MPG64-R

and

MPG64-R Special Edition

Operation Manual

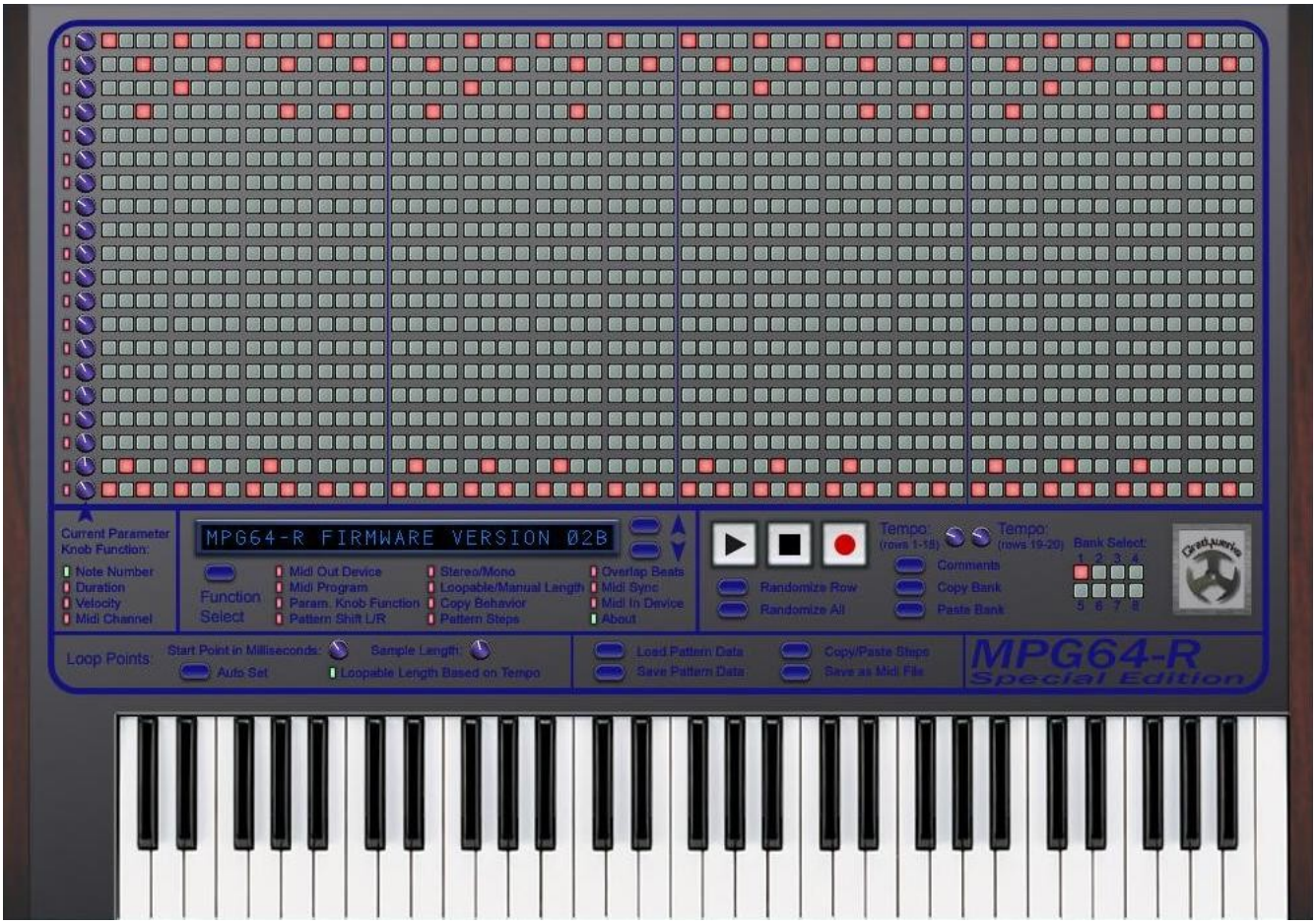


TABLE OF CONTENTS:

SECTION 1: SYSTEM REQUIREMENTS

Minimum Requirements:
Win 7, Windows Vista, or Windows XP with minimum 1024x768 display
Audio card for audio playback or recording
Midi instrument and Midi port, Midi sound card, or Midi software with loopback
Internet access for product registration (first use of SE version only)

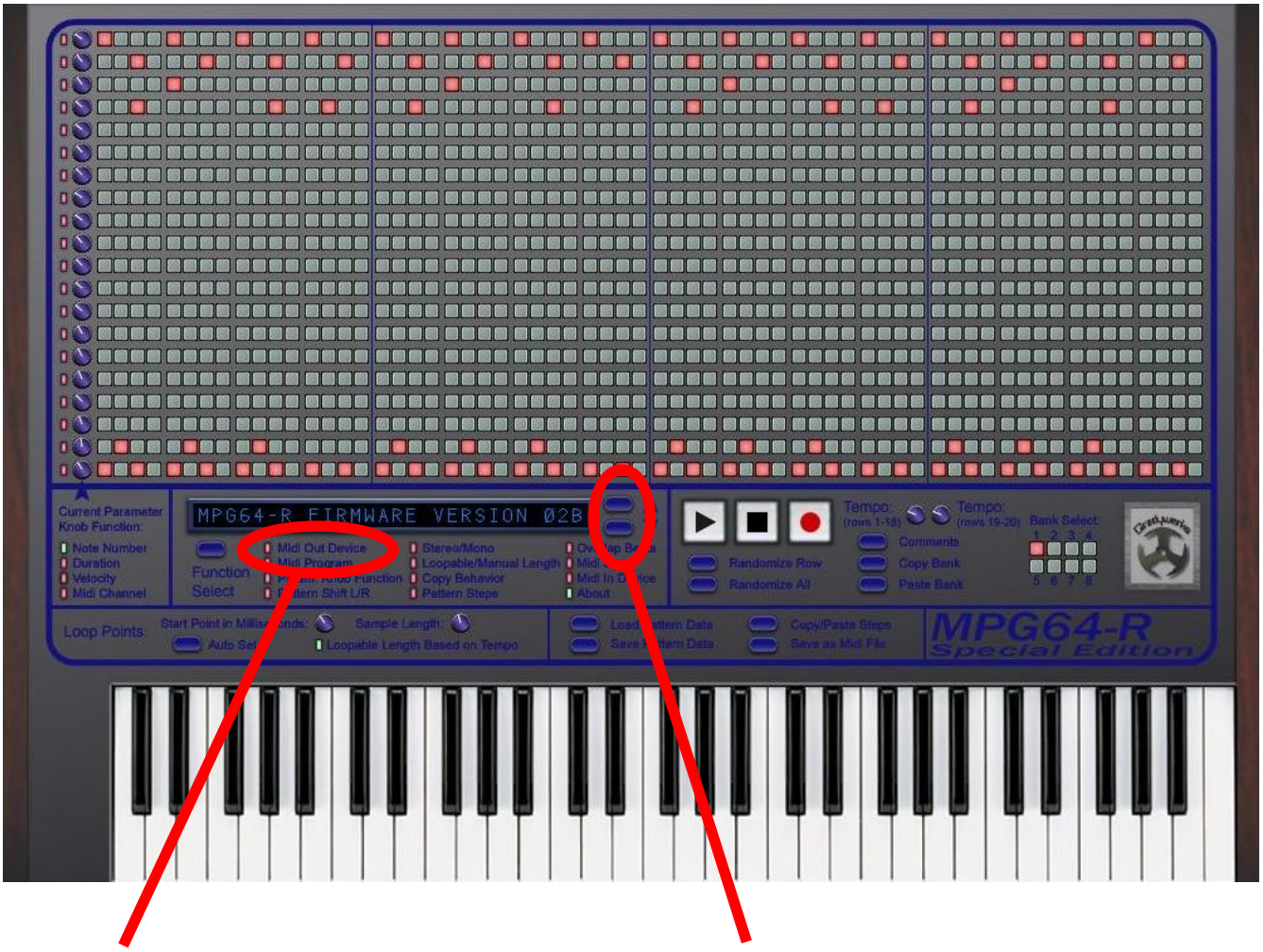
The MPG64-R is a grid based sequencer for Midi drum machines. There are many types of drum machines that you can use with the MPG64-R: The default Midi player that comes with Windows, a soundcard's wavetable synthesizer, a software drum machine (Reason, Reaktor, Kontakt, etc.), or an external hardware drum machine.

In order to use the MPG64-R with a software drum machine on the same computer, you will need to install a Midi loopback, such as LoopBe (Win 7), Maple (Windows Vista), or MIDIYOKE (Windows XP). The loopback allows one program to send Midi data to another program on the same computer. The output Midi port of the MPG64-R must be set to the same port as the input port on the drum machine software.

The MPG64-R can also record your drum loops to a 44.1kHz WAV audio file. You will need to plug your Midi drum machine into your computer's 'Line In' on your audio card. Additionally, you can also record audio from a software drum machine IF your sound card supports simultaneous playback and recording (full duplex). This is often called “What U Hear” or “Stereo Mix” in your sound card's audio volume mixer. Please note that most OEM versions of Windows DO NOT support this capability as a means to prevent illegal reproduction of copy protected audio files. Many after-market sound cards do support full duplex recording.

SECTION 2: GETTING STARTED

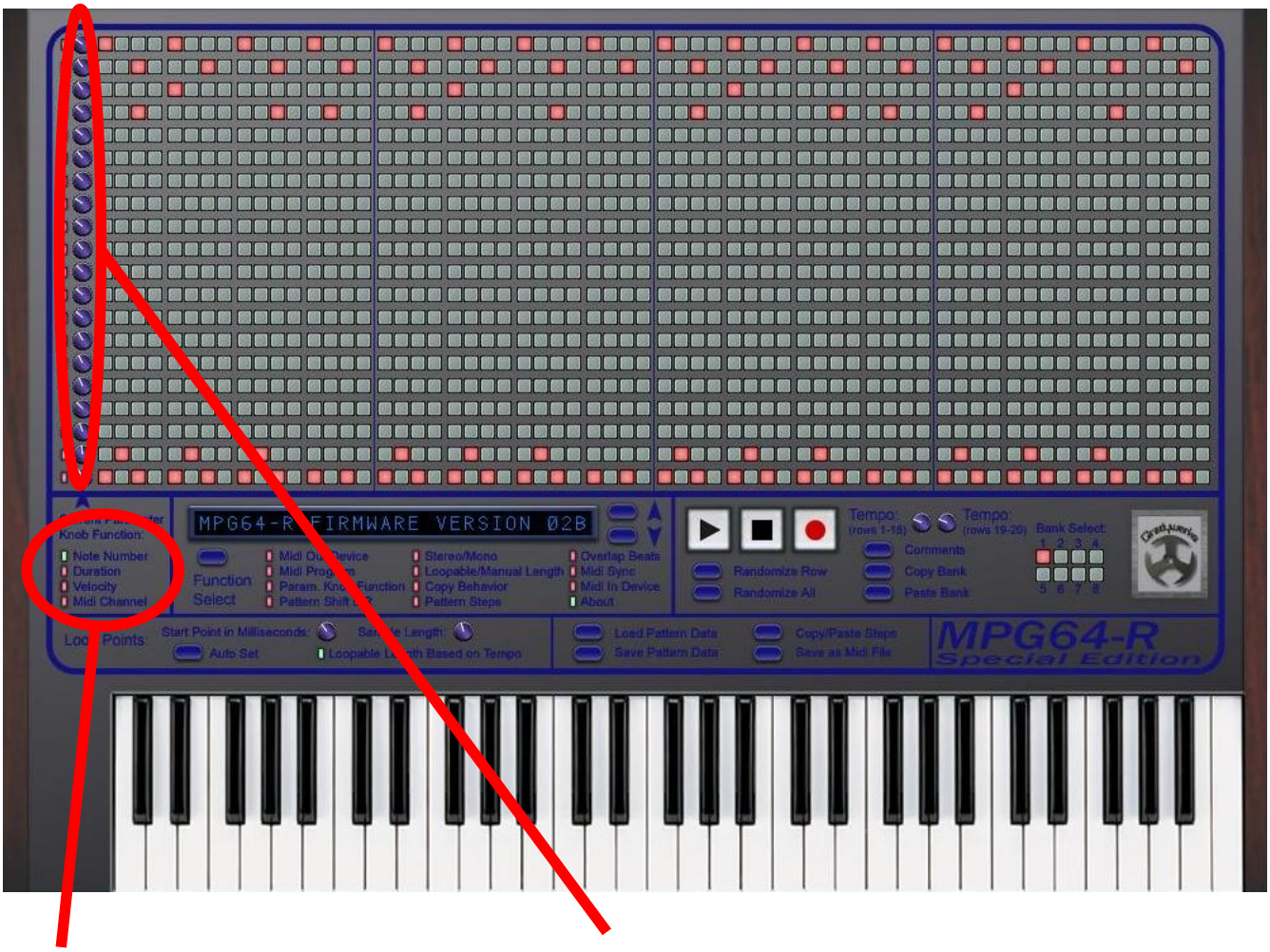
Once the program starts, you will need to select your Midi device. Use the up and down arrow buttons to the right of the main LCD to select your Midi device. The selected device name should appear in the LCD. Press the 'PLAY' button and you should hear your Midi device playing the illuminated grid steps. If you don't hear any sound, check the volume setting on your Midi device. You may also need to change the Midi Channel of your Midi instrument or the MPG64-R. By default, all 20 rows on the MPG64-R are set to transmit on Midi Channel 10, using note numbers 36-55. The top grid row triggers Midi note number 36 and the bottom row triggers note number 55. The Midi channel, note number, note duration, and note velocity (volume) can be changed for each individual row. See Section 4 for more details.



Click this area to display the current Midi out device. Then use the up/down buttons to change Midi devices.

SECTION 3: THE MAIN INTERFACE AND LCD FUNCTIONS

The main interface consists of a 64-step drum grid with 20 rows. Each row is assigned to a specific sound on your Midi instrument. This is accomplished by setting the desired Midi note number and Midi channel using the knobs to the left of each row. The music keyboard on the bottom of the screen can also be used to select the desired note number for a row. When a pattern is not playing, you will hear the note that you selected. The keyboard range is from Midi note number 36 through 96. Values outside of this range must be selected using the knobs. Additionally, the knobs may be used to adjust the volume and note duration for each row.



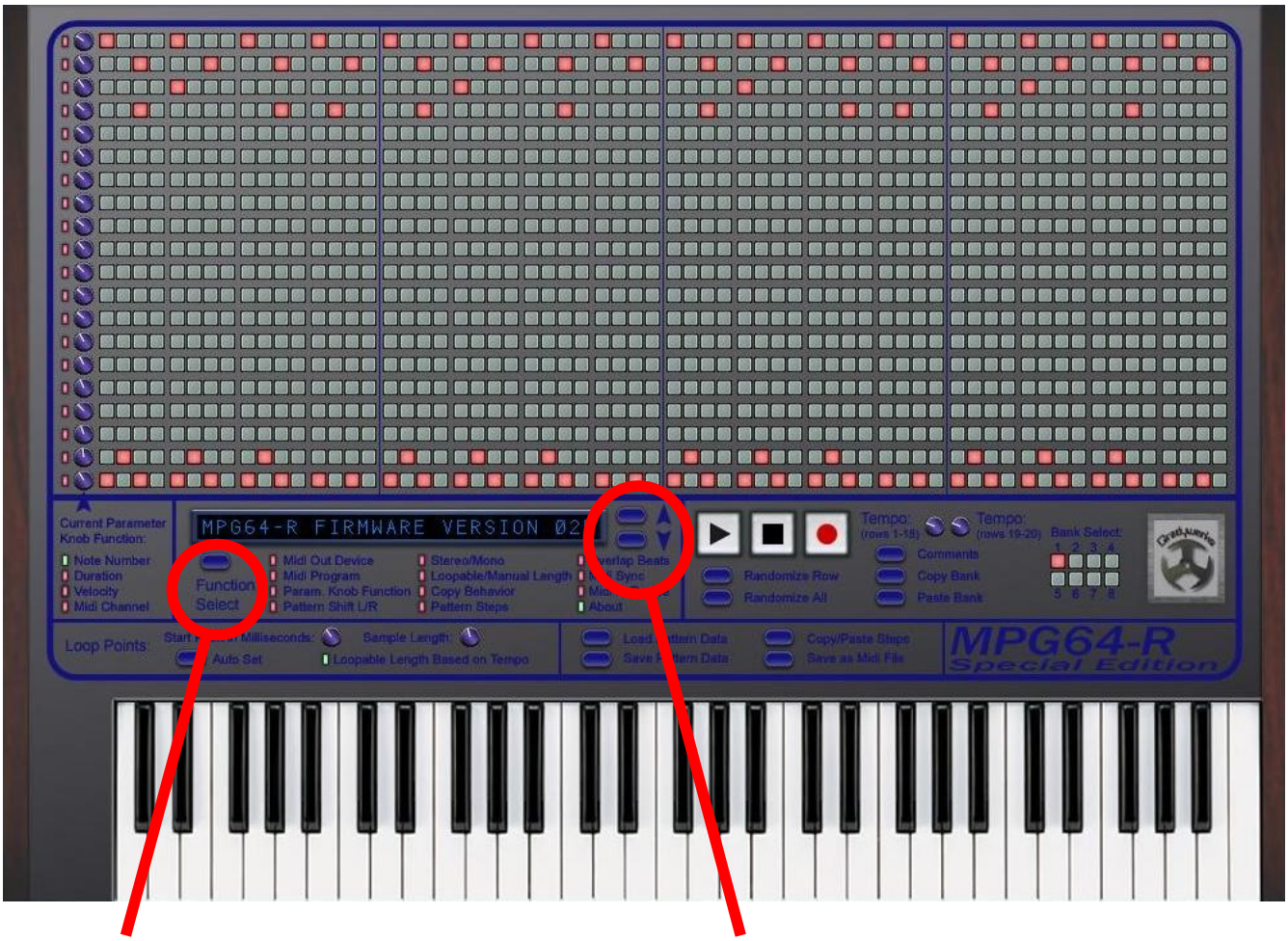
Clicking in this area changes the function of the Parameter Knobs. The Parameter Knobs can be used to adjust the Note Number, Duration, Velocity, or Midi Channel for each individual row.

Click and drag up/down each Parameter Knob to adjust the Note Number, Duration, Velocity, or Midi Channel for each individual row. Clicking on the keyboard at the bottom can also be used to change the Note Number of a selected row.

A 'Comments' button allows you to create a unique name for each row. For example, the first row might be named 'kick drum' and the second row named 'snare'. The row names are used as track names when saving to a multiple track Midi file. The Comments box also allows you to enter some general comments about the setup. This can be useful for remembering which instrument(s) were intended to be used with the pattern. All comments are saved when using the 'Save Pattern Data' button.

The MPG64-R allows you to switch between 8 different patterns or 'banks'. When playback is in progress, the bank will not change until the current pattern has finished playing. Only the current bank will be saved when saving to a Midi file. Likewise, only the current bank can be recorded. All 8 banks are saved when using the 'Save Pattern Data' button.

The next paragraph will describe the functions available using the LCD display and the 'Function Select' button, shown in the image below.



Clicking the 'Function Select' button toggles between the various functions of the LCD display. Alternatively, you can click directly on the name of the desired function as a short-cut. A green light illuminates next to the selected function.

Click the Up and Down buttons to change the value of the currently selected function.

The LCD display is located just to the left of the Play, Stop, and Record buttons. The 'Function Select' button is used to change the function of the LCD display. Alternatively, you can click directly on the text or LED of the function as a faster way of selecting a desired function. The up/down buttons to the right of the display are used to change the values of the current function. A green light will illuminate next to the currently selected function. Here is a description of each of the functions:

Midi Out Device: In order to produce sound, the MPG64-R needs a Midi instrument. By default, the MPG64-R will display the current Midi output device when the program starts. Using the up and down buttons will cycle through the available Midi devices. Note that some removable sound cards or USB Midi devices will not appear in the list unless plugged in prior to opening the MPG64-R.

Midi Program: Use the up and down buttons to send a 'program change' message to your Midi device. The program change message will only be sent to the Midi channel of the first row. The MPG64-R uses values of 0-127 for programs. If your device uses values 1-128, you will need to set the MPG64-R to one number lower than your desired program number. If you save a pattern when the Midi program is set to a value other than 0, an appropriate program change message will be sent to your Midi device when the pattern is loaded again. If you wish to prevent the automatic program change message when data is loaded, set the Midi Program to 0 prior to saving.

Parameter Knob Function: Use the LCD up and down buttons to cycle through the four available parameters (Note Number, Duration, Velocity, and Midi Channel). As a shortcut, you can also click directly on the text or LED for the desired parameter knob setting just below the parameter knobs. Knob movements will only affect the currently selected parameter. When a knob is rotated, the current value will be displayed on the LCD. The values set by the parameter knobs are applied to ALL notes in a specific row. TIP: If you wish to make 'accented' beats, you can use two rows set to trigger the same Midi note number and channel. Set the velocity of one row higher than the other and place your accented beats in this row.

Pattern Shift Left / Right: Using the up arrow button will shift the entire pattern back one step. The down arrow button will shift the pattern forward one step.

Stereo / Mono: This setting determines whether the 'record' button will record a mono or stereo WAV audio sample. All samples are recorded at 44.1kHz.

Loopable / Manual Length: Use the buttons to toggle the selection. When LOOPABLE is selected, the WAV audio sample size will always be equal to the length of the pattern in milliseconds. As the tempo is changed, the 'Sample Length' setting will automatically be changed to equal the length of the pattern. When MANUAL is selected, the length in milliseconds of the recorded sample is set by the position of the 'Sample Length' knob. Use this setting when the last steps of your pattern contain notes that sustain for very long periods of time. Manually setting a sample length that is greater than the pattern length in milliseconds will allow the recorded sample to include notes that decay slowly over time, however, the sample will no longer be loopable. When using samples that are longer than the pattern length in a multi-track sequencer, you can 'stagger' samples between two tracks so that the sample has time to fade out while the next sample is being triggered.

Copy Behavior: The steps that will be copied when the 'Copy' button is pressed can be selected here. To quickly build repeating 16-step patterns, copy steps 1-16 to 17-32. Then copy steps 1-32 to 33-64. If 'REVERSE' is selected, the entire pattern will be reversed when the 'Copy' button is pressed.

Pattern Steps: The pattern length can be adjusted from 2 to 64 steps using the up and down arrow buttons. If 'Loopable Pattern Length' is selected, the 'Sample Length' knob will rotate accordingly as the pattern steps are increased or decreased. When saving to a Midi file, only the selected number of steps will be saved.

Overlap Beats: This setting determines what happens when a new beat is triggered while another beat from the same row is still playing. By default, Overlapping Beats are disabled. This causes any sustaining beat to be silenced by a 'NOTE OFF' message before triggering another beat in the same row. If 'Overlap Beats' is enabled, the MPG64-R will continue to trigger new notes, even if another beat in the same row is still sustaining. This setting is not normally recommended, since many devices tend to malfunction if several notes with the same note number overlap. For example, some sound cards will eventually run out of 'voices' and produce no sound at all if sent several overlapping notes with the same note number.

Midi Synchronization: Determines the current Midi synchronization mode. Choices include Master, Slave, or Off. When set to Master, the MPG64-R will send Midi Start, Clock, and Stop messages to the Midi Out Device. When set to Slave, the MPG64-R will receive Midi Start, Clock, and Stop messages from the Midi In Device.

Midi In Device: Determines which Midi device will be used as the Master, when the MPG64-R is set as a Midi Slave.

About: Displays the version of the software

SECTION 4: Recording your pattern as a WAV Audio Sample

One great feature of the MPG64-R is that it can record your pattern and create a WAV audio sample for use in multi-track audio sequencing software (alternatively, you can save the pattern as Midi data for Midi based sequencing). You will need to plug your Midi drum machine into your computer's 'Line In' on your audio card. Additionally, you can also record audio from a software drum machine IF your sound card supports simultaneous playback and recording (full duplex). This is often called “What U Hear” or “Stereo Mix” in your sound card's audio volume mixer. Please note that most OEM versions of Windows DO NOT support this capability as a means to prevent illegal reproduction of copy protected audio files. There is a work-around for this problem in the following instructions. Additionally, many after-market sound cards do support full duplex recording.

In order to record your Midi device, you will need to ensure that your recording device is enabled and set to a suitable volume. For example, if you are recording an external Midi instrument, you will need to activate the 'Line In'. Generally only one recording source can be activated at a time, making it important that the correct source is enabled. The technique to enable a recording device depends on the operating system:

In Win 7 or Vista, click Start Menu -> Control Panel -> Hardware and Sound -> Sound. Click on the 'Recording' tab and ensure the desired recording device is enabled and set as the default for recording. If the desired device is not shown, right click inside the list of devices and select 'Show Disabled Devices'.

In Windows XP, The Volume Control can usually be opened by clicking on a speaker icon in the system tray (lower right hand corner of the windows desktop). Once open, click on 'Options', then 'Properties' to reach the 'Recording' controls.

Some aftermarket sound cards may require a different procedure to activate the recording source.

Remember that if you are recording audio generated by software on the same computer as the MPG64-R, your sound card must be capable of simultaneously playing and recording audio (full duplex). If your system does not support “What U Hear” or “Stereo Mix” full duplex recording, you may be able to record audio by connecting your 'line out / headphone' to your 'line in / mic' physically by using a 1/8” stereo to 1/8” stereo cable. You may not be able to hear audio through your speakers while recording in this configuration.

One thing that must be understood about recording a Midi instrument is latency. Latency is the time period from when the MPG64-R sends a 'NOTE ON' message to your device, and the time that audio can actually be heard. The MPG64-R has a feature designed to automatically determine the latency of your particular instrument, so that it can record loopable patterns. To do this, start the MPG64-R, select the appropriate Midi Out Device, and then press the 'Auto Set' button on the left of the screen near the bottom. You will be asked for a file name, which will be used to save your sample later when you hit the 'Record' button. After selecting a file name, a single note will be played, and the MPG64-R will determine the latency. This will be the loop 'Start Point' as indicated by the knob near the 'Auto Set' button. Feel free to hit 'Auto Set' a few more times to ensure correct results. Note that the 'Auto Set' function does not work well on notes that have a very gradual increase in volume, since it can be

difficult to determine when the note actually began. If you get an error message related to 'Clipping' when using 'Auto Set', reduce the volume of your Midi device either on the instrument itself or the recording level in the Windows Volume Mixer. If you get an error related to 'Audio Not Detected', ensure that your device is properly plugged in and selected for recording in the Windows Volume Mixer. If desired, you can manually set the loop start point by rotating the 'Start Point' knob. Once you determine the latency of a specific instrument, this should remain a fairly constant value. The 'Start Point' value will be stored in any pattern that you save.

The next thing you need to do is determine the appropriate sample recording length. For example, at 120 BPM, the pattern's loop length will be 8000 milliseconds. By default, the MPG64-R will automatically determine the appropriate sample length based on the selected tempo and pattern steps. Therefore, the 'Sample Length' knob will also rotate to when you change the tempo or steps. There are some instances where your desired sample length will be larger than the pattern length. For example, if the last step of your pattern contains a note that takes several seconds to decay, it would be cut short when the sample length is set equal to the pattern length. In this case, use the main LCD to select 'Manual Sample Length' and then rotate the 'Sample Length' knob to your desired sample length. The actual milliseconds should appear in the LCD display. When using samples that are longer than the pattern length in a multi-track sequencer, you can 'stagger' samples between two tracks so that the sample has time to fade out while the next sample is being triggered.

Tip: You can record individual samples of your Midi instrument by only selecting the first step of the pattern and using a short recording length. This pattern data could be saved as a 'one shot recording set-up'.

The MPG64-R can record samples in mono or stereo based on your setting in the main LCD display. Also, the MPG64-R will automatically apply a very short fade at the start and end of the sample. This 'zero crossing point' fade prevents the audio 'pops' that can occur when a sample is looped. If the first step of your pattern contains a sound with an extremely fast attack (such as an analogue bass drum) you may want to manually back up the 'Start Point' a few milliseconds to prevent the attack from being faded.

SECTION 5: Midi Synchronization

The MPG64-R is capable of playing in synchronization with other Midi devices. The MPG64-R can be set as either the 'Master' or 'Slave' device, depending on your needs. This allows you to hear your pattern play in sync with the rest of your song (perhaps played by a Midi sequencer program, or with an individual instrument like a drum machine). When using the MPG64-R as a Slave device, you must also select the Midi In Device that will be used to receive Midi data sent from your Master device. When the MPG64-R is the Master device, Midi synchronization data will be sent to your Midi Out Device. Midi synchronization data includes Midi Start, Midi Clock, and Midi Stop information.

Due to some timing limitations, the MPG64-R's timing may vary by a few milliseconds when in 'Master' mode only. Hence, recording with Midi Sync activated is not allowed. There are some exceptions to this rule: If the tempo is set to 100, 125, or 250, you can use the AUTOSET and RECORD features while the MPG64-R is set as the Midi Master and the timing will be very accurate. For example, this can be useful for sampling the patterns stored in a drum machine. To do this, set your Midi Out Device to your Midi drum machine. Then set the MPG64-R Midi Channels to a DIFFERENT channel than the one used by your drum machine (so we don't trigger additional notes from the MPG64-R's pattern). Now, change the MPG64-R Midi Synchronization to 'Master'. When you press play, a Midi 'START' message will be sent to your drum machine, and it will begin playing at the MPG64-R's tempo. When the tempo is set to 100, 125, or 250, you can use the AUTO SET and RECORD buttons to record your pattern. Always use 'AUTO SET' first to calculate latency, so that you end up with a loopable sample.

There are a lot of possibilities when using Midi Synchronization. For example, you can open multiple copies of the MPG64-R and synchronize them to each other so that you can have more than 20 rows of instruments (you will need one set as Master, the rest set as Slaves). Depending on your Midi setup, it may be possible to trigger several devices at the same time, or have several MPG's triggering the same device. Feel free to experiment with different setups.

SECTION 6: Using the Continuous Controller Automation from the MPG64-A

Using Midi Synchronization, the Continuous Controller Automation of the MPG64-A can be applied to your MPG64-R instrument(s). To do so requires some set-up: First, install a Midi loopback, such as Maple or MidiOx. Set one MPG64-R (or MPG64-A) as the Midi Master and set the Midi Out Device to your loopback. This first MPG will only be used as a Synchronization Master, and will not be used to trigger any sounds. Now open a MPG64-R and a MPG64-A set as Midi Slaves using your loopback as the Midi Input Device. Set the output of these two MPG's to your Midi Instrument. You can now use the MPG64-A Controller Automation to simulate a Low Frequency Oscillator or control randomizer to add dynamics to your sounds.

SECTION 7: Using the MPG64-R as a Tu2 Plug-In

The MPG64-R can be used as a plug-in for Tuareg by Bram Bos. Simply copy the MPG64R.EXE and MPG64R.INI files to your Tuareg 'Plugins' folder. Now restart Tuareg and open the Sample Manager. Click the Plugin button and the MPG64-R should appear in the list. Now you can record your Midi instruments and import the audio into Tuareg. The 8 banks of pattern data, row names and comments will also be stored within the Tuareg track for later use. Return to the Sample Manager and click the Editor button to reopen the original pattern with the MPG64-R. PLEASE NOTE: The MPG64-R generally records 64 steps, which is typically going to be 4 measures in the Tuareg sequencer. Therefore, you should place the samples 4 measures apart, and allow the sample to stream across all 4 measures. Alternatively, you could shorten the number of 'pattern steps' to 16 if you want to record just 1 measure at a time.

SECTION 8: Dual Tempo (SE version only)

The MPG64-R SE version has two individual tempo knobs. The left knob controls the tempo of rows 1-18. The right knob controls the tempo of rows 19-20. When recording audio or saving to midi, only the pattern length of the upper rows is considered (based on the left tempo knob). If the lower rows are set to a faster tempo than the upper rows, the lower rows will repeat from the first step when the last step of the lower rows is reached.

By setting the 2nd tempo to a different value, some very unique and complex drum loops can be created.