

Peavey Spectrum® Synth - Version 1.10 Addendum

This addendum updates the manual to include the revisions made for software version 1.10.

Six-part Multi-timbral! (see page 13)

The Synth is now up to 6-part multi-timbral (instead of 4). However, you may need less than six parts from the Synth, but need the other channels to drive other modules. In this case, you can tell the Synth how many parts (channels) it should respond to while in its **MULTI**, **LEGATO**, and **MULTI/LEGATO** modes. (Adjustable from 2-6, in contiguous order starting at the MIDI receive channel.) Program change 127 no longer disables a channel in multi-timbral mode.

The **MODE SELECT** button still changes the MIDI mode if pressed and immediately released (mode changes on release). When it is first pressed down, the LED display will show the number of MIDI channels the Synth will respond to in the **MULTI**, **LEGATO**, and **MULTI/LEGATO** modes. The choices will be 2-6 (defaulting to 6 when the unit is re-initialized). This value can be edited with the *up* and *down arrow* buttons while the **MODE SELECT** button is held. In this case, the release of the button will not cause a mode change. Also, if the **MODE SELECT** button is pressed and held for more than one second, the Synth assumes that you wanted to see the number of channels on the LED and not change the mode. Therefore, in this case the release of the button will not change the mode.

Also, the Synth has always powered up in **POLY** mode. It now recalls the mode you were using previously.

New Legato Features (see page 13)

Legato Mode per-patch:

There is a new patch parameter called "LegatoInit" that can force legato on or off (overriding the front panel mode). This allows the selection of legato mode with nothing but a program change. Previously, legato had to be chosen from the front panel (affecting all channels in multi-timbral modes), or by sending MIDI continuous controller #68 (Legato Footswitch). This parameter is in the patch at hex address 111 (the first reserved byte, see program block revisions below). Any custom patches that you saved with version 1.00 should have a zero at this address, which should make them act as they always did (see below). You can change this parameter to a nonzero value via SysEx on any patch, and then (after saving to RAM) it will override the front panel whenever it is recalled.

MIDI controller #68 will still affect a patch that forces legato mode. The force is only applied when the patch is first recalled, or when a MIDI Reset All Controllers message is received on that channel (controller #121 with value of zero). Patches that do not force legato will assume the front panel's legato status when a Reset All Controllers message is received. (Previously, this message always turned legato off for that channel, which was confusing if the legato LED was on.)

Several of the factory patches have been altered to force legato on or off. There are only a few that force it on, but many that force it off (due to quick-decaying envelopes that make the patch virtually useless in legato mode). These "factory" settings can be overridden if you prefer your Synth to act as it did before. To disable (or re-enable) the factory legato settings, press and hold **FINE**, then press **CHANNEL** (and hold both). Switch the display between "on" (enabled) and "off" (disabled) with the *up* and *down arrow*

buttons. Patches that you edit to force the mode (with user settings 1 and 2) will execute the force even if the factory settings are disabled.

Here's how this new patch parameter is translated:

- 0 - Use the front panel legato status, or the running MIDI controller #68 value for the channel.
- 1 - Force legato mode off, overriding the front panel and MIDI. (User setting).
- 2 - Force legato mode on, overriding the front panel and MIDI. (User setting).
- 81h - Factory setting (acts like a 1 if factory settings are enabled, or like a 0 if they are disabled).
- 82h - Factory setting (acts like a 2 if factory settings are enabled, or like a 0 if they are disabled).

The PC™ 1600 presets in the Synth now have a fader assigned to edit this new value (range is 0-2). It is named "Legato Mode" and is on fader #6 of the "Synth Prog Type" preset. You may want to reload your PC™ 1600 if you have one (see below).

Global Bend Range (Prg, 0-24)

The pitch bend range used by the Synth normally comes from each patch (power up default). You can, however, use this global override so that the bend range is constant for all patches. To see the bend range, press and hold **TRANSPOSE**, then press **FINE** (and hold both). At this point, the number can be edited with the *up* and *down arrow* buttons. (E.g. Prg = use patch info, 0 = off, 24 = 2 octaves, etc.)

New Global Autoflow Disable option (see page 15)

If the Synth's MIDI output is connected to something other than another Spectrum Synth (like a MIDI patchbay or librarian), you will want to disable the Autoflow feature so notes that you play are not sent over MIDI and "ignored" by the unit on the other end. Press and hold **TRANSPOSE**, then press **CHANNEL** (and hold both) to see the Autoflow enable status. Switch it between "on" and "off" with the *up* and *down arrow* buttons.

Advanced use with a PC 1600 (see page 16)

Downloading the 24 Synth Creation presets:

Previously, the Synth configured the PC 1600 to program the Synth on MIDI channel 1. If you were using a different MIDI receive channel on your Synth, you were probably the recipient of a rude surprise (the Synth didn't respond to the PC 1600). This new version will substitute the Synth's current channel into the SysEx strings that it sends to the PC 1600.

1. Connect the MIDI Out on the Synth to the MIDI In on the PC 1600.
2. Make sure the MIDI channel on the Synth is set to where it will be when you edit with the PC 1600. The SysEx strings that the PC 1600 sends to the Synth include this channel, and the Synth won't respond if they don't match. If you change the Synth's MIDI channel in the future, repeat this procedure to match up the two units.
3. Select the starting PC 1600 preset location on the Synth (its patch number, not the PC 1600's, determines the starting destination for the 24 presets). Since there are 24 presets to be downloaded, it is recommended that you start with preset 0 (to load the presets to locations 0-23) or 26 (to load to locations 26-49).

4. Press and hold the **TRANSCOPE** button, then press the **MODE SELECT** button to download the presets. The downloading process will take a little over one minute. When the 3-digit program number comes back on the display, it's ready. You may want to watch the PC 1600's LCD during the download to make sure everything's working correctly, and that all the presets fit (The PC 1600 uses dynamically allocated preset memory, so if the 26 other presets that you are not overwriting are very large, the 24 Synth presets may not all fit.)
5. Now reconnect the MIDI cables to their original locations (MIDI Out on the PC 1600 to MIDI In on the Synth).

New PC 1600 "Synth Prog Type" preset functions:

Button #1 - Toggles solo mode on and off (string 1 = on, string 2 = off). When solo mode is on, any note played on the channel will cut other notes off (monophonic, nonlegato style). This button was there before, but not listed in the manual.

Fader #5 - Edits the patch's bend range from 0 (off) to 24 (2 octaves) in semitone steps. This was also there before, but not listed in the manual.

Fader #6 - Legato Mode. Valid user values are 0, 1, and 2 (see above for explanation).

Saving the Edit Buffer to another destination:

The manual states that the 64 user (RAM) patches are lost on power-down. That was false. These patches remain in battery-backed memory (unless you re-initialize the machine at some time).

After editing a patch to your satisfaction, you can save it to a different patch number (0-63) than the one you were on when you were editing. (In the previous version, you had to start at the place you were planning to save.) This means that you can edit any patch (even a ROM patch, 64-255), then save your edits to a RAM location.

Method for editing and saving:

1. Choose any patch as a starting point. Or press button 2 from the PC 1600's "Synth Osc 1" preset to initialize the edit buffer and program from scratch with a "clean slate."
2. Modify patch parameters with the 24 PC 1600 presets.
3. When ready to save, select a patch number between 0 and 63, using the front panel buttons or MIDI. (The sound will change to the new patch, but your edit patch is still in memory.)
4. Select the "Synth Osc 1" preset on the PC 1600 (first preset that was downloaded).
5. Press button 16 on the PC 1600 (the Synth's LED should read "SAV" for a second or two, confirming the save).

Now your new patch is in memory at your selected location for future use. (It remains even if the unit is powered down.) If desired, you can then choose another RAM patch and save your edits again.

The patch won't be lost unless you overwrite it with another one later, or re-initialize the machine. You could lose this hard-earned data if your Synth gets a spike on the AC line, or by accident if you overwrite it with something else. For this reason, we suggest that you back your data up to a MIDI storage device (like the Peavey MIDI Streamer or a computer) if you have custom patches. You can make the Synth send its 64 RAM patches in the form of a System Exclusive dump by sending a SysEx dump request (button

15 on the PC 1600's "Synth Osc 1" preset). If you lose your data, or have to re-initialize your Synth, the data dump can be sent back to the Synth, and it will restore the patch data automatically.

New Mod Sources - Breath and Expression (see page 31):

The last 2 mod sources are listed as MIDI Continuous Controller 1 and 2. These were not hooked up (they acted as if the mod source was off). Now they're set up to respond to the Breath Controller (#2) and the Expression Controller (#11).

Mod 1	Mod 2	Mod Source
14	30	MIDI Breath Controller (#2)
15	31	MIDI Expression Controller (#11)

Program Block Revisions: The manual's listing of the program block did not account for the full size of the block. Also, the variable "Volume1" is listed twice (the later one, at address FB, should be named "Volume2").

The LegatoInit variable described above (new in version 1.10) is also listed here.

Variable Name	Offset	Description	Range
LegatoInit	111	Legato Status upon recall	0-2 (user), 81h, -82h (factory) [see explanation above]
Reserved	112-149	Reserved for future use	

Program Block size: 14A (330 bytes)

Other SysEx commands not in the manual:

Initialize Edit Buffer (to create new patch from scratch):

F0 00 00 1B 02 09 <CH> 09 F7

Save Edit Buffer to current RAM location (if current patch is between 0 and 63):

F0 00 00 1B 02 09 <CH> 07 00 F7

Dump A Single RAM patch:

F0 00 00 1B 02 09 <CH> 01 <PRG> F7

Dump All 64 RAM patches:

F0 00 00 1B 02 09 <CH> 01 7F F7

<CH> = MIDI channel (0-F for channels 1-16)

<PRG> = RAM Program Number (0-3f)



Features and specifications subject to change without notice.



Peavey Electronics Corporation 711 A Street / Meridian, MS 39301 / U.S.A. / (601) 483-5365 / Fax 486-1278