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SINCE 1975

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INSTRUCTIONS

MODEL AVX-D-2-Q1 DELAY GENERATOR

S.N.:

WARRANTY

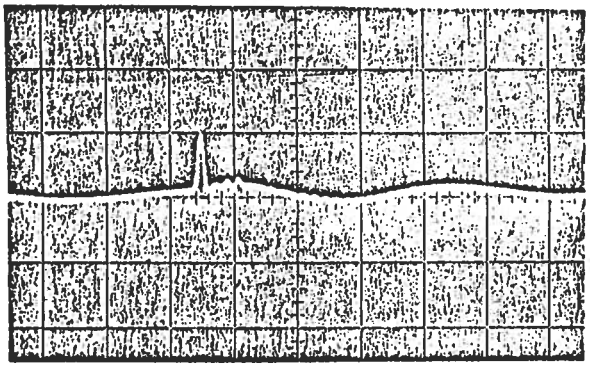
Avtech Electrosystems Ltd. warrants products of its manufacture to be free from defects in material and workmanship under conditions of normal use. If, within one year after delivery to the original owner, and after prepaid return by the original owner, this Avtech product is found to be defective, Avtech 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 or liability assumed by Avtech with respect to this product and no other warranty or guarantee is either expressed or implied.

SPECIFICATIONS

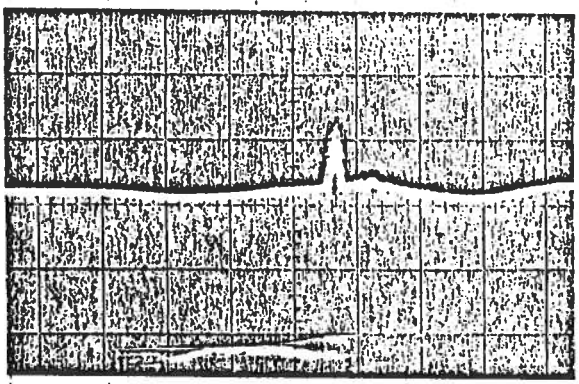
MODEL AVX-D-2-Q1

Model designation:	AVX-D-2-Q1
Delay range:	100 ns to 10 us Low range: 90 ns to approx. 700 ns Med. range: 650 ns to 2.90 us High range: 2.90 us to 10 us 10 turn delay fine and 10 turn delay coarse pot controls determine delay within each range. Coarse control is 10 times more sensitive than fine control.
PRF range:	0 to 1 MHz Note that at given PRF, max delay can not exceed one half of period of PRF
Jitter:	±30 ps at min DELAY ±60 ps at max DELAY (confirmed using AVH-S-1 130 ps impulse generators & sampling scope display)
Input PW:	50 to 500 ns
Output PW:	200 to 300 ns
Trig. PW:	Equals input PW
Prop delay, IN to TRIG port:	≤ 10 ns
Signal amplitudes:	TTL levels Outputs will drive 50 Ohm loads
Power requirements:	+15V DC 100 mA
Connectors:	SMA
Chassis:	As AVX-D but with addition of range switch

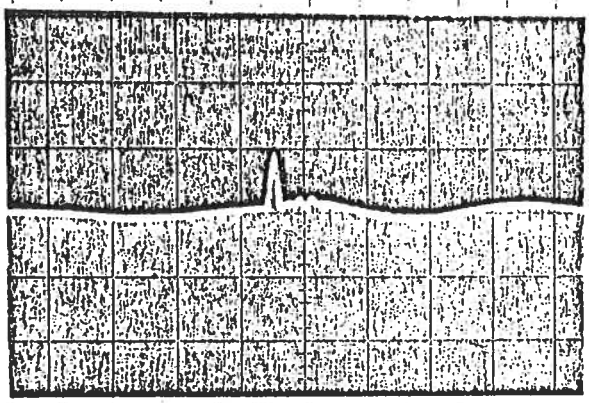
SYSTEM TEST RESULTS



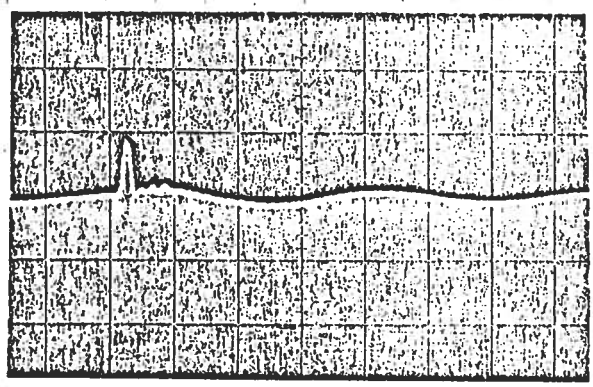
a) AUH-3-1 OUTPUT NO DELAY, @ NO AUX-D-2 UNITS



b) 9 usec DELAY



c) 2 usec DELAY.

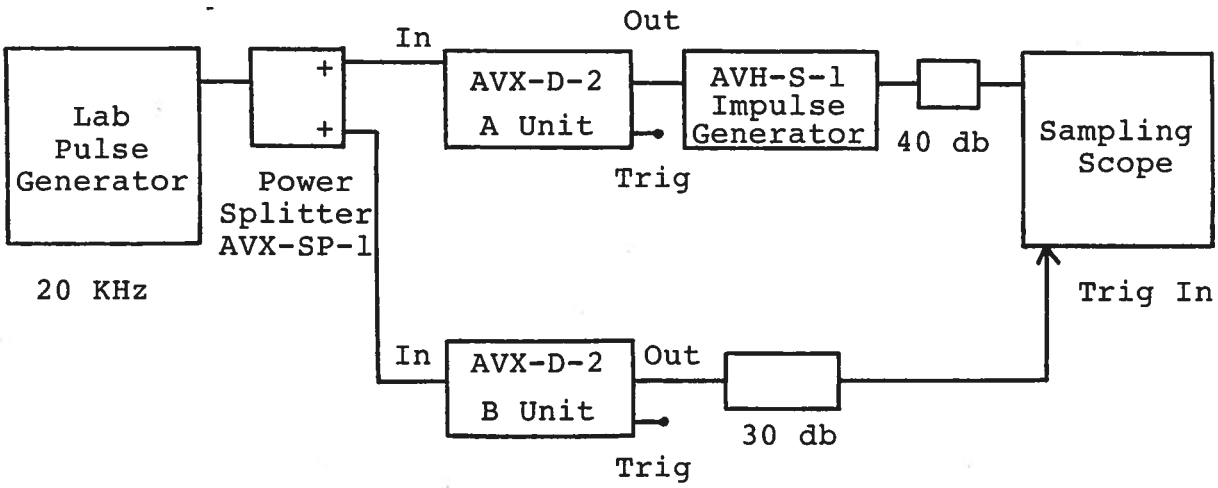


d) 0.4 usec DELAY.

AZL PHOTO
1.0 usec/DIV
10 VOLTS/DIV.
20 KHz.

MODEL AVX-D-2

JITTER AND DELAY TEST ARRANGEMENT



1) A worse-case jitter test of the AVX-D-2 unit was conducted using the above arrangement. The use of two delay generators serves to:

   a) Aggravate the jitter since the resultant jitter is the consequence of two units.
   b) Allow triggering of the sampling scope with long delays (eg. 10 usec) on the AVX-D-2 units.

2) The delays of the A and B units should be such that the time base of the sampling scope is triggered slightly ahead (eg. 20-100 nsec) of the application of the impulse to the vertical amplifier.

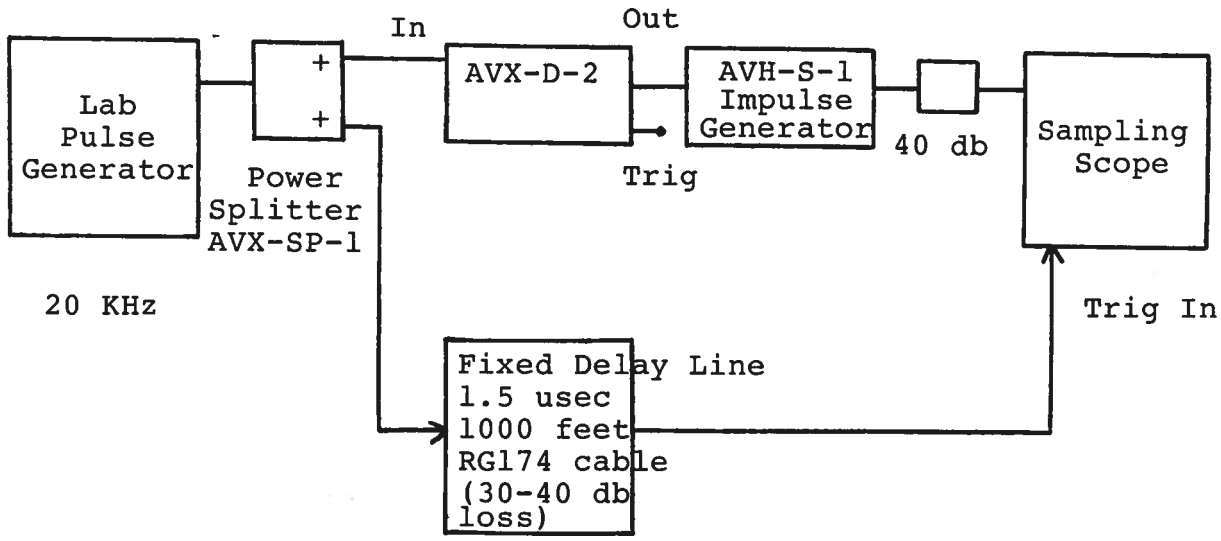
3) The photos on the following sheet illustrates the AVH-S-1 output waveform for the following three cases:

   a) No delay, ie. AVX-D-2 A and B units removed.
   b) Delay of about 9 usec (High range).
   c) Delay of about 2 usec (Med. range).
   d) Delay of about 0.4 usec (Low range).

4) The AVX-D-2 delay can be calibrated by means of a real time scope monitoring the time delay between the IN (or TRIG) and OUT ports.

MODEL AVX-D-2

LONG TERM DRIFT TEST ARRANGEMENT



Following a warm-up period of 5 minutes, the AVX-D-2 delay is constant within ±2 nsec.

Jan. 17/95

Disk: AVX-D, AVX-F

Name: AVXD2Q1.INS