TECHNICAL NOTE                                              *Model 461*
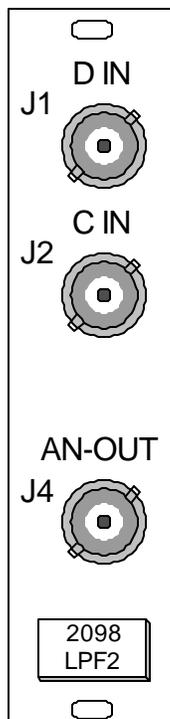
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## LPF2, LOW PASS FILTER MODULE
### MODULE 2098

The LPF2 module is a premodulation filter for use on MITC serial data outputs. It implements an automatic tracking filter with a –3dB point set at .7x the bit rate (or 1.4x in the case of BiPhase codes). The input serial data stream is sampled by a Finite Impulse Response filter which provides a constant group delay for all frequencies. The resulting values are translated back to a serial data stream by DAC. An anti-alias filter removes the sampling noise. Note that the only parameter that needs to be controlled buy the user is the gain selection. This module can be operated with any MITC-*FALCON* series chassis or placed in the 461 DLTS chassis with several other test selected modules to form an integrated test set.



INPUTS

  ➢ All signals are single ended, BNC
  ➢ Jumper selectable 10k/75/50 Ohm
  ➢ Digital data input: TTL levels, rates from 5kbps to 5Mbps
  ➢ NRZ with 0° clock or BiPhase Data with 2x clock

OUTPUTS

  ➢ Bipolar Output
  ➢ Level set up to 2.8V p-p into 50 ohms
  ➢ 50/75-Ohm driver
  ➢ BNC connectors

FILTER

  ➢ Auto tracks input frequency
  ➢ -3 dB point set .7 x bit rate (NRZ) or
     1.4 x bit rate (BiPhase)
  ➢ Constant delay type filter