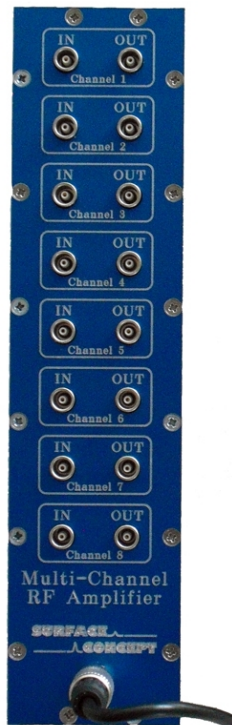


Stand-alone Multichannel RF Amplifier



Manual

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User manual for the Multichannel RF Amplifier.

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2 Introduction

2.1 General Information and Safety Instructions

This manual is intended to assist users in the operation of the Stand-alone Multichannel RF Amplifier. It is divided into 3 chapters.

Surface Concept strongly recommends reading this manual carefully before operating the Stand-alone Multichannel RF Amplifier. Surface Concept declines all responsibility for damages or injuries caused by an improper use of the Module due to negligence on behalf of the User.

2.2 General Overview of the System

The Surface Concept Stand-alone Multichannel RF Amplifier is mounted in a stand-alone 200.7 x 33 x 48mm housing.

The module accepts 2, 4, 6 or 8 analog input pulses (model specific) and produces the corresponding number of amplified analog output pulses on front panel LEMO 00 / SMA connectors. The maximum input pulse amplitude should not exceed ± 4 V. The recommended maximum input pulse amplitude is depending on the model specific amplification factor and can be calculated by:

Max. input amplitude = ± 2 V / amplification factor (see table below)

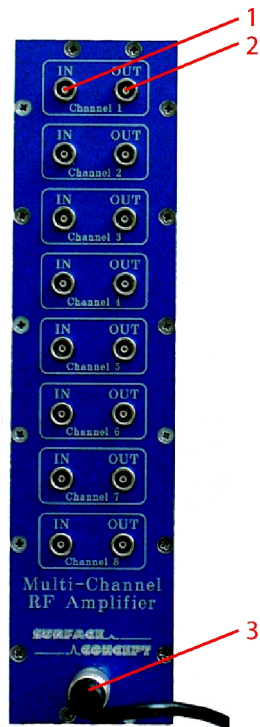
The following Stand-alone Multichannel RF Amplifier layouts are available (typical bandwidths, gains, gain factors and recommended input pulse amplitudes are stated):

bandwidth	typ. gain	typ. gain factor	recom. input ampl.	input/output	max. channel #	inv. / non-inv.
4 GHz	21 dB	11.2	± 179 mV	SMA	4	non-inverting
7 GHz	10.5 dB	3.3	± 606 mV	SMA	8	inverting
3 GHz	32 dB	39.8	± 50 mV	SMA	4	non-inverting
6 GHz	12.5 dB	4.2	± 476 mV	SMA	8	inverting
1 GHz	24 dB	15.8	± 127 mV	LEMO	4	non-inverting
1 GHz	12 dB	4.0	± 500 mV	LEMO	8	inverting
1 GHz	43 dB	141.3	± 14 mV	LEMO	4	non-inverting
1 GHz	21.5 dB	11.9	± 168 mV	LEMO	8	inverting

Please note that the stated gains are typical values. The achieved gains depend on the applied signal frequencies.

3 Technical Specification

3.1 Layout of Front Panel of the Stand-alone Multichannel RF Amplifier



- 1 Input on LEMO 00 type connector
- 2 Output on LEMO 00 type connector
- 3 5 Pin Power Connector (see Figure 2 below)

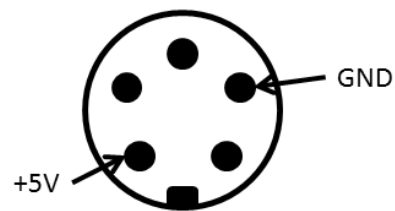


Figure 1: Front Panel of the Stand-alone Multichannel RF Amplifier [8 channel model with LEMO 00 connectors is shown as example]

Figure 2: View of 5 Pin housing connector from outside.

3.2 Power Requirements

The Stand-alone Multichannel RF Amplifier is supplied by a wall power supply (input: 100 – 240V, 50 – 60Hz, 1.0A max) with a maximum output of 15W (+5V, 3A).



EC Declaration of Conformity

Manufacturer **Surface Concept GmbH**
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Product Stand-alone Multichannel RF Amplifier

The above named products comply with the following European directive:

89/336/EEC Electromagnetic Compability Directive, amended by 91/263/ EEC
and 92/31/ EEC and 93/68/EEC
73/23/EEC Low Voltage Equipment Directive, amended by 93/68/EEC

The compliance of the above named product to which this declaration relates is in conformity with the following standards or other normative documents where relevant:

EN 61000-6-2:2005+AC:2005 Electromagnetic compatibility (EMC):
Generic standards - Immunity for industrial environments
EN 61000-6-4:2007+A1:2011 Electromagnetic compatibility (EMC):
Generic standards - Emission standard for industrial environments
EN 61010-1: 2010 Safety Requirements for Electrical Equipment for
Measurement, Control and Laboratory Use

For and on behalf of **Surface Concept GmbH**

Mainz,.....01.04.2013..... Legal signature.....
(Date) (Dr. Andreas Oelsner)

This declaration does not represent a commitment to features or capabilities of the instrument. The safety notes and regulations given in the product related documentation must be observed at all times.