

2 CHANNEL COMPRESSOR

MODEL **SR22**

User Manual

INTRODUCTION

Thank you for choosing this API Select SR22 Compressor. The SR22 is a dual channel compressor featuring two channels of API's patented award winning compressor circuit in a rack mount unit with internal power supply. Each channel includes the patented 'THRUST' switch to protect the sensitive high frequency content of the audio signal even under the most vigorous of compression ratios.

This is the same compressor circuit originally designed into all ATI Paragon mixing consoles. Audio Toys, Inc. (ATI) was founded in 1988 to manufacture audio equipment for live sound reinforcement use. The most revered product was the API Paragon P40 and later, its successor, the Paragon II mixing console. Paragons could be found on many of the top tours of the past 20 years. One of the many distinctive features of the Paragon was the inclusion of on-board dynamics processing - a gate and a compressor, both of which were the favorites of many of the top live engineers on the road. The compressor circuit from the Paragon is faithfully replicated in the API SR22.

ATI was able to aquire API in 1999. Today, the engineering approach and manufacturing processes of ATI have been incorporated into the company which has become API.

The perfect companion to your SR24 EQ, the SR22 compressor provides comprehensive easy-to-use control of the audio signal with custom VU metering of both output and gain reduction. While there are no Attack or Release controls, the SR22 uses an automatic timing circuit, which automatically varies the attack and release characteristics in response to the audio signal passing through the unit. This results in very pleasing audio compression without the potential clicks and pops of either hard-edged attack or super-fast release times.The two channels can even be linked for use as a stereo compressor with true RMS power summing of the left and right signals.

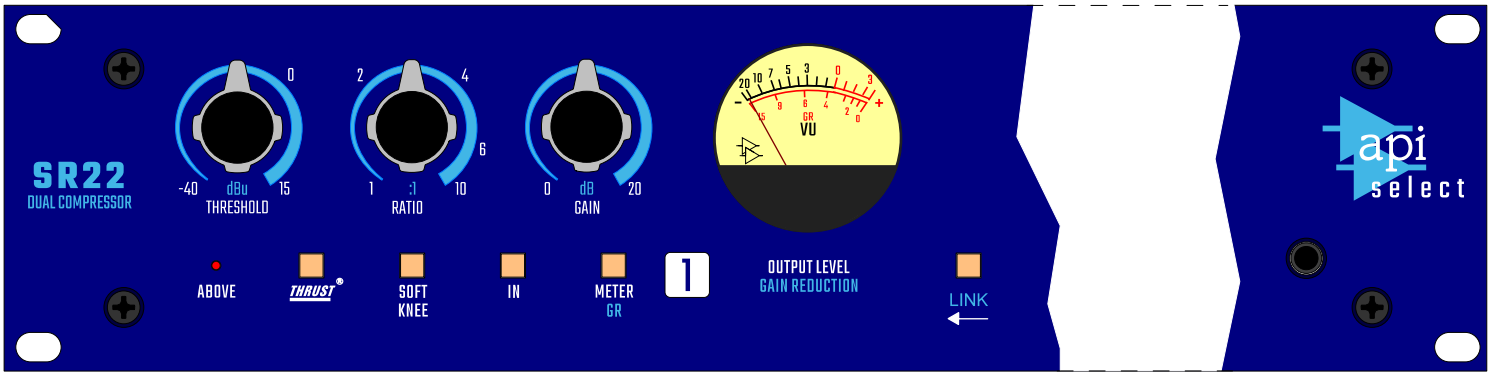
LAYOUT

The API Select SR22 contains two identical channels of compression in a single chassis, sharing only a common ON/OFF switch.

Each channel features switches for the patented THRUST circuit, hard or soft knee, and bypass. Compressor controls are set via continuously variable potentiometers for threshold, compression ratio, and output makeup gain. The custom analog VU meter can be switched between monitoring output levels and gain reduction, with an additional LED to indicate when the input signal is above the set threshold level.

Rear panel connections include both balanced XLR connectors as well as balanced 1/4" jacks for both input and output.

FRONT PANEL CONTROLS



(1 channel shown)

POWER SWITCH

The front panel power switch turns power to the SR22 on and off.

THRESHOLD

The Threshold control sets the signal level above which compression will occur and can be adjusted from -40dBu to +15dBu.

ABOVE LED

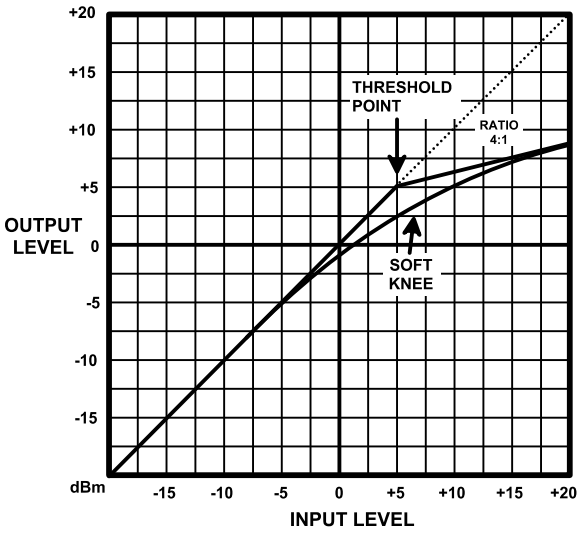
LED will light when the input signal is above the set threshold level. Note that LED will light regardless of the state of the IN switch.

RATIO

This control sets the compressor ratio, which is variable from 1:1 to 10:1.

SOFT / HARD KNEE

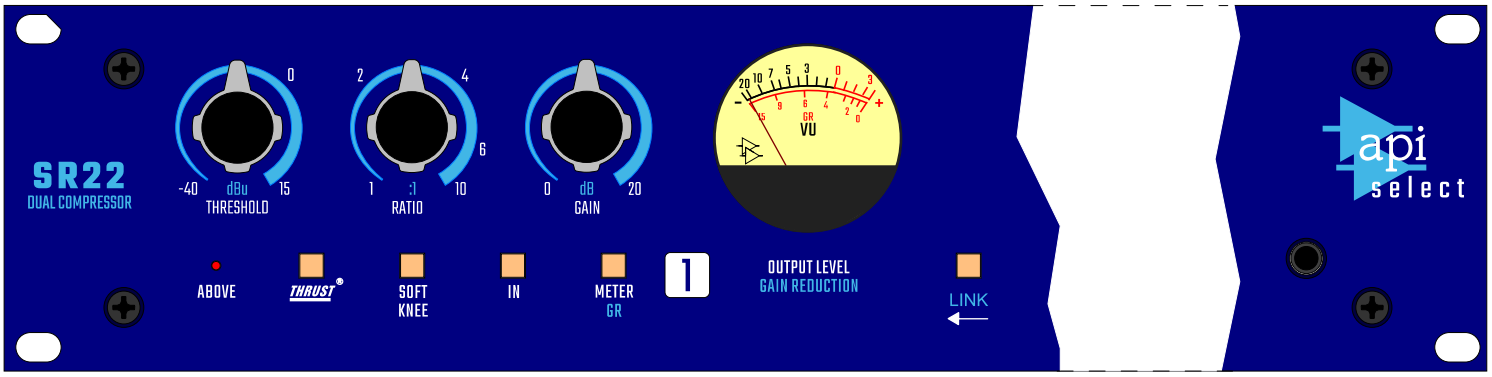
When in the up "Soft" setting, compressor threshold knee is "rounded" (see graph).



THRUST

When the patented THRUST circuit is engaged, a filter is placed in front of the RMS detector. The result is preserved punchy bottom end while still compressing the overall signal.

FRONT PANEL CONTROLS - continued



(1 channel shown)

GAIN

This control adds a variable 0dB to +20dB of make-up gain to compensate for compressor loss.

VU METER

The custom backlit analog meter shows either output VU level or gain reduction in dB. Note that the meter will always show output and gain reduction for the compressor controls in circuit.

OUTPUT / GAIN REDUCTION

This switch allows you to change each channel meter from output level to gain reduction. This switch is NOT linked as part of link mode, so you can monitor each channel how you would like.

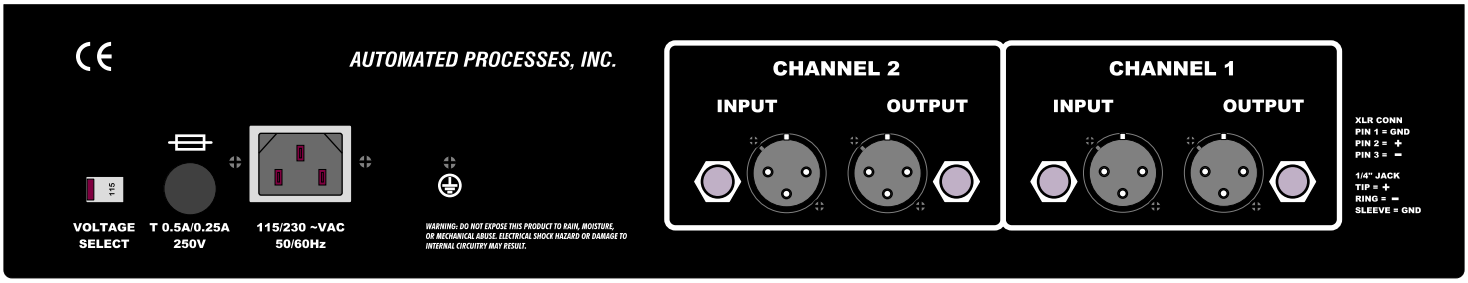
IN / BYPASS

When in the activated position, the channel is effected by the compressor controls. The bypass is a hard relay bypass. If the unit loses power, it will default to this hard relay bypass. This switch is NOT linked as part of the link mode, so you can still switch in and out each channel independently.

LINK

In link mode, *the channel A controls for threshold, ratio, gain, THRUST, and knee control <u>both</u> channels*. The audio signal from both channels are combined in true RMS power summing to create the compression control signal. Then the resulting compression is applied to both channels evenly for proper balance.

REAR PANEL



INPUT CONNECTORS

The inputs to the SR22 can be either the 3 pin XLR-type balanced connector or the 1/4" balanced (tip, ring, sleeve) jack. Note that if you were to connect to both connectors, the signal from the 1/4" jack takes priority. The input XLR connector is wired pin 2 hot (or +).

OUTPUT CONNECTORS

The outputs of the SR22 can be taken from either the 3 pin XLR-type connector, or via the 1/4" balanced TRS (tip, ring, sleeve) connector on the rear panel. Like the input, the output XLR connector is wired pin 2 hot (or +), and the 1/4" TRS connector is wired tip hot (or +). These two connectors are wired in parallel, so output audio will appear on both connectors.

AC MAINS CONNECTOR

The mains AC connector is the standard IEC-type 3 pin connector. The ground of this AC connector is permanently internally connected to the chassis of the SR22 for safety. ***Be sure the Voltage Select switch is in the correct position for your country and the appropriate value fuse is in the holder before applying AC voltage to the SR22.***

AC FUSE HOLDER

When set to the 115V position use a 500mA GMA fuse with Slo-Blo characteristics. At the 230V setting use a 250mA Slo-Blo fuse. ***It is important to change the fuse when changing the supply voltage.***

AC VOLTAGE SELECT SLIDING SWITCH

For line voltages from 100V to 120V, set the switch to 115V. The 230V position is good for all line voltages from 200-240 Volts.

Technical Specifications - SR22

Inputs: Balanced XLR (pin 2 hot) and 1/4" jack (wired tip hot) (1/4" normalled priority)

Outputs: Balanced XLR (pin 2 hot) and 1/4" (wired tip hot) parallel jacks

Input Impedance: 15KOhms Balanced
Bandwidth: +/- 0.5db, 20Hz - 50kHz
THD+N @ 1kHz, +4dBu: <0.005%
Maximum Level: +19dBu
Signal-to-Noise Ratio: -88dBu (comp in), -92dBu (bypass), -106dB
Crosstalk: <84dB @ 20kHz
Stereo Link: True RMS Power Summing
Meter: -20 to +3 VU Output Level, 0 to -15 dB Gain Reduction, switchable

Compressor Controls:
Threshold Range: -40dBu to +15dBu
Ratio Range: 1:1 to 10:1
Makeup Gain Range: 0dB to +20dB
Hard or Soft Knee switchable
Flat or Thrust side chain filter switchable
Attach Time: Program and Control Adaptive, 10mSec to 40mSec
Release Time: Program and Control Adaptive, 30mSec to 400mSec

Power Consumption: 12 Watts

Dimensions: 2U EIA 19" Rack
- Height: 3.5 Inches
- Width: 19 Inches
- Depth: 10 Inches

Weight: 12 lbs

(Specifications subject to change without notice)

API Limited Warranty and Service Information

a) **Warranty Information:** API products carry a one year factory service and five year parts warranty from date of purchase. API (Automated Processes, Incorporated) does not cover claims for damage due to alteration and/or abuse. This warranty is limited to failures during normal use, which are due to defects in material or workmanship. If any defects are found in the materials or workmanship, or if the product fails to function properly during the applicable warranty period, API, at its option, will repair or replace the product.

b) **PLEASE NOTE:**The design or quality of any non-authorized third party service or vendor is beyond the control of API. Therefore, use of **NON-API VPR Alliance modules in any API product including consoles** may **VOID this warranty.** Also, service or modification of any API unit except by an authorized API representative may **VOID this warranty.**

c) API reserves the right to inspect any products that may be the subject of any warranty claims before repair or replacement is carried out. Final determination of warranty coverage lies solely with API.

d) This warranty is extended to the original purchaser and to anyone who may subsequently purchase this product within the applicable warranty period. Proof of purchase may be required.

e) **For questions regarding operation, interfacing or service of your API product, please contact your API dealer from whom you purchased the unit. Many times, your authorized API dealer is the fastest and most cost-effective way to maintain and service your product.**

f) The below steps are the best way to initiate the repair process or to submit a parts order request:

Repair procedure:

1. Fill out a Return Authorization(RA) form at service.apiaudio.com.
2. Wait to receive an e-mail from API Audio with an RA#.
3. Use the API original box to package the unit. Write the RA# large and legibly on the box (if the RA# is not clearly visible on the box, the unit may be rejected by our receiving department)
4. Include copy of the RA form with the unit.
5. Ship the product **freight prepaid** to:

API SERVICE DEPARTMENT
8301 Patuxent Range Road Ste A1
Jessup, MD 20794

Parts Order procedure:

1. Fill out online PO form (for parts and parts numbers not listed online please fill out PO form with your name, e-mail, contact phone and shipping address and describe the part you need).
2. Submit online PO form.
3. API will e-mail you back with part numbers and procedure how to order/pay.

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