

# Unlearn – Re-wire: ephemeral musical devices

John Richards

Music, Technology and Innovation Research Centre

De Montfort University, Leicester,

LE1 9BH, UK

+44 (0)116 207 8269

jrich@dmu.ac.uk

www.jsrichards.com

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## INTRODUCTION

The Kreeback instrument is an assemblage of self-built sound generating devices and discarded analogue audio hardware patched together to create a feedback labyrinth: in its hermetically sealed universe, sound creeps back on itself (Fig. 1). Found objects such as a meat mincer/grinder, candlesticks, wooden sculptures and teapots are all used to steer and control the feedback. Since 2000 the instrument has gradually evolved. It is an instrument, or system, constantly changing, being upgraded, modified and refined. The instrument was initially developed through working with the group Kreepa, hence the name Kreeback, and as an electronic device for improvisation and live performance. Due to the constant states of flux of the instrument, the Kreeback is more an approach or attitude, a ‘non-instrument’, rather than a musical instrument that is defined by set parameters. My residency at STEIM focused on further exploring and developing a musical approach and language, which I have called ‘dirty electronics’, through the Kreeback instrument/non-instrument.

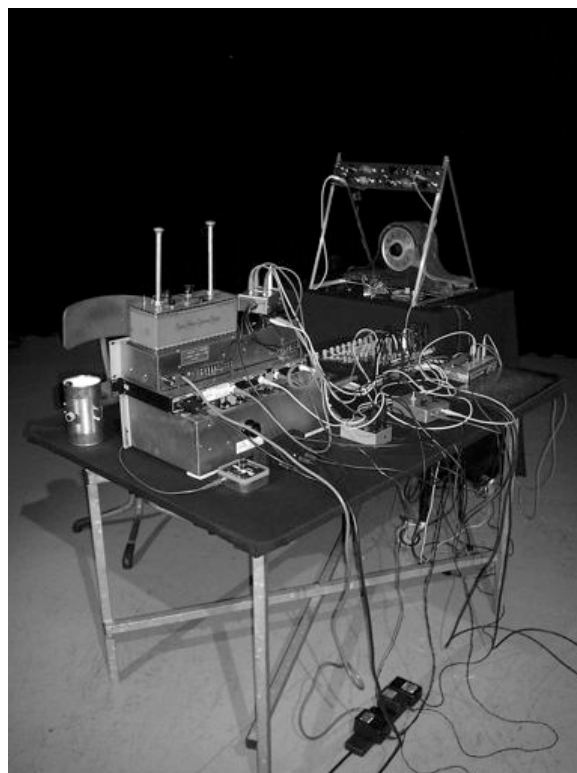


Fig. 1. Rehearsing with the Kreeback instrument at STEIM. Copyright © John Richards

## THE INSTRUMENT/NON-INSTRUMENT

Despite the Kreeback instrument gradually evolving, the core of the instrument has become a valve mixer, Vortexion 4/15/M, the Mackie 1202-VLZ Pro mixing desk used as a matrix for routing audio and control signals, and a bespoke resistance matrix for, what I have defined as, ‘controller-objects’ (things that could be touched and looked intriguing in the context of a musical

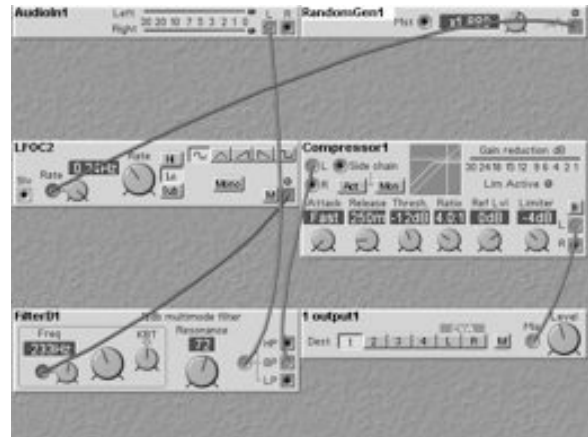
instrument). The Vortexion 4/15/M (four balanced inputs, one unbalanced output) uses EF86 valves at both input and output stages. These valves are notoriously noisy. However, the latent noise of the device generated by the valves is the feedback's paradise. The four large Bakelite knobs of the Vortexion mixer also make an excellent interface for controlling the feedback (Fig. 2). The use of the Mackie mixing desk as a matrix supports the idea of appropriation of hardware over the construction of specially made devices. To build a portable matrix with as many options would have involved significant 'build-time', and I thought that this build-time was best spent on developing other aspects of the system. The controller-objects are found objects that have been exploited in a number of ways to output variable resistances. These resistances are then used, via a resistance matrix, to control the feedback [1]. The resistance matrix is a passive junction box with audio inputs and outputs and patch sockets for the controller-objects.



**Fig. 2. Vortexion mixer. Copyright © John Richards**

The Kreeback is not strictly a 'no-input' device. Custom-made LFOs, oscillators and noise generators are used to modulate the feedback. I have also experimented using the Nord Micro Modular to produce control

signals/modulators for the feedback. As well as generating control signals, the Nord is also used to create its own feedback. This is achieved by routing the Nord's outputs, via the Mackie, back into its audio inputs. This 'sub-feedback' network has various parameters that are MIDI controllable (Fig. 3).



**Fig. 3. Nord Micro Modular patch. Copyright © John Richards**

### ON THE VISUAL

There is something profoundly evocative in incorporating found objects and appropriated hardware into an instrument/performance that overrides the logic of building a refined, purpose-built instrument. My initial appropriation of existing hardware was as much based on convenience as design. Items of equipment that lay dormant found a new life. This approach offered a quick and economical way to try things out. From the appropriation of hardware, I was led more into the world of found art. For example, I wanted to explore the power of 'objects' and how they could be used to demand attention and create intrigue, particularly in the context of a musical instrument. These objects when combined created an ad-hoc quality to the Kreeback instrument that captured the essence of the ephemeral. There are no fixed horizons: anything and everything seemed possible.

The appropriated hardware and found objects of the Kreeback instrument are also used for their sculptural properties, as well as functioning as rhetorical devices in their own right [2]. For example, Simon Atkinson's piece *Interiorities* (for the Kreeback instrument) incorporates two Victorian teapots. I had seen Alvin Lucier perform *Nothing is Real* in Amsterdam where he used a small china teapot. The piece involves performing *Strawberry Fields Forever* by the Beatles on the piano, then playing back a recording of the performance through a miniature loudspeaker housed in a teapot whilst using the teapot lid to filter the sound. For *Interiorities* I wanted to use the teapots in a similar way to Lucier but develop the idea. By having two teapots it was possible to create beating effects and counterpoint. Feedback from the Kreeback instrument is sent to a pair of low voltage audio power amplifiers and then to loudspeakers housed in the teapots. Miniature microphones attached to the teapots' lids are also used to create feedback, which is routed to interact with the original Kreeback signal.

What was more important, however, was the type of teapot I was going to use. When working with Simon Atkinson on *Interiorities*, I debated how I was going to perform a beating drone texture that Simon had written. My thoughts were very much on the premiere of the piece that was going to take place at Fylkingen, Sweden. Many of the 'black boxes' at my disposal could have done the job. But, I wanted to perform the texture in a more physically engaging way, and to connect the beatings directly with my gestures as a performer. The resonating teapots suited the whole atmosphere of the piece: small and intimate with sounds emanating from within. I was able to get hold of two very ornate Victorian silver plated teapots. I knew these objects

would create a very strong visual and have a significant impact rhetorically. They were not just any old teapots, they were antiques, objects of desire that told a story, which was far more important than their use to evoke nostalgia. I thought these objects, when incorporated into the Kreeback instrument, had the potential to win over an audience before any sound was made (Fig. 4).



**Fig. 4. Victorian teapots. Copyright © John Richards**

### **THE HABIT**

Despite the metamorphic and modular attributes of the Kreeback, I had begun to gravitate towards set routings and patches for the system. There were things that worked well which I wanted to use again, and through the gradual process of experimentation, I was beginning to find the limits of certain devices. With the need for experimentation and the unknown also came the need for familiarity and control. There were other practicalities too. Every concert involved 'building' the instrument: nothing is hardwired, although I have rationalised much of the cabling. As previously mentioned, I had also introduced a number of found objects/curios into the instrument as controller-objects. The 'instrument' was getting bigger and bigger, which involved a lot of setting-up and breaking-down time. I was becoming fed-up with being the last one to leave the gig, and, given that there was a

pattern emerging in regards the use of the system and its 'construction', I started to doubt the need to build the Kreeback each time I performed. Appendix 1 shows the 'primary' feedback network of the Kreeback instrument.

### **THE EPHEMERAL**

I was somehow beginning to lose sight of the essence of the Kreeback. The very things that were becoming a burden were in fact what the system was all about. It was the ephemeral state of the Kreeback that I needed to make more of. The beauty of the system lay in its 'condition' to be re-invented each performance through new and untried routings: exploring its modularity. The Kreeback is a sound generating environment where "dangerous" experiments take place [3]. I wanted to discover again a more naïve approach to working with the system, where surprise and playfulness were to the fore. Whilst at STEIM I set myself the task of creating a piece with a completely different signal routing. Consequently, this also involved an element of having to relearn how to play the instrument.

### **EXAMPLE**

To summarise, I used a combination of the Nord patch, (Fig. 3) Vortexion and the compressor/EQ chain (Appendix 1) all routed in series. This loop was also tapped at various stages and returned in to the overall chain. Other techniques included simply setting the gain to maximum on all the 'unused' channels of the Vortexion, thus creating extra noise in the system. This configuration created a completely different 'instrument' particularly from the point of view of response and behaviour [4].

### **CONCLUSION**

It is not just the case of replacing one routing, network or configuration with another. It is relatively easy to patch things together in different ways. With the Kreeback, although on the surface things may appear the same, there are a huge number of possibilities as an instrument simply through looking at signal path. This alone gives the instrument, like many network devices in general, the ability to re-configure and re-invent itself. Because the system is also modular, it is simple to remove and add components. And because the cabling is not hardwired, it is simple to re-wire and patch things together. The residency at STEIM has given me the opportunity to take a snapshot of my current practice and evaluate/re-evaluate my work. It is conceivable that the Kreeback instrument will continue to develop perhaps to the point where it will become something else. Through the process of 'unlearning' and re-invention, I have rediscovered the beauty in the ephemerality of the Kreeback instrument.

### **References and notes**

1. John Richards, "Lost and Found: the Mincer," *Leonardo*, 23 June 2008 <[http://www.leonardo.info/isast/articles/Richards-Mincer\\_LMJ07.html](http://www.leonardo.info/isast/articles/Richards-Mincer_LMJ07.html)>. More detailed discussion on controller-objects.
2. John Richards, "Getting the Hands Dirty," *Leonardo Music Journal*, 18, 2008.
3. Kreepifesto. 23 June 2008 <[www.kreepa.com](http://www.kreepa.com)>
4. Recording made at STEIM using this new configuration (excerpt). 23 June 2008 <<http://www.jsrichards.com/sound/steim2.mp3>>

**Appendix 1: primary feedback network of the Kreeback instrument**

