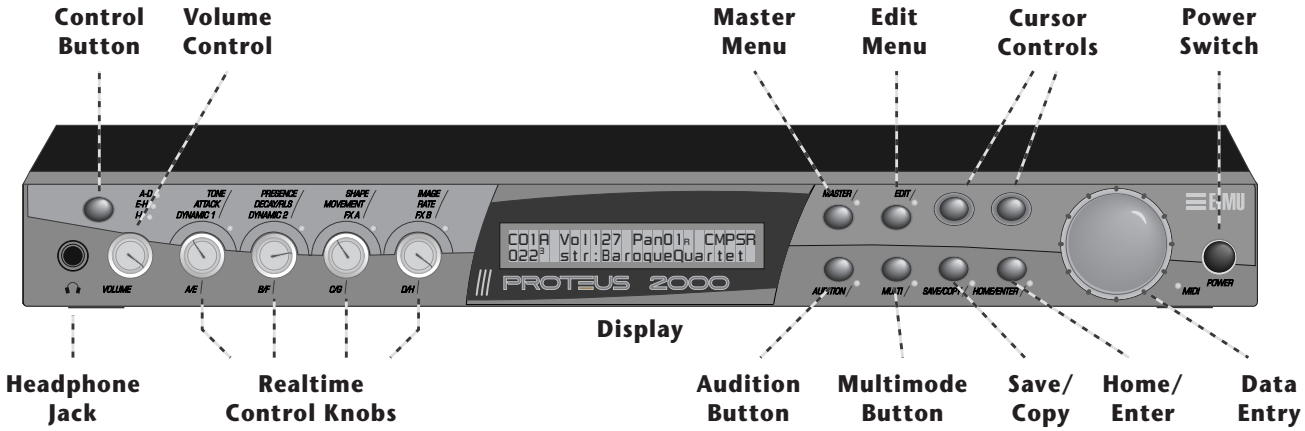
Basic Operations



Front Panel

The Proteus 2000 front panel contains an LCD screen, nine buttons and four real-time controllers. Functions are grouped logically and the controls are arranged for ease of use. Precisely because Proteus is so simple to use, you might be tempted to skip this section. If you just can't help yourself, at least read the Real-time Controller information beginning page 23. There are several "power user" features in the interface which make programming even easier and we wouldn't want you to miss them.

Volume Control

This control is the master volume control for all audio outputs. The Volume Control does not affect any editing or user interface operations.

Master Button

The Master menu contains parameters that affect the entire machine, not just certain presets. An illuminated LED to the right of the button indicates that you are in the Master menu.

Edit Button

Use the Edit menu when you want to create or modify a preset. An illuminated LED to the right of the button indicates that you are in the Edit menu.

Control Button

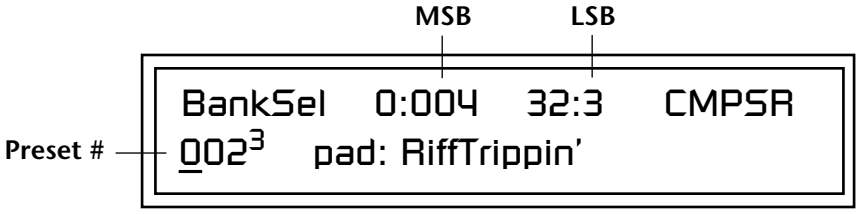
The Control button is used to change the function of the Controller knobs (see the next section). Each time you press the Control button, the Control Mode toggles to select only one of the three Control Rows. The currently selected Control Row is indicated by one of the three LEDs to the right of the row's label.

Audition Button

The Audition button allows you to hear any preset without hooking up a MIDI keyboard. When the Audition button is pressed, the LED next to the button will illuminate and a short "Riff" (programmed as part of the preset) will play. The Riff is latched on and plays continuously until the button is pressed again. Presets can be changed while Audition is latched on.

See "Bank Select Commands" on page 80 for more information on selecting banks via MIDI.

The top line of the display changes to show the MIDI Bank Select controller values needed to select the preset being auditioned. This handy feature lets you know the exact Bank and Preset number to enter into your sequencer.



Left/Right Cursor Buttons

These buttons move the cursor to the next parameter on the display. (The cursor is a little flashing line underneath one of the parameters in the display.) Press either cursor button until the cursor is underneath the desired parameter. The cursor buttons have an auto-repeat feature which advances the cursor when the button is held continuously.

The cursor can be moved bidirectionally using the Data Entry Control while either cursor select button is held down (for example, press and hold the right cursor button and turn the Data Entry Control).

Multimenu Button

The Multimenu button allows you to select a Multi-setup. A Multi-setup is a group of parameters that you might associate with a particular sequence or song. It is like a "snapshot" of the current configuration of the module. There are 128 setups numbered 0-127.

A Multisetup includes all of the following parameters:

- The Preset/Volume/Pan assignments for each of the 32 MIDI channels.
- All Master menu parameters, except for the User Tuning Tables and the MIDI program change->preset map.
- The Multisetup name.

Save/Copy Button

The Save/Copy button is used to save or copy presets and to copy data. Selected groups of parameters, such as PatchCord settings, can be copied between Presets and/or between Layers using this menu.

The LED to the right of the button illuminates to indicate that you are in the Save/Copy menu. The LED also illuminates when any preset parameter has been changed in the Edit menu (or if the front panel knobs have been moved with Quick-Edit mode enabled).

Home/Enter Button

The Home/Enter button is dual purpose. In general, this button acts as the "Home" button. For example, when in an Edit menu, this button snaps the cursor to the page name field of the current screen. When viewing the Preset Select screen (we also call it the main screen), this button snaps the cursor to the preset number field. In these instances, the LED is not used.

Some screens and parameter fields use this button as the "Enter" button. In these cases, the LED blinks when the cursor is moved to one of these fields indicating that the module is waiting for your response to initiate the operation.

Data Entry Control

The Data Entry Control is a stepped, variable control switch used to change parameter values. The wheel increments or decrements the current value one unit with each click. This control incorporates acceleration, which advances the value faster if the Data Entry Control is turned quickly.

Controller Knobs

Each of the four Real-time Controller knobs has a corresponding LED to its upper right side. The function of the Real-time Controllers depends on which row is currently selected and the programming of the preset.

Front Panel Controller Modes

The Real-time Controller Knobs serve three purposes:

1. Real-time control of synthesizer parameters
2. "Quick Editing" the initial settings of the real-time controllers
3. "Deep Editing" the parameters

This section describes each of the three uses.

Real-time Control

The Real-time controller knobs provide direct control of the Proteus 2000's synthesizer parameters. They are always active when on the Preset Select (main) screen. They can optionally be used to transmit MIDI controller messages to other MIDI devices.

The Control button (left of the knobs) changes the function of the real-time controller knobs. Each time the button is pressed, the Control Mode toggles to select one of the three Control Row groups. The currently selected Control Row is indicated by the illuminated LED to the right of the button. The control knob functions are determined by the selected Control Row.

The three Control Rows generate MIDI data that can control the preset on the current MIDI channel (the channel showing on the Preset and main screen. The labels (Tone, Presence, Shape, Image, etc.) printed on these rows show how the factory ROM presets may be programmed to respond. *(The controls might not conform to the front panel labels depending on the preset.)* You can change the way a preset responds to MIDI A-L messages from the Edit menu (PatchCords).

There is an LED next to each of the control knobs which illuminates to indicate that the knob setting has been changed from the value programmed in the preset (when Quick Edit mode is enabled). If the knob position is returned to the original setting, the LED is extinguished.

If the "*Knobs MIDI Out*" parameter in the Master menu (see "Knobs/Riff MIDI Out" on page 49) is set to "transmit," the system sends a MIDI controller message when you turn off the Control knob. The MIDI controller message is sent on the current MIDI channel (also called the basic channel) using the controller number assigned in the Master menu (see "Real-time Controller Assignment" on page 46).

The knobs only generate a message when you move a knob to a new value. The current value jumps to the new value.

Quick Edit

This mode uses the Controller knobs to "Quick-Edit" the currently selected preset without having to enter the Preset Edit menu. This mode is only active when on the Preset Select screen and when *"Quick-Edit"* is enabled in the Master menu (see "Knob Preset Quick-Edit" on page 48).

Initial controller values can be stored in every preset. When you move a knob with Quick-Edit enabled, the Initial Controller Value is updated with the knob's new value. The knob's LED lights indicating that the preset value has been changed. The three Control Rows' MIDI A-L values are stored in the corresponding *Initial Controller Amount* parameter in the Edit menu (see "Initial Controller Amount" on page 120). The Save/Copy button LED illuminates to remind you that the preset has been edited. "Quick-Edits" made to a preset are lost if you select another preset before saving them.

Quick-Edit mode must be enabled in the Master menu.

▶ To Quick-Edit a Preset

1. Use the Control Knobs to change the sound of the current preset as desired.
2. Press the Save/Copy button. The display reads, "Save Preset to."
3. Press the right cursor button to select the bottom row.
4. Optional: Select a new preset location if you don't want to overwrite the current preset, or if the current preset is a ROM preset.
5. Press the Enter button to save the preset.

Deep Edit Mode

When in the Master, or Edit menus, you can use the Controller Knobs to edit parameters. Using the Controller Knobs is a faster method for entering data, but the Data Entry Control offers finer precision.

▶ To Enable Deep Edit Mode:

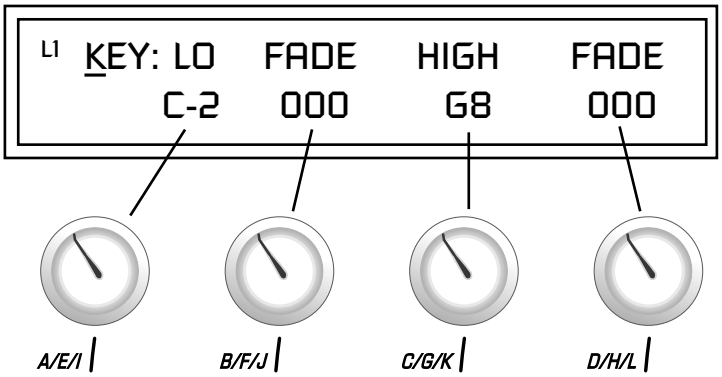
1. Press the Master button and use the Data Entry Control to advance to the "Knobs Deep Edit" screen as shown in the following illustration.

2. Press either Cursor key to move the cursor to the bottom line in the display.
3. Use the Data Entry Control to change the value to "enabled."
4. Press the Master menu button to exit the Master menu.

When you enter any of the Edit menus:

1. The four Controller Knobs are used for editing.
2. All the Controller LEDs are off.
3. All the Control Row LEDS are off.

When you turn a knob, the field value jumps to the current knob value. You can still use the Data Entry Control for editing by moving the cursor to the desired field.

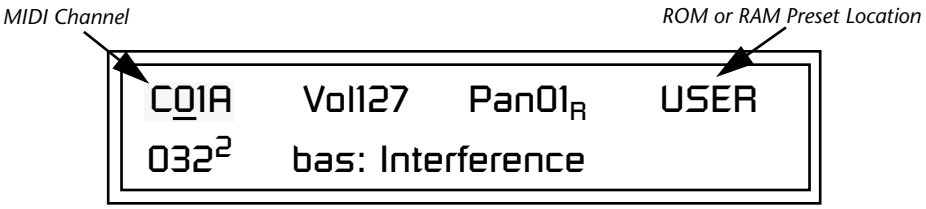


To move through menus horizontally, use the Data Entry Control (the page's title field is the default cursor position). To move through menus vertically (preset layers), press the left cursor to get to the layer field, then change layers with the Data Entry Control.

- Use the Data Entry Control to move through menus (horizontally) or layers (vertically).
- Use the Controller Knobs to change parameter values within each page.

Main Screen

The Preset Select screen is Proteus 2000's default screen (also called the main screen) and is active when you have not selected any of the other button-activated menus. From this screen you can change or examine the Preset, Volume, Pan Position and Preset Location for each of the 32 MIDI channels.



MIDI Channel Selection

The channel number shown in the main screen is the "basic MIDI channel" when in Omni or Poly modes.

▶ To Change the MIDI Channel

1. Press either cursor button until the cursor is underneath the channel number. (The cursor is the little flashing line underneath one of the parameters in the display.)
2. Rotate the Data Entry Control to select a MIDI channel (01A-16A, 01B-16B). As the channel number changes, the display changes to show the preset, volume, pan and preset location associated with the displayed channel.

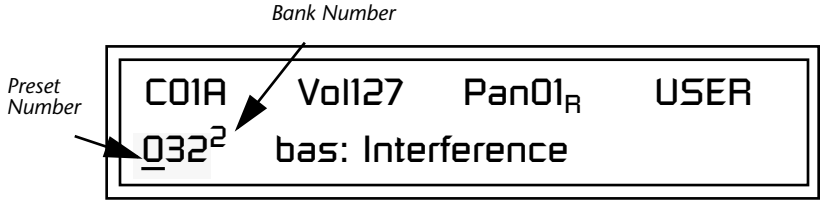
Preset Selection

	Bank	Contents
USER	0	128 RAM Presets
USER	1	128 RAM Presets
USER	2	128 RAM Presets
USER	3	128 RAM Presets
ROM 1	0	128 ROM Presets
ROM 1	1	128 ROM Presets
ROM 1	2	128 ROM Presets
⋮		⋮
??		Depending on ROM sets installed

The USER preset banks can be modified or replaced with your own sounds.

▶ To Change the Preset

1. Press either cursor key until the cursor is underneath the preset number. (The cursor is a little flashing line underneath one of the parameters in the display.) As you rotate the Data Entry Control, the preset number and name changes.
2. The displayed preset is assigned to the displayed MIDI channel. Presets are arranged into banks of 128, as shown in the diagram at left.



Using the screen above as an example, the superscripted number 2 in the second line of the display identifies the current bank number.

- Select banks independently of the of the preset number by locating the cursor on the Bank field and turning the Data Entry Control.

USER

Bank	
0	128 User Presets
1	128 User Presets
2	128 User Presets
3	128 User Presets

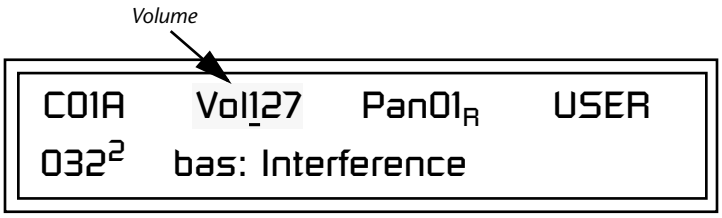
COMPOSER

Bank		Bank	
0	128 ROM Presets	**4**	128 ROM Presets
1	128 ROM Presets	**5**	128 ROM Presets
2	128 ROM Presets	**6**	128 ROM Presets
3	128 ROM Presets	**7**	128 ROM Presets

The Bank numbers start at zero for each ROM sound set installed in Proteus 2000.

Channel Volume

Channel Volume sets the volume of the selected MIDI channel in relation to the other channels. This is the same parameter as MIDI volume control #7, and changes made over MIDI are shown in the display.

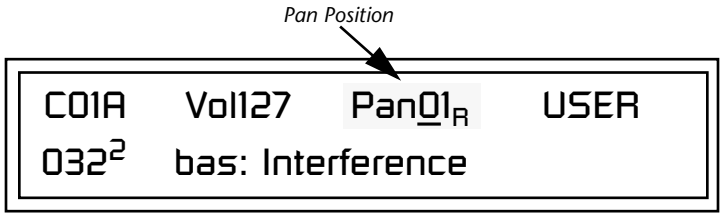


▶ To Change the Channel Volume

1. Press either cursor key until the cursor is underneath the volume value.
2. Rotate the Data Entry Control to select a volume level. The Channel Volume range is 000-127.

Channel Pan

Channel Pan sets the stereo position of the selected MIDI channel. This control operates like the balance control on your home stereo system. Channel Pan is the same parameter as MIDI pan controller #10, and changes made over MIDI are shown in the display.



Note: Pan settings in the preset ADD algebraically with the Channel Pan setting. Therefore, if the pan setting in the preset were set to "63R," moving the Channel Pan setting full left would return the sound to the center position.

▶ To Change the Channel Pan

1. Press either cursor key until the cursor is underneath the pan field.
2. Rotate the Data Entry Control to select a pan value. 64L indicates a hard left pan, 63R indicates a hard right pan. With a setting of "00," the sound is centered in the stereo field.

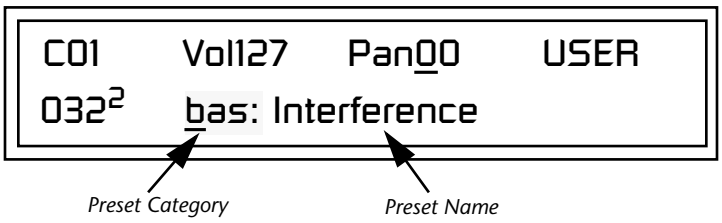
Sound Navigator

Sound Navigator allows you to search through preset and instrument categories to find the type of sound you're looking for. Each preset and instrument has a name and a three letter preset category. You can create your own categories in order to group favorite presets. The preset category is assigned in the Edit menu (Preset Name). Instrument categories are fixed.

Preset Category

When you want to find presets in a particular category, you simply change the category field in the main screen, then move the cursor to the preset name field to scroll through all the presets in the selected category.

When the cursor is on the Preset Category field, turning the Data Entry Control selects different preset categories. The Name Field will change to show the first preset in each category.



▶ To Change the Preset Category

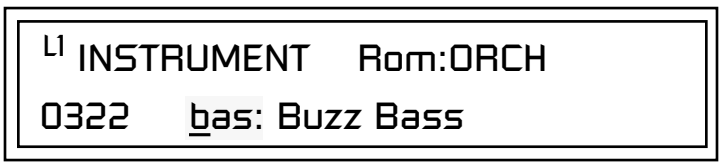
1. Press either cursor key repeatedly until the cursor is underneath the preset category field.
2. Rotate the Data Entry Control to select one of the preset categories. Preset Categories are displayed in alphabetical order.

▶ To Select a Preset within a Category

1. After selecting a category, move the cursor to the Preset Name field.
2. Rotate the Data Entry Control to scroll through the presets in the selected category. Note that the preset numbers will no longer change sequentially.

Instrument Category

When the cursor is on the Instrument Category field (Edit menu), turning the Data Entry Control selects different instrument categories. The Name Field changes to show the first instrument in each category. Move the cursor back to the instrument number to select instruments in the selected category.



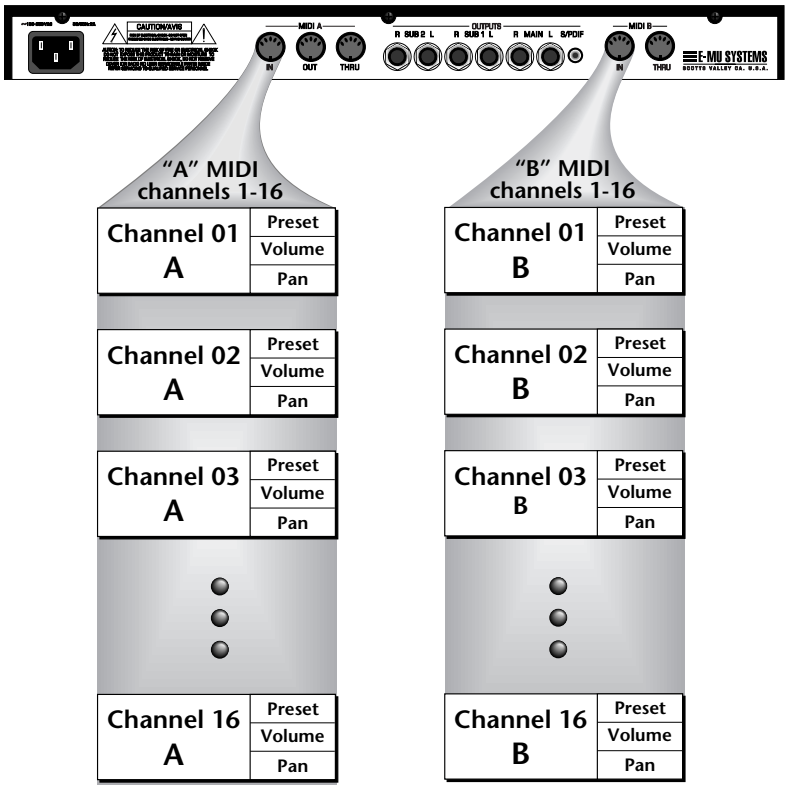
Multitimbral Operation

Multitimbral operation means that Proteus 2000 can play more than one sound at the same time. Follow these instructions to access multiple presets on different MIDI channels simultaneously.

▶ To Set Up Proteus 2000 for Multitimbral Operation

1. Set the MIDI mode to "multi mode," using the MIDI mode function in the Master menu.
2. Decide which MIDI channels you want the Proteus 2000 to receive (32 channels can be used simultaneously). If you are using 16 MIDI channels or less, just use the "A" MIDI port. Use both MIDI ports if you need more than 16 MIDI channels. You can turn any unused channels OFF using the MIDI Enable function in the Master menu.
3. Select the desired preset for each of the MIDI channels you want the Proteus 2000 to receive using the MIDI Channel/Preset selection screen (see previous instructions).
4. Proteus 2000 now responds multitimbrally on each of the MIDI channels you have specified. The volume and pan position parameters can be adjusted over MIDI (for each MIDI channel) or using the Cursor and Data Entry Control in the Preset Select screen.

Save the Multisetup using the instruction provided in Chapter 3:Multisetup.



Proteus 2000 has two MIDI inputs with 16 MIDI channels each. Each of the 32 MIDI channels can be assigned to play a specific preset with unique volume and pan settings.