

Manual Supplement

Manual Title:	5500A Service	Supplement Issue:	3
Part Number:	105798	Issue Date:	4/01
Print Date:	August 1995	Page Count:	3
Revision/Date:	3, 7/99		

This supplement contains information necessary to ensure the accuracy of the above manual. Enter the corrections in the manual if either one of the following conditions exist:

1. The revision letter stamped on the indicated PCA is equal to or higher than that given with each change.
2. No revision letter is indicated at the beginning of the change.

Change #1

On page 6-9, replace Table 6-4 with the following:

Table 6-4. Time Marker Specifications

Time Marker into 50 Ω	5 s to 50 ms	20 ms to 100 ns	50 ns to 20 ns	10 ns	5 ns to 2 ns
1-Year Absolute Uncertainty at Cardinal Points, $t_{cal} \pm 5^\circ \text{C}$ [3]	$\pm(25 + t * 1000)$ ppm [1]	± 2.5 ppm	± 2.5 ppm	± 2.5 ppm	± 2.5 ppm
Wave Shape	spike or square	spike, square, or 20%-pulse	spike or square	square or sine	sine
Typical Output Level	> 1 V p-p [2]	> 1 V p-p [2]	> 1 V p-p [2]	> 1 V p-p [2]	> 1 V p-p
Typical Jitter (rms)	<10 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm
Sequence (cardinal points)	5-2-1 from 5 s to 2 ns (e.g., 500 ms, 200 ms, 100 ms)				
Adjustment Range	At least $\pm 10\%$ around each cardinal points.				
Amplitude Resolution	4 digits				
[1] t is the time in seconds. Examples: At 5 s the uncertainty is 5,025 ppm; At 50 ms the uncertainty is 75 ppm.					
[2] Typical rise time of square wave and 20%-pulse (20% duty cycle pulse) is < 1.5 ns.					
[3] Away from the cardinal points, add ± 50 ppm to uncertainty.					

On page 6-51, replace Table 6-40 with the following:

Table 6-40. Time Marker Verification

Calibrator Mainframe Period	PM 6680 Settings		PM 6680 Reading (Frequency)	1	Tolerance
	Channel	Filter		PM 6680 Reading (Period)	
4.979 s	A	On			24.91E-3 s
2.002 s	A	On			4.06E-3 s
50.0 ms	A	Off			3.75E-6 s
20.0 ms	A	Off			50E-9 s
10.0 ms	A	Off			25E-09 s
50.0 us	A	Off			125E-12 s
20.0 us	A	Off			50E-12 s
10.0 us	A	Off			25E-12 s
50.0 ns	A	Off			125E-15 s
20.0 ns	A	Off			50E-15 s
10.0 ns	A	Off			25E-15 s
5.00 ns	A	Off			12.5E-15 s
2.00 ns	C	Off			5E-15 s

On page 6-71, replace the table in section 6-89 with the following:

Time Marker into 50 Ω	5s to 100 μ s	50 μ s to 2 μ s	1 μ s to 20 ns	10 ns to 2 ns
1-Year Absolute Uncertainty, tcal \pm 5° C [3]	$\pm(25 + t*1000)$ ppm [1]	$\pm(25 + t*15,000)$ ppm [1]	± 25 ppm	± 25 ppm
Wave Shape	pulsed sawtooth	pulsed sawtooth	pulsed sawtooth	sine
Typical Output level	> 1 V pk	> 1 V pk	> 1 V pk	> 2 V p-p [2]
Sequence (cardinal points)	5-2-1 from 5 s to 2 ns (e.g., 500 ms, 200 ms, 100 ms)			
Adjustment Range	At least $\pm 10\%$ around each cardinal points.			
Resolution	4 digits			
[1] t is the time in seconds. Examples: At 5 s the uncertainty is 5,025 ppm; At 50 μ s the uncertainty is 25.75 ppm.				
[2] The 2 ns time marker is typically > 0.5 V p-p.				
[3] Away from the cardinal points, add ± 50 ppm to uncertainty.				

On page 108, replace the table in section 6-69 with the following:

Table 6-69. Time Marker Verification

Calibrator Mainframe Period	PM 6680 Settings		PM 6680 Reading (Frequency)	1	Tolerance
	Channel	Filter		PM 6680 Reading (Period)	
4.979 s	A	On			24.91E-3 s
2.002 s	A	On			4.06E-3 s
50.0 ms	A	Off			3.75E-6 s
20.0 ms	A	Off			900E-09 s
10.0 ms	A	Off			350E-09 s
50.0 us	A	Off			1.29E-9 s
20.0 us	A	Off			506E-12 s
10.0 us	A	Off			251.5E-12 s
1.0 us	A	Off			25.0E-12 s
50.0 ns	A	Off			1.25E-12 s
20.0 ns	A	Off			500E-15 s
10.0 ns	A	Off			250E-15 s
5.00 ns	A	Off			125E-15s
2.00 ns	C	Off			50E-15 s

Change #2

On page 6-21, step 4, replace the last sentence with:

If not, adjust R121 on A41. R121 is a square single turn pot and is marked on the board located near Q29.

Change #3 - W1013947

On page 5-8, Table 5-2, change the following part number,

From:	S7	KEYPAD, ELASTOMERIC	937250	1
To:	S7	KEYPAD, ELASTOMERIC	1586654	1

Change #4

On page 6-69, under **Other Edge Characteristics**, change the Rise Time,

From: ≤ 1 ns

To: < 400 ps

Change Leading Edge Aberrations,

From: within 10 ns $< (2\% \text{ of output} + 2 \text{ mV})$

To: within 10 ns $< (3\% \text{ of output} + 2 \text{ mV})$

On page 6-95, Table 6-56, change the entire **Tolerance** column,

From: < 1000 ps

To: < 400 ps