

Manual
US/English
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4 Channel Ultra Low Distortion Sine Generator

ULD4

Manual

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Manufacturer Address
Rexotech GmbH
Rahmkeweg 41
33758 Schloss Holte – Stukenbrock
Germany
info (at) rexotech.com

Free

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1.0 General Inspection

When you get a new ULD4 Super Sine Generator, you are suggested to take the following steps to inspect the instrument.

1.1 Inspect the shipping carton for damage

If there are damages in the packing or foam, keep them until the whole instrument passing the electrical and mechanical test

1.2 Inspect the instrument

In case any mechanical damage or defect, or if the instrument does not operate properly or performance tests, **notify** your **Rexotech** sales Representative:**shop@rexotech.com**

The consigner or carrier shall be liable for the damage to the instrument resulting from shipment. Rexotech would not be responsible for free maintenance/rework or replacement of the unit.

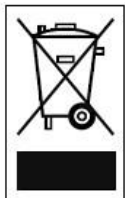
1.1 Symbols In This Manual



Symbol 1:	Attention - refer to manual
Symbol 2:	Danger – High Voltage
Symbol 3:	Protective Ground
Symbol 4:	Attention
Symbol 5:	Stop! Possible damage to the equipment



The CE mark is a registered trademark of the European Community. To meet this mark the instrument has fulfilled the EMV / ESD standards.



This product complies with the WEEE Directive (2002/96/EC) marking equipment. The affixed product label indicates that you must not discard this electrical /electronic product in domestic household waste. To return unwanted products contact your Rexotech Office.



The FCC mark is a registered Trademark of the Federal Communications Commission. This Product complies to the requirements. Own laboratory test.

1.2 Terms

In this Manual:

CAUTION statements identify conditions or practices that could result in damage to the equipment / instrument or other property.

WARNING statements identify conditions or practices that could result in personal injury or loss of life.

As Marked on Equipment

CAUTION indicates a personal injury hazard not immediately accessible as one reads the marking, or a hazard to property including the equipment itself.

DANGER indicates a personal injury hazard immediately accessible as one reads the marking.

POWER SOURCE

This product is intended to operate:

- with an 2.5 mm female 12 Volt / 1 Ampere AC Mains Adapter
- with an at least 12 Volt / 1 Ampere Bench Powersupply
- with 4 or 5 x 9 Volt batteries with at least 200mA at the BAT-IN input connector
- or with symmetrical 36 Volt at the BAT-IN input connector

A quality Mains Adapter / Bench Supply is **essential for safe operation.**

1.3 Safety Notices

Review the following precautions carefully before operating the instrument to avoid any personal injury or damage to the instrument or products connected to it.

To avoid potential hazards, use the instrument in the manner specified in this user's guide.

No serviceable parts inside: The instrument should be serviced only by qualified personnel

Avoid Fire or Personal Injury.

Use Proper Power Supply's as specified in this manual and disconnect it when not in use.

Observe all the Ratings and Symbols on the instrument /terminal.

To avoid fire or shock, observe all the ratings and symbols that are marked on the instrument. Read the manual carefully before making connections to the instrument.

Use an oscilloscope or other proper instrument to get familiar with the instrument operation.

Do not operate your instrument without Covers or Panels.

Do not operate the instrument with suspected failures.

If you suspect there is a damage with this product, have it inspected by qualified personell authorized by Rexotech before further operations.

Provide proper Ventilation

Do not operate in Wet / Damp conditions or in an Explosive Atmosphere.

Keep the Product's Surfaces Clean and Dry.

2.0 Instrument at a Glance



REXOTECH ULD4

Introduction

Rexotech ULD4 Four channel Super Sine Generator adopts the Ultrapure Sine Wave Oscillator introduced by Jim Williams (Linear Technology).

The Rexotech ULD4 Sine Generator is capable of generating high quality ultra-low distortion sine wave signals.

$\leq 0,00006\%$ @ 1kHz , 10kHz

$\leq 0,00009\%$ @ 60 Hz , 20kHz

Hand adjusted and driven by WIMA Caps combined with high efficiency AGC's to meet today's high-end developments.

Four different channel frequencies allowing a good overview of the overall audio system performance.

The ULD4 is perfect for: High quality 24- 32 Bit ADC tests, Op-Amp and Amplifier testing, THD / Power measurements, Instrument verification or just as reference.

The main 600 Ω output voltages can easily be varied from 0,6 Vp-p to 9Vp-p (7Vpp @20kHz) into Hi-Z via the front trim pots.

The ULD4 has a standard 2,5mm DC-IN connector for a standard 12Vdc/1A wall mains adapter and a BAT-IN Connector for (4 or 5) x 9Volt batteries to minimize grounding and distortion.

Rexotech – Das Instrument

2.1 Frontpanel

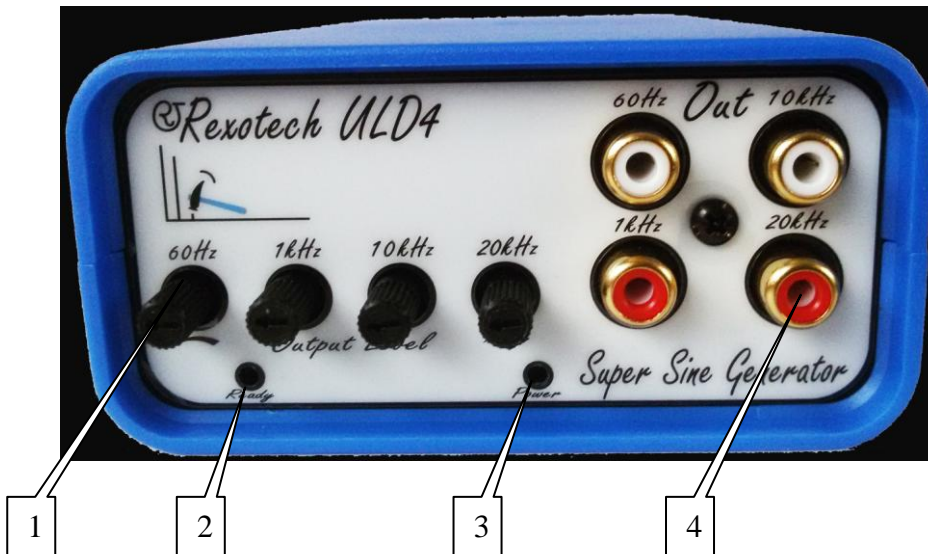


Fig. 1

[1] **Output Level Adjustment.**

The 60 Hz Oscillator requires at least 6 minutes to stabilize the amplitude.

We recommend to set the amplitude a bit higher as needed and then adjusting the output slightly.

When setting the output voltage to 0 volt the AGC circuitry needs some time to recover.

We recommend to adjust the output amplitudes slightly on all channels.

Voltages below 1 Vp-p can be adjusted but have less stability. Please use an attenuator.

[2] **Ready LED**

On startup the led lit in red color for approximate 5 minutes. Disconnect all RCA connectors until the red light disappears and wait 3 minutes. Control the voltage on the outputs before using it.

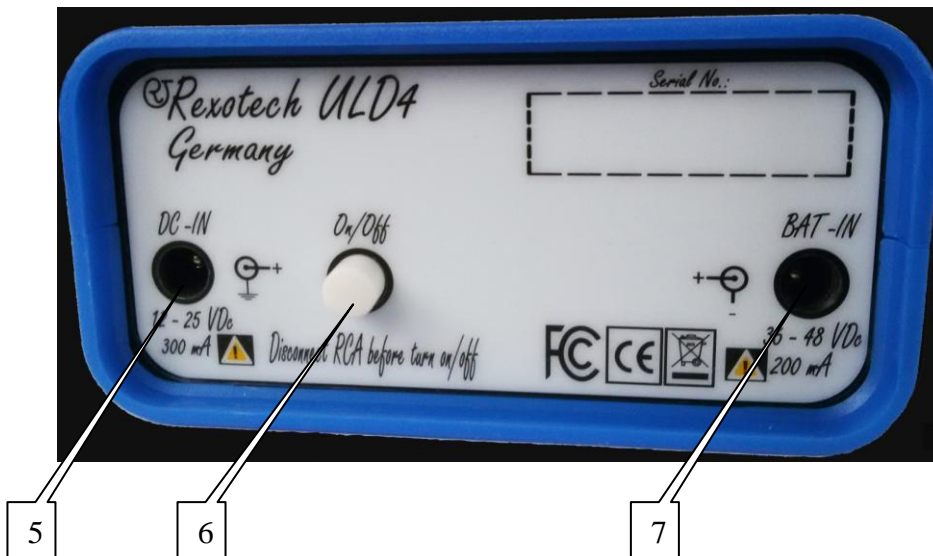
[3] **Green Power LED.** Instrument is on. **WARNING! Disconnect the RCA before Turn ON / Turn OFF the instrument.**

[4] 600 Ω RCA/Chinch Output connector.

WARNING:

Only connect the RCA's when the READY led don't lit. The AGC voltage adjustment circuitry needs some time on startup. This can lead to a high amplitude and DC on startup. We recommend to set the trim pot arrows to 10 o'clock on startup. Don't start the ULD4 with trim pots adjusted to the maximum level.

2.2 Backpanel



- [1] DC-IN : Input for 2,5 mm female Wall Mains Adapter 12 Volt DC/1,0 A
- [2] On/Off: Instrument ON / OFF Switch
- [3] BAT-IN: 2,5 mm female: 36 – 48Vdc /200mA symmetrical Input. The internal board provides the ground reference

Attention:

*The Rexotech ULD4 supports different power supplies.
Use the BAT-IN input connector with batteries or with an dual channel bench supply with 2 x 18 Volt DC in series to get a 36 Volt input voltage.*

EMV/EMC Conformity Declaration

Gemäß ISO/IEC Guide 22 und CEN/CEBELEC EN 45014

Name des Herstellers: Rexotech GmbH

Adresse des Herstellers: Rahmkeweg 41
33758 Schloß Holte- Stukenbrock
Deutschland

Der Hersteller erklärt, dass das Produkt

Name des Produkts: Ultra Low Distortion Sine Generator
Modellnummer: ULD4
Produktoptionen: Diese Erklärung bezieht sich auf alle Produktoptionen des oben genannten Produkts.

den folgenden europäischen Direktiven entspricht:

Das vorliegende Produkt genügt den Anforderungen der Niederspannungsrichtlinie 73/23/EEC sowie der EMC-Richtlinie 89/336/EEC (einschließlich 93/68/EEC) und trägt demgemäß die CE-Kennzeichnung.

den folgenden europäischen Produktnormen entspricht:

EMC	NORM	Kriterien/Einheiten/Prüfstörgrößen
	ESD: EN 61000-4-2:1995+A1:1998+A2:2001	Case: ± 8kV Luftentladung Case /Koppelplatte: ± 4kV Kontaktenladung
	Burst: EN 61000-4-3:2006+A1:2008 EN 61000-4-4:2004	: (5/50ns) Signalleitung : ± 0.5kV : (5/50ns) Netzeingänge: ± 1kV
	Surge: EN 61000-4-5:2006	:Netzeingänge(8/20us), asymmetrisch: ± 2kV :Netzeingänge(8/20us), symmetrisch: ± 1kV
	HF-Einspeisung: 0,15..230MHz EN 61000-4-5:2007	:80% AM, 1kHz, 3V effektiv unmoduliert
	Netzspannungseinbrüche: EN61000-4-11:2004	:Einbrüche:40% Un 70% Un :Unterbrechungen: 0% Un für 0.5 Perioden der Nennfrequenz

Safety

IEC 61010-1:1990+A1:1992+A2:1995 / EN 61010-1:1993+A2:1995

05.08.2015

Datum

Dipl.-Ing.(FH) Andreas Bröckling
CEO

3 Notices

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