7-Series MONO Amplifier. Clean industrial design.



Micro-Precision by Thomas Hoffmann

Technical features.

1. Internal „Dual Board Design“. Splitting the power supply from the analog amplifier board to prevent radiation from power supply on signalpath. Very short and topology symmetrical signal path to prevent loss of detail.

2. Power supply input voltage from 9V to 16V DC. Unregulated power supply type to prevent modulation by regulation.

3. 12 V stepup converter to rail voltage from : +/-30V up to +/-40V (depending on input voltage / battery). Same voltage for all stages, input, drivers and final transistors.

4. High grade, long lasting 105°C caps in all supply circuits. „Mundorf M-Lythic®“ Low ESR Power Capacitors 125°C on rail / main power storage.

5. 20.000 Ohm impedance input, low capacitance. DIP switch selector for input level with 1% tolerance metal resistor divider. „Nichicon Muse NP®“ capacitors in signal path. No potentiometer in signalpath.

6. Total discrete (no IC), double differential amplifier in double cascode configuration with current source mirror, for high input-output isolation. High impedance input and output, high bandwidth up to 150.000 Hz @ -3dB.

7. Power stage in triple darlington configuration with Sanken final transistor with very low VCE saturation. Dedicated „Sanken ®“ (JAPAN) drivers transistors.

8. “SilverMica®“ capacitors for feedback and compensations. Long term stable multi-turn trimmer for bias setup.

9. Protections for reverse input voltage, output short circuit and DC voltage on speakeroutput (both through relais), thermal shut off @ 85°C (analog sensor).

10. 4 mm. Laboratory grade banana terminals for perfect speaker connection.

11. PCB wide copper tracks thickness 100 micron, gold plated to lower internal resistance.

Clean industrial design.

In audiosystem / signalchain the correct and precise levelmatching is important. In modern systems the signalsource is a digital source (DSP) with a precise outputlevel. The connected amplifier input should be same precise as source output.

Potentiometers have no exact level setting position and also on the long term instable because of temperature, vibration and aging. Potentiometer material & construction is almost not good for signal transportation.

Our solution is the „4 digit multiswitch“ witch allow 16 different configuration on input sensivity. High precision, long term stable and no problem in signal path. Set the input switch to the output voltage of CD/ DSP/PREAMP regarding the sheet below. The level tolerance between S7-Mono amplifiers is 0.08 dB only.

Example (blue) :

Switch 1&2 up, switch 3&4 down = 1100 = 3.9V input for full output.

	Switch 1	Switch 2	Switch 3	Switch 4
Input / Volt				
1	0	0	0	0
1.2.	0	0	0	1
1.4.	0	0	1	0
1.6.	0	0	1	1
1.8.	0	1	0	0
2.0	0	1	0	1
2.2.	0	1	1	0
2.4.	0	1	1	1
3.1.	1	0	0	0
3.3.	1	0	0	1
3.5.	1	0	1	0
3.7.	1	0	1	1
3.9.	1	1	0	0
4.1.	1	1	0	1
4.3.	1	1	1	0
4.5.	1	1	1	1

Aspect of individual design.

Because of the „Industrial Design“ construction it is easy to do some individual changes on the outer appearance. The top plate can be ordered in many differnt color and design patterns. As an example we show a pattern in wood design on this page.

As a standard the amplfier is delivered in „white letters on matte black“.











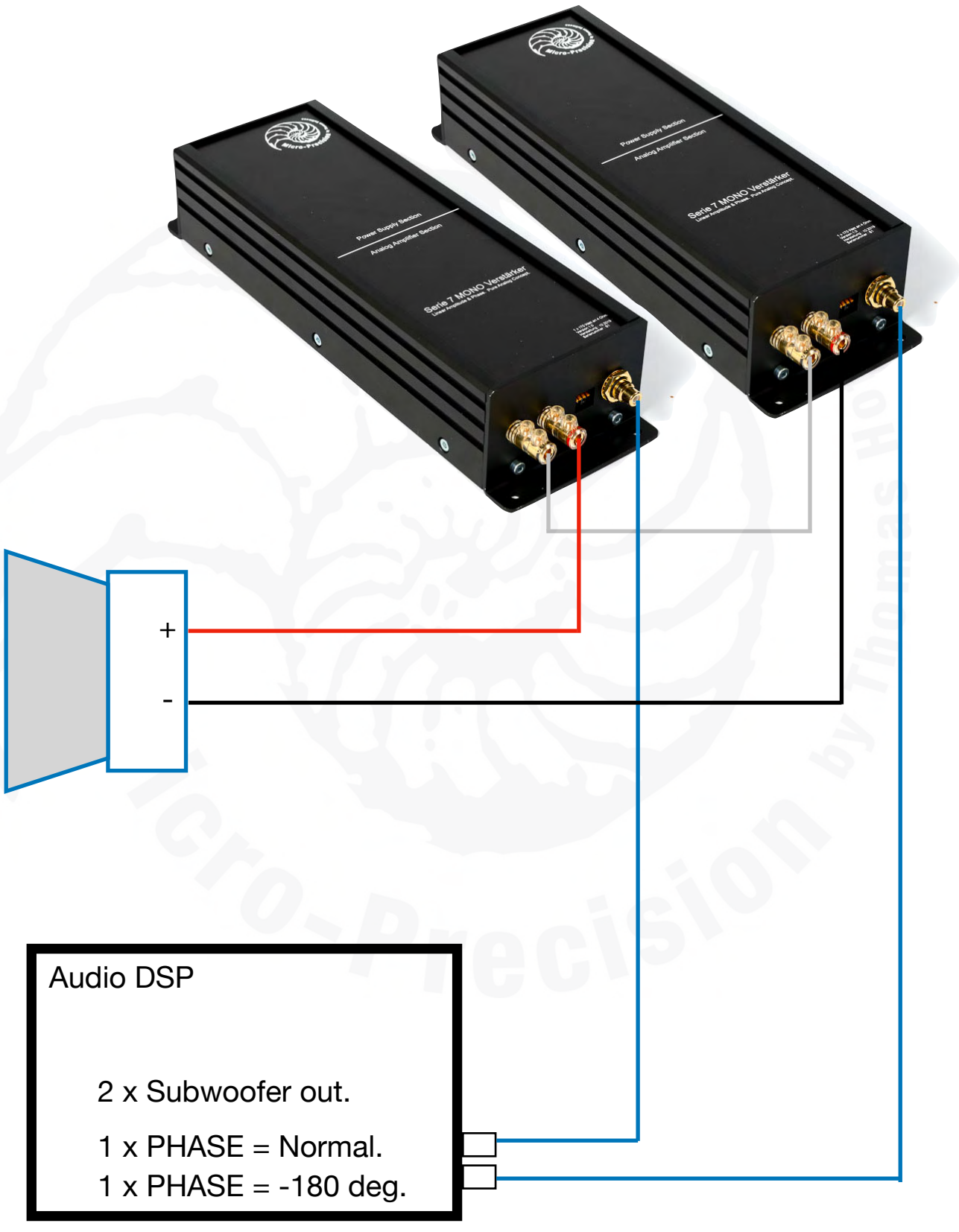


Technical specification.

7-Series MONO Amplifier

Power : 1 X MONO @ 13.8 Volt	
Power Typical @ 4 Ohm 1% THD	150 Watt
Power Typical @ 2 Ohm 1% THD	280 Watt
Power : 2 x MONO in bridged mode	
Power Typical @ 8 Ohm 1% THD	300 Watt
Power Typical @ 4 Ohm 1% THD	500 Watt
Distortion K2 @ 1 Watt	0,001 %
Distortion K3 @ 1 Watt	0,001 %
Powersupply Frequency	43 kHz
Powersupply F.Resident	-83 dB
Frequency Response -1 dB	85.000 Hz
Frequency Response -3 dB	150.000 Hz
Tolerance R/L Channel (2 Amplifiers)	<> 0,08 dB
Signal / Noise Ratio	<> 112 dB
DC Offset on speaker output.	<> 1mV
Remote current.	3,00 mA
Idle current.	1,2 A
Stand by - No remote.	0,20 uA
Remote delay switch on	2,0 sec.
Remote delay shut off	0,1 sec.
Input impedance	39 kOhm
Input capacity	1 nF.
Damping Factor 10 Watt 100 Hz.	2073
Damping Factor 10 Watt 1.000 Hz.	2050
Damping Factor 10 Watt 10.000 Hz.	2035
Turn on voltage min.	11 Volt
Shut off voltage.	7,8 Volt
Shut off thermal	+85 Cels.
Dimension	
Lenght	305/340mm
Wide	100mm
Hight	65mm
Weight	2.5 kg / net / pc.

S7 Mono in bridged mode.



S7 Mono in packaging.

The packaging is made in Germany. Industrial elegance with perfect surface and mechanism. Each set comes with full measurement paperwork (4 pages) from the Micro-Precision laboratory.



