

Although it is hard to say how long each keyboard will take to restore, it is not unusual to spend as much as 40 hours of work to finish one machine. – Kent Spong, KSR

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## Feature

# Back to life

More explorations in the land of vintage synths ... **N. RAMA LOHAN** delves into the innards of the matter.

**S**ERVICING and bringing a vintage synth up to playing condition is no easy task, even for a restorer. Numerous considerations need to be taken into account, sourcing parts often being the greatest source of frustration, but RL Music and partner Kent Spong Restorations (KSR) have both taken it all in their stride and continue to deliver the best examples of vintage synths in Europe.

In this second edition of our interview with Richard Lawson (RL) and Kent Spong (KS), both men reveal what really goes into bringing these classics back to life.

**What is so appealing or unique about these instruments, that has people willing to fork out huge quantities of money to either buy them or have their beloved units restored?**

RL: Much has been written and speculated about why people buy and use vintage keyboards. I suppose you might want to ask the same question of people who buy antique furniture or vintage cars. The love affair people have with the "original article" is difficult to quantify and very subjective, but from my own perspective, it's partly to do with nostalgia. However, mostly it's to do with the tactile nature of instruments that were manufactured two to four decades ago, bringing the musician closer to the creative process of experimenting, writing and performing.

Modern digital hardware and software products are very sophisticated and complex by nature, offering a quick fix through pre-loaded professionally composed patches etc. A vintage keyboard like the Minimoog, for example, needs the musician to really play the instrument and understand the process of synthesis to get the Moog to sing. This experience of standing in front of a beautiful work of electronic art is quite inspirational and provides an extraordinary level of feedback that gets the creative juices flowing. To date, a PC/Mac or digital workstation has never done that for me. Try standing in front of an original Moog Modular System 3C with 50 to 60 patch cords on hand and not be completely inspired and overwhelmed by the potential and sheer beauty of a classic instrument such as this!

I appreciate that many people will not have the budget to buy original vintage analogue synthesizers but these should be aspired to and not just dismissed as too expensive. After all, vintage synthesizers will appreciate in value so these are also long-term investments, as well.

**Could you provide a checklist of how you approach the restoration process of some of these instruments?**

KS: There is only really one mindset when approaching the



▲ **EARLY ENGINEERING:** This is what the interior of an analogue synth looks like – a simple, single VCO, sans memory, monophonic monster, a Kawai Synthesizer 100-F in this case.  
 ▶ **ANALOGUE PLAYGROUND:** The interior of the Kawai Synthesizer-100F up close.

restoration of a synthesiser, electric piano or organ, as far as KSR is concerned. This (mindset) is to treat each keyboard with the sense that it has to be perfect in every way when it is finished, no matter what make/model it is or market value it has. Everything, right down to the rubber feet, is part of the restoration process, which follows this course of action:

- 1) The total disassembly of the unit.
- 2) Cleaning of keys and keyboard assembly, case, key contacts, circuit boards, knobs, sliders, front panel ... everything.
- 3) All electronics are tested and then repaired or replaced or upgraded, as necessary.
- 4) The unit is carefully reassembled.
- 5) The unit is fully power-calibrated, tuned and bench-tested over two to five days, depending on the model.

There are many other sub-processes in between these points like sanding and staining of wood cases, finishing off with French polish and/or other finishes, depending on the synth. If the case is metal (a Roland Jupiter 8, for example) then there is sometimes paint restoration work, which might involve spraying and lacquering.

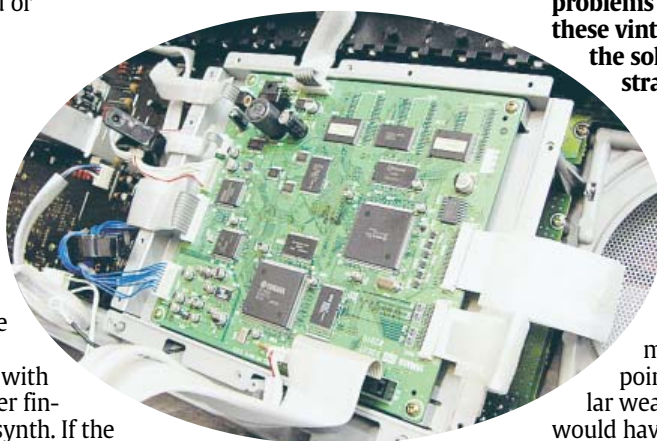
Although it is hard to say how long each keyboard will take to restore, it is not unusual to spend as much as 40 hours of work to finish one machine and that doesn't include all the time spent sourcing spares and the various other materials needed.

Needless to say, the finished keyboard is something to behold and as near as possible to a brand new unit. The level of craftsmanship we at KSR and RL Music employ is underpinned by our total passion and enthusiasm for all keyboards and synthesizers, and particularly, vintage analogue synthesizers.

**What are the more common instruments that come in? Why these instruments?**

RL: Many of the regular visitors to the RL Music website will appreciate

that I tend to specialise in offering the most historically important synthesizers from the great analogue music era. What makes these instruments historical is from their use by key artistes of the time (1960s through early 1980s) and the contributions they made, not only the music of that period, as well as the uniqueness of their sounds and their facilities at that time. It's also important to understand what "vintage" means – this is the best of its type, so this probably excludes more than 70% of all synthesizers made. I personally don't make the rules here but many people interested in this article will



**MODERNISM'S TOUCH:** Capacitors and transistors have made way for printed circuit boards and integrated chips on newer keyboards, as shown in this Yamaha PSR-2100.

recognise the difference between a Sequential Prophet 5 and the Crumar Bit-One in terms of fame, facilities, sound and potential etc.

The vintage keyboard classification is still a big list as there are so many great machines. There are also many generally unknown models as well, which never quite made it into cult status. I guess a top 10 make/model list might look something like this:

- Minimoog/Memorymoog
- Moog/Arp/Roland/Buchla Modulares
- Yamaha CS-80
- Elka Synthex
- Sequential Circuits Prophet 5
- Roland Jupiter 8



**VERY BUSY INDEED:** Yes, servicing a Yamaha CS-80 (on the shelf) can take up a lot of Kent Spong's time.

### NUMBER TO CALL

If you've had trouble contacting **Ironwood Guitar Experience** (review of the B.C. Rich Bronze series Warlock bass last week), try ☎ **03-5636 0594**.

ARP Odysseys and 2600  
 Korg MS and PS range  
 EMS VCS3 and AKS  
 Oberheim SEM, OB-8 and Matrix series

Don't forget vintage digital synths like the PPG and Synclavier, which we also work with.

The makes and model ranges of the list above are all uniquely quite different from each other in sound and operation – what a great variety this is. Nothing in today's market comes close to this fantastic palette of analogue sounds and the sheer enjoyment of playing them all.

**What are the most common problems you encounter with these vintage instruments and are the solutions fairly simple and straightforward?**

KS: To be honest there is very little similarity between one vintage repair and another. It also depends on the kind of life the synth has led in the past. We find that faults tend to be different on every machine but if we had to point a finger at any particular weakness then I would say it would have to be power supplies. However, less serious problems like noisy sliders and pots are quite common, and of course, calibration of oscillators etc.

We at KSR rebuild the power supplies as a standard restoration activity as this is the most common reason for instability/faults in vintage synthesizers. As a result of this fundamental process, we can tackle the rest of the electronics from a good base.

Simple and straightforward is not an expression we can use all that often.

**What are the easier instruments to repair and what are the more difficult ones?**

KS: The answer to this question is a logistical one.

The easiest keyboard to work on is the one with the least electronic components in it. Let's say for instance, Sequential Circuit's Pro One, where the build quality is high and the amount of parts is just under a hundred on the main board

– this would be simple. The hardest would be something like the Yamaha CS-80 with its 43 or so boards and components running into the thousands. Finding a fault in this monster polysynth takes a great deal of time and, as so many components affect each other, the fault that you hear is in fact the result of a fault or faults elsewhere in the system – a really big challenge sometimes!

The other factor is the scarcity of custom chips for specific synthesizers, like the EMS Synthi AKS, for example. This instrument uses unique chips in the sequencer/keyboard module, which are no longer commercially available anywhere.

**Is it easier to repair analogue or digital synths?**

KS: This is a good question. We would say that digital is easier to repair than analogue simply because most keyboards today are designed in such a way that you just replace the whole board that has a problem on it. However, with vintage analogue synths, you have to repair at component level due to the rareness of the parts.

The digital repairs will nearly always be more expensive in terms of parts cost because of the "board swapping" solution the manufacturers use, but the vintage analogue repair will take a lot more time because we have to locate the specific part that is causing the problem. Hence, proper diagnostic work, and many hours of intensive labour.

Labour costs measured in 20 to 60 hours cost a great deal of money and most repair companies will not dedicate this much time to one instrument and if they did, then they may want to charge by the hour, which is frankly unfair to customers. We do not do this and our approach is to take a holistic business view, which has always proved very popular with our clients.

**For parts, what is the support like from the manufacturers? Obviously many don't exist any more, so what do you do for spares?**

KS: Backing by manufactures is