	1 Linear
PRESSURE TOUCH	Pressure Map list	1 Linear
INTONATION	Intonation Table list	1 Equal
OUT A PAN MODE	Mono, Stereo	Stereo
OUT B PAN MODE	Mono, Stereo	Stereo
OUT A EFFECTS POSITION	L Only, L + R	L + R

Tune

Adjusting the value of this parameter will tune every program in the K2500 by the amount you specify. Tuning can be adjusted up or down 100 cents (one semitone) in one-cent increments. This parameter is useful for tuning up with recordings and acoustic instruments. Adjusting the tuning in Master mode does not change the settings on the PITCH page of individual programs, but will be added to any adjustments you make there. Master mode tuning adjustments affect only the K2500's notes.

Transpose

Like the Tune parameter above, Transpose will affect every K2500 program, but not those notes sent to the MIDI Out port. You can adjust the MIDI transposition on the XMIT page in MIDI mode.

Drum Channel

Most K2500 programs have a maximum of three layers, which is enough to create just about any sound you can think of, especially when that sound covers most or all of the keyboard. But what do you do if you want to create a program with a dozen or more different sounds across the range from C 0 to C 8, and you want to be able to run each sound independently through a set of DSP functions?

Drum programs allow you to do exactly that. They can have up to 32 layers, and each layer has all the programming features of regular programs—its own keymap, its own algorithm, etc. We call

them drum programs because a likely application for this type of program is to create drum kits with many different percussion timbres. You can assign any keymap to any layer, however, to create as complex a program as you want. All those extra layers create a lot of information for the K2500's sound engine to process. Every bit of information that's sent to the sound engine is associated with one of the MIDI channels. The K2500's sound engine has enough processing power to handle three layers' worth of information from 8 channels, and 32 layers' worth from the other 8. By default, MIDI channels 1-8 are defined as drum channels.

If you'd like, you can use the DrumChan parameter to define a channel numbered higher than 8 to be a drum channel. In this case, the channel you choose, along with channels 1-7 will be your drum channels. For example, if you set DrumChan to 13, then your eight drum channels will be 1, 2, 3, 4, 5, 6, 7, and 13. If you set DrumChan to a value of 8 or less, however, your drum channels will always be 1, 2, 3, 4, 5, 6, 7, and 8.

Drum channels are the only channels that can have drum programs (any program with more than three layers) assigned to them. So when you're in Program mode, the current MIDI channel must be a drum channel if you want to assign a drum program to it. If you're in Program mode (or in Quick Access mode with a program selected) and the current MIDI channel isn't a drum channel, the drum program's name will be in parentheses and the box at the left of the Program mode display will tell you which channels are the drum channels. If you're in Setup mode (or in Quick Access mode with a setup selected) and the current MIDI channel isn't a drum channel, the drum program's name will be enclosed in parentheses. In either case, the program will not play. Setting the DrumChan parameter to match the current MIDI channel (or vice versa) will restore the drum program to normal operation.

Velocity and Pressure Touch

These two parameters are only used by the keyboard version of the K2500, and have no function in the K2500R. If you are using a K2500R, you should leave them set to their default values.

If you change the setting of the Veltouch parameter, remember that it also has an effect on the transmit velocity map (set on the MIDI XMIT page).

Intonation

Most modern western music uses what is known as equal temperament. This means that the interval between each semitone of the 12-tone octave is precisely the same as every other interval. Many different intonation intervals have evolved over the centuries, however, and the K2500 supplies you with 17 different intonation "tables" to choose from. (There's also an eighteenth "table" listed, which we'll describe in a moment.) By changing the value for this parameter, you select from among the intonation tables stored in the K2500's memory. Each of these tables defines different intervals between each of the semitones in a single octave.

Scroll through the list of Intonation tables, and listen for the differences between semitones. Some of the intervals between semitones may be quite different from equal intonation, but you'll notice that all notes are precisely tuned with notes that are an octave apart. This is because the intonation tables set the intervals within a single octave, and apply those intervals to each octave. If this doesn't make sense, the explanation of the Intonation Table Editor, in Chapter 17, will help clarify things. If you're hoping to create fully microtonal tunings by editing intonation tables—sorry, that's not possible. But you *can* create microtonal tunings using the Keymap Editor; see Chapter 15. There's a list of the intonation tables in Chapter 17; descriptions of each can be found in Chapter 5 of the *Reference Guide*.

Determining the version number of your ROM Objects (Intonation Table 18)

As you're scrolling through the list of intonation tables, you may notice a listing for an eighteenth intonation table with a name such as "18 Obj *vn.n*". This isn't really another intonation table. Rather, this is where the K2500 stores the version number of your ROM objects. If you ever need to find out what version of ROM objects you've got loaded, this is where you look. Simply go to the Master page, then scroll the Intonation parameter until 18 is displayed. And don't forget to return to your correct intonation table when you've checked the version number of your ROM objects.

Outs A and B—Pan Mode

The parameters OutA->Mix and OutB->Mix determine the panning of the audio signal for output groups A and B at the MIX outputs. If they're set to Stereo, then whatever panning is applied to each program (as set on the OUTPUT page in the Program Editor) will show up at the MIX outputs. If either of these parameters is set to Mono, then programs routed to the corresponding audio output group will send all of their sound equally to both MIX outputs, regardless of any panning that might be applied to them on the OUTPUT page. This is a quick and convenient way to convert the MIX outputs into two mono outputs. Output groups C and D are permanently set to Stereo, and cannot be changed.

Out A Effects Position (Out A->FX)

This parameter is intended for special cases when you want an additional separate output that doesn't go through the K2500's effects processor. A value of L Only bypasses the effects processor for all sounds assigned to the right side of Output Group A.

There's more than one way to set this up; we'll give you one possible example that should get you started. You're going to play a multi-timbral sequence. You want to send your percussion sounds through an external effects box. You want your lead sound to go through an external fuzz box. You want the rhythm section to use the K2500's internal effects. Finally, you want to send all the sounds through the K2500's MIX outputs so you'll use only two inputs on your mixing board. This is done by using stereo insert cables in the separate outputs, which enables you to loop sounds through external devices, back to the K2500, and through the MIX outputs. See Chapter 18 for more information about using stereo insert cables.

The percussion sounds are routed to the B outputs (this is done on the OUTPUT page in the Program Editor). You connect the stereo end of an insert cable in each of the K2500's B outputs. The send sides (tips carry signal) of the insert cables are connected to the inputs of your effects box. The return sides (ring receives signal) are connected to the return jacks on the effects box. The percussion sounds will now appear at the K2500's MIX outputs without going through the internal effects processor (sounds routed to Output Group B never go through the internal effects).

All the other sounds are routed to Output Group A. The lead sound is panned fully right, and the rhythm sounds are panned fully left. You connect an insert cable to the A Right output. The send side of the insert cable goes to the input of your fuzz box, and the return side goes to the fuzz box's return or output jack. The lead sound will now appear at the right side of the MIX outputs. The rhythm sounds will appear at the left side of the MIX outputs. At this point, the K2500's internal effects will be applied to the lead sound as well as to the rhythm sounds. You don't want the internal effects applied to the lead sound, so you set the value of the Out A->FX parameter to L Only. Now the lead sound will be dry and the rhythm sounds will be wet.

You want the lead and rhythm sounds to be centered in the mix, so you set the Out A->Mix parameter to Mono. This sends both sounds at equal levels to both the MIX outputs, but the lead sound is still dry.

Contrast

Use this parameter to adjust the contrast of the display, to adapt to different lighting conditions. The K2500 will remember your setting even when you power down.

Confirm

Confirmations are special displays that the K2500 shows you when you are about to alter memory permanently. The confirmations ask if you really want to do what you're about to do, and give you another chance to cancel the operation you're about to execute. With the Confirm parameter set to Off, these prompts do not appear. You'll still be alerted before doing something that might cause you to lose your work.

Intonation Key (Intona Key)

This sets the tonic, or base note from which the currently selected intonation table calculates its intervals. If you select G as the intonation key, for example, and the intonation table you select tunes the minor 2nd down by 50 cents, then G# will be a quartertone flat relative to equal intonation. If you change the intonation key to D, then D# will be a quartertone flat. If you use non-standard intonations, you'll want to change the intonation key as you change the key you're playing in.

You can also set the intonation key from an external MIDI device. Note On events at C -1 through B -1 (MIDI note numbers 0 through 11) will set the intonation key at C through B, respectively.

To trigger notes in the range required to set the Intonation key, you can transpose the K2500 temporarily from its front panel, or from your MIDI controller if it has the ability. Alternatively, you could create a setup with just the lowest octave transposed down two octaves, then select it when you want to change the Intonation key. If you're driving your K2500 from a sequencer, you could simply insert the appropriate note events anywhere in the sequence to change the intonation key.

The Soft Buttons in Master Mode

Object

This soft button brings up the object utilities. They're described beginning on page 11-6.

Delete

This soft button brings up the file dialog, enabling you to erase sets of objects, either entire banks or all objects, from RAM. If the Confirm parameter on the Master mode page is set to a value of On, you'll be given an extra chance to cancel before the set of objects is actually deleted. Once the deletion is complete, the objects are irretrievable, so you may want to save objects to disk before deleting them from RAM.

To delete individual objects, use the functions that are available when you press the **Object** soft button.

Util

With this button you call up the Utility page, which gives you access to four analytic and diagnostic tools. Double pressing the two center soft buttons from any editor is another way to get to the Utility page. The Utility page looks like this:

```
Select what to display:
```

```
MIDI  Objects  Voices  Stealer           Done
```

The **MIDI** soft button launches MIDIScope™, a useful subprogram that lets you monitor the MIDI messages from the K2500's keyboard and those received via MIDI. This is a good way to make sure you're receiving MIDI from MIDI masters. It's also good for making sure your controls are assigned where you want them, checking your attack velocities, etc.

The **Objects** soft button displays the entire list of objects stored in RAM. This is an easy way to check the object ID of any object you've created. You cannot manipulate objects, though, as you can with the Objects Utility (see page 11-6).

When you press the **Voices** soft button, the display shows the K2500's active voice channels as you play. Blocks of capital Xs in six columns of eight represent the 48 notes that the K2500 can play simultaneously. The Xs change to lower case xs, then to commas and periods, then finally drop out as each voice releases or decays to silence. This feature gives you an indication of the envelope level of each voice, though not necessarily the volume level. Nonetheless, this can give you a valuable

indication of how your voices are being used. For example, if all or most of the voices are being represented by capital Xs on this screen, then there's a good chance that when voice stealing takes place an audible voice will be reallocated.

Use the **Stealer** soft button to select a display that will show how the K2500 is allocating its 48 voice channels. When you trigger a note, the note number will appear in one of the display's three columns, and will remain visible while the note is sustained. The four-digit numeral you see is an internal value that has no direct significance. As long as fewer than 48 voice channels are being used, new note numbers will appear as you play additional notes, and the note numbers for notes that have decayed or have been released will disappear. When all 48 voices have been activated, the display will show which voice channels are shut off ("stolen") to enable new notes to play.

Press the **Done** soft button when you are finished with the Utility page. This is the same as pressing the Exit button.

View

Press the **View** soft button to see the current program in large type. Press it again to return to the normal view.

Sample

Press the **Sample** soft button to enter the K2500's sampler. Refer to Chapter 15 for complete information on the sampler.

Reset

Press the **Reset** soft button if you want to return your K2500's memory to the state it was in when you bought it.

Caution! The K2500 will ask you if you want to delete everything (meaning all RAM objects), and a pair of **Yes/No** soft buttons will appear. Press **No** if you want to keep any objects you may not have saved. Press **Yes**, and everything stored in RAM will be erased. All parameters will be restored to default values. After a few seconds, the K2500 will return to the Program mode page.

Guitar/Wind Controller Mode

If you are using a wind controller or guitar controller with your K2500, you may not always get the sound you expect. Since these controllers will sometimes send a MIDI Note On command before sending Breath or Volume data, the attack transients that characterize each instrument may be lost.

Therefore, the K2500 provides a special mode that may improve its response to your guitar or wind controller. To enter Guitar/Wind Controller mode, press both Chan/Bank buttons while in Master mode, then confirm with the **Yes** soft button.

Enable Guitar/Wind controller mode?

Yes No

Guitar/Wind Controller mode slightly delays MIDI Note On and Note Off commands, so that response to pitch bend and other expressive components of a note will be more accurate. If you are hearing a "glitch" in the attack of notes from your guitar or wind controller, you should try setting your K2500 to this mode. Keep in mind, however, that since this mode slightly changes the order in which MIDI commands are sent, it may affect the performance of the K2500 under some circumstances.

When you reboot the K2500, it will reset Guitar/Wind Controller Mode to off.

Object Utilities

Object Utility functions are useful for moving or copying objects into various banks, naming or renaming objects, deleting objects, and dumping objects over MIDI. To access these functions, press the **Object** soft button while in Master mode. You will see the following screen:

Select database function:

Move **Copy** **Name** **Delete** **DUMP** **Done**

The soft buttons are used to choose the various object utility functions.

Move Move selected objects to a new bank or a specific starting ID.

Copy Copy selected objects to a new bank or a specific starting ID.

Name Name selected objects.

Delete Delete selected objects.

Dump Dump selected objects over MIDI.

Done Exit from the object utilities.

Each function's multiple object selection interface is identical to the one used in the Save Objects dialog. For a complete description of this interface, see the "Saving Individual Objects" section on page 13-24. Here is what the **Move** object screen would look like (with several objects selected):

```
Func: MOVE      Sel: 14/211      Index: 1

Sample  200*Zild 20 Ride Hrd C 4S 260K
Sample  201*Zild 20 Ride Sft C 4S 224K
Sample  202*Zild 16 Crash C 4S 341K
Sample  203*Zild NewBeatOpen C 4S 198K
Select  Next  TYPE  Multi  OK  Cancel
```

The name of the function is displayed on the top line:

```
Func: MOVE
```

If you press **Cancel** while in one of the object utilities, you are returned back to the Object Utilities page (the "Select database function:" screen pictured above.) Any objects that were selected when you pressed Cancel will still be selected if you subsequently enter a different object utility (by pressing a different soft button such as **Name**, for instance.) The selections are reset when you exit the Object Utilities page (by pressing the **Done** button.)

All of the features of the Save Object dialog are accessible here:

You can use the Multiple Object Selector (described on page 13-32) to select ranges of objects according to object types, IDs, strings in the object names, or dependent relationships.

You can quickly select or deselect all objects using the Left/Right cursor and Up/Down cursor double-presses.

You can audition any of the Program, Keymap, Sample, and Song objects by pressing either the Left or Right cursor arrow button, when the desired object is highlighted. Songs will play until either cursor is pressed again. To audition a Program, Keymap, or Sample object, play a note on your MIDI controller (after pressing the Left or Right cursor button). (K2500R users also have the shortcut of holding the CANCEL button, then pressing the numeric keys to play notes.)

Move

Pressing **Move** from the Object Utility page takes you to the Move utility. The Move utility allows you to select any group of objects and move them to a different bank. If you select several objects of a single type, then you are allowed to set a specific starting ID for the objects, of any number (0-999). For instance, you could move a group of samples from scattered IDs to a continuous range of IDs starting from ID# 354.

If you move objects that are dependent objects of other objects (such as samples that are dependents of a particular keymaps,) the parent objects are automatically relinked to their dependents that have moved. What this means is that you can move any objects to any new ID numbers, without having to worry if your programs, keymaps or songs will still play correctly.

Moving a Single Object

If you select a single object to move, you will see a dialog similar to the Save/Replace dialog you see when saving any object.

```
Move Awesome Click to: ID#138
(rePlace Click)
```

```
Replace Cancel
```

Moving Multiple Objects

Select the objects that you want to move, then press **OK**. You will see the following dialog:

```
Move to bank: 200...299
              300...399
              400...499
              500...599
Append Fill Cancel
```

This is similar to the Load function, where you are asked to choose a bank and mode for loading. If you have selected more than one object, and all of the selected objects have the same type, then there will be an additional mode available, "ID":

ID **Append** **Fill** **Cancel**

Here is a description of the above soft buttons:

- Append** Try to use each object's ID offset within its current bank as the ID offset within the specified destination bank. If there is already an object at this offset in the new bank, increment the ID until a free ID slot is found. For example, if you were moving Programs 202, 209, 217, and 230 to the 400's bank, which already has a program at 409, the resulting IDs for the moved programs would be 402, 410, 417, and 430.
- Fill** Use consecutive numbering for each object that is moved, starting from the beginning of the specified destination bank. Any object IDs that are already being used in the specified bank will be skipped over. For instance, if you were moving Songs 300, 315, 489, and 841 to the 200's bank, which already contains Songs 200 and 203, then the moved songs' ID numbers would be 201, 202, 204, and 205.
- ID** Use consecutive numbering for each object that is moved, skipping over IDs that are in use (like Fill mode), starting from the ID that you specify. You will see the following dialog when you press the **ID** soft button:

Select starting ID: **231**

OK **Cancel**

Cancel Return to the Move object dialog.

The objects are moved as soon as **Append** or **Fill** is pressed, or when a starting ID is selected. After the Move function completes, you will still be in the Move object dialog, and you will still be scrolled to the previously highlighted object, even if it has moved to a new ID.

Keep in mind that when you only select one object to move, you can replace another object. However, when you select multiple objects for moving you cannot overwrite any objects.

Copy

Pressing **Copy** from the Object Utility page takes you to the Copy utility. The Copy utility allows you to select any group of objects and copy them to a different bank. Only object data is copied, and not sample data. If you copy a sample object, you will end up with a "copy sample" that points to the same region of sample RAM as the original.

The operation of the Copy utility is identical to the Move utility just described.

If the objects to be copied in a single operation include any objects grouped together with any of their dependents, the new copies of the parent objects will reference the new copies of the dependent objects. As an example, suppose you select Song 400 and its three dependent programs, Program 200, 210, and 303. If you copy all of these objects at once into the 700's bank, using **Fill** mode, you will see the copies at Song 700 and Program 700, 701, and 702. Song 700 will reference the copies of the programs (at 700, 701, and 702.) In contrast, if you had only made a copy of Song 400 as Song 700, the song would reference the old programs (at 200, 210, and 303.)

Name

The **Name** utility allows you to rename an object without entering an editor. You can also use this utility to rename one or more objects with the same name. This is much faster than renaming each object individually. A lot of times you might want several objects to have the same name except for a unique identifier at the end of the name. Using this utility function, you could assign a common name to multiple objects at once, and then quickly name each one a little differently.

When you press **OK** after selecting objects, you will see the following screen prompting you for an object name, with a suggested default:

```
Object Name:   Zithep
```

```
Delete Insert << >> OK Cancel
```

The default name that you are presented with is taken from the **highlighted** object in the object list, whether the highlighted object is selected or not. This makes it easy to copy the name of one object on to another.

As in all naming dialogs on the K2500, you can do a double-press of the Left/Right cursor buttons to put the naming cursor on the last character of the string. This is helpful when putting unique characters at the ends of names.

Left/Right cursor button double-press -> Move cursor to the end of the name

The Relink-by-Name feature (described earlier) relies on there being unique names for dependent objects of the same type, so it is a good practice to make object names unique, particularly samples.

Delete

The Delete Objects utility is very useful for reclaiming unused object and sample RAM in your K2500. This utility allows you to select any arbitrary group of objects for deleting, and audition them if necessary before getting rid of them. This can be a convenient way to delete individual or selected groups of objects. However, if you want to delete an entire bank or everything in RAM, the **Delete** soft button on the Master Mode page is quicker.

If any of the selected objects have dependents that were not selected, you will see the question:

```
Delete dependent objects?
```

```
Yes No
```

If you answer **Yes** to this question, all dependent objects of the selected objects are deleted, unless they are being used as dependents of other objects that are to remain in memory.

Answering **No** will delete only those objects that were selected.

Dump

This utility is for dumping selected objects over MIDI. If any of the selected objects have dependents that were not selected, you will be asked the question "**Dump dependent objects?**".

Press **OK** to initiate a MIDI System Exclusive dump of the selected set of objects, one by one out the MIDI Out port of the K2500. Dumping everything can generate massive dumps, so you should know the limits of the device you're dumping to. You can cancel the dump at any time with the **Cancel** soft button.

Note that only sample objects (which contain the Start, Alt, Loop, and End points, as well as the values of all parameters found on the MISC page in the Sample Editor) are dumped by this utility, and not RAM sample data. (RAM sample data can be dumped via the MIDI Sample Dump Standard from within the EditSample page. See Chapter 10 of the *Reference Guide* for more information on the MIDI Sample Dump Standard.) Dumping the sample object of a RAM sample is not very useful because the sample memory address ranges are fixed in the object. This means that if you load the sample object back into the K2500 via MIDI, there is virtually no way it will point to and play back the same area of sample memory as when it was dumped, let alone the same sample data. However, this can lead to some interesting results.

Sample objects that reference the K2500's ROM sample area will reference the same area when you load them back in via MIDI.

Accessing the Object Utilities from the Editor

The object utilities can also be accessed while editing any object. This is provided as a convenience, for example to be able to do certain housekeeping work such as deleting samples to free up room in your sample RAM, or making copies of objects. Access to the utilities can be done by pressing the **Object** soft button from any Save/Replace dialog in the editor:

```
Save Train Wreck as: 00#112  
(rePlace Train Wreck)
```

```
Object                    Rename RePlace Cancel
```

You can get to this Save/Replace dialog when editing an object by either exiting after you have modified the object, or pressing the **Save** soft button.

If you try to use the Copy utility to copy the exact object you are in the process of editing, you will make a copy of the edited version. With sample objects this would be one way to save off a copy sample that references a small part of a much larger sample. You could remain in the sample editor, and continue to edit the larger sample, by pressing **Done** followed by **Cancel** after making the copy. This may be a faster way to save many "snippets" out of a sample than continually re-entering the sample editor after saving copy samples to different IDs.

When using the Object Utilities from within the editor, you must be careful not to delete any of the objects you are currently editing. This could have unpredictable results.