

## KLIPPEL System Example Sets for Headphone Quality Control

Examples only. Please check components for your application with the specifications or send a request to KLIPPEL.

Effective from April 04, 2023. Currency: EURO. All prices net, EXW (tax, duty, transportation, support extra).

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Set for Passive Headphone		
Hardware	Klippel Analyzer 3 (ALSX) - including internal amplifier (Adapter; XLR male - BNC female is part of the RnD System cable set)	8.560 €
Software	QC STANDARD Software	3.990 €
Test fixture	<b>For headphone:</b> GRAS 45CC-2 Headphone Test Fixture	7.760 €
	<i>alternatively</i> <b>For headphone</b> (to provide standardized acoustical load conditions): GRAS 45CC-2 Headphone Test Fixture	7.760 €
	2x GRAS RA0039 Ear Simulator according to IEC 60318-1	4.180 €
	<i>alternatively</i> <b>For earphone and headphone</b> GRAS 45CC-17 GRAS 45CC-17 Headphone Test Fixture with Ear & Cheek Simulator and Pinna, HF	13.460 €
Accessory	Cable Set; Passive Headphone Connection Kit (Cable Set for connecting passive mono or stereo headphones to KA3 measurement devices. KA3 Amp-Card and Speaker-Card required. Incl. 6.3mm TRS male to 3.5mm TRS female adapter, speakON male to speakON male adapter CH1 to CH1&2, 2x speakON female to 6.3mm TRS female adapter cable 0.6m, speakON female to speakON female cable 0.5m)	300 €
optional SW add-on	PNI - Production Noise Immunity	2.780 €
optional QC task	EQA - Equalization + Alignment Standard	810 €
optional Accessory	Ambient noise monitoring microphone (Mic 40PP-10 IEPE Set)	980 €

Set for Digital Headset (USB/Lightning)		
Hardware	Klippel Analyzer 3 (LX) (Adapter; XLR male - BNC female is part of the KA3 LX cable set)	6.190 €
Software	QC STANDARD Software	3.990 €
Software add-on	SYN - External Synchronization (synchronize digital audio)	1.690 €
Test fixture	<b>For in-ear headphone:</b> 2 x GRAS 43AC-S5 Ear Simulator Kit according to IEC 60318-4	12.020 €
	GRAS 44AA Mouth Simulator, according to ITU-T Rec. P51 Set	3.780 €
	<i>alternatively</i> <b>For headphone:</b>	€
	GRAS 45CC-2 Headset Test Fixture Set	7.760 €
	GRAS 44AA Mouth Simulator, according to ITU-T Rec. P51 Set	3.780 €
	<i>alternatively</i> <b>For earphone and headphone</b> GRAS 45CC-17 GRAS 45CC-17 Headphone Test Fixture with Ear & Cheek Simulator and Pinna, HF	13.460 €
	GRAS 44AA Mouth Simulator, according to ITU-T Rec. P51 Set	3.780 €
optional SW add-on	EXD Bluetooth - for assisting Bluetooth pairing	600 €
	PNI - Production Noise Immunity	2.780 €
optional QC-Task	EQA - Equalization + Alignment Standard	810 €
optional Accessory	Ambient noise monitoring microphone (Mic 40PP-10 IEPE Set)	980 €
	USB to Lightning adaptor (3rd party, e.g. Anker USB-A to Lightning Audio Adaptor)	buy local

<b>Set for Bluetooth Headphone with Mic &amp; ANC Test</b>		
Hardware	Klippel Analyzer 3 (LX) <small>(Adapter; XLR male - BNC female is part of the KA3 LX cable set)</small>	6.190 €
Software	QC STANDARD Software	3.990 €
Test fixture	<b>For earphone:</b> 2 x GRAS 43AC-S5 Ear Simulator Kit according to IEC 60318-4	12.020 €
	<b>For headphone:</b> GRAS 45CC-2 Headphone Test Fixture	7.760 €
	<b>For earphone and headphone:</b> GRAS 45CC-17 GRAS 45CC-17 Headphone Test Fixture with Ear & Cheek Simulator and Pinna, HF	13.460 €
Software add-on	SYN - External Synchronization (synchronize digital audio)	1.690 €
Bluetooth Interface	MegaSig U980 Bluetooth® Converter Set <small>includes EXD Bluetooth - External Devices (Bluetooth pairing and profile control)</small>	1.910 €
Sound source	2 x Genelec 8010A (Compact, Active Two-way Speaker) optional: 2 x VESA Adapter for Genelec Speakers	860 € 320 €
Accessory	Measurement Microphone (Mic 40PP-10 IEPE 1/4" Set)	980 €
optional QC-Task	EQA - Equalization + Alignment Standard	810 €
	PNI - Production Noise Immunity	2.780 €
optional Accessory	Multiplexer XLR-OUT <i>y-adaptors can be used alternativey to Mutiplexer XLR-OUT</i>	1.950 €

<b>Recommendation - pool-based test data statistics &amp; statistical limit setting</b>		
Software add-on	STAT - Statistics	1.510 €

<b>Recommendation - software tool for matching optimal transducer pairs before assembly</b>		
Software add-on	MSP - Match-Speaker-Tool	2.290 €

<b>Basic acoustical test of passive headphones using sound card</b>		
Software	QC Stand-alone software (QC7 or higher)	2.200 €
	SPL - Sound pressure based acoustic testing	1.690 €
	SYN - External Synchronization (synchronize digital audio)	1.690 €
Test fixture	<b>For headphone:</b> GRAS 45CC-2 Headphone Test Fixture	7.760 €
Accessory	External Sound Card BNC-XLR adaptor Adapter; 6,35mm TRS jack male - 3,5mm TRS jack female, for headphones	buy locally