

Appendix 7A

Manual Change Information

INTRODUCTION

This appendix contains information necessary to backdate the manual to conform with earlier pcb configurations. To identify the configuration of the pcb's used in your instrument, refer to the revision letter (marked in ink) on the component side of each pcb assembly. Table 7A-1 defines the assembly revision levels documented in this manual.

NEWER INSTRUMENTS

As changes and improvements are made to the instrument, they are identified by incrementing the revision letter marked on the affected pcb assembly. These changes are documented on a supplemental change/errata sheet which, when applicable, is inserted at the front of the manual.

OLDER INSTRUMENTS

To backdate this manual to conform with earlier assembly revision levels, perform the changes indicated in Table 7A-1.

CHANGES

The following design changes, unless otherwise noted, affect only Section 5 and Section 8 of this manual:

- Section 5, parts list and component location drawings
- Section 8, schematics and component location drawings

The material affected within these sections is easily determined by the type of change. See Table 7A-2.

Table 7A-1. Manual Status and Backdating Information

Ref Or Option No.	Assembly Name	Fluke Part No.	* To adapt manual to earlier rev configurations perform changes in descending order (by no.), ending with change under desired rev letter																		
			-	A	B	C	D	E	F	G	H	J	K	L	M	N	P				
A1	Main PCB Assembly	531640	●	4	6	15	X														
A2	Display PCB Assembly	502708	●	●	+	X															
A3	Controller PCB Assembly	502716	●	9	14	20	X														
A4	AC/DC Scaling PCB Assembly	504804	2	+	+	3	7	10	11	12	13	16	17	18	19	X					
A5	A/D And Ohms Converter PCB Assembly	526673	●	1	+	5	8	X													

* X = The PCB revision levels documented in this manual.
 ● = These revision letters were never used in the instrument.
 - = No revision letter on the PCB.
 + = Change did not affect manual.

Table 7A-2. Material Affected By a Change

TYPE OF CHANGE	MATERIAL AFFECTED = •		
	Parts List	Schematic	Component Location
Electrical Value	•	•	
Part Number	•		
Hardware	•		•
Size/Location (physical)			•
Addition/Deletion (electrical)	•	•	•

Change #1 13321
A/D and Ohms Converters PCB Assembly

Change R5
FROM: Res, dep car, 10k $\pm 5\%$, $\frac{1}{4}$ W/ 348839/ 89536/ 348839
TO: Res, dep car, 100k $\pm 5\%$, $\frac{1}{4}$ W/ 348920/ 89536/ 348920

Change #2 13322
AC/DC Scaling PCB Assembly

Change C35 and C36
FROM: Cap, cer, 15pF $\pm 2\%$, 100V/ 369074/ 89536/ 369074
TO: Cap, cer, 12pF $\pm 2\%$, 100V/ 376871/ 89536/ 376871

Change R37
FROM: Res, dep car, 200 $\pm 5\%$, $\frac{1}{4}$ W/ 441451/ 80031/ 441451
TO: Res, dep car, 2k $\pm 5\%$, $\frac{1}{4}$ W/ 441469/ 80031/ 441469

Change #3 13636
AC/DC Scaling PCB Assembly

Change R30
FROM: Res, mf, 511k $\pm 1\%$, $\frac{1}{8}$ W/ 292868/ 89536/ 292868
TO: Res, mf, 2k $\pm 1\%$, $\frac{1}{8}$ W/ 235226/ 89536/ 235226

Change R28
FROM: Res, mf, 3.83k $\pm 1\%$, $\frac{1}{8}$ W, 235143, 89536/ 235143
TO: Res, mf, 1.19k $\pm 1\%$, $\frac{1}{8}$ W, 349126/ 89536/ 349126

Change R29
FROM: Res, var, 1k $\pm 10\%$, $\frac{1}{2}$ W/ 285155/ 89536/ 285155
TO: Res, var, 500 $\pm 10\%$, $\frac{1}{2}$ W/ 291120/ 89536/ 291120

Change C17
FROM: Cap, cer, 33pF $\pm 2\%$, 100V, 354852/ 89536/ 354852
TO: Cap, cer, 22pF $\pm 5\%$, 100V, 448449/ 89536/ 448449

Change the part number of Q19
FROM: 386730/ 89536/ 386730
TO: 261578/ 89536/ 261578

Change R37
FROM: Res, dep car, 100 $\pm 5\%$, $\frac{1}{4}$ W/ 348771/ 89536/ 348771
TO: Res, dep car, 200 $\pm 5\%$, $\frac{1}{4}$ W/ 441451/ 89536/ 441451

Change R5
FROM: Res, dep car, 22k $\pm 5\%$, $\frac{1}{4}$ W, 348870/ 89536/ 348870
TO: Res, dep car, 10k $\pm 5\%$, $\frac{1}{4}$ W, 348839/ 89536/ 348839

Change R2, R3, R4, R33, R35, and R36
FROM: Res, dep car, 47k $\pm 5\%$, $\frac{1}{4}$ W/ 348896/ 89536/ 348896
TO: Res, dep car, 22k $\pm 5\%$, $\frac{1}{4}$ W/ 348870/ 89536/ 348870

Change R68
FROM: Res, dep car, 100k $\pm 5\%$, $\frac{1}{4}$ W/ 348920/ 89536/ 348920
TO: Res, dep car, 91k $\pm 5\%$, $\frac{1}{4}$ W/ 441709/ 89536/ 441709

Delete C43
Cap, cer, 22pF $\pm 5\%$, 100V/ 448449/ 89536/ 448449

Delete C44
Cap, cer, 0.68pF, 458011/ 89536/ 458011

Delete CR9
Diode, Si, low cap, 375907/ 89536/ 375907

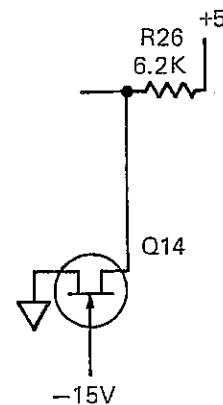
Change #4 13643
Main PCB Assembly

Add Q14
Transistor, JFET/ 343830/ 89536/ 343830

Delete C18
Cap, Ta, 22uF $\pm 20\%$, 15V/ 423012/ 89536/ 423012

Delete CR7
Diode, Si/ 203323/ 89536/ 203323

Change schematic to:



Change #5 13834
A/D and Ohms Converters PCB Assembly

Change C1
FROM: Cap, cer, .005 uF $\pm 20\%$, 50V/ 175232/ 89536/ 175232
TO: Cap, cer, .05 uF $\pm 20\%$, 50V/ 149161/ 89536/ 149161

Change R26
FROM: Res, dep car, 8.2k $\pm 5\%$, $\frac{1}{4}$ W/ 441675/ 89536/ 441675
TO: Res, dep car, 6.8k $\pm 5\%$, $\frac{1}{8}$ W/ 368761/ 89536/ 368761

Change #6 13835
Main PCB Assembly

Change R32, R33, R34, and R35
FROM: Res, dep car, 150k $\pm 5\%$, $\frac{1}{4}$ W/ 348938/ 89536/ 348938
TO: Res, dep car, 390k $\pm 5\%$, $\frac{1}{4}$ W/ 442475/ 89536/ 442475

Change #7 13899
AC/DC Scaling PCB Assembly

Change U17
FROM: IC, Xstr array, dual/ 504191/ 89536/ 504191
TO: IC, Xstr array, quad/ 445213/ 89536/ 445213

Change R68
FROM: Res, dep car, 120k $\pm 5\%$, $\frac{1}{4}$ W/ 441386/ 89536/ 441386
TO: Res, dep car, 100k $\pm 5\%$, $\frac{1}{4}$ W/ 348920/ 89536/ 348920

Delete U20
IC, Xstr array, dual/ 504191/ 89536/ 504191

Delete R66
Res, mf, 1k $\pm 1\%$, $\frac{1}{8}$ W/ 320309/ 89536/ 320309

Delete
Heatsink, xstr, U17 and U20/ 354993/ 89536/ 354993

Add R60
Res, var, 3 $\pm 25\%$, $\frac{1}{2}$ W/ 347963/ 89536/ 347963
Connect between U17-7 and U17-4/5.
Locate between R54 and R67.

Add R64

Res, dep car, $1 \pm 5\%$, $\frac{1}{4}W$ / 357665/ 89536/ 357665
 Connect between U17-10 and junction of R68/ U17-2.
 Locate between R50 and R68.

Change #8 13925

A/D and Ohms Converter PCB Assembly

Change R6 and R7

FROM: Res, mf, $10k \pm 1\%$, $\frac{1}{4}W$ / 168260/ 89536/ 168260
 TO: Res, mf, $20k \pm 1\%$, $\frac{1}{4}W$ / 291872/ 89536/ 291872

Change #9 13936

Controller PCB Assembly

Change U6

FROM: Res, network, 82/ 478859/ 89536/ 478859
 TO: Res, network, 51/ 501502/ 89536/ 501502

Change #10 13965

AC/DC Scaling PCB Assembly

Change R24

FROM: Res, dep car, $4.3k \pm 5\%$, $\frac{1}{4}W$ / 441576/ 89536/ 441576
 TO: Res, dep car, $6.8k \pm 5\%$, $\frac{1}{4}W$ / 368761/ 89536/ 368761

Change U19

FROM: IC, op amp, linear / 473777/ 89536/ 473777
 TO: IC, op amp, linear / 507947/ 89536/ 507947

Change #11 13970

AC/DC Scaling PCB Assembly

Change C21

FROM: Cap, cer, $2.2 pF \pm 2\%$, 100V/ 362731/ 89536/ 362731
 TO: Cap, cer, $4.7 pF \pm 2\%$, 100V/ 362772/ 89536/ 362772

Change #12 14385

AC/DC Scaling PCB Assembly

Change R75

FROM: Res, mf, $715 \pm 1\%$, $\frac{1}{4}W$ / 313080/ 89536/ 313080
 TO: Res, mf, $806 \pm 1\%$, $\frac{1}{4}W$ / 223552/ 89536/ 223552

Change #13 14397

AC/DC Scaling PCB Assembly

Add Q10

Xstr, JFET/ 343830/ 89536/ 343830
 Connect in parallel with Q11.
 Locate between U1 and R11.

Change Q3

FROM: Xstr, JFET/ 535039/ 89536/ 535039
 TO: Xstr, JFET/ 343830/ 89536/ 343830

Change Q8

FROM: Xstr, JFET/ 508697/ 89536/ 508697
 TO: Xstr, JFET/ 343830/ 89536/ 343830

Change Q11

FROM: Xstr, JFET/ 429977/ 89536/ 429977
 TO: Xstr, JFET/ 343830/ 89536/ 343830

Change R30

FROM: Res, mf, $4.99k \pm 1\%$, $\frac{1}{4}W$ / 168252/ 89536/ 168252
 TO: Res, mf, $5.11k \pm 1\%$, $\frac{1}{4}W$ / 294868/ 89536/ 294868

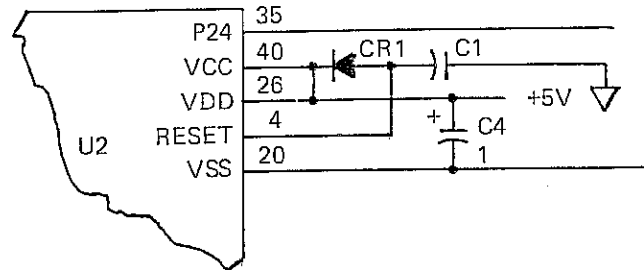
Change #14 14528

Controller PCB Assembly

Delete

C10/ Cap, cer, $.22 \mu F \pm 2\%$, 50V/ 519157/ 89536/ 519157
 Q1 / Xstr, NPN/ 218396/ 89536/ 218396
 R13/ Res, dep car, $2k \pm 5\%$, $\frac{1}{4}W$ / 441469/ 89536/ 441469
 R14/ Res, dep car, $220 \pm 5\%$, $\frac{1}{4}W$ / 342626/ 89536/ 342626

Change schematic to:



Change #15 14529

Main PCB Assembly

Change C8

FROM: Cap, elect, 1200 μF -10/+100%, 200V/ 500322/ 89536/ 500322
 TO: Cap, Ta, $150 \mu F \pm 20\%$, 20V/ 422576/ 89536/ 422576

Change C9

FROM: Cap, cer, $.22 \mu F \pm 20\%$, 50V/ 519157/ 89536/ 519157
 TO: Cap, Ta $150 \mu F \pm 20\%$, 20V/ 422576/ 89536/ 422576

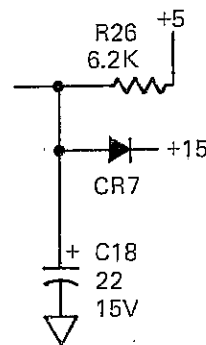
Change C18

FROM: Cap, cer, $.22 \mu F \pm 20\%$, 50V/ 519157/ 89536/ 519157
 TO: Cap, Ta $22 \mu F \pm 20\%$, 15V/ 423012/ 89536/ 423012

Delete

C14/ Cap, Ta, $2.2 \mu F \pm 20\%$, 20V/ 161927/ 89536/ 161927
 Q15/ Xstr, Si, NPN/ 218396/ 89536/ 218396
 R27/ Res, dep car, $2k \pm 5\%$, $\frac{1}{4}W$ / 441469/ 89536/ 441469
 R28/ Res, dep car, $220 \pm 5\%$, $\frac{1}{4}W$ / 342626/ 89536/ 342626

Change schematic to:



Change #16 14624

AC/DC Scaling PCB Assembly

Change C35 and C36

FROM: Cap, cer, $22 pF \pm 5\%$, 100V/ 448449/ 89536/ 448449

TO: Cap, cer, 15 pF $\pm 2\%$, 100V/ 369074/ 89536/ 369074
 Change #17 14663
 AC/DC Scaling PCB Assembly

Change R28
 FROM: Res, mf, 3.4k $\pm 1\%$, $\frac{1}{8}W$ / 260323/ 89536/ 260323
 TO: Res, mf, 3.83k $\pm 1\%$, $\frac{1}{8}W$ / 235143/ 89536/ 235143

Change R29
 FROM: Res, var, 2k $\pm 10\%$, $\frac{1}{2}W$ / 285163/ 89536/ 285163
 TO: Res, var, 1k $\pm 10\%$, $\frac{1}{2}W$ / 285155/ 89536/ 285155

Change #18 14872
 AC/DC Scaling PCB Assembly

Change C32
 FROM: Cap, mylar, .47 uF $\pm 10\%$, 100V/ 369124/ 89536/
 369124
 TO: Cap, mylar, .47 uF $\pm 10\%$, 100V/ 446807/ 89536/
 446807

Change C34
 FROM: Cap, poly, .22 uF $\pm 10\%$, 100V/ 614172/ 89536/ 614172
 TO: Cap, mylar, .22 uF $\pm 10\%$, 100V/ 436113/ 89536/
 436113

Change #19 14887
 AC/DC Scaling PCB Assembly

Add C24
 Cap, cer, .22 uF $\pm 20\%$, 50V/ 309849/ 89536/ 309849
 Connect between Pins 2 and 3 of U13.
 Locate between C25 and C26.

Change #20 15061
 Controller PCB Assembly

Change C4, C5, and C6
 FROM: Cap, cer, .22 uF $\pm 20\%$, 50V/ 519157/ 89536/ 519157
 TO: Cap, Ta 1 uF $\pm 20\%$, 35V/ 161919/ 89536/ 161919

Delete C11
 Cap, cer, .22 uF $\pm 20\%$, 50V/ 519157/ 89536/ 519157