Please make note of the following changes and additions to the MF-105M MIDI MuRF, which are not covered in the User's Manual:

New MIDI CC messages:

CC95 - MIDI Stop Mode: Values 0-63 = Stop Mode 0, 64-127 = Stop Mode 1. MIDI Stop Mode is a new setting that controls what happens when the MuRF is synchronized to MIDI Clock and a Stop message is received. In MIDI Stop Mode 0, the MuRF pattern will stop playing when a MIDI Stop message is received. This is the old pre-1.7 behavior. CC95 any value 64-127 sets MIDI Stop Mode 1 - in this mode, the MuRF will switch from MIDI Sync to internal clock running at the same rate as the last MIDI clock received, without skipping a beat. This is a persistent setting; the current MIDI Stop Mode is remembered on power-down.

CC92 and CC93 - MIDI Tap Tempo: These CC messages allow you to tap a tempo into the MuRF using a remote MIDI controller. Handy for some devices like guitar multi-effects, which may not send MIDI clock but which allow you to map a MIDI CC to a foot switch. CC92 is Tap Tempo Momentary, CC93 is Tap Tempo Latching. Program your MIDI controller to use CC92 if the controller sends one CC value when you press its switch and another CC value on release of the switch (momentary on/off behavior); program your MIDI controller to use CC93 if the controller sends only one CC value on pressing its switch and does not send a CC on release (latching on/off behavior). The two Tap Tempo CCs behave the same as the Tap Tempo jack on the back of the MuRF; the only difference between the CCs is that CC92 counts only values 64-127 as a tap, where CC93 counts every CC message of any value as a tap.

CC66 – Triplets Disable: Values 0-63=OFF, 64-127=ON. If a CC66 message value 64-127 is received, this will disable the Triplets time divisions from being selected while in MIDI Sync. The purpose of this is to allow you to sweep manually through the different clock divisions (using the Rate knob or CC9) while preserving 4/4 timing. Triplets will remain disabled until a CC66 message value 0-63 is received, or until the MF-105M is powered down. The unit always powers up with triplets enabled. See Clock Division charts below for more info.

Changes/Additions to the User's Manual:

CC87 - Bypass On/Off *(page 19):* If you are sending MIDI clock to the MuRF, you can now switch in and out of Bypass (via MIDI CC or using the stomp switch) without losing sync.

CC89 – Pattern Clock Sync On/Off *(page 19)*: When the MF-105M receives a CC89 message on the MIDI channel it is assigned, the value of the CC89 message enables or disables the Pattern Clock's ability to sync to incoming MIDI Clock messages. With this set to OFF, the MIDI MuRF will ignore MIDI Clock messages and will not go into MIDI Sync. If a CC89 "OFF" message (value 0-63) is received while the MIDI MuRF is actively synced to MIDI Clock, it behaves like a MIDI Stop message, meaning the pattern will stop if in MIDI Stop Mode 0, and the pattern will continue at the same rate but switched to internal clock if in MIDI Stop Mode 1. If Pattern Clock Sync is disabled while not in MIDI sync, there is no obvious response from the MuRF, but it will ignore any MIDI clocks received after that point. The MuRF always powers on with MIDI Sync enabled. **Additional Note:** The MF-105M will enter clock sync on the first MIDI Clock received. Does not require a MIDI Start message to enter sync, as was the case in previous firmware versions.

CC90 – Pattern Reset *(page 19)*: A CC90 message (any value) received will reset the pattern to the beginning (step 1). If the MuRF is running on its Internal Clock, then the CC90 message will cause a reset instantly, changing the downbeat. If the MuRF is synced to MIDI Clock, a CC90 message will cause a reset to pattern step 1 on the next synchronized beat.

Clock Divisions - Triplets Enabled
(CC66 value 0-63 / default on power-on)

Duration	MIDI CC Values	# Clock Messages
Four Wholes	0 - 6	384
Three Wholes	7 - 12	288
Two Wholes	13 - 19	192
Dotted Whole	20 - 25	144
Whole	26 - 32	96
Dotted 1/2	33 - 38	72
Whole Note triplet	39 - 44	64
1/2 Note	45 - 51	48
Dotted 1/4	52 - 57	36
1/2 Note triplet	58 - 64	32
1/4 Note	65 - 70	24
Dotted 1/8	71 - 76	18
1/4 Note triplet	77 - 83	16
1/8 Note	84 - 89	12
Dotted 1/16	90 - 96	9
1/16 Note	97 - 102	6
Dotted 1/32	103 - 108	4
1/32 Note	109 - 115	3
Dotted 1/64	116 - 121	2
1/64 Note	122 - 127	1

Clock Divisions - Triplets Disabled
(CC66 value 64-127)

Duration	MIDI CC Values	# Clock Messages
Four Wholes	0 - 7	384
Three Wholes	8 - 15	288
Two Wholes	16 - 22	192
Dotted Whole	23 - 30	144
Whole	31 - 37	96
Dotted 1/2	38 - 45	72
1/2 Note	46 - 52	48
Dotted 1/4	53 - 60	36
1/4 Note	61 - 67	24
Dotted 1/8	68 - 75	18
1/8 Note	76 - 82	12
Dotted 1/16	83 - 90	9
1/16 Note	91 - 97	6
Dotted 1/32	98 - 105	4
1/32 Note	106 - 112	3
Dotted 1/64	113 - 120	2
1/64 Note	121 - 127	1