

Chapter 9

Global Parameters

Many of the PC88's important settings are made from the menu under the **Global** button. As the name implies, these parameters are not Zone- or channel-specific, but affect the entire instrument. The table below summarizes these parameters:

Parameter	Range of Values
Local Control	On, Off
Clock	Internal, External
Transmit Clock	Off, On, Seq
Touch	Easiest - Hardest
Efx Chg Mode	Panel, Prog, Setup, All
Chg Setups	Immed, Keys Up
Setup Change Channel	None, 1-16
MIDI In	Normal, Remap, Merge
Tuning	-100 to 100 cents
Recv Trans	-64 to 63 semitones
Bank Sel Ctl	0, 32, 0/32, 0or32
All Notes Off	Respond, Ignore
General MIDI	Off, On
Device ID	0-127
Xmit Buttons	Off, On
Xmit Rvb Sysex	Off, On
Mem Avail	<i>View only</i>
Reset PC88?	<i>Press Enter to Reset</i>
Dump all Setups?	<i>Press Enter to dump Setups</i>
MIDIScope?	<i>Press Enter for MIDIScope</i>

Local Control

This turns local control of the PC88 on and off. This function is very important in a large studio. Here's why:

If the PC88 is the master keyboard for a sequencer and at the same time is acting as a multi-timbral instrument, it's essential that the performance section (the keys and controllers) and the sound-producing section (the voice banks) be independent from each other. That way, when you are playing a part on the keyboard into the sequencer that is meant to be heard on a *different* instrument, the PC88 doesn't play the same part using an internal sound, and utterly confuse you. This "de-coupling" of the two parts of the instrument is known in MIDI parlance as "Local Control Off".

When Local Control is on, the instrument plays the sounds that you are playing on the keys. When it is off, the keys do not play the local sounds. However, the keys are still transmitting MIDI data — it's the equivalent of setting the Destination for every Zone to MIDI only. Also, the PC88 is still *receiving* data as well, so that incoming MIDI from a sequencer will make the instrument play. If the sequencer has a "loop-thru" function, as most do, then you can play the PC88 keyboard and hear the PC88 at the same time, with the sequencer determining which channels (and which sounds) you are hearing.

Clock

This parameter and the **Transmit Clock** parameter deal with how MIDI Timing Clock messages are handled. The **Clock** parameter determines whether the PC88 will generate its own MIDI Clocks, or instead will listen to external Clock messages.

If it is set to **Internal**, then the tempo of the Arpeggiator, as well as the tempo of any sequencer, drum machine, or other variable-tempo device connected to the PC88 can be controlled from the PC88's own Tempo parameter. This, in turn, can be assigned to a slider, pedal, or wheel.

If Clock is set to **External**, the Arpeggiator will follow Clocks coming into the PC88 from an external source. If there are no Clocks at the PC88's MIDI input, the Arpeggiator will not play.

Transmit Clock

The **Transmit Clock** parameter determines under which circumstances the PC88 will send Clocks out the MIDI Out jack (it has no effect on clocks coming in). The choices are **Off** (never); **On** (always); and **Seq** (for "Sequence" — send Clocks only after a Start or Continue command, or when the Arpeggiator is turned on; and stop sending when the Arpeggiator is turned off, or a Stop command is issued.) If the PC88 is sending out MIDI Clocks, make sure the devices receiving them have *their* sync parameter set to "External".

Touch

Touch lets you adjust the overall feel of the keyboard. You can further modify the keyboard response (per Setup) with the **Velocity** parameters.

Effects Change Mode

As we've seen, each Internal Voice has an Effect assigned to it, and so does each Setup. Effects can also be changed from the front panel, using the Effects buttons and/or the Effects editor

(which is explained in Chapter 7), and they can also be modified by incoming MIDI Controller commands. Sometimes you don't want the Effects to change every time you switch Voices or Setups, because it can cause a discontinuity in the sound. The **Efx Chg Mode** parameter lets you decide under what circumstances the Effects will change. The choices are:

Panel — will not change when Setups or Internal Voices are changed, but will respond to front panel and MIDI Controller commands on any channel.

Prog — changes when Internal Voices change, and responds to front panel and MIDI, but not Setup changes.

Setup — will change when Setups change, and will respond to front panel and MIDI, but not Internal Voice changes.

All — responds to everything; the default setting.

Change Setups

Chg Setups is a very useful parameter for live performance. It determines when a newly-selected Setup will take effect. It has two modes:

In **Immed** mode, when a new Setup is selected, the display changes immediately to show the new Setup, and the next note played will reflect the change. Notes being held by Kurzweil instruments continue to sound with the old voices; gear from other manufacturers may cut off voices when they receive program changes.

In **Keys Up** mode, the change will not occur until the PC88 is in a "no keys down" condition. So if you hold any note, or even if you play sufficiently legato so that there's never a moment at which no keys are being played, the change will be delayed. While this is happening, the light on the Select button of the new Setup will blink. As soon as you lift all of your fingers off, the change goes into effect, the light comes on steadily, and all notes played after that will be in the new Setup. The Sustain pedal won't do anything to delay the Setup change; however, any *notes* from Internal Voices being held by the Sustain pedal will continue to sound with their original voice through a Setup change, until you release the pedal.

Setup Change Channel

Setup chg chan lets you use an external MIDI device to change the PC88's Setups. You can always use external MIDI Program Change commands to change a voice on a channel or in a Zone, but this command lets you change the entire Setup at once. Choose an unused MIDI channel on which you would like to send Program Changes to the PC88 for changing Setups. If you don't want external Program Changes to change the Setups, select **None** (the default).

MIDI In

MIDI In modifies the MIDI data as it is received in the following ways.

Normal (the default) means the incoming MIDI data is unchanged.

Remap takes the incoming notes and treats them as if they were being produced by the PC88's keyboard: they get split into four different Zones according to their note numbers, and sent out the appropriate channels. Any notes that lie in two overlapping Zones will be sent out on *both* Zones' MIDI channels. Channel numbers on incoming notes are ignored. Non-note information (controllers, pitchbend, etc.) will be sent out on *all* active channels: for example, if the four Zones of a Setup are transmitting on channels 2, 5, 9, and 12, any Pitchbend information coming into the PC88 on any channel will be regurgitated on channels 2, 5, 9, and 12 simultaneously.

Merge mixes the incoming MIDI data with the data being generated by the PC88 keyboard and sends the combined data stream out the MIDI Out jack. Channel numbers of incoming commands remain intact. Both note and non-note messages are passed normally, but System Exclusive messages are filtered out. (The MIDI Thru jack still works normally.)

Tuning and Receive Transpose

Changing the **Tuning** parameter raises or lowers the pitch of the PC88 by up to a semitone, in 1-cent (1/100th of a semitone) increments. Changing Receive Transpose (**Recv Trans**) raises or lowers the pitch a semitone at a time, up to 64 semitones.

The PC88 doesn't care which Zone is selected when you adjust these parameters: the whole instrument changes pitch.

Bank Select Control

Bank Sel Ctl determines how the PC88 will respond to incoming Bank Select messages to switch among the Internal and the VGM banks. (How Bank Select is *transmitted* is set under the **Bank Transmit** option on the **Program** menu — in Chapter 5.) Bank Select can be a great source of confusion, since instruments from different manufacturers may interpret Bank Select messages differently. This parameter offers the most flexibility possible, and should be set so that it agrees with the sequencer or other MIDI device that will be sending the Bank Select messages. The choices are to respond only to Controller #0; to respond only to Controller #32; to respond only if *both* Controllers are sent together; or to respond to *either* Controller. Note that if the VGM board is not present, switching a channel to any bank except 0 will render that channel silent.

All Notes Off

All Notes Off specifies how the PC88 will respond to a standard MIDI All Notes Off message (controller #123). Normally, when this message is received, a synthesizer should stop playing any notes being held (**Respond**). However, some keyboards (notably those from Roland) and even sequencers generate All Notes Off messages too frequently, and can cause notes to cut off prematurely. If this is a problem in your setup, set this parameter to **Ignore**. In fact, you can usually set this to Ignore no matter what your setup is: it is quite possible to lead a happy and productive MIDI life without ever responding to an All Notes Off.

General MIDI

Turning on the **General MIDI** parameter sends out the MIDI message "General MIDI On" to any GM-compatible synthesizers that are receiving MIDI from the PC88. If the VGM board is installed, it also puts the PC88 into General MIDI mode, and sets all channels to Bank 1, except channel 10, which is assigned to a special bank for drums. Turning it off sends out the MIDI message "General MIDI Off". General MIDI is also discussed in Chapter 8.

Device ID

Device ID is a parameter to use when you're using more than one PC88 in a system. If you need to address the instruments individually so that you can dump or load Setups to one and not the others, then each must have a unique Device ID. The Device ID defaults to 0, but you can set it to whatever number you want, up to 126. Setting it to 127 invokes a special "broadcast" mode: any PC88 on the MIDI line, regardless of its device ID, will respond to a PC88 whose ID is 127. The Device ID gets stored as part of the Setup information when you dump a Setup into a sequencer or other storage device, so when you load it back into the PC88,

the Device IDs must agree or the PC88 will ignore it. If you want to make sure the Setup can be sent back into *any* PC88, set the Device ID to 127 before you dump it.

Transmit Buttons

Xmit Buttons lets you transmit every button press on a PC88 as a MIDI System Exclusive command. This allows you to have a sequencer memorize all of your moves when programming or playing the instrument, for playback later.

Transmit Reverb Sysex

This parameter lets you transmit your current PC88 effects settings to a sequencer whenever you select a Setup. Since **Xmit Rvb Sysex** can create a large amount of MIDI data, however, it should normally be set to **Off**.

When Xmit Rvb Sysex is set to **On**, the PC88 will send SysEx messages describing its current effects settings whenever you select a Setup. This means that when you subsequently transmit from the sequencer to the PC88, the effects settings you've saved will be used instead of the PC88's defaults.

Memory Available

The PC88 has a generous amount of on-board memory, but it's not inexhaustible. If you find that you're storing huge numbers of Setups and wonder how long you can keep it up, check the **Mem avail** parameter from time to time. The value when it comes from the factory is 183k; once you get below 5k, it's time to think about deleting some unnecessary Setups. If you don't want to get rid of the Setups entirely, use **Dump all Setups** (described below) to send your Setups out over the MIDI cable as System Exclusive data. You can also dump individual Setups; see "Dumping a Setup" in Chapter 5.

By the way, the PC88's memory is battery-backed. See Chapter 1 for information on this.

Reset PC88

If you press **Enter**, the display will ask "Are You Sure?", which gives you an important opportunity to think about what you're doing. This is a "hard" reset: all of the parameters on the PC88 are set to their initial factory state, which includes all Setups and Effects. If you aren't concerned about losing any and all work you've done on the instrument's parameters (or if you *want* to start from scratch), then press **Enter** again and the instrument resets. Or, press **Cancel** if you've had a change of heart.

There is also a "soft" reset function, which is much kinder, and only serves to shut the PC88 up without changing any memorized parameters: it's the equivalent of turning the power off and on again, but it's gentler on the power supply. Soft reset is accomplished by pressing, in the numeric keypad, the **+/-**, **0**, and **Clear** buttons simultaneously. In most circumstances, if your MIDI setup starts getting weird and not responding the way you want, try the **Panic** button first, then press **Internal Voices** (to limit the amount of MIDI data being sent), and use the soft reset only if those don't work.

Dump all Setups

Press **Enter** and all of the Setups in memory are sent out over the MIDI cable as System Exclusive data. This allows you to store your entire PC88's memory into an external device like a sequencer or computer files in one operation. To restore the memory, simply play back the System Exclusive file into the PC88 (first making sure the Device IDs are correct).

MIDIScope

MIDIScope displays MIDI data, either coming into the PC88 or being produced by the instrument itself. To use it, press **Enter** at the “MIDIScope?” prompt. Now whenever you play a key or controller or send any MIDI data to the PC88, the data shows up on the display: the type of command on the top line, and the data bytes on the bottom. This can be a highly useful tool for diagnosing problems in a MIDI system, such as improper setting of controllers or dead cables. To leave MIDIScope, press any button.