AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS
ENGINEERING - MANUFACTURING

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INSTRUCTIONS

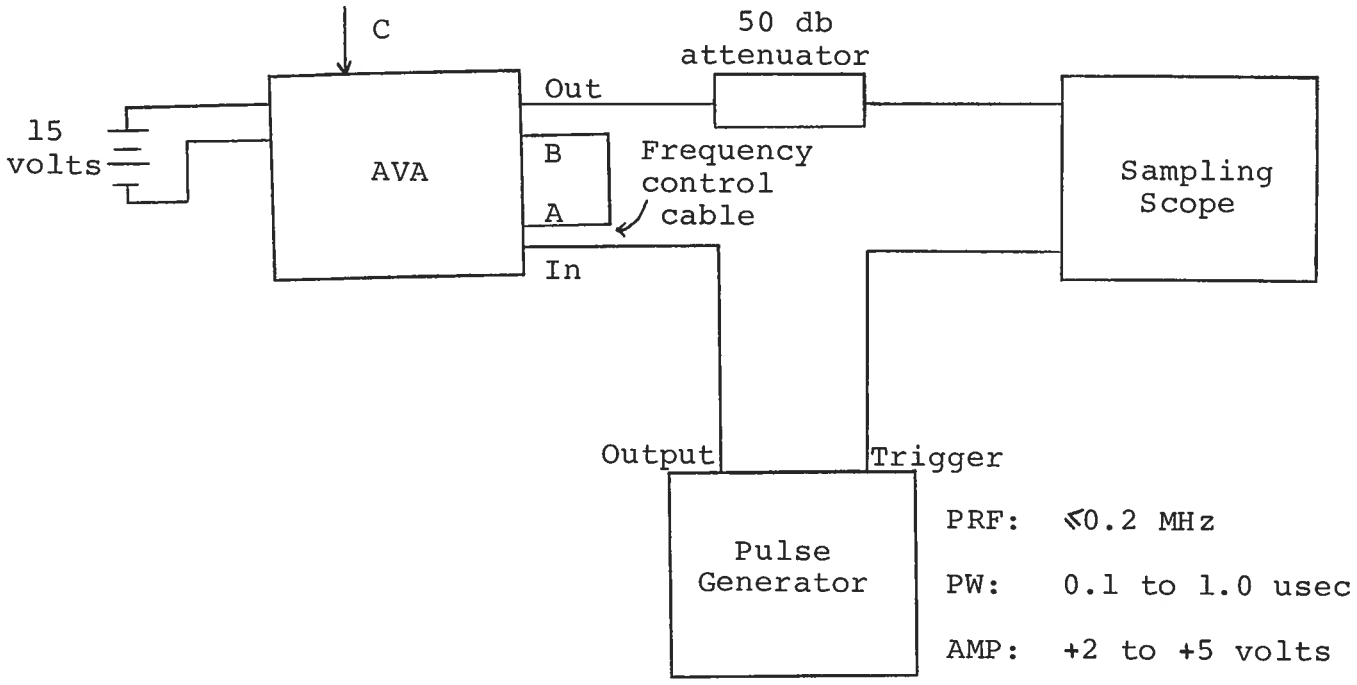
MODEL AVA-M-SRI MONOCYCLE GENERATOR

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.

MONOCYCLE GENERATOR TEST ARRANGEMENT



Notes:

1) The bandwidth capability of components and instruments used to display the monocycle generator output signal (attenuators, cables, connectors, etc.) should exceed several gigahertz.

2) The use of a 50 db attenuator will insure a peak input signal to the sampling scope of less than one volt.

3) In general, the pulse generator trigger delay control should be set in the <100 nsec range. Other settings should be as shown in the above diagram. The monocycle generator output is delayed with respect to the trigger input signal by about 70 nsec (typically).

4) The output signal half-period (T/2) is controlled primarily by the length of cable (RG 174) connected between ports A and B. Increasing the cable length increases the half period. The units are supplied with cable giving either 200 or 400 MHz. If frequency adjustment is required, the required length can be determined using either a miniature line stretcher or by connecting two lengths of cable differing by perhaps 10 cm and noting the resulting half periods. The required final length can then be interpolated from these known length - T/2 values.

5) The half period (and quarter period) are also slightly dependent on the setting of the variable capacitor C which is accessible via a hole in the side of the chassis. Clockwise rotation of the capacitor C tends to increase the width of the positive half cycle and to increase the output amplitude. The capacitor should never be turned in maximum clockwise as this induces a short circuit which disables the waveform generator. The capacitor should rarely require adjustment as the main control is provided by the frequency control cable between A and B.

6) The monocycle generator can withstand an infinite VSWR on the output port.

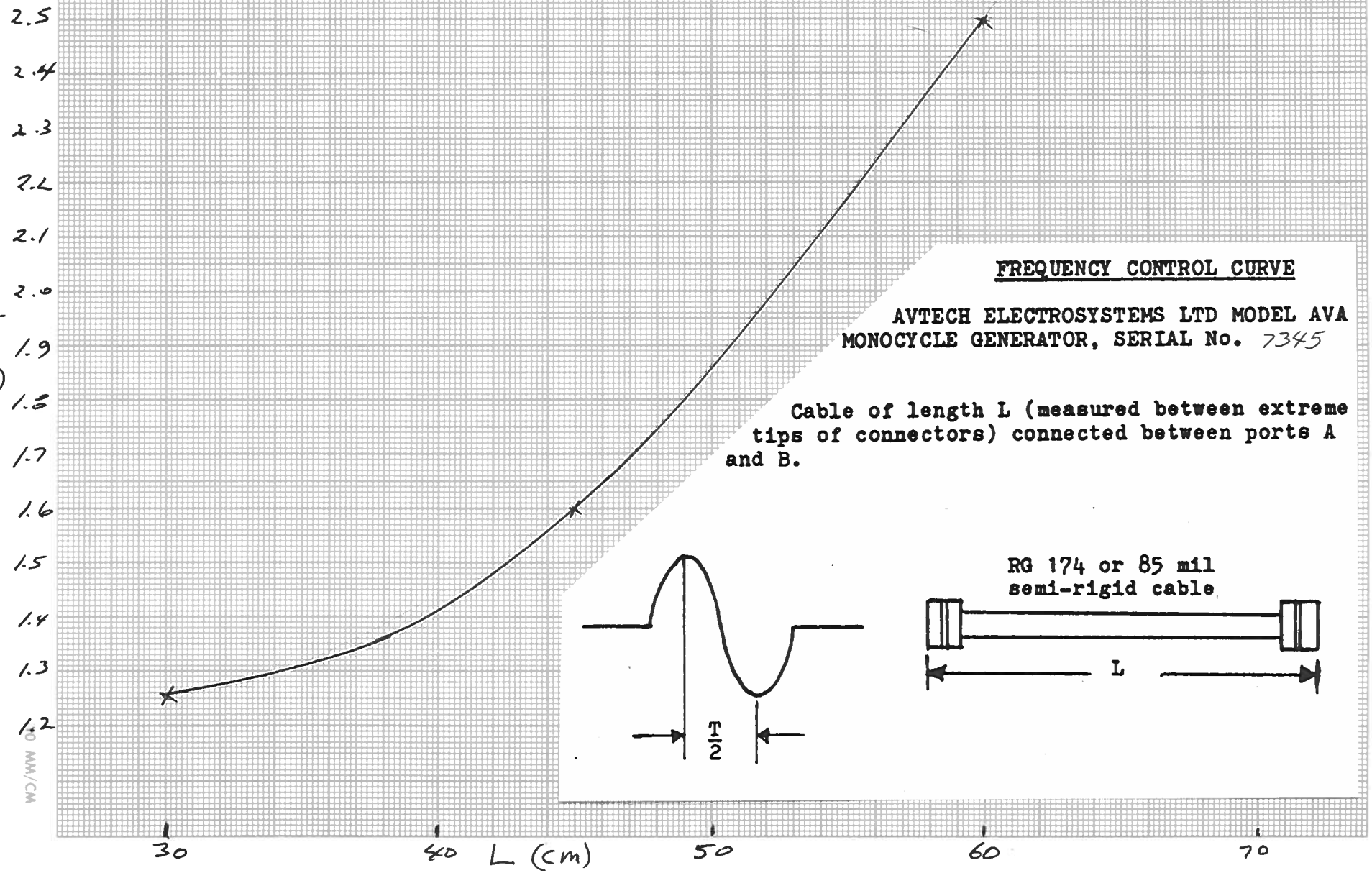
7) Either the input trigger signal or the +15 volt supply should be disconnected when changing or removing the frequency control cable.

8) 400 MHz will operate at PRF up to 1.0 MHz. 200 MHz will operate at PRF up to 150 KHz.

FREQUENCY CONTROL CURVE

AVTECH ELECTROSYSTEMS LTD MODEL AVA
MONOCYCLE GENERATOR, SERIAL No. 7345

Cable of length L (measured between extreme tips of connectors) connected between ports A and B.



FREQUENCY CONTROL CURVE

AVTECH ELECTROSYSTEMS LTD MODEL AVA
MONOCYCLE GENERATOR, SERIAL No. 7635

Cable of length L (measured between extreme tips of connectors) connected between ports A and B.