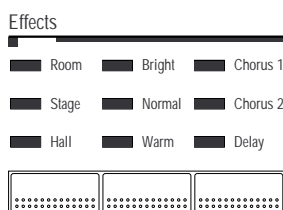


Chapter 7

Effects Editing

The PC88's built-in effects processor provides reverb, delay and chorusing effects for the on-board sounds. As we've seen, a different combination of effects can be assigned to any Internal Voice or Setup, and that combination can be remembered when that Voice or Setup is recalled — depending on the setting of the Effects Change Mode in the **Global** menu.



Effects can be edited on two levels. The first you've already done: change the settings of the buttons in the **Effects** section. When you use those buttons, there is a set of default parameters that you can't see that define the effect you've chosen. The second level lets you go beyond the default parameters, and change individual parameters within the effects themselves. These "tweaked" effects can be useful for making a Setup sound "just right", or for creating unusual combinations for special purposes. Tweaked effects are only usable with Setups: the Internal Voices, although they can use any **Effects**-button combination, *must* use the default settings of the chosen combination.



If you have the VGM board installed, there are actually *two* effects processors available, identical but independently programmable. Parameters for the Internal effects processor are labelled "Int" in the display, and those for the VGM processor are labelled "VGM".

Effects editing is handled in the **Zone Parameters**: press the **Effects** button there. The table below summarizes the options:

Parameter	Values
IntFx	1-48
Int Rev Wet	0-127
Int Rev Time	0-127
Int Eff Wet	0-127
Int Eff Delay	1-350
VGMFx	1-48
VGM Rev Wet	0-127
VGM Rev Time	0-127
VGM Eff Wet	0-127
VGM Eff Delay	1-350

Internal Effects

IntFx shows the algorithm or combination of effects that will be applied to the Internal sounds. These correspond with the various button combinations from the Effects section of the PC88's front panel; as you scroll through the Algorithms, you can see the lights in the Effects section change in accordance with the Algorithms. For example, when Algorithm #1 (None) is showing, all the lights are off. Move up to Algorithm #5 (Room Bright), and the lights will glow next to **Room** and **Bright**. Go to Algorithm #6 (RoomBr+Ch1), and the lights show **Room**, **Bright**, and **Chorus1**.

The correspondence works both ways: If you have the Algorithm on the display, and you change the effects using the Effects buttons, the Algorithm will change accordingly.

Internal Reverb Wet

Once you've chosen an Algorithm with **IntFx**, you can make modifications in it. Press the right cursor button (>>>) and the display shows **Int Rev Wet**. This sets the ratio of reverberated to "dry" unprocessed signal. Maximum value is 127 - all reverb - and minimum is 0 - all dry.

Internal Reverb Time

This sets the overall decay time of the reverb. It also has values of 0 to 127, but exactly what the numbers mean in milliseconds or seconds is a function of which type of reverb you have selected. A setting of 127 will mean a longer reverb in an algorithm that uses "Hall" than one that uses "Room". Setting this parameter to 0 does not cut off the reverb completely: The first initial reflection (the "bounce" you hear after you play the note) is not affected by this parameter, and will still be heard, although later sound will be damped. The timing of that initial reflection is a function of the reverb type, and stays the same regardless of how you set this parameter.

Internal Effects Wet

This controls the balance between the dry signal and the effected (chorused or delayed) signal. Again, 127 means all effect, and 0 means no effect.

Internal Effects Delay

This parameter only changes the Delay effect, not the two choruses. The delay time can be set from 1 to 350 milliseconds. It also changes the "feedback" ratio — the amount the delayed signal is fed back into the delay.

Saving Effects

To save the effects edits, **Store** the Setup. The effects parameters are stored with the Setup just like the Arpeggiator parameters.

Once you start editing an effects Algorithm, do not change Algorithms until you **Save** the Setup, or you will lose all of your edits. Moving to a new Algorithm calls up that Algorithm's default values, which override any others. Also, don't call up an Internal Voice — or you'll lose your entire edit, Effects and all! Each Internal Voice has its own Effects setting, so calling one will put its combination in place, wiping out your edits. (And remember the Effects that accompany Internal Voices always use default values.)

VGM Effects



We still haven't looked at the VGM board's effects processor. If you have the VGM board installed, press the right cursor button (assuming you're still in the **Effects** menu) to see more parameters. (Another way to get here is to press *both* cursor buttons from an Internal effects parameter.) These parameters affect the VGM sounds (Banks 1-3), whether they're being played locally or from MIDI. VGM effects parameters are stored with Setups just like the Internal effects parameters.

The lights in the Effects section of the front panel will follow the Algorithm of the whichever processor is being used in the current Zone: that is, if the current Zone uses a voice from Bank 0, the lights will show the Internal effects Algorithm, if the current Zone's voice is from a different bank, the lights will follow changes in the VGM effects Algorithm. Changing the algorithm in the Internal effects will not change the algorithm in the VGM effects, or vice versa. Nor will changing one effects Algorithm change any *parameters* in the other effects processor — so if you have a set of parameters you like in one processor, you don't have to worry about losing them while you fool around with the other processor.

Copying Effects

Sometimes you will want to have the two effects processors be quite different, and sometimes (especially when you are in 64-voice mode) you will want them to be identical. An easy way to achieve the latter is to use the **Copy** function. Make sure that one of the Internal effects parameters is showing on the display, and press **Copy**. The display asks "Copy Int effect?", and you press **Enter** to do so. Press **Effects** to go back to the effects parameters, and scroll with the right cursor until you get to a VGM effects parameter. Press **Copy**, and scroll once to the right. The display says "Paste VGM effect?". Press **Enter** and the parameters from the Internal processor are loaded into the VGM processor. Press **Store** so you don't lose everything. You can, of course, go the other way around, and copy from the VGM to the Internal. You can also copy either of the parameter sets to a different Setup, pasting into either the VGM or Internal processor.

Effects and Drum Sounds

If the VGM algorithm includes Chorus 1, Chorus 2, or Delay, the drum kits (and percussion sounds such as ride cymbal and click) will not be affected. They will be processed by the reverb, however.

MIDI Control of Effects

The PC88's effects can be controlled by MIDI Continuous Controller commands. These commands can originate from the physical controllers on the PC88 or from an external MIDI source like a sequencer. Each processor has its own Controllers:

Controller number	Function
83	Internal Algorithm select*
90	VGM Algorithm select*
91	Internal Reverb Wet (the default assignment for Slider A)
92	VGM Reverb Wet
93	Internal Effects Wet (the default assignment for Slider B)
94	VGM Effects Wet

*To select an Algorithm, you must send a particular Controller value (second data byte), which recalls the Algorithm from a fixed table in software. See Appendix D for the complete list of Algorithms and controller values.

Transmitting PC88 Effects Settings to a Sequencer

The **Xmit Rvb Sysex** parameter from the **Global** menu allows you to send SysEx messages describing the PC88's current effects settings when you call 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.