Roland
JUNO-G

MICRO MANUAL

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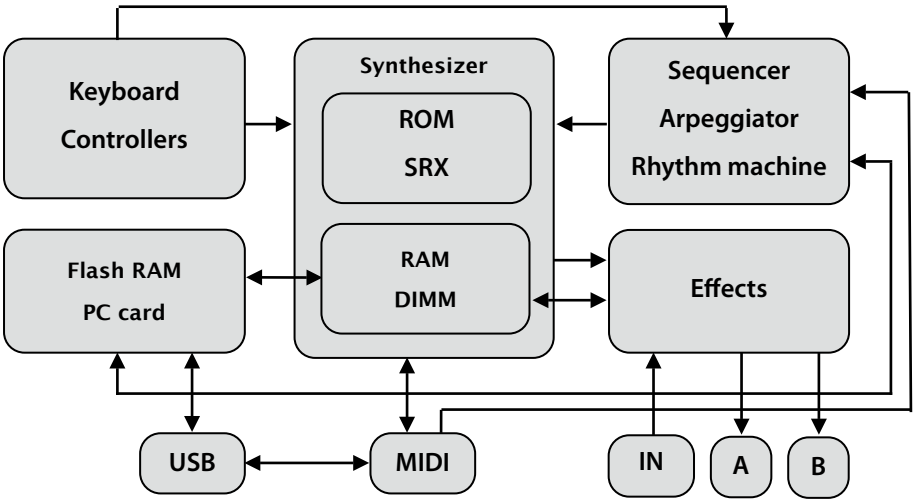
System and settings

Internal structure

To have a clear understanding of how the Juno-G works, please have a look at it's internal structure diagram:



The **keyboard** and **controllers** send MIDI messages to the synthesizer and this information can also be recorded into the sequencer.

The **synthesizer** has 16 instrument parts and 128-voice polyphony. The sounds it produces are based on waveforms from the static memory, **ROM** (64 MB standard, expandable to 128 MB with one **SRX** series card), and dynamic sample memory, **RAM** (4 MB standard, expandable to 516 MB with a **DIMM** memory module).

The **effects** units can process both the internal synthesizer sounds and sound from the external line/mic input. Juno-G has 3 multi-effect processors, chorus and reverb processors and a dedicated input processor. There are two independent stereo outputs (A and B). The sound Juno-G produces can be recorded into the sampler or the sequencer's audio tracks.

The **sequencer** includes 16 MIDI tracks and 4 audio tracks. Also, the Juno-G has an **arpeggiator** and a **rhythm machine**, both are programmable.

The compositions (songs) and audio samples are stored in **flash RAM** (16 MB standard). This memory can be expanded with a card like Compact Flash or Secure Digital using a **PC card** adaptor.

The **USB** port can work in two different modes. In USB MIDI mode you can use the Juno-G with your computer as a MIDI controller keyboard or a sound module. In USB storage mode, your computer will access it as a USB flash drive, this is how you can import and export sound banks, songs and samples.

Making settings

In all instructions given here, we will use the following text style to designate different actions you need to make:

- **BUTTON** (bold font, capital letters) stands for a real physical button on the front panel.
- *SOFT KEY* (italic font, capital letters) is a virtual button at the bottom of the LCD screen which is accessible with a physical "F" button below it.
- *Some parameter* (italic font) means an onscreen menu item or parameter which you need to select with the Juno-G's cursor buttons.

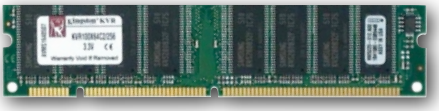
Expanding the memory

The **sample memory** (RAM) is used for working with audio data in real time. It has a high speed which allows to play a big number of samples simultaneously. However, when the power is switched off, the RAM looses it's data.

Juno-G's **flash memory** (flash RAM) is like a hard drive, it is used for saving the data, and it can keep it when the power is off. However, flash RAM is not fast enough for working in realtime.

Thus, keyboards like the Juno-G use both RAM and flash RAM, and to be able to work with more data you need to expand them both.

The sample RAM can be expanded using a standard DIMM module with a size of 64 to 512 MB and the following specifications: PC100 or PC133, 3.3 V, 168 pin, non-buffered, non-EEC. The memory module slot can be reached under a small lid at the bottom of the Juno-G.

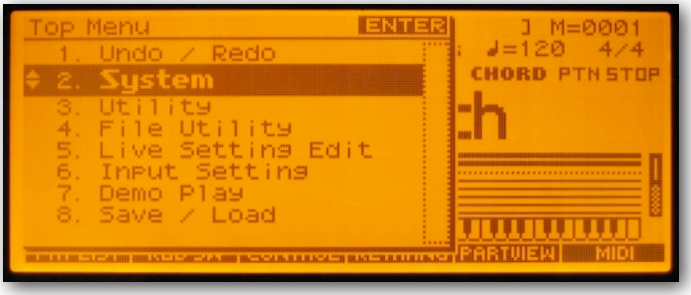


To expand the flash memory, you need a flash card like Compact Flash or Secure Digital, and a corresponding PC card adaptor. For example, this can be a Compact Flash card and a Compact Flash to PC card adaptor: the card is inserted into the adaptor, and the adaptor goes into the PC card slot on the back of the Juno-G.

After you have installed any new memory, you can check if it works in the **Information → Memory** system settings section.

System settings

To enter the system settings mode, in the main PATCH or PERFORMANCE screen, press **MENU**, select *System* and press **ENTER**.



All settings are divided into several sections and screens (see the table below). To select the needed section and screen, use the "F" soft keys below the display. Press the *WRITE* soft key to save the system settings.

Section	Screen	Description
GENERAL	COMMON	General system settings
	AUTO LD	Auto-load settings
	SOUND	Global tuning
	USB	Default USB mode
KBD/CTRL	KBD	Keyboard settings
	PEDAL	Control pedal settings
	CONTROL	Realtime controller settings
MIDI	GENERAL	General MIDI settings
	TX	Data transmission
	RX	Data reception
	MMC MTC	External synchronization settings

Section	Screen	Description
METRO/SYNC	METRO	Metronome
	SYNC	Internal synchronization settings
D-BEAM	GENERAL	D-Beam sensitivity
	ASSIGN	“Assignable” mode
	ATV EXP	“Active Expression” mode
	SYNTH	“Solo Synth” mode
INFORMATION	MEMORY	Information about RAM and flash RAM
	SRX	Information about the SRX card
	VERSION	Operating system version

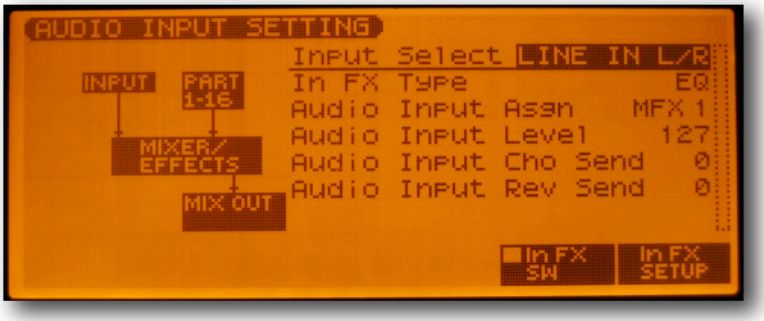
Working with effects

Processing an external signal

With the Juno-G it's possible to process sound from an external source (microphone, audio player, guitar or another synthesizer) using it's internal effects processors. This can be used both during recording and for realtime applications.

To send the external audio into one or more effects processors:

1. Connect the external source to the Juno-G's input jacks.
2. Set the **AUDIO IN** mixer slider to the lowest position.
3. In the main PATCH or PERFORMANCE screen, press **MENU**, choose *Input Setting* and press **ENTER**.



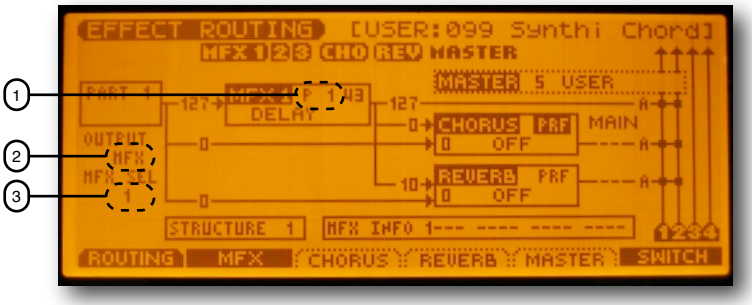
4. Set the *Input Select* parameter to the value which correspond to what and how you have connected:
   - LINE IN L/R: stereo line input (L and R jacks)
   - LINE IN L: mono line input (L jack)
   - MICROPHONE: microphone input (L jack)
5. Play something using the external sound source (instrument) and use the **AUDIO IN** slider to set a normal signal level.
6. On the screen, the *Audio Input Assign* parameter defines where the external signal goes:
   - MFX 1, 2 or 3: will be processed using the respective MFX unit
   - DRY: will not go into the MFX

7. You can adjust the Chorus and Reverb processor sends with the *Audio Input Cho Send* and *Audio Input Rev Send* parameters, respectively.
8. Next, press EFFECTS and adjust the effects processors as you like. You can save these settings as a patch or as a performance. When you save your song (press **WRITE** and select *Save Song*), these settings are saved within it as well.

Patch effect settings in performance mode

Part of the Juno-G patches actively use the effects processors to produce the final sound. However, when you call up such patches in performance mode, these effects settings are not loaded by default. In order for a patch to load it's effects settings, you need to do the following:

1. Select a performance part and assign a patch to it.
2. Press **EFFECTS**.
3. Set the *OUTPUT* parameter on the screen (marked "2" on the image below) to "MFX".
4. Set the *MFX SEL* parameter (marked "3") to one of the free MFX processors (1, 2 or 3).
5. Then, set the MFX settings source (marked "1") to the number of the performance part you are working with (see step 1).
6. If needed, set the Chorus and Reverb processor settings sources to the same part number as well.



Working with audio

Importing audio files

Using the USB storage connection with a computer, you can load audio files in AIFF and WAVE formats (16 bit, 44.1 kHz) and use them as patches, phrases and insert into audio tracks.

The procedure for importing audio files is as follows:

1. Enter the USB storage mode (see the **Exchanging data with a computer** section below).
2. Copy the audio files into the `/TMP/AUDIO_IMPORT` folder.
3. Exit the USB storage mode by pressing **EXIT**.
4. Press the **AUDIO** button twice to enter the Juno-G's sample list.
5. Press **MENU**, select *Import Audio* and press **ENTER**.
6. You will see a file selection window. Select the *USER* or *CARD* area depending on where you put the samples.

7. With the *MARK* soft key, choose the files you'd like to import, or press *SET ALL* to select them all.
8. Press *IMPORT*. The files will be imported into the Juno-G's sample memory.
9. Press **SONG**, then press **WRITE** and select *Save All Samples* to save the imported samples into the flash memory.
10. In the USB storage mode, delete the original files from the `/TMP/AUDIO_IMPORT` folder.

Now you can access these samples from the patch list ("User Sample" and "Card Sample" groups), as well as insert them into the sequencer's audio track using it's *INSERT* function.

Recording a song into an audio file

Right within the Juno-G, you can record your composition (or part of it) into an AIFF or WAVE audio file (the *Default File Type* is set in the **General → Common** system screen), and use it to burn an audio CD or share on the Internet.

To record into an audio file, you need to have one free audio track and perform the following operation:

1. Set the sequencer to the place you want to start recording from.
2. Press **AUDIO TRACK**.
3. Select a free audio track.
4. Set the *Audio Rec Mode* parameter to RE-SAMPLING:

5. Press **PLAY**.
6. Press **STOP** when you want to end recording.
7. In the newly-appeared menu, choose *CANCEL*.
8. The new recording will appear in sample edit mode.
9. Press **WRITE**, and save the file into the flash memory (*USER* or *CARD*). Remember the number you saved the sample under(for example, 0120).

10. Now, switch to USB storage mode (see the **Exchanging data with a computer** section below) and copy the audio sample of your song to your computer (the file will be named. `SMPL0120.AIF` or `SMPL0120.WAV` depending on the selected default format).

Exchanging data with a computer

USB MIDI connection

Juno-G can send and receive MIDI data through it's USB port: you can use it as a USB MIDI keyboard controller for software instruments and as a sound module for a software sequencer.

To be able to work in USB MIDI mode, you need to:

1. Install the latest Juno-G driver from Roland.
2. Connect the Juno-G to your computer with a USB cable.
3. Press the **USB** button and select the *USB MIDI* mode. You can then exit this screen and Juno-G will continue working in USB MIDI mode.

4. On your computer, launch the desired application (software instrument or a sequencer).
5. Select the Juno-G as a MIDI input device (for a software instrument) or a MIDI output device (for a sequencer).

USB storage connection

When Juno-G is connected in USB storage mode, your computer can access it as an external USB drive. You can import and export songs, sound banks and audio samples.

To enter the USB storage mode:

1. Connect the Juno-G to your computer with a USB cable.

2. Press the **USB** button and select which flash memory area will be accessed from the computer: INTERNL (internal flash memory) or PC CARD (if you have a flash memory card):

3. On your computer's desktop or in the storage device list you will see a new external drive named "JUNO-G USER" or "JUNO-G CARD", depending on which memory area you have selected:

4. Perform the needed operations with the files.
5. Select the "eject" option in the external drive's icon menu.
6. Press *EXIT* soft key on the Juno-G.

The Juno-G memory folder structure is as follows:

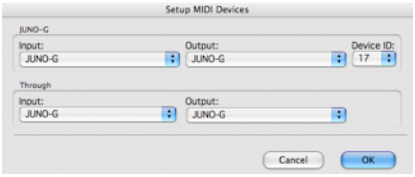
- ▶ ROLAND
  - ▶ SEQ
    - ▶ SNG — songs and MIDI files
  - ▶ SND — sound bank
  - ▶ SMPL — samples
- ▶ TMP
  - ▶ AUDIO_IMPORT — samples to be imported
  - ▶ TXT — text files

Using the Juno-G Librarian software

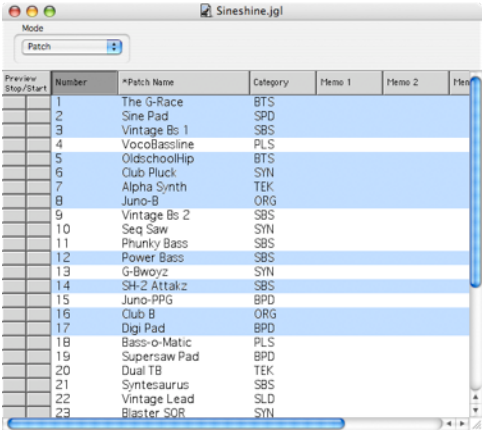
The Juno-G comes with it's own Juno-G Librarian application which allows you to easily manage multiple sound libraries using your computer and select which patches, rhythm kits, arpeggiator and rhythm machine patterns you want to load in the internal flash memory.

For example, to load several patches from a Librarian file:

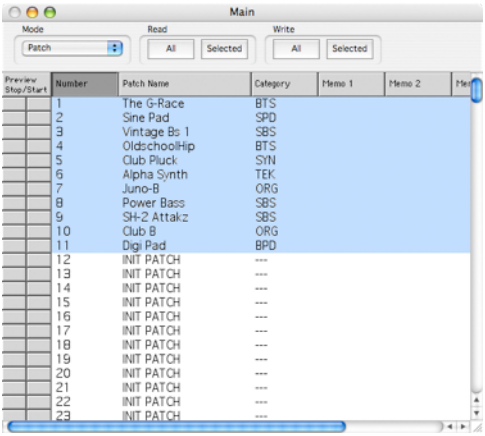
1. Connect the Juno-G to your computer in USB MIDI mode (see the **USB MIDI connection** above).
2. Launch the Juno-G Librarian application. You will see a window named "Main" which represents the USER bank of the Juno-G.
3. In the "Setup" menu option, choose "Set Up MIDI Devices" and make sure that both "Input" and "Output" are set to "Juno-G":



4. In order to load the Juno-G's internal patches into the Librarian, press the "All" button in the "Read" toolbar group.
5. Open any sound bank in the Juno-G Librarian format. You will see it open in another Librarian window.
6. Select the patches you want to load in your Juno-G:



7. Copy these patches ("Copy" command in the "Edit" menu) and paste them ("Paste" command in the "Edit" menu) in the desired location of the USER bank ("Main" Librarian window):



8. To load these patches into the Juno-G, press the "Selected" button in the "Write" toolbar group.