



R3 Main Features

- MMT (Multi Modeling Technology): The R3 offers a wide range of synth waveforms and oscillator algorithms
- Powerful 16-channel Vocoder with Formant Motion recording
- Up to five effects at a time: two insert effects per Timbre, plus a master effect, plus separate two-band EQ per Timbre
- 128 programs, easily editable from the instrument or with the included Editor/Librarian software, via the R3's USB/MIDI interface
- Virtual Patching offers a flexible range of Modulation sources and destinations.
- Modulation Sequencers, one per Timbre, provide the animation of a "knob-twist" to modify sounds over time
- External audio can be processed through the R3's engine via two audio inputs.
- Built-in Arpeggiator with six types and the ability to turn steps on/off
- 37 full-size keys with velocity-sensitive action
- Professional gooseneck microphone included

EasyStart CONTENTS

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Getting Started - Connections

1. First, connect the AC power cable: a two-part cable.
2. Make sure that the **MASTER VOLUME** dial is all the way down and then connect audio cables from the **OUTPUT L/R** jacks on the back of the R3 to your stereo powered monitor system (or connect headphones to the mini phone jack on the front).
3. Press the **ON** button on the rear panel.

Loading the Factory Data

! *Make sure to back up any of your own Programs and Formants via USB to your computer using the included Editor/Librarian before proceeding. See the R3 Owner's Manual for more information.*

1. Press and hold the **SHIFT** key and press Program key **#8, PROTECT**.
2. Rotate the **PAGE** dial counter-clockwise to "**Off**" and press the Program **#8** key to confirm.
3. Press and hold the **SHIFT** key and press Program key **#7, PRELOAD**.
4. Rotate the **PAGE** dial clockwise to "**All Data**" and press the Program **#7** key to confirm.
5. Set Memory Protect back to "**On**" following Step 1.
6. Rotate the **PAGE** dial clockwise to "**On**" and press the Program **#8** key to confirm.

Playing the Demo Songs

1. Press and hold the **SHIFT** key and press the **ARPEGGIATOR ON/OFF** key - the R3 will automatically start playback of eight Demo Songs in succession.
2. Press any of the eight **PROGRAM SELECT** keys to jump to a particular demo.
3. Press the **EXIT** key at any time to return to Program play mode.

Selecting and Playing Programs

1. Programs are organized from the factory in banks of eight by sound type > Select a category with the **BANK** dial.
2. Press one of the **PROGRAM SELECT** 1-8 keys to play the sound indicated in the display.

! *Keep in mind that all 128 Program locations are User locations: any sound can be written / moved to any location!*

Check out these great R3 Programs:

BANK/PROG NAME		TRY WORKING WITH THESE REAL TIME CONTROLS:
M-3	700s Lead	[Analog] Knob 3: Portamento Time
C-3	Wired Lead	[Unison] ModWhl: Osc 2's Tune / Knob 3: LFO 1's Freq.
L-8	VPM Bass	[VPM] ModWhl: Overtones/ Knob 2: Harmonic intensity
G-5	CrossMod	[CrossMod] Arp: On/Off / Knob 1: Mod Depth
H-7	Glacial	[Noise] Knob3: WS Depth
H-6	Wave Seq	[DWGS/Mod Sequence] Knob 1: Waveform Select
O-2	Aliens	[Formant Motion] ModWhl: PW Mod / Knob 3: WS Depth
P-3	Airy Voc	[Vocoder] Use MIC / Knob 3: Noise Level / Knob 4: Delay

Selecting and Editing a Timbre

Each R3 Program can make use of up to two Timbres. A Timbre is a complete two-oscillator structure. The Timbre whose key is flashing is active for immediate sound editing. The page select dial gives you immediate access to 45 pages of parameters that can be edited using the 4 knobs.

1. Choose Program **A-1 Hypnotic**.
2. Press the **TIMBRE 2** key and play with **Knobs 1** and **2** (Cutoff and Resonance).
3. A Timbre may be soloed for in-depth editing by pressing and holding the **SHIFT** key and pressing the desired **TIMBRE 1** or **TIMBRE 2** key (The **MAIN DISPLAY** will momentarily show, "**Timbre [#] Solo On**")
4. Press and hold **SHIFT** and the same **Timbre 1** or **2** key to turn its solo function off (The **MAIN DISPLAY** will momentarily show, "**Timbre [#] Solo Off**")
5. Rotate the **PAGE SELECT** knob to the desired page following the **PAGE MENU** printed on the front of the R3.
6. Let's choose "**P30 Ins FX2**"
7. Using Knob **#1**, choose something drastic like "S. **RingMd**" (Ring Modulator) to hear just how far you can take a sound.
8. Turn **Solo** off as in Step 4 above.
9. Press the **EXIT** key to get to the outermost view of a Program with its name in the display.

Assigning parameters to the 4 knobs

Any R3 parameter can be assigned to any of the 4 knobs...

1. Press and hold **SHIFT** and press **FORMANT MOTION ON/OFF/KNOB ASSIGN** > Notice that all four Knob displays flash, waiting to be chosen...
2. Rotate **Knob 3** and choose "**NoiseLv**" in the current example.
3. Press **FORMANT MOTION ON/OFF/KNOB ASSIGN** to confirm the selection.
4. Now rotate **Knob 3** as you play our edited example, to bring a noise generator into the mix.

Customize the R3 in Global Mode: Jump/Catch

Global Mode allows you to make overall decisions for the instrument, like Master Tuning, Transpose, and Velocity Curve. Check out the Jump/Catch function in Global Mode:

1. Rotate the **PAGE SELECT** knob to "**P. 41, Global-B**".
2. Rotate Knob **#2**, "**Knob Mode**" > Notice that there are two choices:
 - Jump** comes in handy for sound editing, when you need to hear immediate results as you move a knob: the selected parameter "jumps" to the value marked by the current physical location of the knob.
 - Catch** is useful for performance situations in which you may not wish to hear an abrupt value change: the selected parameter is not affected until you've turned the knob through its preset value.
3. If you've made a change and want to keep it, turn off Memory Protect (Step 1 in the Loading the Factory Data section), press the **WRITE** key and rotate the **PAGE SELECT** knob to select "**Write Global**" > Press the **WRITE** key twice.

Using the Multi Mode Filter

Filter 1 of the R3's two filters offers unique control over the filter type: *it can actually generate a percentage blend of two filter types at once!*

1. Select Program **B-2 RingBass**.
2. Rotate **Knob 3**, "**FiltBal1**" fully counter-clockwise, and slowly rotate it clockwise as you play:

The filter smoothly *morphs* from pure -24dB/Oct Low Pass to a blend with -12dB/Oct Low Pass; which then blends with High Pass; which then blends with Band Pass; which then blends with "**Thru**", unfiltered signal. This smooth transition between filter types offers an unparalleled level of sonic possibilities.

Virtual Patching

The R3 provides six Virtual Patch routes that let you create more sophisticated sounds. Each patch lets you select a modulation source (Source) and modulation destination (Dest), and specify the intensity of modulation.

1. Rotate the **PAGE** dial to **P20: Patch 1: Virtual**.
2. Rotate **Knob 1** to select "**ModWheel**" as **Source 1**.
3. Rotate **Knob 2** to select "**Noise Lvl**" as "**Dest 1**" (Destination 1).
4. Rotate **Knob 3**, "**P.Int 1**" (Patch Intensity) fully clockwise to **+63**.
5. Play the keyboard and push the Mod Wheel back, adding the noise generator in a fluid fashion to our sound.

Modulation Sequencing

Modulation sequencers allow you to change your sound over time and create dynamic and evolving patches. One modulation sequencer is provided for each timbre in the R3.

1. We can animate the R3's DWGS (Digital Waveform Generation System) wave selection choice, as well as any other real-time modulation, and record it as a **Mod Sequence**.

Mod Sequences can be recorded either in **Program** or **Edit Mode**. Here's how to record one in **Edit Mode**...

2. Rotate the **PAGE SELECT** knob to the number that has the parameter you wish to record.
3. Select **P05: OSC 1** for this example.
4. Press the **MOD SEQUENCE ON/OFF** key to turn it on.
5. Press the **REC** key: it flashes, and the LEDs around the **BANK/PROGRAM SELECT** dial light in succession.
6. Hold a note on the keyboard down and rotate **Knob 4**, "**Wave Sel**" > The **REC** light automatically turns off after the maximum 16 steps have been recorded.
7. Now play a key and listen to the result: by recording a Mod Sequence of the DWGS Wave selection, we've just created a mini "Wave Sequence"!

This Modulation Sequence is also editable:

8. Rotate the **PAGE** dial to **P27: ModSeq-B**.
9. **Knob3** selects a Step number, and **Knob 4** allows you to change the value for the chosen step.

Working with the Arpeggiator

The arpeggiator can be used to create sequences of notes based on the chords you play. The R3's Arpeggiator can generate six types of Arp activity through up to four octaves of range, and is independently available to Timbre 1, Timbre 2 or both Timbres at once.

1. Press the **ARPEGGIATOR ON/OFF** key to turn on the **Arpeggiator**.
2. Rotate the **PAGE** dial to either **P32** or **P33**, "**Arpeg-A**" or "**Arpeg-B**".
3. Try pressing some of the **Program 1-8** keys, to turn Arp steps on and off in real time.
4. Press the **EXIT** key when satisfied with just how much mangling and motion you can provide to any Program!

Using the Vocoder

The Vocoder Mode of the R3 is every bit as powerful as its big brother, the RADIUS synthesizer. Any Program can easily be "Vocoded", and one of sixteen recordable Formant Motion phrases can be applied.

1. Make sure the **MIC** switch (to the left of the included MIC) is in its lower, recessed position in order to work with the included microphone.
2. The **AUDIO INPUT 1** knob allows you to optimize the level; intermittent green on the LED works the best.
3. Select **Program E-1, Strings**.
4. Press the **VOCODER** key, play some notes on the keyboard, and speak into the MIC: That's it!

The Vocoder's tone is extremely editable via the **PAGE** dial (pages 34-39)...

1. **P37, Filter, Knob 1, "Frmnt Shift"** quickly changes the character of the tone.
2. **P39 Lvl/Pan** allows you to dial in separate level and pan for each of the 16 channels or frequency bands of the Vocoder! > (**Knob 1** selects the Channel, **Knob 2** set the level, and **Knob 3** sets the pan).

Besides the ability to turn any synth Program into a Vocoded one, there are 16 Vocoder Programs already optimized for your enjoyment

Recording Formant Motions

The R3 allows you to record your voice as a “Formant” so that you do not need the microphone to modulate the Vocoder’s carrier signal. R3 can store up to 16 Formant motions.

1. Select Vocoder Program **P-2, “PulseVoc”**.
2. Notice that the **VOCODER** key is already lit; press it once (it flashes).
3. Press the **FORMANT MOTION ON/OFF** key (it lights up).
4. Press the **REC** key (it flashes).
5. Press **REC** again (it will be solidly lit) and immediately hold down a key on the keyboard and say something, up to 7 ½ seconds long.
6. If the **REC** light hasn’t turned off by exceeding the allotted time, press **REC** and turn it off.
7. Now play the keyboard and hear your phrase!

The Formant Motion phrases are written to Global memory, so that any of the 128 Programs can attach to any one of the 16 phrases!

Creating your own Programs

Besides customizing sounds by editing a preset Program, the R3 also allows programming from an **initialized state**, allowing you to create Programs “from scratch”...

1. To initialize any Program, press and hold **SHIFT** and press the Program #2 key, “**Init Prog**” (The **MAIN DISPLAY** asks “**Init OK?**”).
2. Press the **Program #2** key to execute the Initialize command > Notice that Knobs 1 and 2 default to allowing you to shape Filter 1’s Cutoff and Resonance.
3. Rotate the **PAGE** dial to **P13: Drive/WS**:
Drive and Wave Shape provide additional tools to make a sound more complex and edgy.
4. Rotate **Knob 1 “WS Type”** to select **Drive**.
5. Rotate **Knob 3, “WS Depth”** to about **80**; playing and listening to the results as Drive “saturates” the Amp stage.
6. Leave **Knob 3** parked where it is, and rotate **Knob 1** to listen to the other Wave Shape choices: our Init Program is taking on some mangled character!

R3 Editor/Librarian Software

The R3 ships with a CD-ROM containing the Korg USB MIDI Driver as well as a powerful, easy to use editor/librarian. Once the keyboard is connected to a computer via USB, the editor lets you freely edit Programs, sending sounds back and forth one at a time or in banks. The Editor is also handy for Formant Motion editing: its Global page provides a Normalize and Auto Trim function.

For more information on working with the R3 Editor/Librarian, see the R3 Owner’s Manual.

SHIFT Key Shortcuts

There are many useful functions that you can access by holding the **SHIFT** key and pressing another key on the R3. Below is a listing of those functions.

For more information on each function, refer to the R3 Owner's Manual, starting on page 75.

- Play Demos: **SHIFT** and **ARPEGGIATOR ON/OFF**
- Calibrate a continuous pedal: **SHIFT** and **ARPEGGIATOR LATCH**
- Solo a Timbre: **SHIFT** and **TIMBRE 1** or **TIMBRE 2** – Repeat to defeat
- Audio In Thru: **SHIFT** and **VOCODER**
- Knob Assign: **SHIFT** and **MOD SEQUENCE/FORMANT MOTION ON/OFF** – Press **TIMBRE 1**, **TIMBRE 2**, or **VOCODER** depending on which area of a Program you wish to re-assign knobs.
- Memory Protect: **SHIFT** and **Program #8**
- Preload: **SHIFT** and **Program #7**
- Rename a Program: **SHIFT** and **Program #1**
- Initialize a Program: **SHIFT** and **Program #2**
- Copy Timbre: **SHIFT** and **Program #3**
- Swap Timbre: **SHIFT** and **Program #4**
- Initialize Vocoder: **SHIFT** and **Program #3** – when **VOCODER** is first selected for editing
- Copy Effect: **SHIFT** and **Program #5**
- MIDI Data Dump: **SHIFT** and **Program #6** (Note: for MIDI Data Reception back into the R3, make sure Memory Protect is **OFF**, rotate the **PAGE** dial to **P43: "MIDI filt"** and rotate **Knob 4**, "**SystemEX**" to "**Enable**")

For more information, see the R3 Owner's Manual, and visit www.korg.com/R3 for more support, tips and tricks!