# Roland XP-60 Music Workstation *vs* Terratec microWAVE PC Sound System

**T**wenty years ago, computers and synthesisers had so little in common that few could have predicted how closely integrated they have become in recent times. Today, you would be hard pushed to find a PC that doesn't come equipped with a powerful sound card and a range of audio and sequencing applications. By the same token, you would have a job on your hands to find a modern synthesiser that runs without sophisticated, custom software.

**Although many attempts** were made in the early eighties to connect computers up to the emerging range of MIDI-capable keyboards, it wasn't until the Atari ST came along in '85 that computers were first taken seriously for making music. But while the ST gathered pace, some of the biggest names in music technology, like Korg, Roland and Yamaha, were trying different ways to integrate computer-based recording on-board their synthesisers. This lead to the development of the all-inclusive music workstation. But which system has the most to offer, and just as importantly, which is best for making music?

To find out, we got our hands on Roland's XP-60 Music Workstation and compared it to

◀ **THE MIGHTY ROLAND XP-60. DON'T YOU JUST WANT TO TOUCH IT?**

▼ **WHERE AUDIO IS MIXED AND ROUTED ON-BOARD THE EWS**

Terratec's EWS64 XL sound card and the new microWAVE PC synth module. To complete the computer-based set-up, Terratec also supplied us with a MIDI Master Pro controller keyboard.

**The Roland XP-60** is a full-size, five-octave synthesiser that combines 64 voices of polyphony with three studio-quality effects and comprehensive, 16-track MIDI sequencing. Straight out of the box it comes with 8Mb of high-quality WaveTable samples, although this is expandable to 40Mb using up to four SR-JV80 plug-in cards. At present there are 14 cards in the series encompassing just about every type of sound going, from vintage synths and pianos through to orchestral and ethnic instruments. This approach isn't as flexible as sampling-in your own sounds, as you can with the Terratec system, but the flip-side is that you have a plethora of instruments that can be used instantly each time you power-up the keyboard.

**The Terratec system** comes with two synths, although the most interesting is undoubtedly the excellent microWAVE PC module. Based on Waldorf's microWAVE XT, a professional rack-mounted synth priced at £1,099, it provides 10 polyphonic voices across eight multi-timbral parts. Up to four effects can be used simultaneously in performance (or multi-timbral) mode and it features extensive MIDI implementation to enable real-time control of every synth parameter.

The second synth, which doubles up as a sampler, can be found on the main sound card. This provides 64 voices of polyphony and comes equipped with 6Mb of RAM expandable to 64Mb with standard 72-pin SIMMs. General MIDI sound banks are included on the accompanying CD in various sizes up to 4Mb, and the card's effects are available for all audio sources. These include the usual complement of reverb and chorus settings, although they're not a patch on what the XP-60 has to offer.
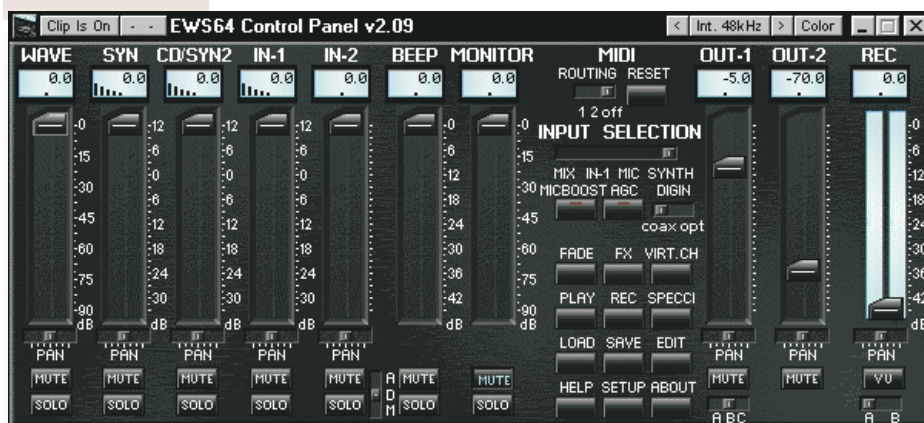
☛ **Setting up**
The Roland XP-60 is a true plug-and-play device: excluding plugging in the power cable and a couple of audio leads, it doesn't require any setting up. If you have a sustain pedal, this can be connected round the back, but we'll take a more detailed look at this in a moment. The Terratec bundle, on the other hand, isn't quite so straightforward.

# USER INTERFACE

**B**oth systems have their pros and cons when it comes to usability. The PC-based setup provides a graphical, on-screen environment for MIDI sequencing. What can beat that? However, when it comes to selecting and editing instruments, the same graphical environment can only be used to replicate the many buttons, sliders and dials that you find on the Roland XP-60. Although virtual consoles do provide a way in to the world of sound editing (*see screenshot, right*) they're a poor substitute for the real thing.

In contrast, the XP-60's range of controls and its 320x80 dot LCD display are no match for a monitor and mouse-driven sequencer. For example, to delete a single note from a track you must first call up the relevant screen and scroll through a list of events until you find exactly what you're looking for. With a PC-based sequencer, you have a far more meaningful and visual overview of a track's contents that enables notes to be deleted just by clicking on them. It's not that you can't get the job done with a workstation, it just takes longer.



▲ **THE MICROWAVE VIRTUAL CONSOLE. ALL THE IMPORTANT SYNTH PARAMETERS HAVE DEDICATED DIALS FOR REAL-TIME EDITING**

The microWAVE needs to be installed in your PC and hooked up to the EWS sound card with two ribbon cables; one is for audio, the other carries data. And then there's the worry of conflicting IRQs and I/O ranges. Despite being one of the older ISA-type cards, the EWS64 was successfully detected and installed as a plug-and-play device.

Once the hardware is configured, the setup program continues to install the card's applications and utilities. The Control Panel (*see screenshot, left*) is the hub of the EWS software bundle. From here you can launch the main programs and configure how audio is routed from the card's various inputs with numerous switches. This isn't quite so straightforward as it could be, though, and takes a while to master.

☛ **Ins and outs**
The XP-60 is equipped with two stereo outputs: one for the main mix, and a second, direct-out that bypasses the internal effects. When working in performance mode, this enables selected instruments to be treated with external processors. Additionally, there's a dedicated output from the sequencer's click track, or metronome. This is handy if you need to play along with other musicians in certain live and recording situations.

We've mentioned the connector for the sustain pedal, and next to this are four more sockets for extra control pedals. These can be configured for pretty much anything you please, such as volume and expression, or even as start/stop switches for the sequencer. The remaining connectors are for headphones, and MIDI in, out and thru.

Terratec's system offers a range of ins and outs to suit most audio and MIDI applications. The front-panel module has two sets of MIDI ins and outs, coaxial and optical digital inputs, two S/PDIF outs and a headphone connector. Round the back of the sound card itself are two stereo outputs, two line inputs, a mic input and the obligatory joystick/MIDI adapter.

☛ **Keyboards**
The MIDI Master Pro covers a four-octave range and provides pitch bend, modulation and data entry controls. Its green backlit display enables you to configure the data slider to send any CC (continuous controller); handy preset buttons are provided for volume, pan, reverb and chorus.

The keys are velocity sensitive and should be adequate for most users who will probably just want to bash a few chords into their PC. When compared to Roland's five-octave, semi-weighted keyboard, though, it doesn't have quite the same luxurious touch or action. When it comes to quality, the XP-60 wins hands down.

☛ **Sounds**
When choosing a synthesiser, it would be fair to say that the sounds are the most important thing you look (and listen) out for. As with any synth, the XP-60

# FEATURES AT A GLANCE

| | Roland XP-60 | Terratec Native Synth | microWAVE Synth |
|---|---|---|---|
| Polyphony | 64 voices | 64 voices | 10 voices |
| Simultaneous parts | 16 | 16 | 8 |
| Number of instruments | 512, 8 drum kits | 128, 1 drum kit | 256 |
| WaveTable memory | 8Mb ROM | 6Mb RAM | <1Mb |
| Max. WaveTable memory | 40Mb ROM | 32Mb RAM | N/A |
| Number of effects | 42 | 2 | 10 |
| Max. simultaneous effects | 3 | 2 | 1 |

*This table compares the main features of each synthesiser*

▲ **THE TERRATEC microWAVE PC
SOUND SYSTEM: ALL YOU COULD
EVER WANT TO MAKE MUSIC WITH**

lives by its sounds and there's a great selection to choose from. In addition to the essential meat-and-two-veg General MIDI patches, it's equipped with plenty of dance and contemporary instruments. With a comprehensive range of editing parameters and access to new sounds on the internet, not to mention all those expansion cards, you'll be spoilt for choice. The pianos are expressive, the strings are warm-sounding, and the basses have plenty of depth and punch.

With names like Imperial Code, Blade Runner and, would you believe, HP LaserJet, the microWAVE clearly doesn't try to emulate real-life instruments. And as such, it doesn't need dozens of megabytes of wave ROM. Instead, the source samples tend to be short, pure, synthesised tones that take on a whole new twist once they have been treated with a raft of sound-shaping gadgets. These include banks of filters, envelopes, arpeggiators and effects. All of these can be controlled in real-time using the microEdit software (*see box, p109*).

The sounds, which range from squelchy analogue basses through to lush stereo pads, have a raw, grungy quality to them, which won't be everyone's cup of tea. But if you're looking for something a bit different from the norm, you'll fall in love with this box. I did. The General MIDI banks for the EWS card don't come close to the XP-60's rich, warm-sounding presets, but you do have the option to create your own sounds using the supplied Ed!Son software which turns the EWS into a full-featured sampler.

☞ **Sequencer**
At the heart of any MIDI setup is the sequencer. Roland's 16-track recorder is surprisingly easy to learn and we had a song up and running within about half an hour. Editing and arranging proves to be a tad trickier than it does with Cubasis AV, which comes with the Terratec bundle, but there's not much you can't do.

The internal memory is good for 60,000 notes, and songs can be saved to disc with all performance settings tagged on. Cubasis offers unlimited tracks for MIDI and two for audio. Its graphical interface is much easier to grasp and quicker to work with, but then, you're unlikely to risk taking your PC out on the road. Each setup has its pros and cons.

☞ **Conclusion**
Although both systems can record, edit and play back music, each will appeal to very different users. There are many joys to owning a music workstation, but not having to sit through operating-system start-up screens has to be near the top of the list. Neither do you have to download firmware, upload sounds or worry about general protection faults and compatibility with games. On the other hand, workstations are not as flexible as the PC-based equivalent.

The Terratec bundle has everything you need to create music with MIDI and audio. And while the keyboard may not be as luxurious, the sounds that come from the speakers are more than a match for the XP-60.

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