



505½ CENTINELA AVE., INGLEWOOD, CALIFORNIA 90302 (213) 674-3021

ES 1416

Operation & Maintenance Manual

The ES 1416 is identical to an ES 570 except the transformer is supplied external to the case. 6.3VAc must be applied via the transformer secondary leads to pins 1 and 2 on the rear connector. All other specifications of the ES 570 apply.



142 SIERRA ST., EL SEGUNDO, CALIFORNIA 90245 (213) 322-2136

Operation and Maintenance Manual

ES 570

Operating Instructions

The ES-570 is a four digit, Sixty or One Hundred minute Timer, selectable on the rear connector.

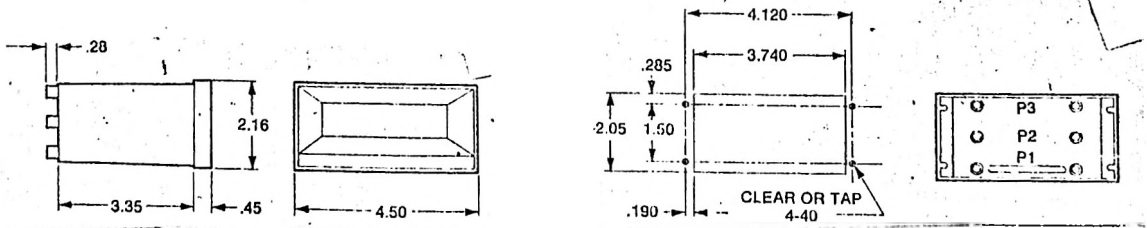
Each unit has three controls (Start, Stop, and Reset) accessible on the rear mounted connector. In addition to the controls, the rear mounted connector can optionally have BCD outputs. For the DC option, +5 volts DC must be supplied to this connector. The timer will run continuously unless stopped. If stopped it will hold the time displayed when it was stopped. Start control will initiate timing from the time on the display. The reset control returns the display to 00:00. The timer may be reset while it is stopped or while it is running. If it is reset while running it will reset to 00:00 and continue to run. All control inputs require a momentary closure to ground to operate. When power is first applied, the display may come on at a random time. It is recommended that after first application of power or after power loss the timer be reset to clear all counters and begin normal operation.

Specifications

Mechanical - Molded Plastic Case 2" High x 3.7" Wide x 4.1" Deep
(excluding Bezel).

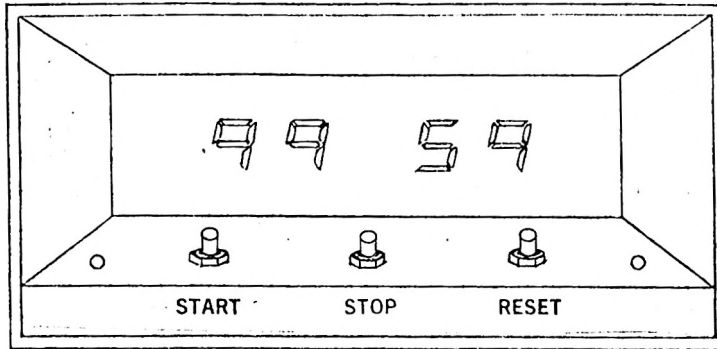
Electrical - Input voltage 117VAc 60 Hz; Power Requirement 4W Max.
+5VDC optional.

Mounting Dimensions

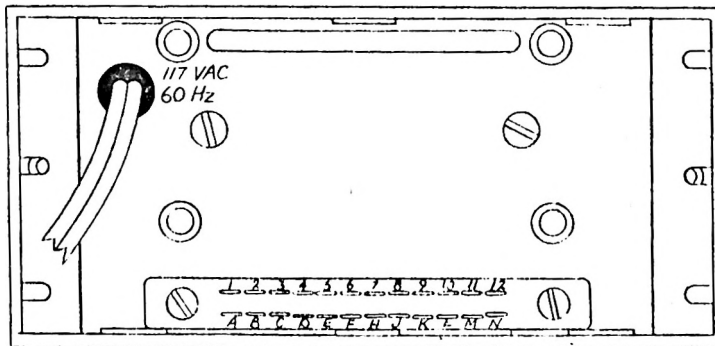


NOTE: Bezel is a snap on type for easy removal.

FRONT VIEW

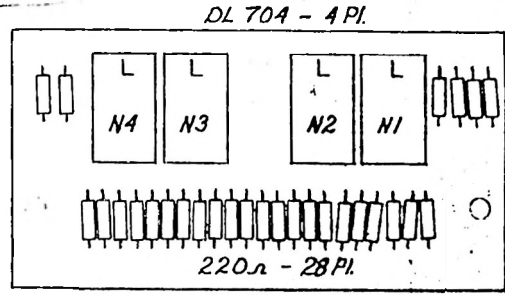
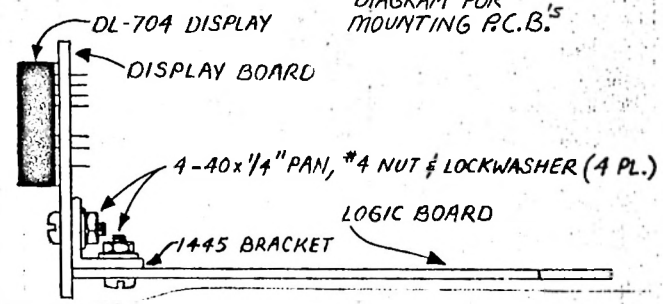
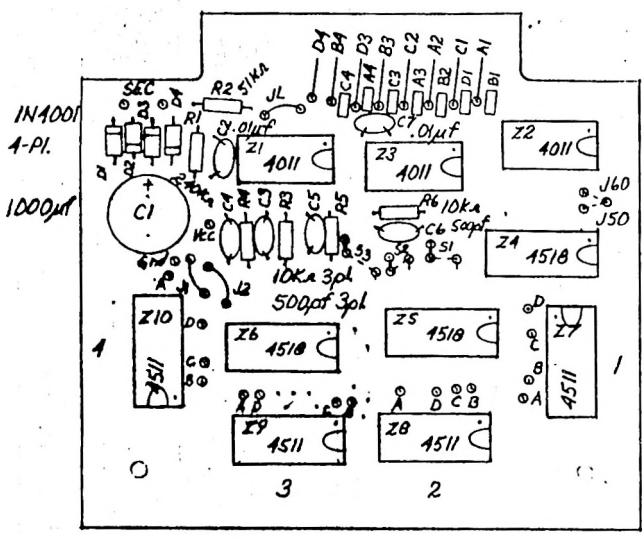


REAR VIEW



<u>Pin</u>	<u>Function</u>	<u>Pin</u>	<u>Function</u>
1	B1	A	A1
2	D1	B	C1
3	B2	C	A2
4	A3	D	C2
5	C3	E	B3
6	A4	F	D3
7	C4	H	B4
8	N/C	J	D4
9	Reset	K	Short for 60 Min.
10	Start	L	N/C
11	Stop	M	Ground
12	Vcc (DC input only)	N	

TE: All controls are activated by a momentary switch closure between the appropriate control input and ground.



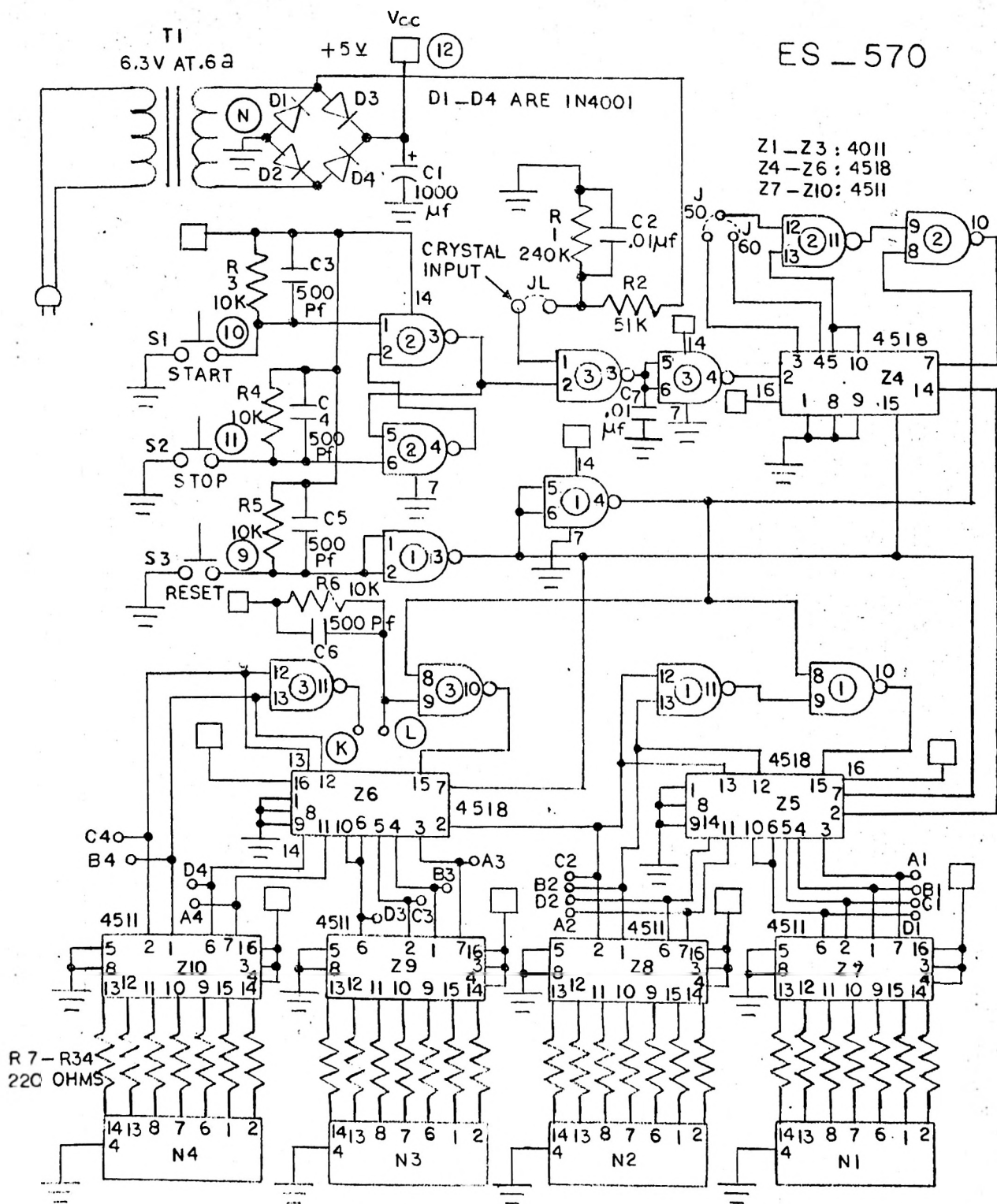
ES 570 Parts List

<u>Qty</u>	<u>Designation</u>	<u>Description</u>	<u>P/N</u>
3	Z1, Z2, Z3	IC	CD4011
3	Z4, Z5, Z6	IC	CD4518
4	Z7 - Z10	IC	CD4511
4	D1 - D4	Diodes	1N4001
1	R1	Resistor	240K 1/4W 10%
1	R2	Resistor	51K 1/4W 10%
4	R3 - R6	Resistor	10K 1/4W 10%
28	R7 - R34	Resistor	220 Ohm 1/4W 10%
1	C1	Capacitor	1000uf Min 10V Min.
2	C2 & C7	Capacitor	.01uf ±20% 25V Min.
4	C3 - C6	Capacitor	500pf 20% 25V Min.
4	N1 - N4	LED	NSN74R or Equiv.
1	T1	Transformer	P-6465 or Equiv.
1		6.3V @ 600MA	
1		Connector	Cinch 50-24-A-30 or Equiv.
1		Molded Plastic Case & Bezel	
1		PCB	ES 570
1		Line Cord	2 Wire 6'
2		Wire Caps	71B
2		"L" Bracket	No. 1445

Optional Parts

3	S1, S2, S3	Momentary Switches
1	ES 202	Crystal Oscillator Board

ES - 570



Z1 - Z3 : 4011
 Z4 - Z6 : 4518
 Z7 - Z10 : 4511

R 7 - R34
 22C OHMS

○ INDICATES CONNECTOR PIN

N1 - N4 : NSN 74