

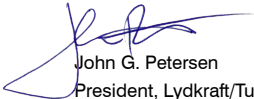


# Softube Tube-Tech PE 1C equalizer User's Guide

## Foreword by John G. Petersen

In the eighties I got really fascinated by the design and quality of classic tube processors such as Pultec and Teletronics. I felt there was a need to continue that tradition. TUBE-TECH Program Equalizer PE 1A (now PE 1C) was my first unit in production, and it started me off designing the whole TUBE-TECH range. We are excited to experience the PE 1C in the digital domain and impressed once again by the skills of Softube.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'John G. Petersen', with a large, stylized flourish extending to the left.

John G. Petersen  
President, Lydkraft/Tube-Tech

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## Contact Details

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### Support

On the Softube website ([www.softube.com](http://www.softube.com)) you will find answers to common questions (FAQ) and other topics that might interest you.

Support questions can be posted at <http://www.softube.com>, where we will help you as fast as we can!

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## Installation and Authorization

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IF YOU BOUGHT THE PRODUCT ONLINE and have got the confirmation e-mail, the license will already be deposited in your iLok account:

2. Make sure that you have the latest iLok drivers installed. They can be found at <http://www.ilok.com>.
3. Log on to <http://www.ilok.com> and transfer the newly received license to your physical iLok dongle.
4. Install the software from the DVD, or download the latest version from <http://www.softube.com/installers>.

Sometimes the DVD contains installers for all Softube products, but you will only be able to run those that you have acquired licenses for. In some cases, extra demo licenses are included when you buy a Softube product.

## Introduction

*"Tube-Tech is Pultec."* This is a quote from when the very first Tube-Tech product, the PE 1A, was promoted back in 1985. The vintage US made Pultec EQ 1P (designed and sold during the fifties) was the inspiration for Tube-Tech designer and founder John Petersen who was determined to produce a modern unit that could capture the magic of the original Pultec. The final testing, before shipping the PE 1A, was the EQ 1P and the PE 1A on different channels on a stereo track, making sure that each and every setting behaved exactly the same.

Today, decades later, the PE 1C (with minimal changes from the PE 1A) is still in production and the famous PE 1C has now entered the digital world with the PE 1C plugin!

### **About the PE 1C**

The Tube-Tech PE 1C is a passive, tube-based equalizer suitable for many different sources ranging from bass drums and guitars to vocals.

The equalizer features a Low Frequency section made up of two low shelf filters which can be combined to attenuate and boost at the same time. These filters are actually bit apart in frequency even if they are controlled by the same frequency selector. The High Frequency section has a peak and shelving filter working in parallel, which provides a smooth top end while not getting too bright.

The ability to combine the different filters and sections is what gives the PE 1C its characteristic sound and is something which plays a crucial part in explaining the classic Pultec sound.

## User Interface

### LOW FREQUENCY BOOST AND ATTENUATION SECTION



### HIGH FREQUENCY ATTENUATION SECTION



### HIGH FREQUENCY BOOST SECTION

### OUTPUT GAIN

The user interface of the PE 1C, or of a Pultec for that matter, can be confusing if you haven't used a Pultec before. First you have a low frequency section where you select the frequency with one knob, and boost and attenuate frequencies with two different knobs.

The high frequency section is made up of two subsections, the boost and the attenuation section. If you want to boost high frequencies, you select the frequency with the **High Frequency** knob, the width or "Q" of the bell filter with the **Bandwidth** knob, and then the amount of boosting with the **Boost** knob. You'll get a bell shaped boost filter for mid to high frequencies.

But for cutting high frequencies you only get three frequency choices selectable with the **Atten Sel** knob. The amount of high frequency attenuation is dialed in with the **Atten** knob. This section gives you a high shelving type filter.

In addition to this you get an **Output Gain** control. It isn't included in the original hardware, but we thought it might be useful in a plug-in.

## Low Frequency Section

### Boost

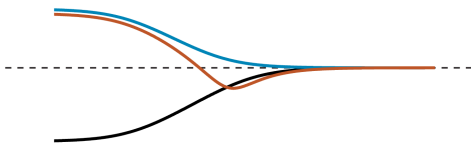
The **Boost** knob goes from 0 to 14 dB and controls a low shelf filter with a cut-off frequency that is actually a little lower than the ones that are printed on the panel. This gives the unit a unique frequency response when combined with the **Atten** setting.

### Atten

The **Atten** knob will attenuate the signal 0 to -18 dB using a low shelf filter.

### Low Frequency

Sets the cut-off frequency for the low frequency **Boost** and **Atten** controls. The frequency settings are 20 Hz, 30 Hz, 60 Hz and 100 Hz.



*Trick*, which is commonly used for equalizing bass drum. Tube-Tech has some nice instruction videos about this on their web site.



*By increasing both the **Boost** (blue curve) and **Atten** (black curve) knobs at the same time, you'll get the very Pultec specific sound (red curve), sometimes referred to as the "Low End*

## High Frequency Section

### Boost

Controls the gain for a boost peak filter that goes from 0 to 18 dB for sharp bandwidth and 0 to 10 dB for broad bandwidth.

### Bandwidth

Sets the width, or Q, of the **Boost** peak filter. Goes from SHARP to BROAD.

### High Frequency

Sets the cut-off frequency for the high frequency **Boost** control. The frequency settings are 1 kHz, 1.5 kHz, 2 kHz, 3 kHz, 4 kHz, 5 kHz, 8 kHz, 10 kHz, 12 kHz and 16 kHz.



## High Frequency Attenuation



### Atten

The **Atten** knob will attenuate the signal 0 to 18 dB using a high shelf filter.

### Atten Sel

Sets the cut-off frequency for the high frequency **Atten** control. The frequency settings are 5 kHz, 10 kHz and 20 kHz.

## Output Gain

The **Output Gain** knob controls the output volume from the plug-in. The range of the output volume is -10 dB to 10 dB.

### Key and Mouse Commands

All numbers in the GUI are clickable. This allows you to easily select a setting by clicking on the wanted value. Hovering above a label will turn the mouse pointer into a pointing hand.

#### Mouse

UP/DOWN or MOUSE WHEEL: Change a parameter, such as a knob or a switch.

#### Keyboard Commands

FINE ADJUST:  $\mathbb{C}$  (Mac) or *Ctrl* (Win), while changing the parameter value.

RESET TO DEFAULT: *Alt*, while clicking on the knob or fader.

#### Pro Tools Specific Keyboard Commands

AUTOMATION CONTROL WINDOW: *Ctrl*+ $\mathbb{C}$ / $\mathbb{I}$ +*Alt*+click

SHOW AUTOMATION TRACK: *Ctrl*+ $\mathbb{C}$ / $\mathbb{I}$ +click

### Mono and Stereo Operation

The TUBE-TECH PE 1C plug-in is designed to work in both stereo and mono. How the different modes are selected depends on your host software. In most hosts you can select these when you select the plug-in. In other cases, inserting the plug-in on a mono track will usually make it use the MONO mode, while selecting it on a stereo track makes it use the STEREO mode.



*From top to bottom: Knob- and switch-changing cursor, Label cursor and the "About" box cursor.*

## System Requirements

Supported sample rates: 44.1, 48, 88.2, 96, 176.4 and 192 kHz, in both mono and stereo.

### All native versions

- Mac OS 10.4 (or higher) on a G4 or Intel CPU (or higher)
- Windows XP (or higher) on a PIII CPU (or higher)
- 512 MB RAM
- Any VST, Audio Units or RTAS (Pro Tools 7 or higher) compatible host application
- **iLok USB key and the latest iLok drivers** (download them from <http://www.ilok.com>)
- DVD drive or Internet access for installation

### TDM and VENUE versions

- Pro Tools|HD compatible system

**Please, make sure that you always use the latest iLok driver. It is not included in the Softube installer, but can be downloaded from [www.ilok.com](http://www.ilok.com).**

## Buying Recommendations

The best way to get as close as possible to the original Pultec sound in hardware is to get the PE 1C from Tube-Tech. As mentioned on Tube-Tech's web page, the sound of a PE 1C is exactly like the sound of a brand-new Pultec—not a dusty, old, and unserviced Pultec. The difference is that a meticulously serviced Pultec has a wide and open frequency response, without graininess or harshness. The PE 1C is not a dull and muddy old school equalizer, it's in fact pretty much the opposite!

Anyway, Tube-Tech makes great gear. Period. Every time we get to borrow Tube-Tech stuff we immediately fall in love and want to keep it.





**Tube-Tech PE 1C plug-in was made by:** Arvid Rosén – modeling, Oscar Öberg – DSP programming. Torsten Gatu – framework programming. Niklas Odelholm – DSP programming. Ulf Ekelöf – 3D rendering. Original hardware was designed by John G. Petersen at Tube-Tech/Lydkraft ApS, Denmark.

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