

Scanner Simulator (PN 04278-65301)

User's Guide

Second Edition



Agilent Technologies

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Manual Printing History

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1. INTRODUCTION

This operating note provides information on the scanner simulator (P/N 04278-65301). The scanner simulator is shown in Figure 1, and its specifications are listed in Table 1.

2. DESCRIPTION

The Scanner Simulator is specially designed for testing the operation of the HP 4278A's optional scanner interface.

The scanner simulator has an LED for each signal line between the scanner interface and the scanner simulator. The LED turns on when its associated signal is asserted LOW, so the state of each signal can be checked by observing the appropriate LED.

The test procedure is described in the performance test section of the instrument's service manual.

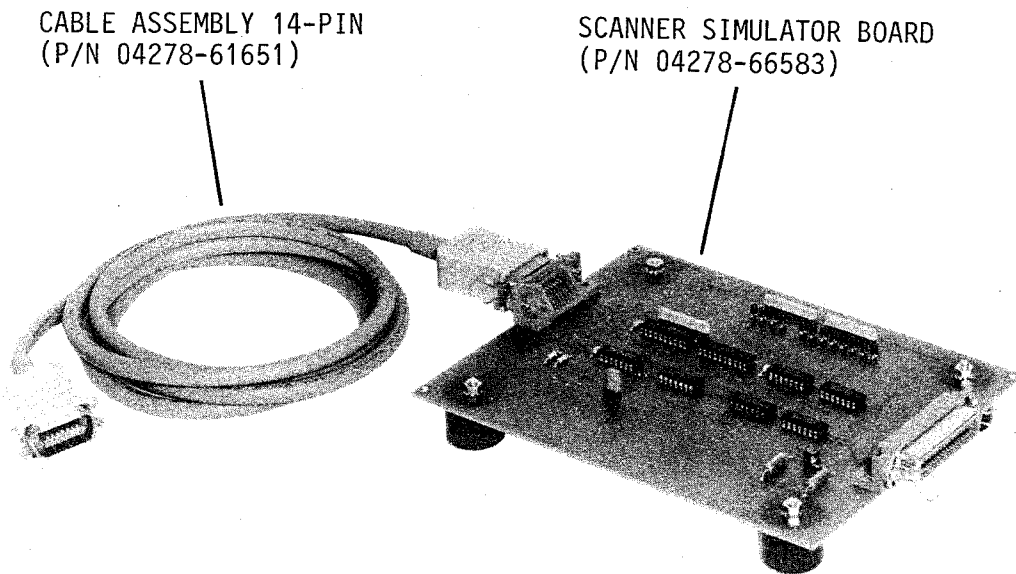


Figure 1. Scanner Simulator

Table 1. Specifications

Scanner I/F connector:	14-pin Amphenol female
Required power voltage:	+5 V
Indicators:	LED indicators
Input signal:	/EOM, /INDEX
Output signal:	EXT.TRIG (Rising Edge), /CH VALID, /CHO to /CH7
Environment:	
Operating environment:	
Temperature:	5 °C to 45 °C
Humidity:	up to 95% (at 40 °C)
Storage environment:	
Temperature:	-20 °C to 60 °C
Humidity:	up to 95% (at 40 °C)
Dimension of Scanner Simulator:	158 mm(W) × 37 mm(H) × 200 mm(D)
Weight:	
Scanner Simulator Board:	Approximately 0.23 kg (0.51 lb.)
Cable:	Approximately 0.21 kg (0.46 lb.)

3.SERVICING

Component locations are shown in Figure 4. The schematic diagram of the scanner simulator is shown in Figure 5. Table 2 lists the replaceable parts which can be ordered from your nearest Hewlett-Packard Service Office. Ordering information should include the HP part number, and the quantity required.

Figure 2 shows the timing for when the scanner simulator is used with the HP 4278A set as follows:

multi-compensation mode : ON
trigger mode : EXT_TRIG

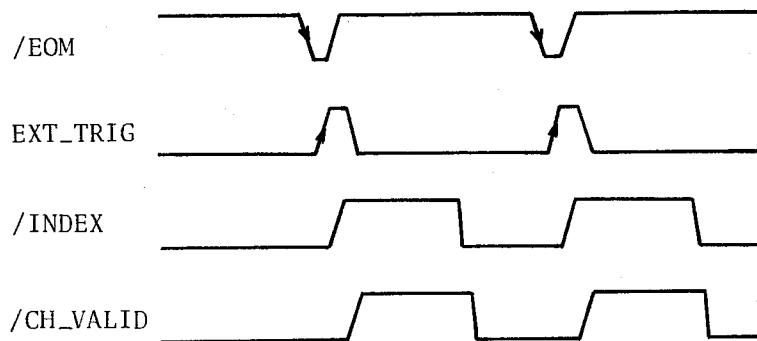


Figure 2. Timing Chart

NOTE

The jumper on the scanner simulator must be set to the position 1. Figure 3 shows the location of the jumper.

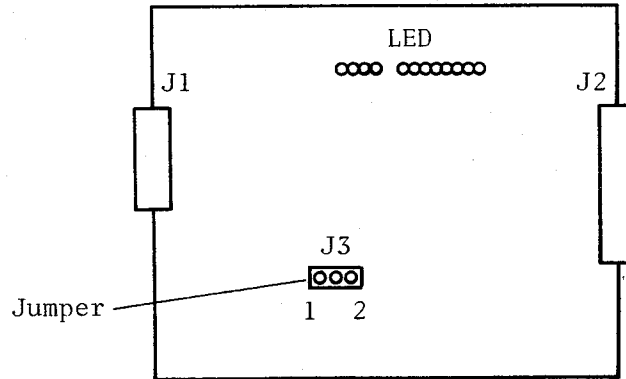


Figure 3. Jumper Location

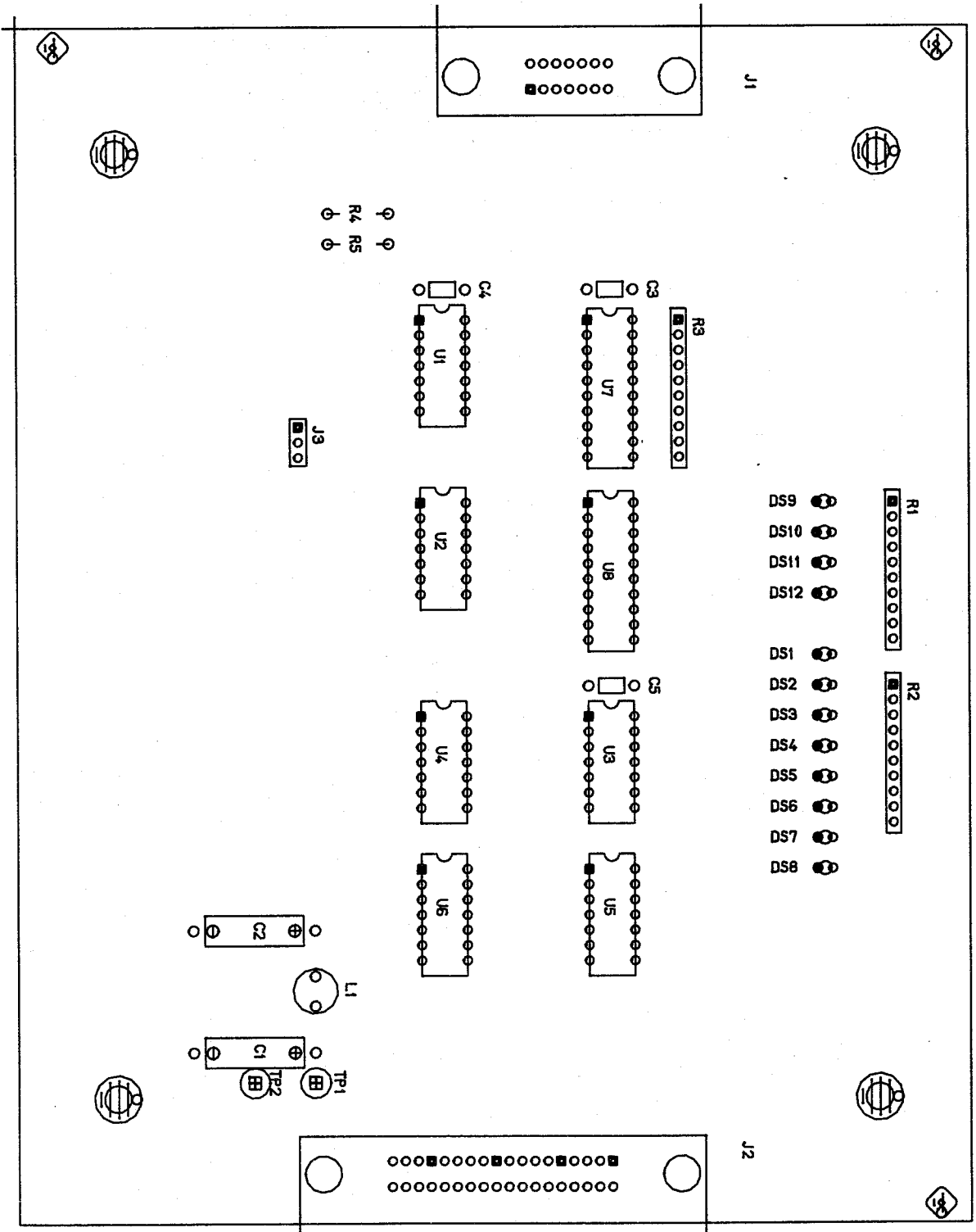


Figure 4. Component Location

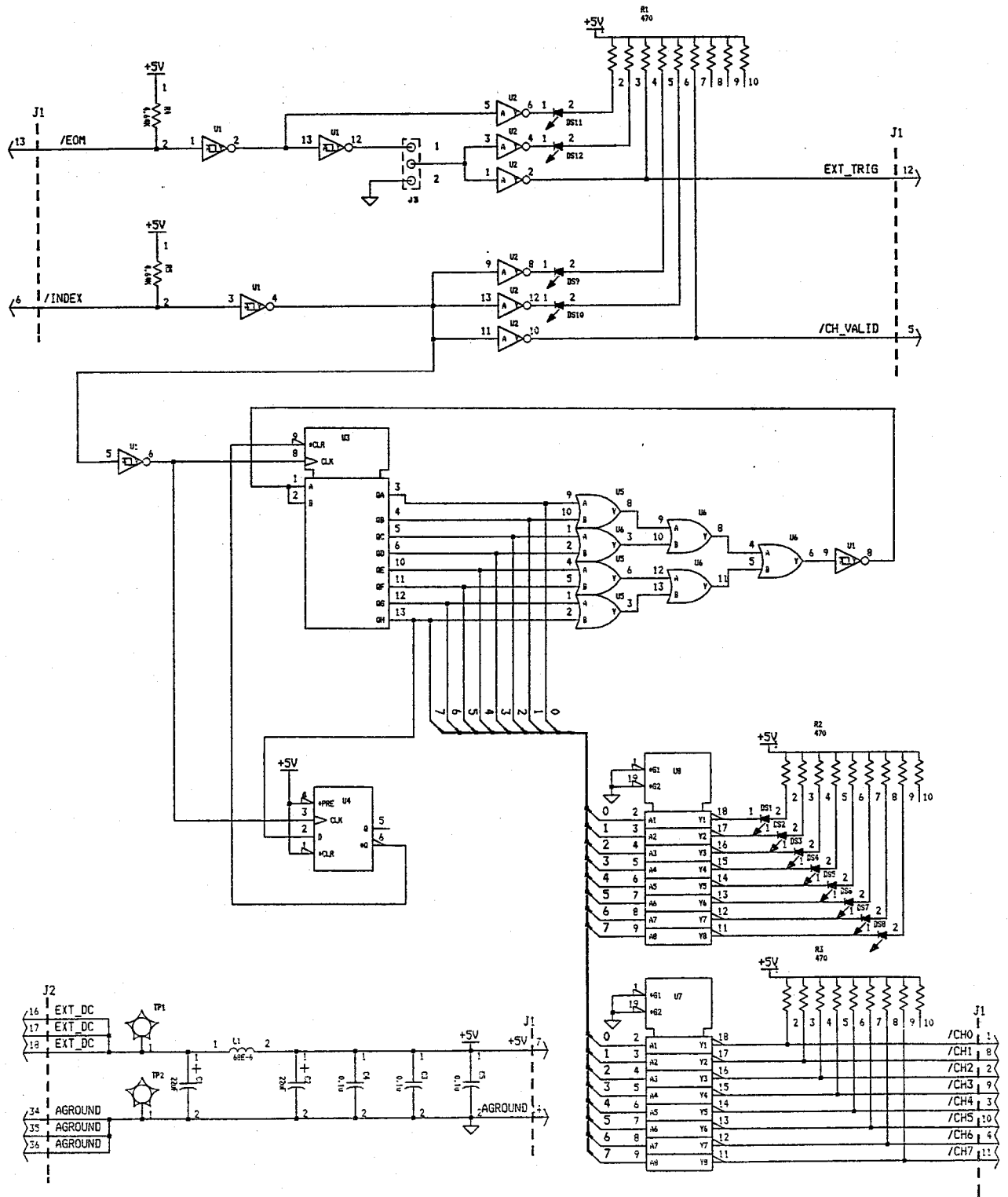


Figure 5. Schematic Diagram

Table 2. Replaceable Parts

Reference Designation	HP Part Number	Qty.	Description
	04278-66583	1	SCANNER SIMULATOR BOARD
C1	0180-0228	1	CAPACITOR FXD. 22 μ F 15V TA
C2	0180-0228	1	CAPACITOR FXD. 22 μ F 15V TA
C3	0160-6561	1	CAPACITOR FXD. 0.1 μ F \pm 20% 50VD
C4	0160-6561	1	CAPACITOR FXD. 0.1 μ F \pm 20% 50VD
DS1	1990-0486	1	LED-VSBL
DS2	1990-0486	1	LED-VSBL
DS3	1990-0486	1	LED-VSBL
DS4	1990-0486	1	LED-VSBL
DS5	1990-0486	1	LED-VSBL
DS6	1990-0486	1	LED-VSBL
DS7	1990-0486	1	LED-VSBL
DS8	1990-0486	1	LED-VSBL
DS9	1990-0486	1	LED-VSBL
DS10	1990-0486	1	LED-VSBL
DS11	1990-0486	1	LED-VSBL
DS12	1990-0486	1	LED-VSBL
J1		1	CONN 14-PIN FEMALE
J2	1252-2022	1	CONN 36-PIN FEMALE
J3	1251-4822	1	CONN 3-PIN MALE
L1	9140-1278	1	INDUCTOR 68 μ H 10%
R1	1810-0273	1	NETWORK-RES 470
R2	1810-0273	1	NETWORK-RES 470
R3	1810-0273	1	NETWORK-RES 470
R4	0698-3155	1	RES 4.64K 1%
R5	0698-3155	1	RES 4.64K 1%
TP1	0360-1653	1	TERM-SGL-PIN
TP2	0360-1653	1	TERM-SGL-PIN
U1	1820-1416	1	IC SN74LS14N
U2	1820-1200	1	IC MB 74LS05M
U3	1820-1433	1	IC SN74LS164N
U4	1820-1112	1	IC MB74LS74AM
U5	1820-1208	1	IC 74LS32N
U6	1820-1208	1	IC 74LS32N
U7	1820-2710	1	SN 74LS540N
U8	1820-2710	1	SN 74LS540N
W1	1258-0141	1	JUMPER-REM
	0403-0004	1	BUMPER FOOT-SCREW
	2190-0586	1	WASHER
	0535-0043	1	NUT
	0515-0983	1	SCREW M4
	04278-61651	1	CABLE ASSEMBLY 14-PIN

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