

4 3 2 1

NOTES: UNLESS OTHERWISE SPECIFIED.

1 COMPONENT PREPARATION REQUIRES SAME SET-UP FOR ALL THE FOLLOWING COMPONENTS:

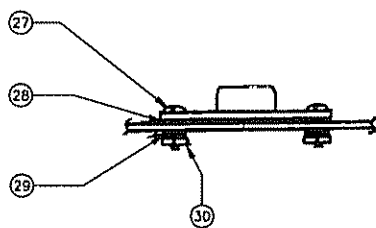
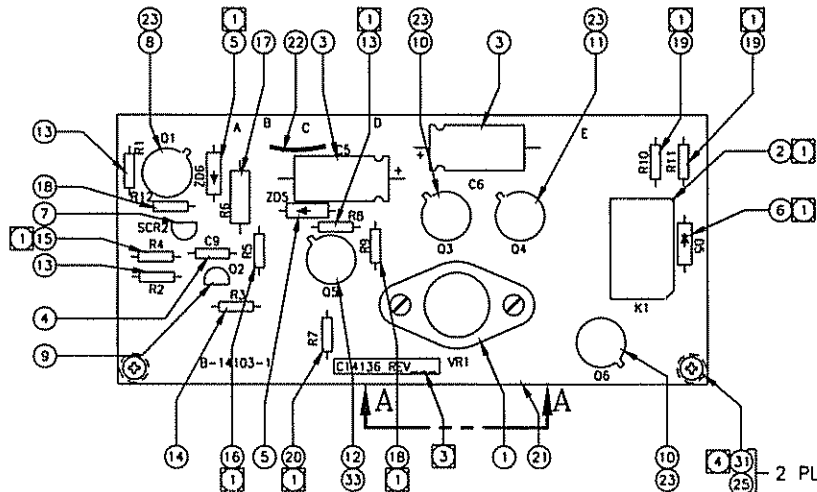
R1, R649, R228, R411, R213, R316
USE ZDS ON P.C. BOARD TO SET UP PREPARATION OF COMPONENTS: Z30, R312, S89

2 SEE DRAWING# A-14138 FOR INSTALLATION DIAGRAM

3 LABEL AND WRITE ASSEMBLY NUMBER WITH CURRENT REVISION

4 INSTALL ITEM 31 FROM FAR SIDE OF PCB

REVISIONS				
REV	DESCRIPTION	DATE	APP.	REV BY
12	INC. ECO 98-0578	1-7-99	AA	MV
13	INC. ECO 00-0035	2/11/00	AA	DC



VIEW A-A

ITEM	QTY	PART NO.	DESCRIPTION
31	2	-----	SCREW, 6-32 X .375 LG BIND HD.
30	2	-----	NUT, 4-40
29	2	-----	LOCKWASHER INTERNAL #4
28	2	-----	WASHER, FLAT, #4
27	2	-----	SCREW, BIND. HD., 4-40 x .38 LG
26			DELETED
25	2	A 32069	SPACER, 6-32 X .75 LG
24	REF	C14136-RS	ROUTE SHEET
23	5	P 109	PAD, TRANSISTOR
22	1	-----	STRAP
21	1	B-14103	P.C. BOARD
20	1	R 312	RESISTOR, METAL FILM, 20K, 1% R7
19	2	R 411	RESISTOR, COMP., 4.99K, 1% R10,R11
18	2	R 228	RESISTOR, COMP., 3K, .25W, 5% R9,R12
17	1	R 266	RESISTOR, COMP., 2.7K, .50W, 5% R6
16	1	R 421	RESISTOR, COMP., 4.7K, .25W, 5% R5
15	1	R 316	RESISTOR, COMP., 2M Ω , .25W, 5% R4
14	1	R 351	RESISTOR, COMP., 10K, .25W, 5% R3
13	3	R 649	RESISTOR, COMP., 5.1K, .25W, 5% R1,R2,R8
12	1	T 324	TRANSISTOR, 2N5784 Q5
11	1	T 214	TRANSISTOR, 2N1893 Q4
10	2	T 231	TRANSISTOR, 2N4036 Q3,Q6
9	1	T 385	TRANSISTOR, 2N6028 Q2
8	1	T 342	TRANSISTOR, 2N5781 Q1
7	1	T 384	SCR, 2N5061 SCR2
6	1	S 89	DIODE, IN4004 D5
5	2	Z 30	ZENER DIODE, IN5249B ZDS,ZD6
4	1	C 383	CAPACITOR, 1 μ F, 150V C9
3	2	C 199	CAPACITOR, 47 μ F, 25V C5,C6
2	1	R 672	RELAY, MAGNECRAFT W171DIP-5 K1
1	1	R 566	VOLTAGE REGULATOR, RC4195TK VR1

BILL OF MATERIAL

DO NOT SCALE DWG
 TOLERANCE UNLESS OTHERWISE SPECIFIED: ANGULAR $\pm 1/2^\circ$
 LINEAR $\begin{cases} X & = .1 \\ XX & = .02 \\ XXX & = 0.010 \end{cases}$

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TELETYPE ELECTRONIC TECHNOLOGIES
 Analytical Instruments
 4000 Industry Center
 CITY OF INDUSTRY, CALIFORNIA 91744

S/	SIGNATURES	DATE	TITLE	SCALE
I/	DWT: <i>Manly</i>	9/23/98		---
N/	CHK:			SM
P/	APPR:			SHEET
O/	ENGR:			1 OF 1
F/	S.D.			REV
REFERENCE	CAD ID: C1413613			

MATL: - LISTED -
 DWG NO: **C-14136**
 REV: **13**

4 3 2 1

 **TELEDYNE**
ELECTRONIC TECHNOLOGIES
Analytical Instruments
 An Allegheny Teledyne Company
 CITY OF INDUSTRY, CALIFORNIA 91748

CAD ID: C8932-39

PARTS LIST

DRAWING NUMBER

C-8932

PAGE

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of 2

MODEL/SERIES: 310,315,316,317,318 SERIES

INC. ECO #97-0133
38) 4/23/97APP
S.B.

DRAWING TITLE: P.C. BOARD ASSEMBLY

INC. ECO 98-0370
39) 4/23/97

S.B.

ITEM No.	QUANTITY								T.A.I. PART NUMBER	SCHEMATIC REFERENCE	DESCRIPTION
	A	B	C	D	E	F	G	H			
1.	1								C-13222		P.C. BOARD I.D. DETAIL
2.	1								A-13401		PLUG-IN AMPLIFIER P.C.B. ASSEMBLY
3.	1								A 19	A2	I.C. 741CE
4.	4								C 212	C1,C2,C3,C4	CAPACITOR, 220 UF, 40V
5.	1								C 199	C7	CAPACITOR, 47UF, 25V
6.	1								C 242	C8	CAPACITOR, SEI, 4UF, 100V, ±10%
7.	4								S 89	D1,D2,D3,D4	DIODE, IN4004
8.	2								R 268	R27,R28	RESISTOR, 8-2K, W COMP.
9.	1								Z 29	ZD3	ZENER DIODE, #IN821, IR
10.	2								R 570	R1,R2	RESISTOR, 20 OHM, 1/2W
11.	1								---		GROUND LUG
12.	1								SEE NOTE 3	R15	RESISTOR
13.	1								SEE NOTE 3	R16	RESISTOR
14.	1								R 406	R17	RESISTOR, M.F. 7.5K, 1/8W, 1%
15.	1								R 445	R19	RESISTOR, M.F., 121K, 1/8W, 1%
16.	1								R 718	R21	RESISTOR, M.F., 5.62K, 1/8W, 1%


TELEDYNE
 ELECTRONIC TECHNOLOGIES
Analytical Instruments
 An Allegheny Teledyne Company
 CITY OF INDUSTRY, CALIFORNIA 91748

DRAWING NUMBER

C-8932

REV.

39

PAGE

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PARTS LIST

ITEM No.	QUANTITY								T A I. PART NUMBER	SCHEMATIC REFERENCE	DESCRIPTION
	A	B	C	D	E	F	G	H			
17.	1								R 310	R 23	RESISTOR, M.F., 1K, 1/8W, 1%
18.	1								P 107	R 18	TRIM POT, 5K
19.	1								P 100	R 26	TRIM POT, 10K
20.	1								---	---	FLATWASHER, #4
21.	1								---	---	FIBERWASHER, #4
22.	1								T 261	Q 12	TRANSISTOR, U1897E
23.	1								S 224	---	SOCKET, AMPLIFIER, 8 PINS
24.	1								P 214	---	PAD, TRANSISTOR, 3 PIN
25.	1								---	---	SCREW, #4-40 x 3/8 LG
26.	1								---	---	NUT, #4-40
27.	4								---	---	FIBER WASHER #6
28.	4								---	---	FIBER WASHER #4
29.	REF								C8932-RS	---	ROUTE SHEET
30.											
31.											
32.											
33.											
34.											
35.											
36.											