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SINCE 1975

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INSTRUCTIONS

MODEL AV-148-PS-MITB

7.5 TO 15 MHz, 1V SINE WAVE
TO TTL CONVERTER

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 disassembled, 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

Phone: 613-226-5772 or 1-800-265-6681

Fax: 613-226-2802 or 1-800-561-1970

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Manual Reference: Q:\office\instructword\AV-148\AV-148-PS-MITB.doc, created August 21, 2000

INTRODUCTION

The AV-148-PS-MITB will convert a sine-wave input with a frequency of 7.5 to 15 MHz and an amplitude of approximately 1V peak-to-peak into a TTL-level (i.e., 0 and +3V) pulse stream, with a pulse width of 20 ns.

The TTL output may be used to drive other pulse generators, such as the Avtech AVM series.

ORIGINAL QUOTATION

| | | | |
|-----------|-------------------------------------|-------------------|---------------------------|
| Quote No: | <u>9905</u> | Sender's Fax: | <u>613-226-2802</u> |
| File: | <u></u> | Receiver's Fax: | <u>781-981-4129</u> |
| To: | <u>M.I.T.</u> | Receiver's Phone: | <u>781-981-3098</u> |
| Attn: | <u>Farhad Hakimi</u> | Date: | <u>June 2, 2000</u> |
| Subject: | <u>Price and delivery quotation</u> | Number of pages: | <u>2, including cover</u> |

Following our telephone conversation of June 1, 2000, I am pleased to provide a price and delivery quotation for a special purpose Sine to TTL Pulse Converter meeting the following specifications:

| | |
|--------------------------|---|
| Quote Number: | 9905 |
| Model designation: | AV-148-PS-MITB |
| Input Signal Amplitude: | 1 Volts (\pm 1 Volt), Peak to peak (sine wave) |
| Input Signal Frequency: | 7.5 to 15 MHz |
| Output Signal Amplitude: | +3 Volts |
| Output Pulse Width: | 20 ns |
| Propagation Delay: | < 30 ns (est.) |
| Connectors: | BNC |
| Prime Power: | 120/240 V, 50 to 60 Hz |
| Chassis: | As per Model AVM-2-C |
| Price: | \$2,498.00 US, FOB destination. This price includes our standard 5% academic discount. |
| Delivery: | 60 days, after receipt of order. |

Thank you for your interest in our products. Please call or email me if you require any further information.

Regards,

Dr. Walter Chudobiak
Chief Engineer

WC:mf

INSTALLATION

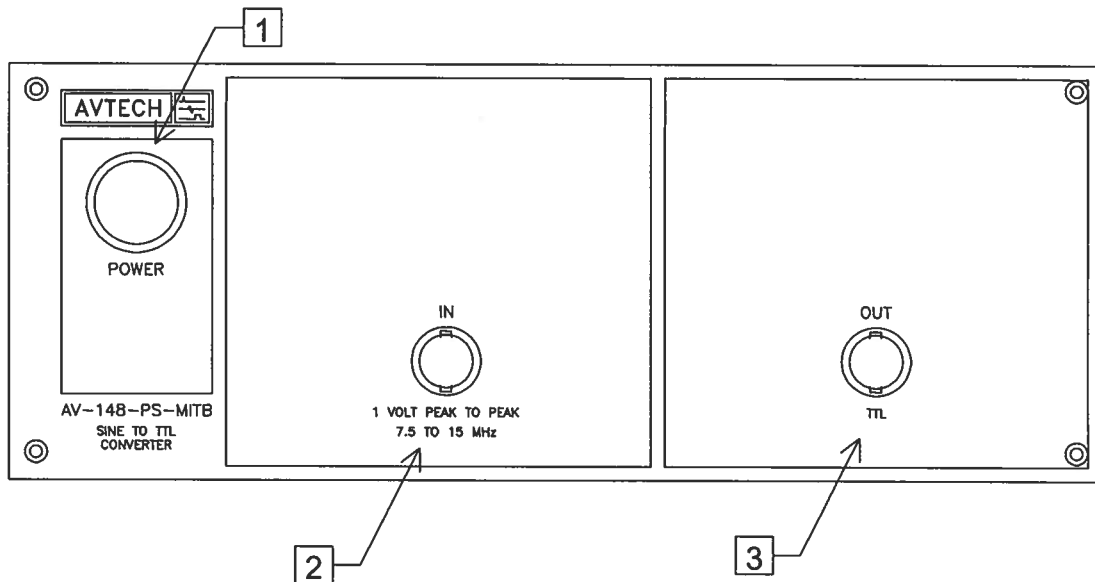
VISUAL CHECK

After unpacking the instrument mainframe and the output module, examine to ensure that they have not been damaged in shipment. Visually inspect all connectors, knobs, and the handles. Confirm that a power cord is 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 0.5A slow blow fuse is required. In the 240V setting, a 0.25A slow blow fuse is required.

FRONT PANEL CONTROLS

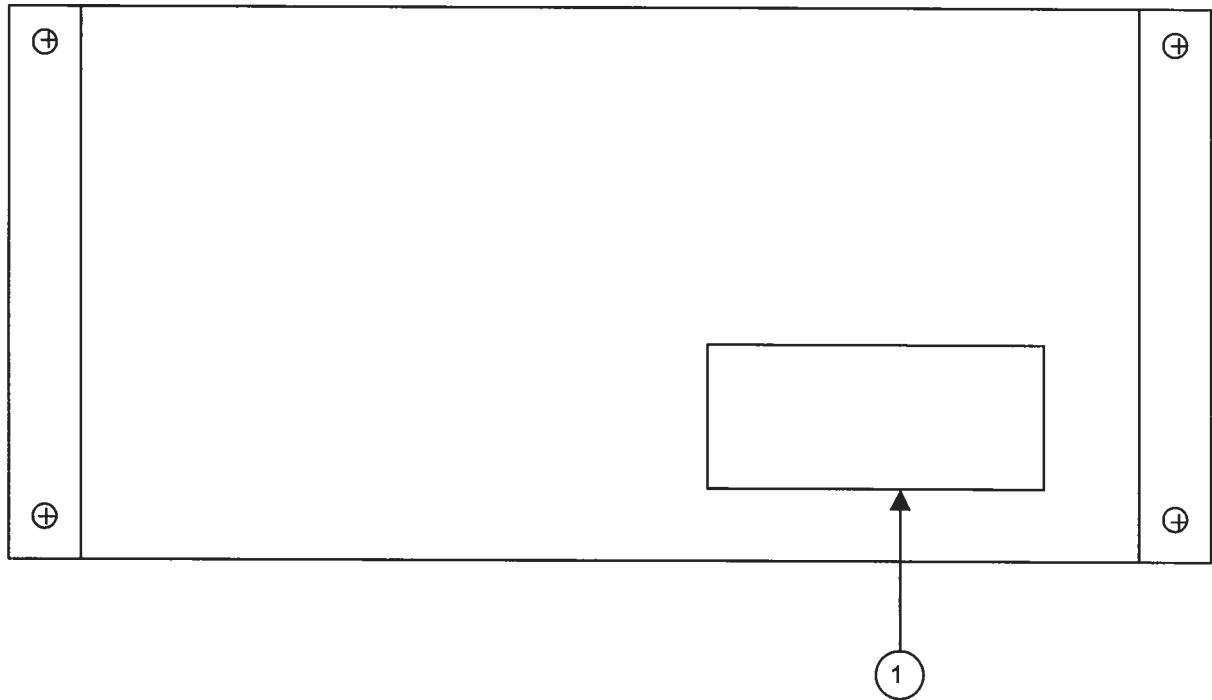


1. **POWER Switch.** The POWER push button switch applies AC prime power to the primaries of the transformer, turning the instrument on. The push button lamp (#382 type) is connected to the +15V DC supply.
2. **IN.** This input is designed accept a 1 V peak-to-peak sine wave, with a frequency between 7.5 and 15 MHz. The input impedance is 1 k Ω .

CAUTION: Inputs above 5 V peak-to-peak may damage the instrument.

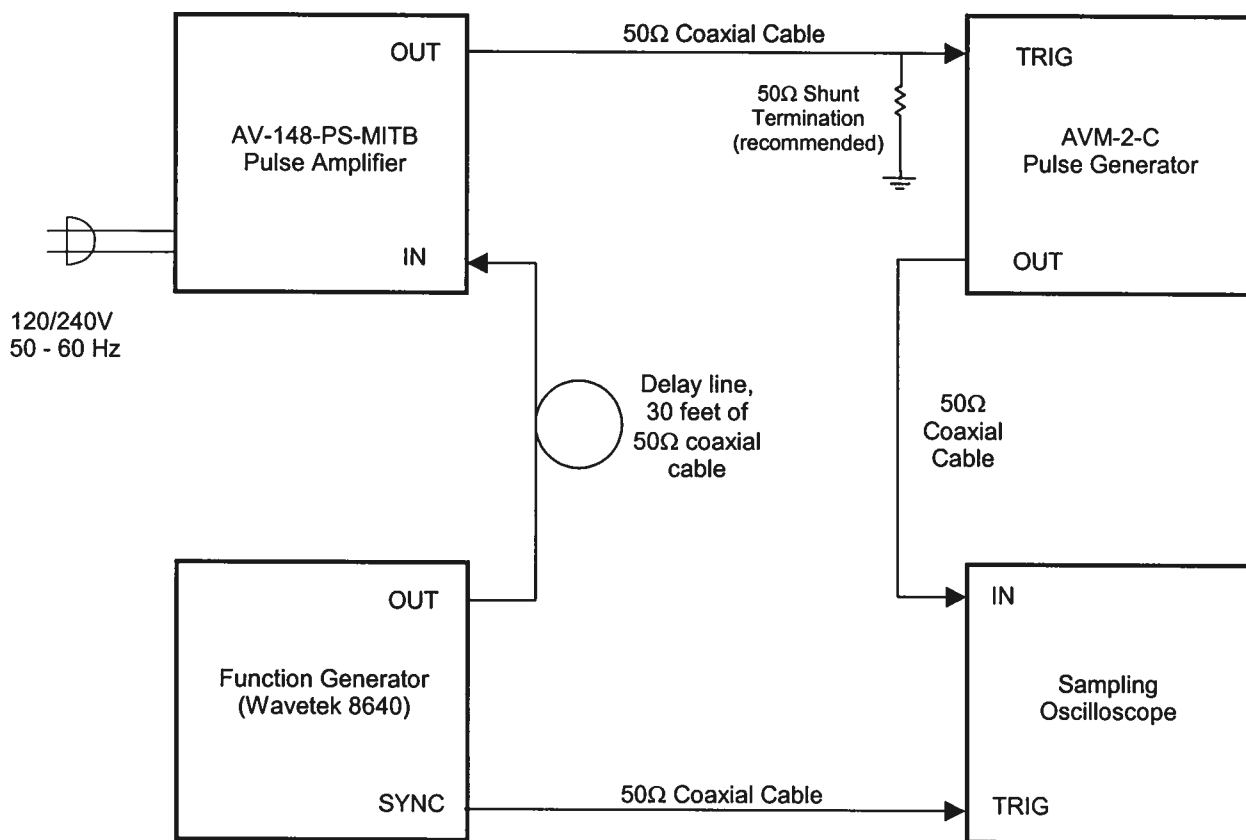
3. **OUT.** For each sine wave cycle applied to the input, a TTL-level (i.e., +3V) pulse with 20 ns pulse width is generated on the output. This output will drive impedances of 50 Ω and higher. For best performance, this output should be connected to other instrument with 50 Ω coaxial cabling, and be terminated with a 50 Ω impedance.

REAR PANEL CONTROLS



1. AC POWER INPUT. A three-pronged recessed male connector is provided on the back panel for AC power connection to the instrument. Also contained in this assembly is a 0.5A slow blow fuse and a removable card that can be removed and repositioned to switch between 120V AC in and 240V AC in.

BASIC TEST ARRANGEMENT



The delay line delays the triggering of the AV-148-PS-MITB and AVM-2-C instruments long enough to allow the sampling oscilloscope to respond to its "TRIG" input, and properly display the input waveform. The delay line length may need to be adjusted for different oscilloscopes.