

Operating Note/August 1987

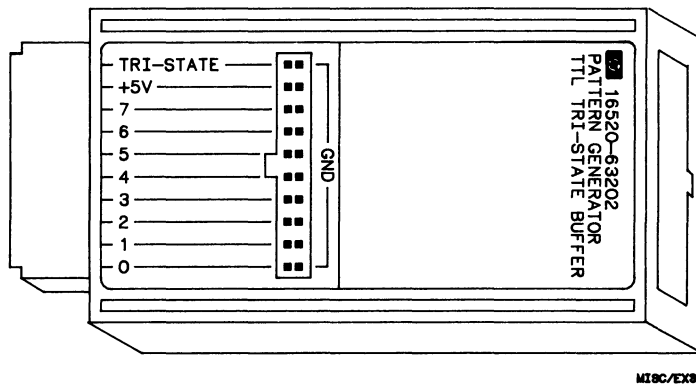


Figure 1. HP 10346A Tri-State Buffer Pod

## Introduction

This operating note contains information on connecting the HP 10346A TTL Tri-State Buffer Pod (HP part number 16520-63202) to your test system. It also includes a schematic of the pod and a complete description of the pinouts.

The HP 10346A 8-Channel TTL Tri-State Buffer Pod buffers the TTL outputs of the HP 16520A and HP 16521A Pattern Generator and provides an external TTL tri-state control input.

Operating Note Part Number 10346-90901  
Microfiche Part Number 10346-90801

## Connecting the HP 10346A to the Pattern Generator

To connect the HP 10346A pod to the pattern generator:

1. Select the pattern generator cable for the output you want buffered and remove any probe adapters already connected to that cable.
2. Connect the HP 10346A pod to the pattern generator by aligning the key on the connector from the pattern generator cable with the slot on the pod connector and pushing them together (see figure 2).
3. If a probe adapter is required, connect the HP 10346A pod to the probe adapter of the pattern generator by aligning the key on the connector of HP 10346A pod with the slot on the probe adapter and pushing them together (see figure 2).

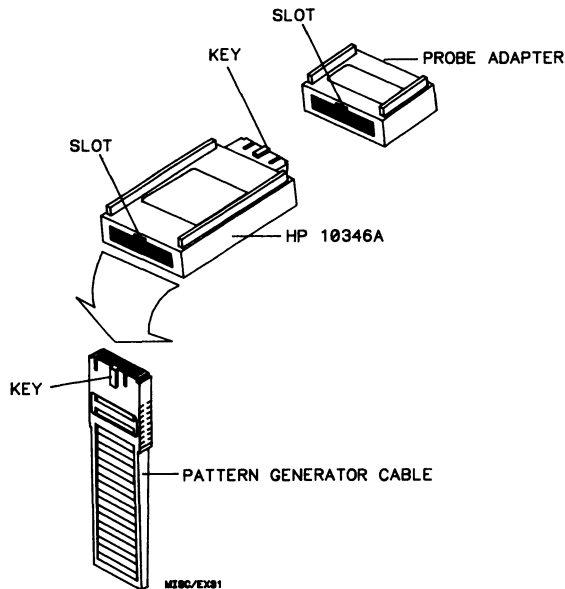


Figure 2. Connecting the HP 10346A Pod to the Cable Connector

## Connecting to the Target System

Use the probes supplied with the pattern generator to connect the HP 10346A pod to the target system. The output pins for the pod are marked on the pod body (see figure 3). To connect to the target system:

1. Connect the ground probe of the HP 10346A pod to a ground pin on the target system or external supply.
2. Connect the +5 V input of the HP 10346A pod to a +5 V supply on the target system or other external source.
3. Connect the output pins 0 through 7 of the pod to the target system.
4. In order to control the pod, you must connect an input to the TRI-STATE pin of the HP 10346A pod (see figure 3). A 2.0 V high level input tri-states the HP 10346A outputs, while a 0.8 V low level input enables the pod to buffer out the input signals.

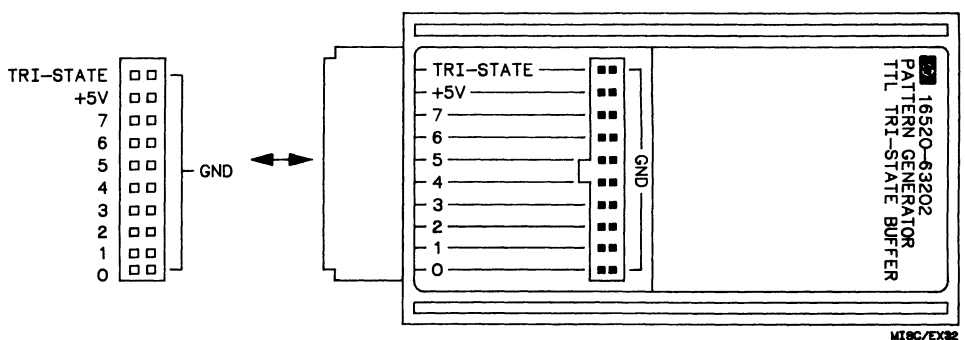


Figure 3. Labeling of Output Pins

## Operating Characteristics

Low-Level Output ( $V_{OL}$ max):	+0.5 V
High Level Output ( $V_{OH}$ min):	+2.0 V
Typical Enable/Disable Time:	18 ns
Typical Propagation Delay:	12 ns
Maximum Low Output Sink Current ( $I_{OL}$ ):	+24 mA
Maximum High Output Source Current ( $I_{OH}$ ):	-15 mA
Typical Power Dissipation:	135 mW
Supply Voltage:	+5.0 V $\pm$ 5%

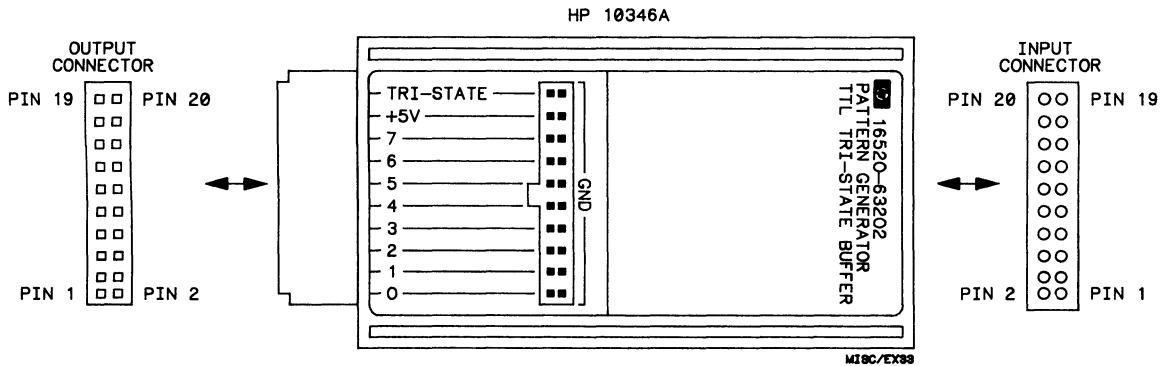


Figure 4. Pinouts for the HP 10346A Pod

Table 1. HP 10346A Signal Distribution

Input Pin	Description	Output Pin	Description
1	DINO	1	DOUT0
2	GROUND	2	GROUND
3	DIN1	3	DOUT1
4	GROUND	4	GROUND
5	DIN2	5	DOUT2
6	GROUND	6	GROUND
7	DIN3	7	DOUT3
8	GROUND	8	GROUND
9	DIN4	9	DOUT4
10	GROUND	10	GROUND
11	DIN5	11	DOUT5
12	GROUND	12	GROUND
13	DIN6	13	DOUT6
14	GROUND	14	GROUND
15	DIN7	15	DOUT7
16	GROUND	16	GROUND
17	N/C	17	+5.0 V (Input)
18	GROUND	18	GROUND (Input)
19	N/C	19	TRI-STATE (Input)
20	GROUND	20	GROUND

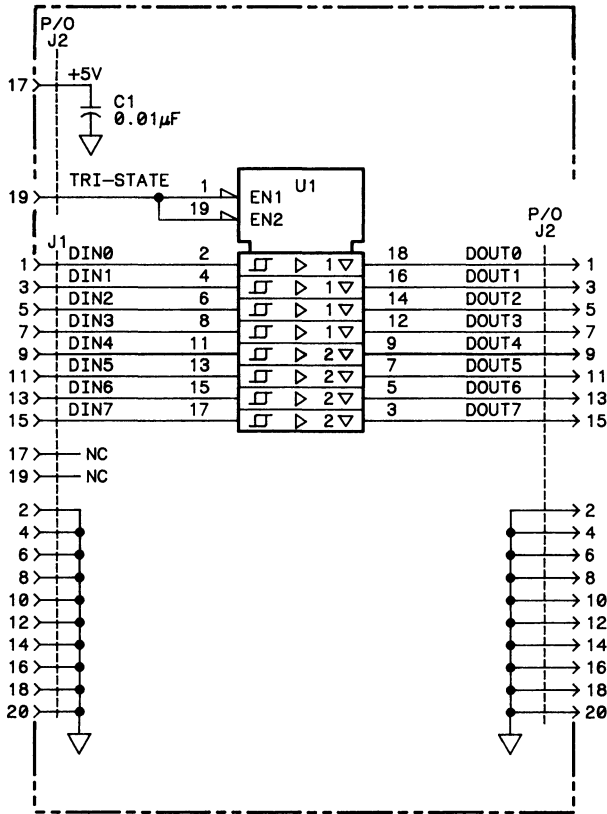
N/C = No Connection

Note: See figure 4 for the pinouts of the HP 10346A pod.

## Troubleshooting and Servicing

If a failure is suspected in the HP 10346A TTL Tri-State Buffer Pod, contact your nearest Hewlett-Packard Sales/Service Office for information on servicing the pod.

HP Model 10346A



**IC DEVICE  
POWER CONNECTIONS**

SUPPLY	PIN NO.	IC GROUP
+5V	20	U1
GND	10	

**PARTS ON THIS SCHEMATIC**

C1
J1,2
U1

**NOTES:**

- GATES ARE SYMBOLIZED ACCORDING TO CIRCUIT FUNCTION.
- UNLESS OTHERWISE NOTED:  
RESISTANCE IN OHMS  
CAPACITANCE IN MICROFARADS  
INDUCTANCE IN MICROHENRIES
- UNLESS OTHERWISE NOTED:  
LOGIC LEVELS ARE TTL:  
+2.0V TO +5.0V=LOGIC"1"=H  
0V TO +0.8V=LOGIC"0"=L

MISC/SC07/7-87

Figure 5. Schematic for the HP 10346A Pod

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## Product Warranty

This Hewlett-Packard product has a warranty against defects in material and workmanship for a period of 1 year from date of shipment. During warranty period, Hewlett-Packard Company will, at its option, either repair or replace products that prove to be defective.

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**Certification**

Hewlett-Packard Company certifies that this product met its published specifications at the time of shipment from the factory. Hewlett-Packard further certifies that its calibration measurements are traceable to the United States National Bureau of Standards, to the extent allowed by the Bureau's calibration facility, and to the calibration facilities of other International Standards Organization members.

**Safety**

This product has been designed and tested according to International Safety Requirements. To ensure safe operation and to keep the product safe, the information, cautions, and warnings in this operating note must be heeded.





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