

LINEAR AND AMPLIFIER PRODUCTS, NIM AND SINGLE-CHANNEL UNITS

| Model | Function | Rate MHz | # Of Chan | Voltage Gain | RMS Noise (Typ.) | # & Type Of Outputs | Special Features |
|---|---|---|-----------|--------------------|--|---------------------------------------|----------------------------------|
| 740 | LINEAR LOGIC FAN IN/OUT | DC to 250 | 4 | 1 | 400 μ V | 6 Outputs 4 Non-Inv 2 Inverting | Linear summation of inputs |
| | | Allows linear summing in nanoseconds of levels and pulses for easy formation of complex analog triggers. | | | | | |
| 744 | LINEAR GATE FAN IN/OUT | DC to 250 | 4 | 1 | 500 μ V | 6 Outputs 4 Non-Inv 2 Inverting | Gated linear summation of inputs |
| | | Four independent fast analog switches with linear fan in/out. Ideal for fast analog mux/demux analog gating. | | | | | |
| 748 | LINEAR/LOGIC FAN OUT | DC to 250 | 8 | 1 | 250 μ V | 4 Non-Inv | \pm 250 mV offset |
| | | Analog fan out for fast detector signal to simultaneously drive discriminators, A/D converters, transient recorders & other data acquisition systems. | | | | | |
| 770 | FIXED GAIN AMPLIFIER | DC to 300 | 4 | 10 | 25 μ V | 2 Bridged Non-Inv | \pm 250 mV Offset |
| 772 | | 8 | | | | | |
| Fast, low cost amplifier block. Channels can be cascaded for gains in excess of 500 | | | | | | | |
| 771 | VARIABLE GAIN AMPLIFIER | DC to 300 | 4 | 1 to 10 | Gain 10: 25 μ V Gain 1: 250 μ V | 1 Output Non-Inv | \pm 250 mV Offset |
| | | General purpose fast pulse or CW amplifier. Ten position switch selects gains 1 to 10 with full bandwidth. | | | | | |
| 774 | PULSE AMPLIFIER | 100 KHz to 1.8 GHz | 4 | Gain 5 or 10 | 40 μ V | 1 Linear | Non-Inverting |
| | | | | 20, 50, 100 | | | |
| 775 | PULSE AMPLIFIER | 100 KHz to 1.8 GHz | 8 | Gain 5 or 10 | 40 μ V | 1 Linear | Non-Inverting |
| | | | | Gain 20 or 50 | | | |
| 776 | PHOTO-MULTIPLIER PREAMP | DC to 275 | 16 | Fixed 10 | 25 μ V | 2 Non-Inv | Internal Offset ADJ. |
| | | | | | | | |
| 777 | VARIABLE GAIN PREAMP | DC to 200 | 8 | Continuous 2 to 50 | Gain 50: 25 μ V Gain 2: 100 μ V | 2 Non-Inv | Front-Panel Offset ADJ. |
| | | | | | High performance octal photomultiplier preamp with adjustable gain. DC offset control via front panel. | | |
| 778 | Sixteen Channel Version of the Model 777 in Single Width NIM; (See Model 777 specifications above). | | | | | | |
| 779 | Thirty-two Channel Version of the Model 776 in Single Width NIM; (Same performance as Model 776 above) | | | | | | |
| 6931 | DC-100 MHz Single Channel Bipolar Amplifier; 100X Voltage Gain. Noise less than 10 μ V RMS. | | | | | | |
| 6950 | DC-300 MHz Single-Channel Bipolar Amplifier; 10X Voltage Gain, (See Model 770 for specs.) | | | | | | |
| 6954 | 100 KHz to 1.8 GHz Bipolar Preamplifier. Single Channel version of Model 774. Available with BNC or SMA connectors. | | | | | | Gain 5 or 10 |
| | | | | | | | Gain 20, 50, or 100 |
| 6955 | 20 MHz to 700 MHz Timing/Charge Pick-Off Preamplifier. Available with BNC or SMA connectors. | | | | | | Gain 5 or 10 |
| | | | | | | | Gain 20, 50, or 100 |
| 5010 | Rotary Step Attenuator Variable from 0.1 to 1.0. Range DC to 1 GHz. Choice of LEMO or BNC connectors. | | | | | Single Channel | |
| 804 | Rotary Step Attenuator variable from 0.1 to 1.0. Range DC to 1 GHz. Choice of LEMO or BNC connectors. | | | | | Four Channel NIM | |

PRODUCT WARRANTY

All units manufactured by Phillips Scientific are guaranteed to be free from defects in materials and workmanship and to meet performance specifications for a period of one year from the date of shipment.

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DISCRIMINATORS, NIM AND SINGLE-CHANNEL UNITS

| Model | Function | Rate MHz | # Of Chan | Variable Threshold | Variable Output Width | Updating Outputs | # & Type Of Outputs | Special Features |
|-------|--|--|-----------|------------------------------------|-----------------------|------------------|--|--|
| 704 | LEADING EDGE DISCRIMINATOR | 300 | 4 | -10mV to -1V | 2nS to 50nS | Yes | 6 Outputs 2 Pairs Bridged 2 Complement | Veto |
| | | The fastest discriminator available. Ideal for fast solid state and microchannel plate detectors. | | | | | | |
| 705 | LEADING EDGE DISCRIMINATOR | 75 | 8 | -10mV to -1V | 6nS to 150nS | No | 3 Outputs 1 Pair Bridged 1 Complement | Linear Summed Output |
| | | A low cost, high performance discriminator without sacrificing features such as veto and linear summing. | | | | | | |
| 706 | LEADING EDGE DISCRIMINATOR | 100 | 16 | -10mV to -1V | 5nS to 150nS | No | 2 Outputs 1 Pair Bridged | Fast Veto |
| | | The only 16 channel discriminator available in a single-width NIM. | | | | | | |
| 708 | LEADING EDGE DISCRIMINATOR | 300 | 8 | -10mV to -1V | 2nS to 50nS | Yes | 3 Outputs 1 Pair Bridged 1 Complement | Fast Veto |
| | | Only Phillips Scientific offers this high rate performance octal 300 MHz discriminator. | | | | | | |
| 710 | LEADING EDGE DISCRIMINATOR | 150 | 8 | -10mV to -1V | 4nS to 150nS | Yes | 1 Pair Bridged 1 Normal NIM 1 Complement | Linear Summed Output |
| | | Versatile octal discriminator with four outputs per channel, individual thresholds and output width controls with veto & linear summed output. | | | | | | |
| 711 | LEADING EDGE DISCRIMINATOR | 150 | 6 | -10mV to -1V | 4nS to 1 µS | Yes | 5 Outputs 2 Pairs Bridged 1 Complement | Burst Guard Mode |
| | | General purpose discriminator, outputs to 1 µsec and features time-over-threshold operation. | | | | | | |
| 715 | CONSTANT-FRACTION TIMING DISCRIMINATOR | 100 | 5 | -25mV to -1V | 5nS to 150nS | No | 3 Outputs 2 Normal NIM 1 Complement | Constant Fraction Timing |
| | | Low cost five-channel timing discriminator with non-updating outputs, which insure accurate counting and time measurements to over 100 MHz. | | | | | | |
| 730 | DE WINDOW DISCRIMINATOR | 100 | 5 | LLT = -10mV -1V ULT = -25mV -1V | 5nS to 150nS | No | 3 Outputs 2 Normal NIM 1 Complement | Leading Edge DE Window ARC Modes |
| | | Five fast SCA's in a single-width NIM. Ideal for making prompt energy cuts for fast triggers. | | | | | | |
| 6816 | 16-Channel Amplifier/Discriminator Card, ECL Outputs. Drift Chamber/MWPC or Multi-anode MCP Front-End. | | | | | | | |
| 6904 | Single Channel 300 MHz Discriminator; (See Model 704 specs.) | | | | | | | |
| 6908 | Single Channel 300 MHz Amplifier/Discriminator; Similar to Model 6904 with -1mV to -100 mV Threshold. | | | | | | | |
| 6915 | Single Channel Constant-Fraction Timing Discriminator; (See Model 715 specs.) | | | | | | | |
| 6930 | Single-Channel Analyzer/Window Discriminator; (See Model 730 specs.) | | | | | | | |

NIM LOGIC UNITS

| Model | Function | Rate MHz | # Of Chan | Logic Threshold | Variable Output Widths | Updating Outputs | # & Type Of Outputs | Special Features |
|-------|----------------------------------|-------------------|-----------|------------------------------|---|-----------------------|--|--------------------------------------|
| 726 | LEVEL TRANSLATOR | 150 | 16 | NIM, TTL, ECL | Output = Input | No | 1 TTL 1 Pair Bridged 1 DIFF ECL | Logical "OR" |
| 752 | TWO INPUT AND/OR LOGIC | 150 | 4 | NIM -500 mV | 4nS to 1 µS | Yes | 6 Outputs 2 Pairs Bridged 2 Complement | Common Veto |
| 754 | FOUR INPUT MAJORITY LOGIC | 300 | 4 | NIM -500 mV | 2nS to 50nS | Yes | 5 Outputs 2 Pairs Bridged 1 Complement | Veto/Chan Logic Fan-IN/OUT |
| 755 | FOUR INPUT MAJORITY LOGIC | 150 | 4 | NIM -500 mV | 4nS to 1 µS | Yes | 5 Outputs 2 Pairs Bridged 1 Complement | Veto/Chan Logic Fan-IN/OUT |
| 756 | FOUR INPUT MAJORITY LOGIC | <u>300</u> 150 | 4 | NIM -500 mV | <u>Input Overlap Time</u> 4nS - 1 µS | <u>Overlap</u> Yes | 5 Outputs 2 Pairs Bridged 1 Complement | Veto/Chan Overlap Outputs & Updating |
| 757 | MIXED LOGIC UNIT SWITCH SELECTED | 150 | 8 | TTL/NIM -500 mV +1.5 V | Overlap of Inputs | No | 6 Outputs 2 Pairs Bridged 2 Complement | LED Set-Up Indication |
| 758 | TWO INPUT AND/OR LOGIC | 150 | 8 | NIM -500 mV | 4nS to 150nS | Yes | 3 Outputs 1 Pair Bridged 1 Complement | Common Veto |

