

# Trigger Accessories



**Model 2600-TLINK:** 25-pin female digital I/O port to Trigger Link adapter.

**For use with:** Series 2600, Series 2600A, 3706



**Model 8502:** Trigger Link adapter box has two female 8-pin micro DIN connectors to 6 female BNC connectors. Includes an 8501-1 cable.

**For use with:** Series 2000, Series 2400, 7001, 7002



**Model 8505:** Male to 2 Female Y-DIN cable.  
**For use with:** Trigger Link



**Model 8501-1:** 1m (3.3 ft) Trigger Link cable. Each end contains an 8-pin male DIN connector. Also available in 2m (6.6 ft) length (**Model 8501-2**).

**For use with:** Trigger Link inputs, 708A (for master/slave control)



**Model 8503 DIN-to-BNC Trigger Cable:** 1m (3 ft) cable used to connect BNC inputs to any instrument having Trigger Link connectors.

**For use with:** 2000, 2010, 2400, 6221, Trigger Link inputs

# Trigger Accessories



- Improve system throughput
- Trigger up to six instruments
- Automatically route TTL signals
- Speed operation of multiple Source-Measure Units

## Ordering Information

**2361**     **Trigger Controller Unit with 7051-2 BNC Interconnect cable, 0.6m (2 ft)**

### Accessories Supplied

**7051-2**     **BNC Interconnect Cable (4)**

The Model 2361 Trigger Controller Unit (TCU) puts TTL, trigger routing, and coordination under GPIB control for rack and stack systems. This compact unit connects to the trigger inputs and outputs of up to six instruments using BNC cables. All triggers in the system are passed through the 2361 Trigger Controller to allow:

- Automatic trigger routing between instruments.
- Conditional and simultaneous triggering.

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## Applications

The 2361 controls test systems of two to six Source-Measure Units (SMUs), DMMs, switches, or other GPIB instruments. It allows trigger input and output signals from instruments in a test system to be arbitrarily directed without changing cable connections. This provides complete flexibility in test design with reduced operator intervention and without sacrificing the speed and synchronization.

## Advanced Triggering Capabilities

Six trigger relations may be programmed using GPIB commands to specify which trigger inputs will result in a particular group of outputs. "OR" causes a trigger output when a trigger is received on any one specified channel. "AND" accumulates triggers until one has been received on each of the specified channels and then generates the trigger outputs. This is especially useful for allowing multiple sources or SMUs in a test system to settle concurrently, then multiple meters or SMUs to measure in unison. The result is two to ten times faster test execution than with serial trigger loops.

A digital I/O port provides 8 bits of TTL inputs and 8 bits of TTL outputs. SRQs can be generated by changes in the digital or trigger inputs.

In test systems that incorporate instruments from several different manufacturers, the Model 2361 Trigger Controller Unit can interface triggers with falling and rising edge directions to one another. Non-volatile program memory permits system synchronization without a GPIB controller.

## ACCESSORIES AVAILABLE

7007-1	Shielded IEEE-488 Cable, 1m (3.3 ft)
7007-2	Shielded IEEE-488 Cable, 2m (6.6 ft)
8503	DIN-to-BNC Trigger Cable
KPCI-488LPA	IEEE-488 Interface/Controller for the PCI Bus
KUSB-488B	IEEE-488 USB-to-GPIB Adapter for USB Port

## SERVICES AVAILABLE

2361-3Y-EW	1-year factory warranty extended to 3 years from date of shipment
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## SIGNALS

### CONFIGURATION:

- Six trigger inputs, TTL compatible.
- Six trigger outputs, TTL compatible.
- One 8-bit digital input port, TTL compatible.
- One 8-bit digital output port, TTL compatible.

### TRIGGER CHANNELS:

- Input:** May be programmed to detect rising or falling edges.
- Output:** Active low pulse, maximum pulse width 110 $\mu$ s.

### DIGITAL I/O:

- Input:** May be programmed to detect level or edges (either rising or falling).
- Output:** Specified level appears on digital output lines.

## EXECUTION SPEED

- INPUT PULSE WIDTH:** 50ns minimum, unlimited maximum.
- CHANNEL SYNCHRONIZATION (typical):** Output pulses are synchronized to within 5ns.
- TRIGGER PROPAGATION DELAY (IEEE-488 inactive):** 350 $\mu$ s maximum, 100 $\mu$ s typical (T0D0, only one trigger I/O relation evaluates true).
- PULSE RECOGNITION RATE:** 2kHz maximum at any trigger input.
- RESPONSE TO IEEE-488 COMMAND:**
  - Trigger Control Commands:** 2.5ms maximum.
  - Trigger I/O Program:** 25ms maximum.

## IEEE-488 BUS IMPLEMENTATION

- MULTIPLE COMMANDS:** DCL, SDC, UNT, UNL, SPE, SPD.
- UNILINE COMMANDS:** IFC, REN, EOI, SRQ, ATN.
- INTERFACE FUNCTIONS:** SH1 AH1, T6, TE0, L4, LE0, SR1, RL2, PP0, DC1, DT0, C0, EI.
- SRQ OPTIONS:** SRQ on any of the following events: Trigger input detected, digital input detected, ready for IEEE-488 command, error.
- PROGRAMMABLE FUNCTIONS:** Trigger I/O programming, trigger I/O program initialization, trigger I/O program storage and retrieval, trigger input edge polarity, trigger response enable/disable, trigger latch initialization, trigger output generation, digital output specification, digital input edge polarity, SRQ masking, IEEE-488 holdoff, IEEE-488 output terminator, system status readback, factory default reset.

## GENERAL

**TRIGGER I/O PROGRAM:** Up to six input-output relations constitute the program which resides in the internal memory. Non-volatile storage of up to three trigger I/O programs.

### CONNECTORS:

**Trigger Input, Output:** Six BNC connectors each on rear panel.

**Digital I/O:** 20 pin card edge.

**ENVIRONMENT: Operating:** 0–50°C; 0–70% R.H.  
**Storage:** –25 to 65°C.

**POWER:** 90–125 or 180–250V AC (internal switch selectable); 50–60Hz. 10VA max.

**DIMENSIONS, WEIGHT:** 425mm wide × 45mm high × 309mm deep (16 $\frac{3}{4}$  in × 1 $\frac{3}{4}$  in × 12 in). Net weight 2.7kg (6.2 lb).