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SINCE 1975

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INSTRUCTIONS

MODEL AVX-FD1-PS-NWU1A-NWU2-EP-IP

10 MHz FREQUENCY DIVIDER

SERIAL NUMBER: _____

WARRANTY

Avtech Electrosystems Ltd. warrants products of its manufacture to be free from defects in material and workmanship under conditions of normal use. If, within one year after delivery to the original owner, and after prepaid return by the original owner, this Avtech product is found to be defective, Avtech shall at its option repair or replace said defective item. This warranty does not apply to units which have been dissembled, modified or subjected to conditions exceeding the applicable specifications or ratings. This warranty is the extent of the obligation assumed by Avtech with respect to this product and no other warranty or guarantee is either expressed or implied.

TECHNICAL SUPPORT

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TABLE OF CONTENTS

INTRODUCTION

The AVX-FD1-PS-NWU1A-NWU2-EP-IP will divide the frequency of an input trigger signal by a factor of 1 to 999, at input frequencies of up to 10 MHz. The pulse width of the output signal can be varied between 10 ns and 10 ms. Complementary logic outputs (i.e. inverted and non-inverted) are provided.

The instrument can be triggered from a TTL-level pulse train. An internal limiting-amplifier is also provided so that the instrument can also be triggered by a 0.1 to 5V peak-to-peak sine wave.

INSTALLATION

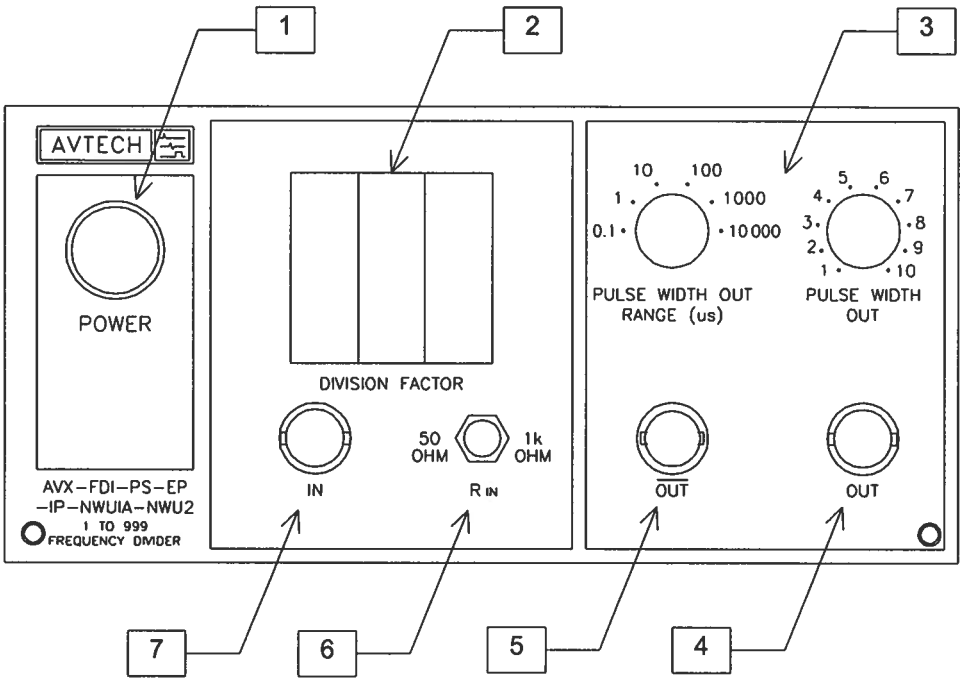
VISUAL CHECK

After unpacking the instrument, examine to ensure that it has not been damaged in shipment. Visually inspect all connectors, knobs and the handles. Confirm that a power cord and instrumentation manual are with the instrument. (If the instrument has been damaged, file a claim immediately with the company that transported the instrument).

PLUGGING IN THE INSTRUMENT

Examine the rear of the instrument. There will be a male power receptacle, a fuse holder and the edge of the power selector card visible. Confirm that the power selector is in the correct orientation - it should be marked either 120 or 240, indicating whether it expects 120V AC or 240V AC. If it is not set for the proper voltage, remove the fuse and then grasp the card with a pair of pliers and remove it. Rotate horizontally through 180 degrees. Reinstall the card and the correct fuse. In the 120V setting, a 1/4A slow blow fuse is required. In the 240V setting, a 1/8A slow blow fuse is required.

FRONT PANEL CONTROLS



1) ON-OFF Switch. Applies prime power to all stages.

2) DIVISION FACTOR. The thumbwheel switch sets the division factor (1 to 999).

3) PULSE WIDTH. The three-position switch and one-turn control controls output pulse width as follows:

RANGE 1	0.01 μs to 0.1 μs
RANGE 2	0.1 μs to 1 μs
RANGE 3	1 μs to 10 μs
RANGE 4	10 μs to 100 μs
RANGE 5	100 μs to 1000 μs
RANGE 6	1000 μs to 10000 μs

4) OUT. This BNC output connector provides TTL-level (0 and +3V) pulses to 50 Ohms (or higher).

5) INVERTED OUT. This BNC output connector provides the logical-complement of the main output (i.e. the high and low logic levels are switched.)

6) R_{IN}. When the R_{IN} switch is in the 1 kΩ position, the input is DC-coupled, with an input impedance of 1 kΩ. The input signal at (7) must be TTL (low = 0V, high = 2.8

to 5.0 Volts).

When the R_{IN} switch is in the 50 Ω position, the -IP option is functional. The input is then AC-coupled, with an input impedance of 50 Ω and the input signal may have a peak-to-peak amplitude in the range of 0.1 to 5.0 Volts (pulse or sine wave).

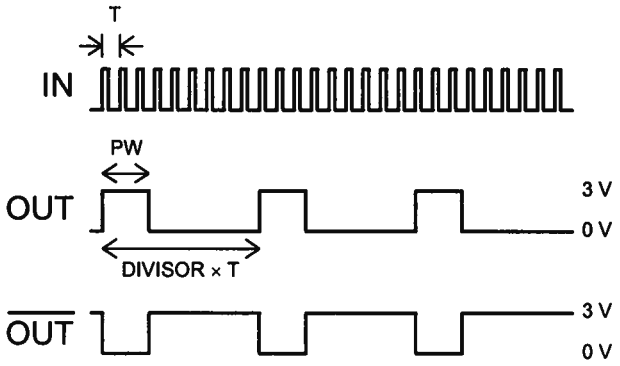
7) IN. This is the input BNC connector. The required input signal depends on the position of the R_{IN} switch.

GENERAL INFORMATION

BASIC CONTROL

The output frequency of the instrument, f_{OUT}, is a fraction of the input frequency, f_{IN}, as given by $f_{OUT} = f_{IN} / N$, where N is the divisor set on the front panel. N can be set between 1 and 999. The divider will operate at frequencies from 0 to 10 MHz.

The pulse width of the output signal is also set by front-panel controls, and can be in the range of 10 ns to 10 ms.



TRIGGER SIGNAL

When the R_{IN} switch is in the 1 kΩ position, the input is DC-coupled, with an input impedance of 1 kΩ. The input signal must be TTL-level (low = 0V, high = 2.8 to 5.0 Volts).

When the R_{IN} switch is in the 50 Ω position, the -IP option is functional. The input is then AC-coupled, with an input impedance of 50 Ω and the input signal may have a peak-to-peak amplitude in the range of 0.1 to 5.0 Volts (pulse or sine wave).

ELECTROMAGNETIC INTERFERENCE

To prevent electromagnetic interference with other equipment, all used outputs should be connected to shielded 50 Ohm loads using shielded 50 Ohm coaxial cables. Unused outputs should be terminated with shielded 50 Ohm BNC terminators or with shielded BNC dust caps, to prevent unintentional electromagnetic radiation. All cords and cables should be less than 3m in length.

May 4/98 Michael did this set in Word