

Besides fixing a number of bugs, the newest version of the 2880 software also includes a number of additional features. The new features change the way a Quantized recording ends and gives the user MIDI control over all of the functions of the 2880 by utilizing both MIDI Control Changes (CCs) and MIDI Program Changes. The only controls that are not MIDI controllable on the 2880 are the Left and Right Input Gain knobs and the Headphone Volume knob, all of which are analog controls.

ENDING A QUANTIZED LOOP:

When recording a loop in Quantize mode, the loop length will always be quantized to the nearest bar. To end the recording of a Quantized loop you press either Record, Play or New Loop buttons. Pressing any of these buttons within the first 2 beats of a bar will truncate the end of the Quantized loop to the end of the previous bar. Pressing any the above-mentioned buttons after the first two beats of a bar will allow the 2880 to continue recording out the current bar.

For example, if you have recorded two bars and are in the third bar, pressing the Play button before hearing the third beat will cause the 2880 to immediately stop recording and truncate the loop length to two bars. If you had pressed the Play button after the third beat, the 2880 will continue recording out the entire third bar and your loop will be three bars long.

In the older version of the 2880 software, ending a Quantized loop would always cause the 2880 to record out the current bar you were in. It did not truncate. The truncate feature allows a musician to record any number of bars they want, let go of their instrument then stop the loop before the third beat. The musician will not hear any silence at the end of their loop.

QUANTIZED LOOPING WHEN 2880 IS MIDI CLOCK SLAVE

When the 2880 has EXT. CLOCK enabled and is therefore the MIDI Clock slave to another device, a fix has been made when Quantize mode is ON. If your MIDI master is continually sending MIDI Clock with MIDI Song Position Pointer data, the 2880 will read the MIDI SPP data and always start recording its loop on beat 1, as long as Quantize is set to on. It will also always end the loop recording on beat 1 of a bar so that the loop lengths are always x number of bars in length. This allows the user to more easily make loops that will be in sync with their MIDI master.

Normally when the 2880 is the MIDI master and using Quantize mode, the 2880 will give a 4-beat count-in before recording a loop. The 2880 now will give a count-in based on the beat of the MIDI master. If you press the record button on the 2880 when the master is on beat 2 of a bar, the 2880 will begin its count-in on beat 2 so your count-in will consist of beats 2, 3 and 4, then start recording on the next beat 1.

MIDI CONTROL

Independently of the MIDI SYNC state, the 2880 will at all times respond to certain Control Change messages. These messages have the same effect as pushing 2880's buttons and moving its sliders and rotary controls (except input sensitivity and headphone level). The MIDI channel on which such messages are received can be altered from 2880's panel and saved in internal memory.

SETTING THE MIDI CHANNEL

Press MIXDOWN and hold it for more than 2 seconds.

This will cause all of the LEDs except the four track LEDs to blink.

The state of the track LEDs indicates the channel to which 2880 is currently set. It uses the following code ("." = LED off):

Track LED	1	2	3	4	= MIDI channel
	1
	.	.	.	ON	2
	.	.	ON	.	3
	.	.	ON	ON	4
	.	ON	.	.	5
	.	ON	.	ON	6
	.	ON	ON	.	7
	.	ON	ON	ON	8
	ON	.	.	.	9
	ON	.	.	ON	10
	ON	.	ON	.	11
	ON	.	ON	ON	12
	ON	ON	.	.	13
	ON	ON	.	ON	14
	ON	ON	ON	.	15
	ON	ON	ON	ON	16

If one holds MIXDOWN, the track LEDs will advance through the above sequence to select a different channel. When one releases MIXDOWN the channel selected will be saved after power cycling.

MIDI CONTROL CHANGE MESSAGES

At power up the 2880 will always be in OMNI=OFF mode. This means that it will only obey Control Change messages on the selected channel. The 2880 can however be switched to OMNI=ON mode by receipt of the appropriate command on its selected channel. In OMNI=ON mode 2880 will respond to CONTROL CHANGE MESSAGES (except OMNI=OFF) on any channel.

Each CONTROL CHANGE message carries two information bytes- the Controller Change Number (CC#) and the data value (DV). The following table shows which of 2880's functions the information bytes control:

CC#	DV	2880 Parameter
9	0 to 127	Clix level
20	0 to 127	Live signals monitor level
21	0 to 127	Track 1 play/feedback level
22	0 to 127	Track 2 play/feedback level
23	0 to 127	Track 3 play/feedback level
24	0 to 127	Track 4 play/feedback level
25	0 to 127	Mix track play/feedback level
26	0 to 127	Tempo slider
27	0 to 127	Live signals pan
28	0 to 127	Track 1 pan
29	0 to 127	Track 2 pan
30	0 to 127	Track 3 pan
31	0 to 127	Track 4 pan
102	127	Push REC button
103	127	Push NEW button
104	127	Push PLAY button
105	127	Push TRACK SELECT button
106	127	Push EXT SYNC button
107	127	Push MIXDOWN button
108	127	Push STEREO button
109	127	Push REVERSE button
110	127	Push OCTAVE button
111	127	Push PUNCH-IN button
112	127	Push QUANTIZE button
124	0	Change to OMNI=OFF
125	0	Change to OMNI=ON

There must be at least 300mS between each button push message.

MIDI PROGRAM CHANGE MESSAGES

The 2880 also interprets certain Program change messages as button pushes and mute/unmute commands. A program change message has one information byte, P0 (0 to 127), but this is usually presented to the user as being 1 to 128, shown below as P1.

P0	P1	2880 Parameter
80	81	Push PLAY button
81	82	Mute/unmute track 1's play **
82	83	Mute/unmute track 2's play **
83	84	Mute/unmute track 3's play **
84	85	Mute/unmute track 4's play **
85	86	Push REC button
86	87	Select track 1 for record (or 1 and 2 if stereo)
87	88	Select track 2 for record (or 1 and 2 if stereo)
88	89	Select track 3 for record (or 3 and 4 if stereo)

89	90	Select track 4 for record (or 3 and 4 if stereo)	
90	91	Push NEW button	
91	92	Push QUANTIZE button	
92	93	Push REC button	
93	94	Push PLAY button	
94	95	Push REVERSE button	
95	96	Push TRACK SELECT button	
96	97	Push STEREO button	
97	98	Push PUNCH-IN button	
98	99	Push EXT SYNC button	
99	100	Push OCTAVE button	
100	101	Push PLAY button	
101	102	Mute/unmute track 1's play	**
102	103	Mute/unmute track 2's play	**
103	104	Mute/unmute track 3's play	**
104	105	Mute/unmute track 4's play	**
105	106	Push REC button	
106	107	Push MIXDOWN button	
107	108	Mute/unmute mix track's play	**
108	109	Mute/unmute Dry Out	**
109	110	Mute/unmute clix level	**
110	111	Mute/unmute all play tracks	***

** The single channel mute/unmute action works as follows:

If the channel's level is greater than zero when the command is received then the channel will be muted. If the channel's level is zero when the command is received then the level will be set either to that of 2880's panel fader or to that of the last CC message (20..24), depending on which was most recently effective.

*** When a mute/unmute all-play-tracks command is received all play tracks will be muted if ANY of them is greater than zero. If ALL of them are zero then each will be set to fader or CC level.

MIDI OUT (MIDI THRU)

2880 generally relays all received MIDI messages at its MIDI out connector. But in Internal sync mode it does not relay the sequencer commands: STOP START CONT CLOCK.