

76D LIMITER

THE 76D USER MANUAL

AUDIOSCAPE
ENGINEERING CO.



POWERED BY
SONIC TRUTH

MADE IN THE USA

This manual provides general information, preparation for use, installation, and operating instructions for the Audioscape 76D.

Audioscape Engineering Co.
Florida
Made in the U.S.A.



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A WORD FROM THE AUDIOSCAPE FAMILY



Thank you for purchasing the 76D from AudioScape Engineering!

AudioScape is proud to bring the classic 76D to our line-up of USA-built, period-correct recreations of legendary gear. This is our take on the renowned blackface revision of the UREI 1176. Released in the early 1970's, Rev. D is probably the most widely used and universally recognized dynamic processor ever made.

The Rev. D is admired for its punchy, thick, and harmonically complex tonality - our 76D is the solution for those desiring to add the sound of this analog legend to their outboard arsenal.

With the addition of the 76D, our line-up of the most desired revisions of the 1176 circuit, which includes our 76A and 76F, is now complete. For the first time, this holy trinity of classic FET compressors is available for all to enjoy!

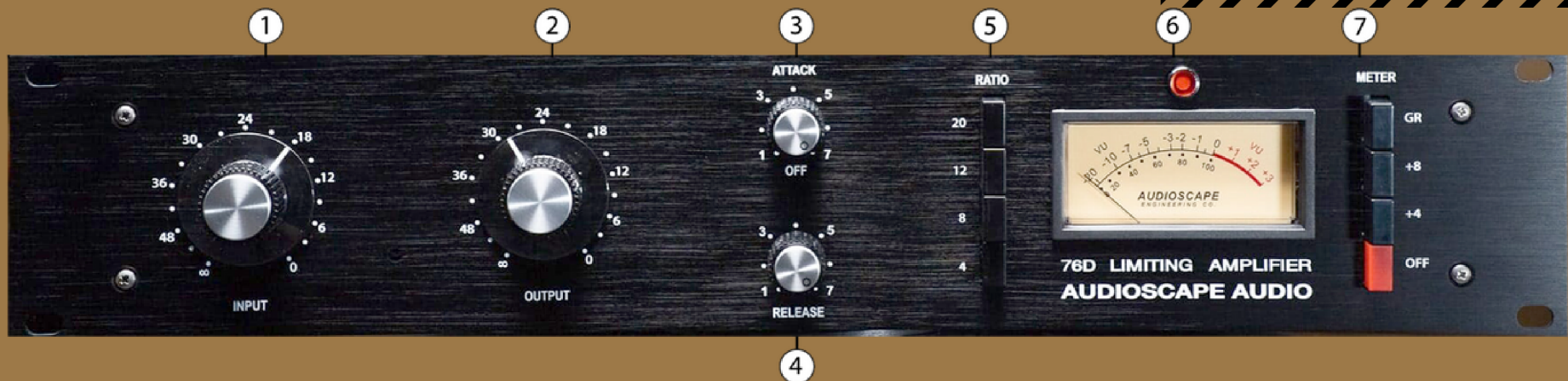
Let's check out this classic:



IMPORTANT SAFETY INSTRUCTIONS

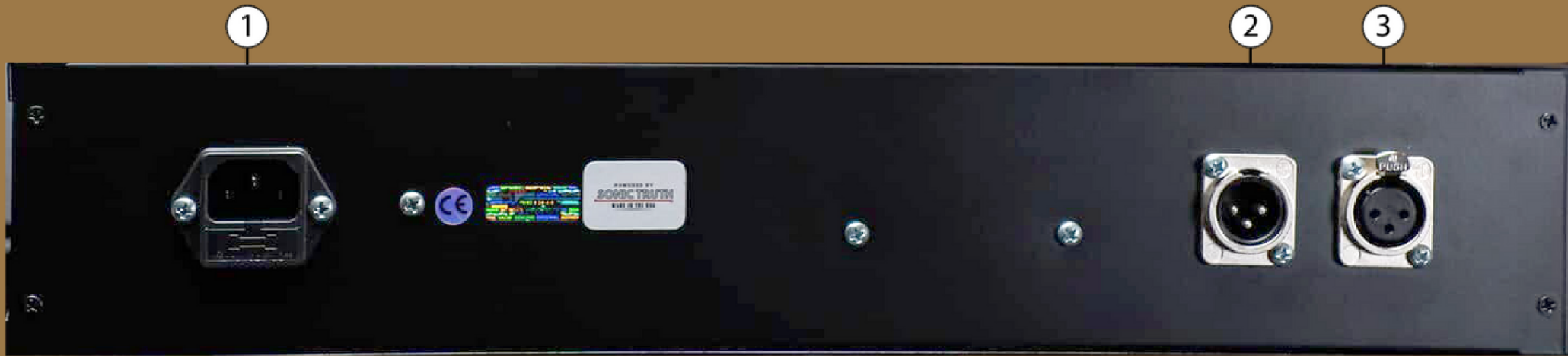


- **Water and Moisture** - Do not use the unit near any source of water or in excessively moist environments.
- **Object and Liquid Entry** - Care should be taken so that objects do not fall, and liquids are not spilled, into the enclosure through openings.
- **Ventilation** - When installing the unit in a rack or any other location, be sure there is adequate ventilation. Improper ventilation will cause overheating and can damage the unit.
- **Heat** - The unit should be situated away from heat sources, or other equipment that produce heat.
- **Power Sources** - The unit should be connected to a power supply only of the type described in the operating instructions, or as marked on the unit.
- **Power Cord Protection** - AC power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit. Never take hold of the plug or cord if your hand is wet. Always grasp the plug body when connecting or disconnecting it.
- **Non-use Periods** - The AC power supply cord of the unit should be unplugged from the AC outlet when left unused for a long period of time.



- (1) Input - Sets the input gain and threshold. Higher settings will result in increased amounts of limiting or compression.
- (2) Output - Sets the output volume of the 76D.
- (3) Attack - Sets how fast the compressor responds to a transient above the threshold. 1 is slowest and 7 is fastest. To bypass the limiting circuitry but still pass audio, turn counter-clockwise and click to the OFF position.
- (4) Release - Sets how fast the compressor recovers after a transient event. 1 is slowest and 7 is fastest.
- (5) Ratio - Selectable 4:1, 8:1, 12:1 and 20:1. The so-called All-Buttons-In or "ABI" mode is activated when just the 4:1 and 20:1 buttons are engaged simultaneously, though all buttons can be engaged if desired.
- (6) Meter - A standard VU meter that displays either the amount of gain reduction, or output level, depending upon the setting of the Meter Function switch.
- (7) Meter Function - Can be set to monitor GR (Gain Reduction), or output level (+4 dBm or +8 dBm [broadcast standard] line level reference). In the OFF position, the 76A will power down.

REAR PANEL



(1) AC Power Connector / Fuse Holder - Connect a standard, detachable IEC power cable (supplied) here. If fuse replacement is required, use only a 125 mA time delay (slow blow) fuse for operation at 115 V, or a 63 mA time delay (slow blow) fuse for operation at 230 V. Never substitute different fuses other than those specified here.

(2) XLR OUTPUT - A balanced XLR connector carrying the line-level output signal. This signal will normally be routed via a patchbay to a channel or bus insert return.

(3) XLR INPUT - Connect line-level input signal to this balanced XLR connector. Pin 2 is wired positive (hot). This signal will normally be arriving via a patchbay from a channel or bus insert send.



★ FEATURES

The 76D is a Class-A, Discrete, FET-based Limiter/Compressor that's been heralded for it's extremely unique dynamics response, box-tone and beautiful, program-dependent compression ratios.

The 76D is a FEEDBACK style compressor and operates using a "fixed-threshold" design - the higher the INPUT level, the more compression, tone and transformer saturation will rise.

This thing is FUN in a box.



INPUT

Raise Input level for more compression and coloration



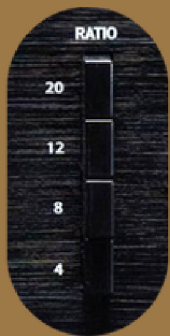
OUTPUT

Control the overall output of the compressed signal



METERING

Choose whether the VU Meter shows Gain Reduction or Output Level (+4dB or +8dB)



RATIO

Determines amount of compression applied to a signal exceeding the threshold



ATTACK

Determines the speed at which the compression circuit engages on material. 1 is slowest, 7 is fastest



RELEASE

Determines the release time for the compressor circuit. 1 is slowest, 7 is fastest,



Application Notes



PUSH THE INPUT!

The 76D is unique & quirky in many ways - let's start with the lack of a threshold control. Although the threshold is technically fixed, it changes based on the selected ratio - the higher the ratio, the higher the threshold. The input gain can be used to control the amount of compression applied to your signal.

While the threshold is fixed, the ratio (as well as the attack and release times) are program-dependent: After a transient, the compression is rapidly released. As the rest of the signal is compressed, the release time increases, along with the ratio. This is all part of the magic of the circuit - creating that quasi-raucous, punchy, in-your-face sound that so many engineers and producers look for in a great FET-based compressor/limiter.

RATIO SELECTION

The control and operation of the 76F deviates from most 'standard' hardware conventions. The ratio is selected by pressing one of the four ratio buttons: (4:1) (8:1) (12:1) (20:1)

ALL BUTTONS IN

Also known as ABI, 4:1 & 20:1 together will achieve the same effect.

In ABI Mode, bias points all around the circuit change, the attack/release times change and the ratio musically wanders around 12:1 & 20:1 - resulting in saturated, grinding, HARD KNEE, lightning fast transient chomping limiting!

ATTACK "OFF"

By turning the attack knob entirely counter-clockwise, it will click to the "OFF" position. This bypasses the compression component of the 76F and instead runs straight through the circuitry - which includes a very vibey output amplifier. Great for vocal grit, drum room treatment, bass, guitars, and synths!

TAMING PEAKS

Since the threshold is fixed, there is no threshold control. Instead, use the input knob to increase the gain going into the unit until the desired amount of compression is applied.

To dial in the sound, tweak the attack and release knobs to taste. Just remember—they operate backward from the conventional compressor standards.

Turn the knobs to the left for slower times and to the right for faster times.

Drastically changing the attack and release times may cause the amount of compression to change. Use the input gain knob to correct any unwanted changes.

The 76D is a great VOCAL TRACKING TOOL. Using the 76D you can gently shave vocal transients, add some vibe, and really keep the vocal front & center. Use FAST attack time(s), short-ish release and higher ratios.





SPECIFICATIONS

Freq Response:	20Hz-20kHz
Noise:	-80 dB +/-5
Height:	2U
Depth:	9" (229mm)
Width:	19" (48cm)
Weight:	11 lbs
Power:	120/220V
Impedance in/out:	600Ω

CONTROL PARAMETERS

Attack:	20-800 μs
Release:	80-700 ms
Ratios:	4:1 / 8:1 / 12:1 / 20:1 & ABI

All-Discrete Signal Path,
Faithfully Recreated Circuit

Handcrafted in the USA!
Hassle-Free 2 Year Warranty.

ADDITIONAL FEATURES

- Handcrafted in the USA
- 2U 19" Rackmount with Vintage-Styled Faceplate and Period Correct Knobs
- Cinemag® & Custom-Wound Transformers
- Period Correct Push Buttons for "ALL-BUTTONS-IN" Mode
- Attack Knob Turns Compression OFF when Clicked Counter-Clockwise, as Found on the Original Unit
- Lightning-Fast Attack and Release Times to Grab Those Stray Transients & Peaks in an Instant!
- Neutrik® XLR In/Out - Built to Last a Lifetime
- Alpha Potentiometers and Switches
- Proprietary 120 V/240 V Power Transformer



FAQ

COMMON QUESTIONS

Q: Can a pair of 76D's be connected for stereo linking?

A: Not technically - but in most cases, you probably wouldn't like the results. The FET transistors used in the 76D are meticulously matched by hand, allowing for rather tight tolerances between one unit to the next. In other words - run the units in dual-mono and have a great time!

Q: Which revision of the '76 is the best?

A: There is no "one size fits all" answer to this question. They are ALL immensely musical, character-laden compressors. If we had to sum up each revision, it would go something like this:

76A = Aggressive

76D = Punchy

76F = Big



The circuit and components inside your 76D are very special - from a sonic and technical viewpoint. This unique circuit is not without it's few quirks, however!

The VU Meter (and corresponding circuitry) is prone to something called "meter-drift". The longer you use the unit, the more the VU needle may shy away from 0dB (when in GR Mode). This is completely and totally normal!

Let your unit warm-up for 30 minutes. There is a recessed slot screw in between the input and output controls. This is for meter adjustment. Simply rotate it clockwise or counter-clockwise until the needle is at zero (choose GR on the Meter <right side> column of buttons) when idle.



CE EU DECLARATION OF CONFORMITY

PRODUCT MODEL / PRODUCT:

PRODUCT: 76D LIMITING AMPLIFIER
MODEL/TYPE: 76D
SERIAL NOS. 125900 - 130000

MANUFACTURER:

MANUFACTURER: AUDIOSCAPE ENGINEERING CO. LLC
ADDRESS: 1631 S. NOVA ROAD, BUILDING A, DAYTONA BEACH, FL 32119, USA

THIS DECLARATION OF CONFORMITY IS ISSUED UNDER THE SOLE RESPONSIBILITY OF THE MANUFACTURER.



THE OBJECT OF THE DECLARATION DESCRIBED IS IN CONFORMITY WITH THE RELEVANT UNION HARMONISATION LEGISLATION:

73/23/EWG	LOW VOLTAGE DIRECTIVE
89/336/EWG	EMC DIRECTIVE
DIN EN 55103-1&2	ELECTROMAGNETIC COMPATIBILITY OF AUDIO EQUIPMENT
2011/65/EU	THE RESTRICTION OF HAZARDOUS SUBSTANCES DIRECTIVE

THIS DECLARATION BECOMES INVALID BY MODIFICATION ON THE DEVICE WITHOUT APPROVAL.

THE TECHNICAL FILE IS AVAILABLE FROM THE MANUFACTURER AT THE ADDRESS ABOVE.

SIGNED FOR AND ON BEHALF: AUDIOSCAPE ENGINEERING CO. LLC

PLACE OF ISSUE: DAYTONA BEACH, FL, USA

DATE OF ISSUE: NOVEMBER 1ST, 2023

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