



REQUIREMENTS FOR POWER AMPLIFIER

FOR KLIPPEL QC AND R&D SYSTEM

WHAT KIND OF AMPLIFIER IS REQUIRED?

A conventional AC-coupled audio amplifier is required with the following properties.

RECOMMENDED PROPERTIES

- Professional amplifiers with **balanced input** to achieve best signal to noise ratio
Note: Unbalanced amplifiers may show decreased noise performance and are susceptible to ground loop problems (such as humming at 50/60 Hz).
- No intelligent input protection such as muting or limiting
- No digital signal processing that causes latency (contact KLIPPEL to find out which measurement modules are susceptible to amplifier delays)
- No power saving feature (stand-by at low input levels)
- No DC coupling
- AC high-pass filter with moderate slope (≤ 12 dB/oct.) and sufficiently low cut-off frequency (≤ 10 Hz)
- Class D amplifiers may also be used
Note: The rail voltage that is present at the poles, even if no signal is applied, can be significantly high and could cause short circuits with other equipment (Scanning Vibrometer or speaker stand). This has to be considered for operation.
- XLR connector for the input signal, TRS jacks connectors possible with adapters, unbalanced connectors like RCA (Cinch) are not recommended
- SPEAKON connectors for the speaker output are recommended, wire terminals are also supported
- The amplifier should be capable of providing the required peak values of the electric current and voltage to the loudspeaker without limiting.

FURTHER INFORMATION

- The KLIPPEL software supervises the linearity of the amplifier and may stop measurements when the amplifier starts limiting. However, the power amplifier used should be able to provide the peak values of the electric current and voltage to the loudspeaker without limiting. A stereo amplifier can be operated in a bridged arrangement to increase the maximal output power. The current sensor in the Distortion Analyzer allows measuring the current at a floating potential.
- Different amplifier connection cables are provided either with a SPEAKON or an open wire connection. Please indicate with your order, which type of cable you need. If no specification is made, the open wire cable is provided by default.

AMPLIFIER SELECTION GUIDE

Manuf.	Type	Specification			Features	Recommended for	Application	KLIPPEL Art. #
		Output Power @ 20-20kHz / 0.1% THD		Min. Load				
SAMSON	Servo 120A	Stereo / 2 channels 2 x 60W @ 4Ω	Mono / bridged 1 x 120W @ 8Ω	4 Ω 8 Ω bridged	<ul style="list-style-type: none"> • 1 U (rack unit) • passively cooled (no fan) • balanced inputs • cable terminal outputs 	R&D SYSTEM	<ul style="list-style-type: none"> • micro speakers • low power application 	Purchase locally
	Servo 200	Stereo / 2 channels 2 x 100W @ 4Ω (only specified @ 1 kHz)	Mono / bridged 1 x 200W @ 8Ω (only specified @ 1 kHz)	4 Ω 8 Ω bridged	<ul style="list-style-type: none"> • 2 U (rack units) • fan cooled • balanced inputs • cable terminal outputs 	R&D SYSTEM QC SYSTEM	<ul style="list-style-type: none"> • micro speakers • low power application 	Purchase locally
QSC	PLX 1802	Stereo / 2 channels 2 x 525W @ 4Ω	Mono / bridged 1 x 1100W @ 8Ω	2 Ω 4 Ω bridged	<ul style="list-style-type: none"> • 2 U (rack units) • fan cooled • professional amp • balanced inputs • cable terminal and SPEAKON outputs • standard Klippel measurement amp 	R&D SYSTEM QC SYSTEM	from subwoofers to micro speakers	2700-001
	PLX 2502	Stereo / 2 channels 2 x 675W @ 4Ω	Mono / bridged 1 x 1400W @ 8Ω	2 Ω 4 Ω bridged		R&D SYSTEM QC SYSTEM	from subwoofers to tweeters	2700-002
	PLX 3602	Stereo / 2 channels 2 x 1100W @ 4Ω	Mono / bridged 1 x 2600W @ 8Ω	2 Ω 4 Ω bridged		R&D SYSTEM QC SYSTEM		2700-003
	CX 168	8 channels 8 x 130W @ 4Ω	bridged 4 x 260W @ 8Ω	4 Ω 8 Ω bridged	<ul style="list-style-type: none"> • 2 U (rack units) • fan cooled • professional amp • balanced inputs • cable terminal outputs • 8 channels in 1 device 	Power Monitor	from subwoofers to micro speakers	2700-005
CROWN	MA-5000i	Stereo / 2 channels 2 x 2500W @ 4Ω	Mono / bridged 1 x 5000W @ 8Ω	1 Ω 2 Ω bridged	<ul style="list-style-type: none"> • 2 U (rack units) • fan cooled • balanced inputs • cable terminal and SPEAKON outputs • professional amp for high power and low impedance applications 	R&D SYSTEM QC SYSTEM	from subwoofers to tweeters	Purchase locally
	MA-9000i	Stereo / 2 channels 2 x 3500W @ 4Ω	Mono / bridged 1 x 7000W @ 8Ω	1 Ω 2 Ω bridged		R&D SYSTEM QC SYSTEM		Purchase locally
	MA-12000i	Stereo / 2 channels 2 x 4500W @ 4Ω	Mono / bridged 1 x 9000W @ 8Ω	1 Ω 2 Ω bridged		R&D SYSTEM QC SYSTEM		Purchase locally

The listed amplifiers are only recommendations; any amplifier meeting the mentioned requirements may be used.