

# Manual Supplement

Manual Title:	5520A Operator	Supplement Issue:	<b>6</b>
Part Number:	688739	Issue Date:	7/02
Print Date:	August 1998	Page Count:	4
Revision/Date:	5, 1/01		

---

---

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, W1018122

On page 8-61, under **8-79. Other Edge Characteristics**, change the Rise Time specification,

From:  $\leq 1$  ns

To:  $< 400$  ps

Change the Leading Edge Aberrations specifications,

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

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

On page 8-90, under **8-116. Edge Function Verifications**, make the following changes:

Change: **1-Year Spec. (ns)**

To: **1-Year Spec. (ps)**

Change the entire column of **1-Year Spec. (ps)**,

From: 1.00

To: 400

## Change #2

On page 1-15, add the following footnote to the 1.0 mV to 32.999 mV, 33 mV to 329.999 mV and 0.33 V to 3.29999 V ranges in the last row of the Max Distortion column:

1. Max Distortion for 100 kHz to 200 kHz. For 200 kHz to 500 kHz, the maximum distortion is 0.9% of output + floor as shown.

On page 1-28,

Change:

0.3 V to 3.3 V	500.1 kHz to 1 MHz	-8 dB at 1 MHz, typical	Two digits
	1.001 MHz to 2 MHz	-26 dB at 2 MHz, typical	

To:

0.3 V to 3.3 V	500.1 kHz to 1 MHz	-10 dB at 1 MHz, typical	Two digits
	1.001 MHz to 2 MHz	-31 dB at 2 MHz, typical	

## Change #3

On page 5-23, replace Table 5-1 with the following:

**Table 5-1. Operating State Transitions**

From	To	Front Panel	GPIB Message	Serial Command
Local	Remote		MLA (REN True)	REMOTE
	Local with Lockout		LLO	LOCKOUT
Remote	Local	Go to Local softkey	GTL or REN False	LOCAL
	Remote with Lockout		LLO	LOCKOUT
Local with Lockout	Local		REN False	LOCAL
	Remote with Lockout		MLA (REN True)	REMOTE
Remote with Lockout	Local		REN False	LOCAL
	Local with Lockout		GTL	

## Change #4

On page 1-12, replace the **DC Current Specifications** table with the following:

Range	Absolute Uncertainty, tcal $\pm 5^\circ\text{C}$ $\pm$ (ppm of output + $\mu\text{A}$ )		Resolution	Max Compliance Voltage V	Max Inductive Load mH
	90 days	1 year			
0 to 329.999 mA	120 + 0.02	150 + 0.02	1 nA	10	400
0 to 3.29999 mA	80 + 0.05	100 + 0.05	0.01 mA	10	
0 to 32.9999 mA	80 + 0.25	100 + 0.25	0.1 mA	7	
0 to 329.999 mA	80 + 2.5	100 + 2.5	1 mA	7	
0 to 1.09999 A	160 + 40	200 + 40	10 mA	6	
1.1 to 2.99999 A	300 + 40	380 + 40	10 mA	6	
0 to 10.9999 A (20 A Range)	380 + 500	500 + 500	100 mA	4	
11 to 20.5 A [1]	800 + 750 [2]	1000 + 750 [2]	100 mA	4	

[1] Duty Cycle: Currents < 11 A may be provided continuously. For currents > 11 A, see Figure 1-4. The current may be provided 60-T-1 minutes any 60 minute period where T is the temperature in  $^\circ\text{C}$  (room temperature is about  $23^\circ\text{C}$ ) and I is the output current in amperes. For example, 17 A, at  $23^\circ\text{C}$  could be provided for 60-17-23 = 20 minutes each hour.

[2] Floor specification is  $1500\ \mu\text{A}$  within 30 seconds of selecting operate. For operating times > 30 seconds, the floor specification is  $750\ \mu\text{A}$ .

On page 1-17, **AC Current (Sinewave) Specifications**, make the following changes:

Under Range, delete footnote [1] for 0.33 A to 1.09999 A, 1.1 A to 2.99999 A and 3A to 10.9999 A.

In the 11A to 20.5A row, add footnote [1] to all 6 entries in the 90 days and 1 year columns.

Replace footnote [1] with the following:

[1] Floor specification is 1000  $\mu$ A within 30 seconds of selecting operate. For operating times >30 seconds, the floor specification is 5000  $\mu$ A.

On page 1-18, make the following changes:

Under Range,

Change: 0.33 A to 2.99999 A [1]

To: 0.33 A to 2.99999 A

Replace:

3 A to 20.5 A [1] [2]	45 to 100 Hz	0.1 + 2000	0.12 + 2000	0.1 + 0	400 [3]
	100 to 440 Hz	0.8 + 5000	1.0 + 5000	0.5 + 0	

With:

3 A to 20.5 A [1]	10 Hz to 100 Hz	0.1 + 2000 [2]	0.12 + 2000 [2]	0.1 + 0	400 [4]
	100 Hz to 1 kHz	0.8 + 5000 [3]	1.0 + 5000 [3]	0.5 + 0	

Replace the entire footnote section with:

<p>[1] Duty Cycle: Currents &lt; 11 A may be provided continuously. For currents &gt;11 A, see Figure 1-4. The current may be provided 60-T-I minutes any 60 minute period where T is the temperature in °C (room temperature is about 23 °C) and I is the output current in amperes. For example, 17 A, at 23 °C could be provided for 60-17-23 = 20 minutes each hour.</p> <p>[2] For currents &gt;11 A, Floor specification is 4000 <math>\mu</math>A within 30 seconds of selecting operate. For operating times &gt;30 seconds, the floor specification is 2000 <math>\mu</math>A.</p> <p>[3] For currents &gt;11 A, Floor specification is 1000 <math>\mu</math>A within 30 seconds of selecting operate. For operating times &gt;30 seconds, the floor specification is 5000 <math>\mu</math>A.</p> <p>[4] Subject to compliance voltages limits.</p>
--

## Change #5

On page 7-7, in the last sentence of the paragraph change the *5520A Service Manual* part number:

From: 688747

To: 802303

On page 9-3, Table 9-1, change the following:

From: 699747 5520A Service Manual

To: 802303 5520A Service Manual

## Change #6

On page 1-10, under **1-13. General Specifications**, add the following:

<b>Absolute Uncertainty Definition</b>	The 5520A specifications include stability, temperature coefficient, linearity, line and load regulation, and the tractability of the external standards used for calibration. You do not need to add anything to determine the total specification of the 5520A for the temperature range indicated.
<b>Specification Confidence Interval</b>	99%

## Change #7

On page 1-29, section 1-31, in the first table, under Normal Channel (Single Output Mode), change the following and add footnote [3]:

From: 20 kHz to 100 kHz

To: 20 kHz to 100 kHz [3]

[3] Uncertainty for Truncated Sine outputs is typical over this frequency band.