

# Timestep RA Equaliser T-01EQ

## Features:

- 19" Analogue real time equaliser
- 2 cartridge/arm inputs
- Moving coil and moving magnet input
- Variable cartridge load
- Variable LF and HF EQ
- Fixed EQ for rapid archiving
- Variable slope and variable frequency scratch/LPF filter
- Wide range rumble filter
- Two "frying/sizzle" notches
- Compatible with the Owl-1 & Vadlyd
- Ultra high performance input op-amps
- Proper Mono summing resulting in a 3dB signal to noise increase using stereo cartridges.
- Comprehensive groove wall selection
- Variable vertical and lateral switching/blending
- Single ended and balanced output
- High signal to noise
- Low distortion
- HiFi performance
- Built in 100/120/230V 50/60Hz power supply

**Design and Construction:** Over the years there have been several archival equalisers; most had some unique features and we have incorporate them all into one single unit as shown here.

We have been very careful to present a HiFi feel to this equaliser, we use only top quality op-amps, PTFE input connectors and output RCA sockets. The signal to noise is extremely high with no hum or buzz, the distortion is vanishingly low and the overall audio fidelity is in the High End HiFi zone.

We use gold plated switches and very closely matched pots. All resistors are 1% or 0.1% tolerance. EQ capacitors are all 1%. We use Ultra high performance input op-amps from Texas the OPA1612 SoundPlus™

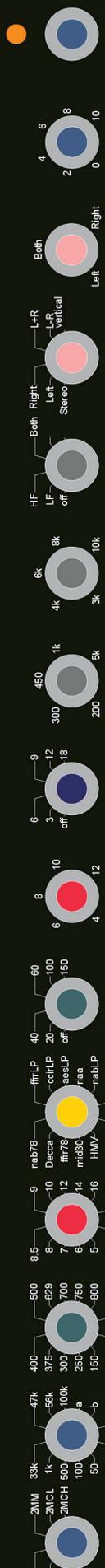
If you are reading this on a computer as a pdf document, zoom in to see the front panel detail.

**The Owl-1** has not been produced for over 20 years now, but it has become the de facto standard in 78rpm equalisation with most of the books and guides either referencing the Owl-1 directly or mirroring its settings. The EQ switching and gain distribution is the same as the Owl-1 so you will feel a natural and intuitive migration to the T-01EQ.

This is no coincidence, as Tom Owen the creator of the Owl-1 and Multifilter let us have the original hand drawn circuit diagrams and gave us permission to use his circuitry. When we showed Tom our concept and drawings at the 2013 AES Convention in New York, Tom said "the world has been waiting 20 years for this".

Tom asked for a couple of changes and then to our surprise said "can I have one please?" The T-01EQ closely follows the design of the Owl-1 and Owl Multifilter, with increased functionality and performance, is approved by Tom. We could not have tried harder to enhance and support the restoration of 78rpm records.

Described in a separate brochure is the T-01DDS 14 - 170rpm digital speed controller for Technics direct drive turntables.



**Philosophy:** We have listened to restorers and we realise that often, very high numbers do not equate to the best sound, witness the variable slope scratch filter. If a record is very scratched then often a steep slope is required, but on not so on moderately damaged records; a steep slope can destroy some of the music and a gentle slope might be better, hence we offer 3, 6, 9, and 12 dB per octave rollover.

**Inputs:** To cater for the growing use of Moving Coil 78rpm cartridges, both inputs will take any sort of cartridge with switchable sensitivity and variable loading.

**EQ:** We offer quick and easy 11 preset EQ's that are the most used, as well as near infinite variation of both the LF and HF points. Where possible level matching is achieved so that regardless of the EQ setting the output level remains constant, in a similar way to the Owl-1.

**Notch:** Here we were inspired by the fabulous but no longer available Owl Multifilter. We looked at the Owl design and performed many tests with a complex parametric equaliser to bring the very best, quietest and highest performing noise filter. On many 78s the abrasive filler material produces a narrow spectrum of noise, the two independent notches can often eliminate this noise considerably without detracting from the music at all. This very powerful feature is missing on most modern analogue equalisers.

**True Mono:** Many preamplifiers and EQ's simply short the two stereo signals together to get a mono output. There is a better way, and that is to sum both channels into one. The wanted signal is coherent and rises by 3dB and the noise which is uncorrelated stays the same. Hence a very simple 3dB improvement from allowing a stereo cartridge to perform in a similar manner to a true mono cartridge. Also true summing removes all vertical modulation for an even better result.

**Blend, Lateral and Vertical mode:** Using a stereo cartridge you can seamlessly and continuously pan across from one groove wall to the other, and anything in between to find the least wear. Sometimes this has no real effect but it can be checked in a couple of seconds anyway.

**Edison Diamond, Pathé** and others have a vertically modulated signal that is better played with a stereo cartridge with one channel out of phase, to extract all the information recorded. This is a simple flick of the switch, here the blend control allows you to null out any cartridge imbalance to get the best sound possible.

**Buying a T-01EQ:** We aim to keep units in stock, so no waiting and we can deliver to anywhere in the world by tracked and insured Fed Ex.

**Compatibility:** We have designed the T-01EQ to equal or exceed the specifications of all other 78rpm EQ's, past and present. This unit is approved by Tom Owen the creator of the Owl 1 and we guarantee that it will meet and exceed all specifications of both the Owl 1 and Owl Multifilter. We have used and sold the Vadlyd MD12 MK3 and we guarantee that it will meet and exceed all specifications. Furthermore our Mono summing is true and not simply added. We also have the ability to pan seamlessly from one groove to the other at a constant signal amplitude. We have both preset and manual equalisation and our HF filter has the flexibility of a variable slope. An optional fixed a flat output on separate XLR connectors is available. We can supply customers units to virtually any custom specification.

**Designed by Dave Cawley** a full member of AES <http://www.aes.org/aes/davecawley>