



RETRO INSTRUMENTS

176 Introduction Sheet

Thank you for purchasing the Retro 176! They are hand built to last many decades. All of the components in the Retro 176 are new and reliable, so we recommend you turn off the 176 when you are leaving the studio. To register your unit with Retro to receive the latest information and updates for your 176 please visit <http://retroinstruments.com/176reg/>

The complete user manual is also available at <http://retroinstruments.com/176reg/>

INSTALLATION AND MAINTENANCE

Please save all packing material.

Inspection. Before mounting, check to make sure all of the tubes are fully seated in their sockets.

****THE RED AC VOLTAGE SELECTOR ON THE BACK SHOULD BE SET FOR THE PROPER AC MAINS VOLTAGE. 115V for US (USE 2A FUSE) and 230V for EU (USE 1A FUSE).****

Mounting. Mount in a standard 19" equipment rack. Please allow room above the top and side vent holes to keep the unit from getting too hot. Heat will reduce the life of your equipment. Use common sense about equipment in proximity and potential heat build-up. Take care placing equipment together in the rack. When two unknown units are mounted together in a rack, coupling can occur between transformers. If you experience hum in any

piece of gear, turn off the equipment near to see if that helps. If it does, you can improve things by changing rack placement. Note: If the test switch inside the 176 is not in the center position, that will cause hum.

Power Interlock. For safety, the power is interrupted when the front door is opened. Only trained technicians should open the front door to gain access to the internal adjustments.

Balance Adjustment. The ability of the 176 to operate free from artifacts depends on the tubes being properly balanced. If you change a tube, the balance should be adjusted. The 6BC8 is most critical. They have very much to do with the sound. A severe imbalance will cause a gurgling or thumping sound on attack.

Meter Zero Adjust. When you first apply power to the 176, the GR meter may rest slightly below the zero mark. It takes a while

before it will rest at exactly 0. It does not affect the sound; so begin using it after a short warm-up. There is a meter zero control to compensate for normal circuit drift. The 176 should be serviced if the meter zero setting changes dramatically.

CONTROLS

The Asymmetry Switch allows the compression to detect only the top or bottom of the wave. With the switch in the middle, it detects both sides like every other compressor. The first thing you notice when you turn it on is that the compression becomes more relaxed and smooth. Certain things that were once held down now open up. On a vocal that won't sit right, this can do wonders. Take for example the deep raspy male vocal; if you detect on the raspy side, you can make it more symmetrical and less distorted. With the switch in the opposite position, the compression rides on the smooth side and provides transparent compression but leaves

the vocal edge.

The **Sidechain HPF** rolls off the bass to the detector. As you advance it, you will hear the lows open up as you gain better compression control of the midrange frequencies. You can make the compression more transparent by using this control. It will let more bass through. The OFF setting allows detection of all frequencies equally and works nicely with the interstage OUT to create tight firm delicious bass.

Interstage Switch. The interstage switch engages the interstage transformer into the circuit. It allows two distinct compression signatures. "In" is more lively and punchy. "Out" is more natural and relaxed.

Attack and Release Controls. The Retro 176 has extended attack and release adjustability over an original model. For control that feels identical to the original, PULL THE ATTACK KNOB. It has a pull switch that disables additional timing circuitry for when you want the pumping and distortion effect of an original 175B or 176. With the knob in, the Retro 176 uses a program-controlled attack/release, which sounds more relaxed and musical.

Ratio Control. Low ratios put a compression

signature over a wider dynamic range. High ratios act more aggressively to limit dynamic range. You know this. Have at it.

Couple Jack. If you purchase a stereo pair of 176's, we supply a link panel. This is useful in stereo buss applications where panning is critical and the stereo image must not wander. For contemporary music, unlinked operation usually provides the most desirable results.

Amplifier - Bypass or Active. Provides hard-wire bypass of the 176. The Meter switch lets you match up the input and output levels for easy comparison with the Bypass switch.

Your ears may tell you everything you need to know but we welcome your questions. Contact your dealer or Retro Instruments for more information. phil@sta-level.com or 209-810-3344.

Best Regards,
Phil Moore

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***Enjoy your New
Retro Instruments
176!***