

**76A LIMITER**

# THE 76A USER MANUAL

AUDIOSCAPE  
ENGINEERING CO.



POWERED BY  
**SONIC TRUTH**

MADE IN THE U.S.A.

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

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



# TABLE OF CONTENTS

A word from the Audioscape family.....	1
Important Safety Instructions.....	2
Front Panel.....	3
Rear Panel.....	4
Features.....	5
The Tech Stuff.....	6
Troubleshooting.....	7

PAGE





**A WORD FROM THE AUDIOSCAPE FAMILY.**

**Thank you for purchasing the 76A from  
AudioScape Engineering!**

**Inspired by the UREI 1176 FET Compressor from the 1960's, the 76A brings program material to life with a pleasant grit; while achieving the lightning-fast compression times that make this circuit so famous. Simply put, there is NO SETTING that sounds bad!**

**Part of the magic in the 76A, which makes it ideal for vocal recording, is how it shatters and disperses the transients into slight harmonic distortion in the 4Khz and higher range making it sparkle, especially in the 12:1 ratio setting. We have preserved this tone, albeit with a lot less noise.**



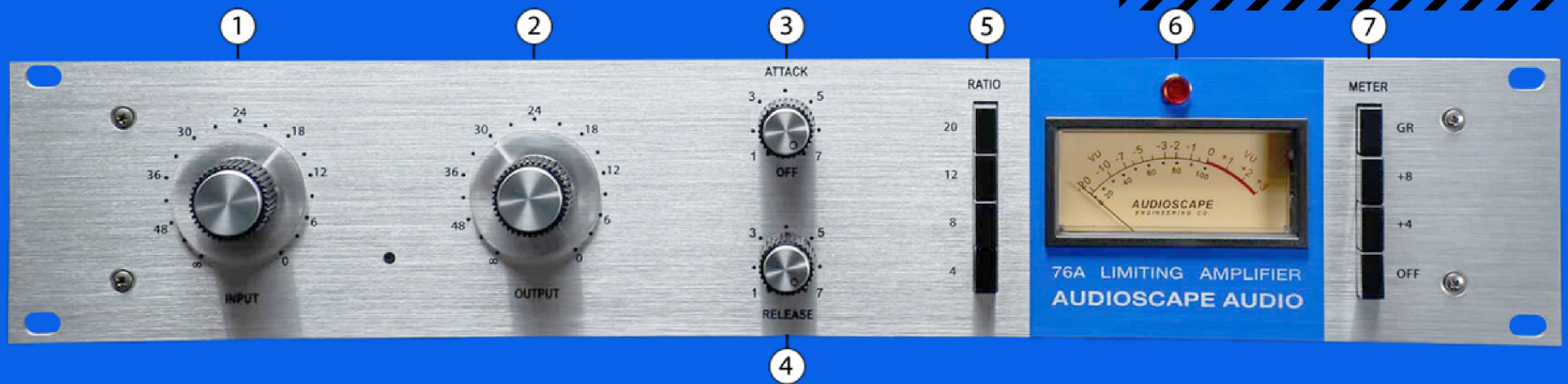
**Let's check it out!**

# 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 as well as the threshold. Higher settings result in increased more compression

**(2) Output** - Sets the output level. The Output control can be used to make up any gain lost due to gain reduction.

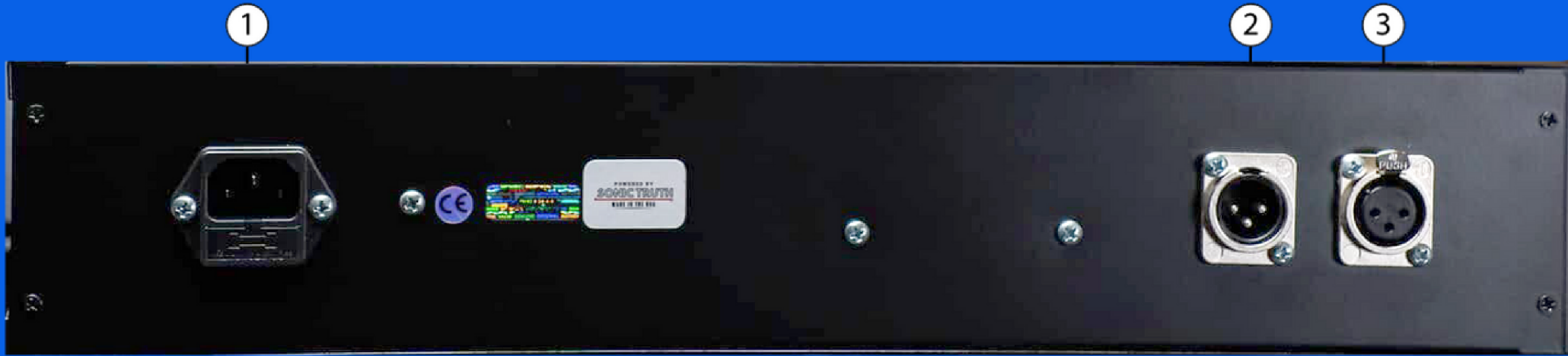
**(3) Attack** - Sets the attack speed. From slowest (1) to fastest (7); (3) is considered the starting point and where most 76s sit 99% of the time. To bypass the unit, set to the 'off' position. You still will pass audio through the rest of the circuitry which can add the tone!

**(4) Release** - Sets the recovery back to unity gain after compression. Slowest (1) to fastest (7); (5) is considered the most common setting as it helps you 'ride the waves' of peaks in the program material.

**(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.

**(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.



**(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. Note that the 76A has no dedicated on-off Power button; instead, depressing the Meter OFF button ( see #7 on the previous page) has the effect of powering the unit off. Never substitute different fuses other than those specified here!

**(2) XLR OUTPUT** - A balanced XLR connector carrying the line-level output signal of the 76A. 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 & TECH SPECS



## FEATURES

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

The 76A 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

Sets the Input level for more compression and coloration



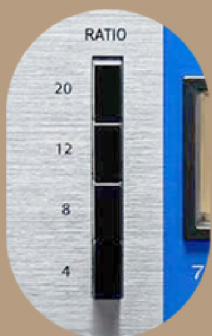
### OUTPUT

Control the overall output of the compressed signal



### METERING

The VU Meter shows Gain Reduction or Output Level (+4 dBm or +8 dBm Line Level Reference)



### RATIO

Sets amount of compression applied to a signal exceeding the threshold



### ATTACK

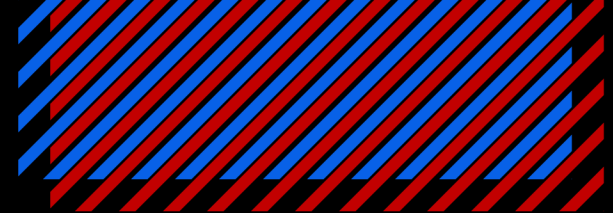
Sets the speed at which compression engages after a transient. 1 is slowest, 7 is fastest



### RELEASE

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

## Application Notes



### PUSH THE INPUT!

The 76F 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 76F is a great VOCAL TRACKING TOOL. Using the 76F 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:	20 Hz-20 kHz
Noise:	-80 dB +/-5
Height:	2U
Depth:	9" (229mm)
Width:	19" (48cm)
Weight:	11 lbs
Power:	120/220V
Impedance in/out:	600 Ohm

**CONTROLS**

Attack:	20-800 $\mu$ s
Release:	80-700 ms
Ratios:	4:1 / 8:1 / 12:1 / 20:1 & ABI

Completely Discrete Signal Path  
Original, Vintage Style VU Meter,  
Hassle-Free 2 Year Warranty.

Handcrafted in the USA!

**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 76F'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 76F 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**

■



76A LIMITING AMPLIFIER  
AUDIOSCOPE AUDIO

The circuit and components inside your 76A 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: 76A LIMITING AMPLIFIER

MODEL/TYPE: 76A

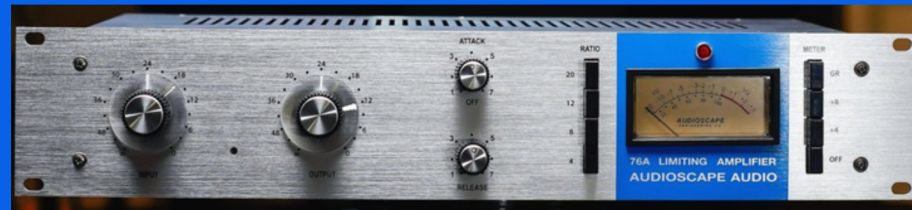
SERIAL NOS. 125700 - 130000

## MANUFACTURER:

MANUFACTURER: AUDIOSCAPE ENGINEERING CO. LLC

ADDRESS: 1631 S. NOVA ROAD, BUILDING A, DAYTONA BEACH, FL 32119, USA

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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

NAME: CHRIS YETTER

POSITION: OWNER

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