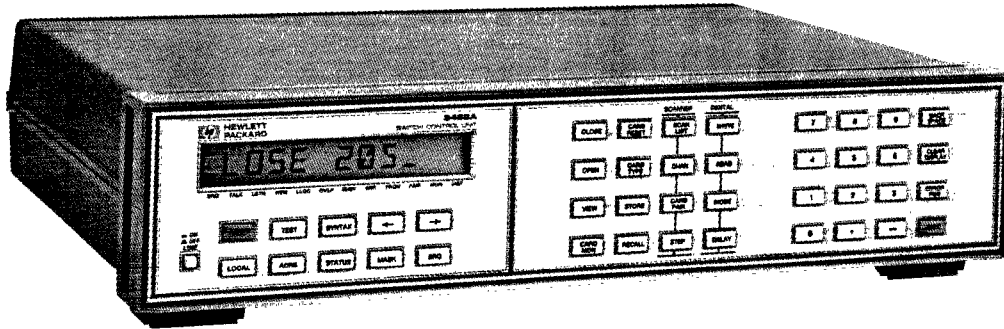


TEST SYSTEM SWITCHES

Signal Routing and Measurement

HP 3488A

- dc–26.5 GHz signal switching
- Matrix, multiplexer, and general purpose relays
- Digital I/O control and actuation
- Up to 50 channels
- 40 configuration storage registers
- 11 switch and control modules



HP 3488A



HP 3488A Switch/Control Unit

The HP 3488A Switch/Control Unit brings versatile, HP-IB programmable switching to tests requiring multi-channel measurements. The HP 3488A provides signal switching with the integrity and isolation needed for high-performance production test systems. It also offers a flexible, low-cost interconnection for automating experiments on the bench and for developing tests in the lab. The HP 3488A is designed to hold up to 5 of the following switch and control modules:

- 10-channel relay multiplexer
- 10-channel general purpose relay
- Dual 4-channel VHF switch
- 4 × 4 matrix switch
- 16-bit digital input/output
- Breadboard
- 3-channel 18 GHz switch
- 7-channel form-C relay
- 2-channel microwave switch
- 1.3 GHz 50 and 75 Ω multiplexers

Flexible Switching

The HP 3488A is an economical approach to flexible switching through plug-in modules. You can select the right combination of switching functions to meet both performance and budget needs. Testing is simplified by having one solution for connections of low-level DVM inputs, high-level dc and ac power, and microwave signals to 26.5 GHz. Additional devices, such as microwave relays and programmable attenuators, are easily controlled with digital I/O functions. Custom circuitry can also be implemented on breadboard modules.

Versatile Performance

The HP 3488A can store up to 40 complete switch configurations for convenient recall in automated test programs. Switch operation can be done with multiple relay closures or with selectable channels in a break-before-make mode. Break-before-make and recallable switch configurations can be combined in a programmable scan list. The HP 3488A uses removable screw terminal connectors that provide easily interchangeable wiring for each test. Built-in self-test assures proper operation.

Multiplexer (Option 010/HP 44470A)

Option 010 is a 10-channel multiplexer for scanning or multiple signal connections. Channels switch 2 wires (Hi and Lo) with 2PST relays for DVM inputs and other signals up to 250V and 2A. This module can also be used to multiplex signals to other switching functions, such as the matrix module.

General Purpose Relay (Option 011/HP 44471A)

This module consists of 10 SPST independent relays for general signal switching and control of external devices. Quality connections make this module ideal for switching signals when multiplexing is not required, or for supplying switchable power to the device under test.

VHF Switch (Option 012/HP 44472A)

The VHF module provides broadband switching for high-frequency and pulse signals. The 2 independent groups of bidirectional 1 × 4 switches can be used for signals from dc to 300 MHz. All channels have 50-Ω characteristic impedance and are break-before-make within a group of 4 channels. Each group is isolated from the other and from ground to prevent ground loops. Excellent isolation makes this module ideal for high-frequency signal analyzer measurements requiring a large dynamic range.

Matrix Switch (Option 013/HP 44473A)

Option 013 offers highly flexible switching with a 4 × 4, 2-wire matrix. Any combination of 4 input channels may be connected to any combination of 4 output channels. Each cross point or node in the matrix uses a 2PST relay to switch 2 lines (Hi and Lo) at a time. Multiple 4 × 4 modules can be connected to form larger matrices. Multiplexers can be used in conjunction with this module to effectively expand the number of inputs and outputs of the matrix.

Digital I/O (Option 014/HP 44474A)

This module offers 16 very flexible bidirectional I/O lines and 4 TTL-compatible handshake lines for sensing and control of external devices. The digital inputs can be used to sense contact closures to ground. Each channel provides current sinks for remote switching of external relays, such as the HP 33311 series coaxial switches.

Breadboard (Option 015/HP 44475A)

The breadboard module provides a convenient way to implement custom circuits and special functions that interface directly to the HP 3488A's backplane control signals.

Microwave Switch (Option 016/HP 44476A)

This microwave switch furnishes 3 independent SPST 50-Ω coaxial switches with excellent performance from dc to 18 GHz. The 3 mm SMA connector allows you to easily connect cables for multiple system configurations.

Form-C Relay (Option 017/HP 44477A)

This module provides 7 separate SPDT channels for general purpose switching and control of external devices. Using a power supply, the module can drive programmable attenuators and non-HP coaxial switches.