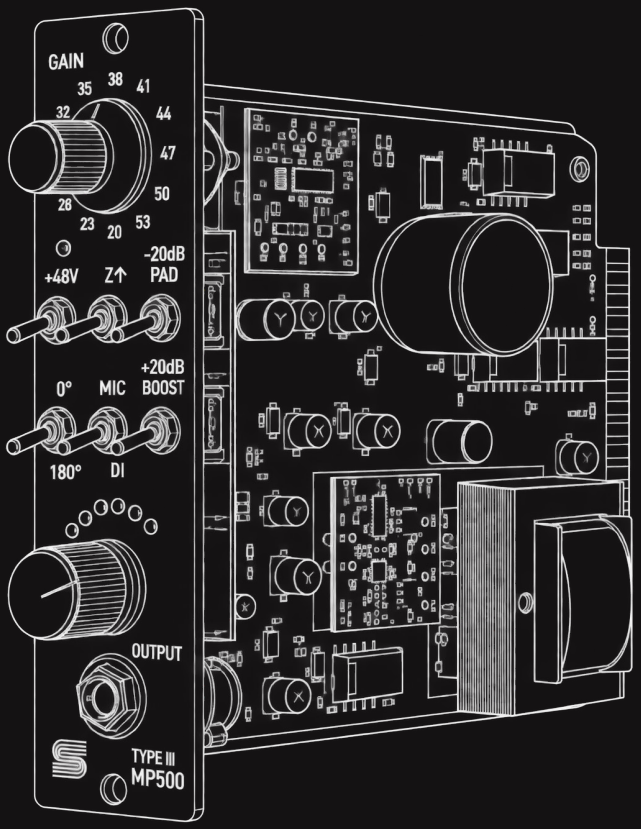
TYPE III MP500

Operator's Manual



SOVIET AMERICAN AUDIO SYSTEMS

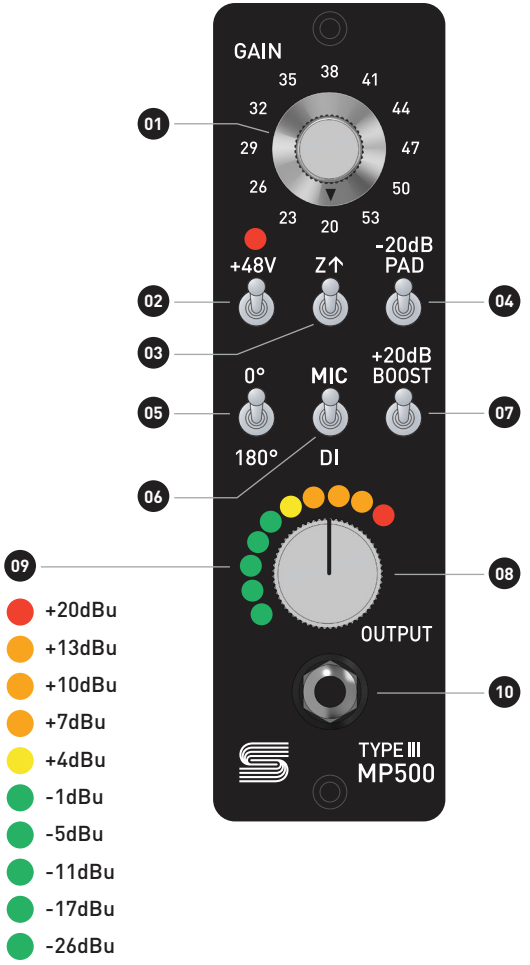

GAIN
35
38
41
44
47
50
53
20
23
+48V
Z↑
-20dB
PAD
0°
MIC
+20dB
BOOST
180°
DI
OUTPUT
TYPE III
MP500
SOVIET
AMERICAN
AUDIO
SYSTEMS
TYPE III MP500
DOA60
SOVIET AMERICAN
AUDIO SYSTEMS
+V
GND
-V
Out
V1

FEATURES

- Dual-gain-stage, transformer-balanced 500 Series microphone preamp inspired by the sound of vintage Sphere console preamps
- Newly manufactured Reichenbach 7341 microphone input transformer and 7393 output transformer, made in the same factory using the savvme drawings and materials as those used in vintage Sphere consoles
- Two SAAS designed proprietary DOA60 discrete op amps
- 12-position Grayhill input gain control, adjustable from 20 dB to +53 dB in 3 dB steps
- Continuously variable output level
- Switchable +20 dB output stage boost
- 83dB maximum available gain
- Selectable input impedances of 300Ω or 1.5kΩ
- Passive -20 dB input pad
- 48V phantom power with red status LED
- Polarity reversal
- Dedicated active DI circuit with front-panel 1/4" input
- 10-segment LED output meter
- Relay switching for front panel switch functions to ensure reliability
- API 2520-compatible discrete op amp footprint, swappable for other electrically and mechanically compatible 2520-format modules
- Suitable for microphones, instruments, and line-level processing

TYPE III MP500

Front Panel



FRONT PANEL CONTROLS

01 GAIN

Adjusts the gain of the first amplifier stage in 3 dB steps from 20 dB to +53 dB.

02 48V

Flip up to engage 48V phantom power. The red LED illuminates when phantom power is active. Only use phantom powerv with microphones or devices designed to receive it.

03 Z↑

Selects how the windings of the 7341 microphone input transformer are connected. Down is 300Ω, while up is 1.5kΩ. The 1.5kΩ setting typically reduces input gain by about 6 dB, depending on the microphone's output impedance, while adding a subtle rise (+1dB at 20kHz) in the high frequencies.The exact result will vary with the impedance of the source.

04 -20 dB PAD

Engages a passive -20 dB input pad. Use it for loud sources, when the input is overloaded at the lowest GAIN setting.

05 0°/180°

Reverses signal polarity. Up (0°) is normal polarity, down (180°) is reverse polarity.

06 MIC/DI

Selects the input and its circuitry. Up selects the microphone input, down selects the Direct Input (DI).

07 +20 dB BOOST

Adds 20 dB of gain to the output amplifier, the second gain stage. Use it when additional gain is needed.

08 OUTPUT

Fully variable control over the output stage. Use it to set the final level sent to your recorder.
As a starting point, set the pot to about 3 o'clock for nominal output gain.

09 OUTPUT METERING

10-segment LED metering showing output level. Use it alongside the metering on your recorder or interface when setting gain and monitoring headroom.

10 Direct Input (DI)

Front-panel 1/4" input for connecting an instrument or other high-impedance source to the dedicated active DI circuit. Set the MIC/DI switch to DI to select this input.

OPERATION

The MP500 uses two separate gain stages. The stepped GAIN control sets the amount of input gain and how hard the first DOA60 is driven. The continuously variable OUTPUT control sets the level into the second stage and lets you adjust the final output level independently. The +20 dB BOOST switch adds 20 dB of gain to the output stage. Together these controls let you use the MP500 as a clean, high-headroom preamp, or drive the input stage deliberately for anything from subtle color to aggressive crunch, while keeping the level sent to your recorder under control.

BASIC GAIN STAGING

Select your desired input impedance, the -20 dB PAD and +20 dB BOOST disengaged, and OUTPUT at about 3 o'clock. Increase GAIN while watching both the MP500's output meter and the input meter on your recorder, then use OUTPUT to set the final recording level.

For the cleanest result, use only as much input GAIN as the source requires and keep enough headroom on both the MP500 and the receiving device. For more color, increase GAIN to drive the first amplifier harder, then reduce OUTPUT to keep the level reaching your recorder under control. This can produce anything from subtle density to extreme crunch.

For quiet sources or low-output microphones, increase GAIN first. If you still need more, back GAIN off about six steps (18 dB), engage the +20 dB BOOST, then bring GAIN back up as needed until you reach the desired level. For loud sources, start at the lowest GAIN setting and engage the -20 dB PAD if the input is still overloaded.

INPUT IMPEDANCE

The Z↑ switch changes the electrical load presented to the microphone by changing how the windings on the 7341 microphone input transformer are connected, so the audible result varies by microphone. Neither setting is universally correct, try both on any source when time allows.

300Ω (Z switch down) gives the most available input gain. The 1.5kΩ (Z switch up) position typically reduces gain by about 6 dB while adding a subtle rise in the high frequencies. When comparing settings, try bumping GAIN up two steps (+6 dB) at the same time you engage Z↑, to account for the level drop from the impedance change.

USING THE DI

Connect an instrument to the front-panel 1/4" input and flip MIC/DI down to select the DI circuit. Start with a low GAIN setting, then increase GAIN until you reach the level and character you want. Use OUTPUT to set the final recording level.

For a clean DI sound, keep input gain conservative and leave enough headroom for the instrument's loudest peaks. For more saturation, increase GAIN to drive the input stage and reduce OUTPUT to compensate. Driving the input gain on DI sources can soften or clip transients in a musically useful way, or push further into saturation.

The DI signal passes through both DOA60 gain stages and the Rechenbach output transformer.

PROCESSING LINE-LEVEL SOURCES

The MP500 can also add the character of its transformers and discrete amplifiers to previously recorded signals, including individual tracks, instrument busses, and full mixes.

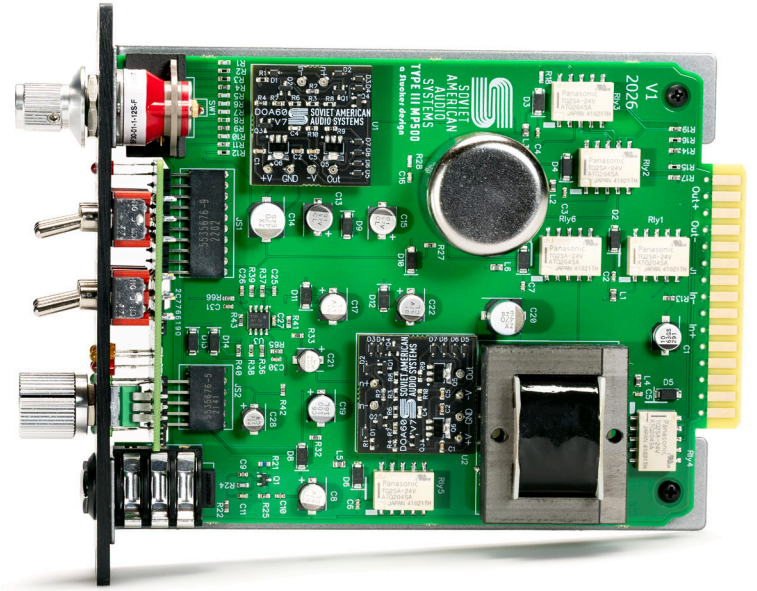
TO PROCESS A LINE-LEVEL SOURCE:

1. Disengage phantom power.
2. Set GAIN to its lowest 20 dB position.
3. Engage the -20 dB PAD.
4. Feed the line-level source into the microphone input.
5. Use OUTPUT to set the returning level.

Engage Z↑ to select the 1.5kΩ and add its subtle high frequency lift. For more obvious saturation, increase GAIN and reduce OUTPUT while carefully monitoring the level returning to your recorder.

TIPS AND TRICKS

- **Clean or driven:** The MP500 has plenty of clean headroom, but the input stage can also be pushed from subtle harmonic saturation into aggressive crunch. Increase GAIN to dial in the amount of drive you want, then back off OUTPUT to set your level to the recorder.
- **Level match your comparisons:** When comparing gain or impedance settings, use OUTPUT to keep the final level consistent, so you're hearing tonal differences and not just a change in volume.
- **Try both impedance settings:** The result depends on the mic and source. The 600 ohm setting is worth trying on kick drums, bass amps, and other loud, low-frequency sources, as well as vocals or ribbon mic sources that could use a subtle high-frequency lift.
- **Drive the DI:** Bass, guitar, keys, drum machines, and other instruments can be run clean or driven into pleasant saturation using the same GAIN and OUTPUT relationship as the mic input.
- **Use it as an analog insert:** With GAIN at 20 dB and the -20 dB PAD engaged, line-level tracks and busses can be run through the MP500 for transformer and discrete-amplifier color.
- **Add the boost when needed:** Use the stepped input gain first, then engage the +20 dB BOOST when a quiet source or low-output mic needs additional amplification.
- **Use it on everything:** The MP500 sounds great on individual tracks, but the real magic becomes evident as multiple sources stack up across a recording. Some vintage-style colored preamps can introduce muddiness or unwanted harmonic buildup as tracks pile up, but the MP500 stacks beautifully, maintaining clarity, depth, and character. Don't feel like you have to save it for one featured track - use it on everything.


SOVIET AMERICAN AUDIO SYSTEMS
TYPE III MP500
a theater design
V1
2026
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DOA600
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