

## PERFORMANCE SUMMARY/DESCRIPTION

### PERFORMANCE SUMMARY AND DESCRIPTION

The Model 3585 is a high-performance, easy-to-use spectrum analyzer, covering the 20 Hz to 40.1 MHz frequency range. It can be used as a stand-alone bench instrument for signal-analysis and network-analysis applications; or, through its HP-IB interface, it can be linked to a computing controller and up to thirteen other HP-IB instruments to form a powerful automatic measurement system.\*

#### 3585 PERFORMANCE SUMMARY

##### FREQUENCY:

**Measurement Range:**

20 Hz to 40.1 MHz

**Displayed Range:**

0 Hz to 40.1 MHz full span

**Resolution:**

3 dB bandwidths of 3 Hz to 30 kHz in a 1, 3, 10 sequence

**Accuracy****Manual Frequency:**

$\pm 0.1 \text{ Hz} \pm 1 \times 10^{-7}/\text{mo.}$

**Marker:**

Normal  $\pm 0.2\%$  of Frequency Span  
 $\pm$  Resolution Bandwidth

Counter  $\pm 0.3 \text{ Hz} \pm 1 \times 10^{-7}/\text{mo.}$

##### AMPLITUDE:

**Measurement Range:**

-137 dBm to +30 dBm (50 $\Omega$  or 75 $\Omega$ )

**Displayed Range:**

10, 5, 2, 1 dB/DIV over a 10 division scale

**Dynamic Range:**

Harmonic distortion and third order inter-modulation distortion > 80 dB below signal  $\leq$  to the Range Setting..

**Average Noise Level:**

< -137 dBm in the 3 Hz Resolution Bandwidth

**Accuracy:**

Best achievable accuracy over the measurement range is  $\pm 0.4 \text{ dB}$  to  $\pm 1.3 \text{ dB}$  depending on the level.

##### SWEEP:

**Time:**

0.2 sec. to 59,652 hrs.

##### INPUT:

**Signal Inputs:**

Terminated 50/75 $\Omega$ ; return loss > 26 dB

High-Impedance 1 M $\Omega$ ;  $\pm 3\%$  shunted by < 30 pf

**Max. Input Level:**

50/75 $\Omega$ ; +30 dBm (1 watt)

1 M $\Omega$ ; 42 V Peak

##### OUTPUTS:

**Tracking Generator:**

0 dBm to -11 dBm (50 ohms)

**Display:**

X, Y, and Z outputs for auxiliary CRT display

##### INSTRUMENT STATE AND TRACE MEMORY STORAGE:

As many as ten user-defined instrument states may be saved in nonvolatile memory and recalled for later use.

As many as ten traces may be stored in nonvolatile memory and recalled for later use.

##### REMOTE OPERATION:

All analyzer control settings (with the exception of line, tracking generator amplitude and display) can be programmed via the Hewlett-Packard Interface Bus (HP-IB).\*

\*Hewlett-Packard Interface Bus (HP-IB) is -hp-'s implementation of IEEE Standard 488-1975 and identical ANSI Standard MC1.1. "Digital Interface for Programmable Instrumentation". HP-IB operation is described in Section III, Part 2.

1-18. The 3585 keyboard controls are completely HP-IB programmable. In addition, commands are available to output information such as: active or stored keyboard settings; instrument status; A or B trace in marker amplitudes or normalized binary data; marker amplitude and frequency and CRT alphanumerics. A 50-character line of annotation or six 50-character lines of instructional messages can be displayed on the 3585 using the HP-IB. Finally, the keyboard may be configured as a limited data input terminal, with each key having a unique, numeric code. When coupled with the instructional message capability, this can provide a calculator based system where operator decisions can be entered on the 3585 keyboard. When used in this manner, the operator is not required to understand the calculator language, only answer the questions on the 3585 display.

### 1-19. OPTIONS.

1-20. The following options are available for use with the Model 3585:

Option No.	Description (see Figure 2-2)	Part Number
907	Front handle kit	5062-3991
908	Rack mounting kit	5062-3979
909	Front handle and rack mounting kit	5062-3985
910	Additional Operating Manual and Service Manual	03585-90017 03585-90016

### 1.21. ACCESSORIES AVAILABLE.

1-22. The following is a list of accessories available for the 3585B:

Item	Quantity	HP Part Number
Accessory Kit	1 each	03585-84401
Includes the following:		
Cable Assembly Extender	5 each	03585-61601
Cable Assembly Adapter	1 each	03585-61616
Jack to Jack Adapter	3 each	1250-0669
PC Extender Boards:		
43-pin	1 each	03585-66591
36-pin	1 each	03585-66590
18-pin	1 each	03585-66592
15-pin	1 each	03585-66595
15-pin	1 each	03585-66596
10-pin	1 each	03585-66593
6-pin	1 each	03585-66594

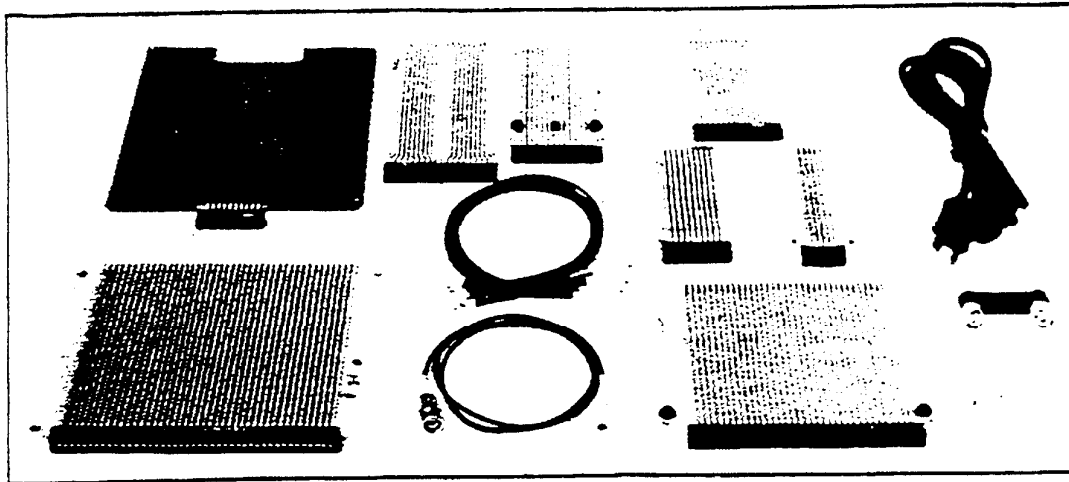


Figure 1-1. Accessory Kit

### 1-23. ACCESSORIES AVAILABLE (con't).

1-24. The following is a list of accessories available for use with the Model 3585.

#### a. Input Probes.

1. 1120A 1:1 active probe provides  $100\text{ k}\Omega$  shunted by 3 pf.
2. 10021A 1:1 passive probe for  $50\ \Omega$  or  $1\text{ M}\Omega$  shunted by 70 pf.
3. 10040A 10:1 passive probe provides  $1\text{ M}\Omega$  shunted by 9 pf.

#### b. Balancing Transformers.

1. 11473A  $75\ \Omega$  to  $600\ \Omega$  WECO 310.
2. 11473B  $75\ \Omega$  to  $600\ \Omega$  Siemens 9 REL STP-6AC.
3. 11474A  $75\ \Omega$  WECO 241.
4. 11475A  $75\ \Omega$  to  $150\ \Omega$  Siemens 9 REL STP-6AC.
5. 11476A  $75\ \Omega$  to  $124\ \Omega$  WECO 408A.

#### c. Preamplifiers.

1. 461A 20 dB or 40 dB gain 1 kHz to 150 MHz.
2. 465A 20 dB or 40 dB gain 5 Hz to 1 MHz.

#### d. VHF Switch.

1. 59307A provides one pair of single throw 4-pole switches.