

16-fold Frequency Divider

ADD 1.7



Manual

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User manual for the 16-fold Frequency Divider
ADD 1.7
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2 Introduction

2.1 General Information

This manual is intended to assist users in the operation of the Frequency Divider ADD 1.7. It is divided into 4 chapters.

2.2 General Overview of the System

The ADD 1.7 is a 16-fold frequency divider for digital signals with a LVTTTL signal level. The package of the ADD 1.7 includes the ADD 1.7 and an AC-DC adapter with a special 5 pin plug for power supply.

2.3 Safety Instructions

Please read this manual carefully before performing any electrical or electronic operations and strictly follow the safety rules given within this manual. 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.

The following symbols appear throughout the manual:



The “note symbol” marks text passages, which contain important information/ hints about the operation of the detector. Follow these information to ensure a proper functioning of the detector.



The “caution symbol” marks warnings, which are given to prevent an accidentally damaging of the detector or the readout system. Do **NOT** ignore these warnings and follow them strictly. Otherwise no guarantee is given for arose damages.

3 Device Layout

3.1 Initial Inspection

Visual inspection of the device is required to ensure that no damage has occurred during shipping. Should there be any signs of damage, please contact SURFACE CONCEPT immediately. Please check the delivery according to the packing list (see Table 1) for completeness.

1. 16-fold frequency divider ADD 1.7
2. Wall power supply

Table 1: Packing list for the ADD 1.7

3.2 Connector Layout

The connector layout of the ADD 1.7 is shown in Figure 1.



1. BNC Socket for Signal Input (LVTTTL).
2. Switch for switching the frequency dividing factor between 1 (OFF) and 16 (ON).
3. BNC Sockets for 3-fold FAN OUT of Signal Output (LVTTTL).
4. 5 pin socket for power supply.

Figure 1: Connector Layout of ADD 1.7

3.3 Schematic Layout and Device Functioning

The 16-fold frequency divider has a BNC connector for the input signal which must be a low voltage (LV)TTL, but is TTL tolerant. The frequency of the input signal is divided by a frequency dividing factor and is given out on three BNC connectors which are connected via a 3-fold FAN OUT. The output signal is a LVTTTL signal again.

The frequency dividing factor can be switched between 1 (OFF) and 16 (ON). The schematic layout of the ADD 1.7 is given below in Figure 2.

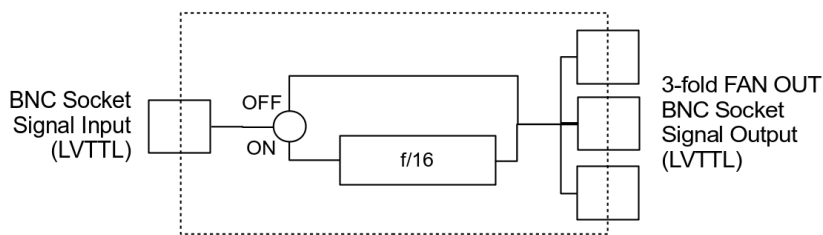


Figure 2: Schematic layout of ADD 1.7

3.4 Power Supply

The operation power for the ADD 1.7 is +5V. It is provided via a wall power supply. Connect the wall power supply to the round 5pin socket named "power" of the ADD 1.7. The pin configuration of the 5pin socket is shown below in Figure 3.



Figure 3: Pin configuration of 5pin power socket of ADD 1.7.

4 Technical Data

Layout and Performance:

No. of Input Channels:	1
Signal Level for Input Signal:	Low voltage TTL (but TTL tolerant)
Connector Type for Input Signal:	BNC
No. of Output Channels:	3 (as 3-fold FAN OUT)
Signal Level of Output Signal:	Low voltage TTL
Connector Type of Output Signal:	BNC
Frequency Dividing Factor (switchable):	1 or 16
Input Frequency (max.):	100 MHz/ 15MHz (with divider switched ON/ OFF)

Line Input:

Electrical Input (LINE):	+5 V (provided by a wall power supply)
Power:	3 Watt (max.)