

DIONICS INC.

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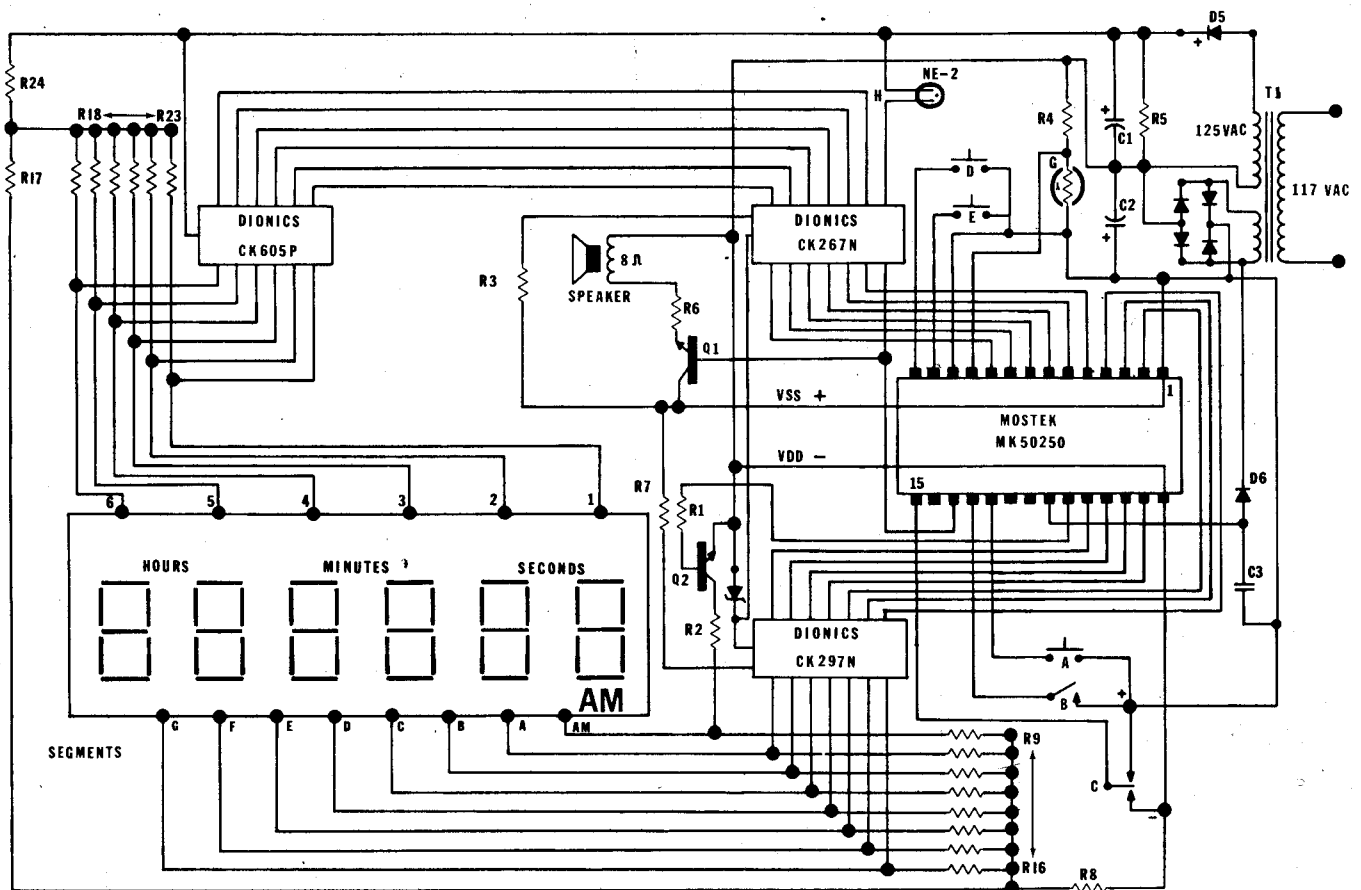
APPLICATION NOTE 6DAC-M

6 DIGIT ALARM CLOCK INTERFACE FOR GAS DISCHARGE DISPLAYS

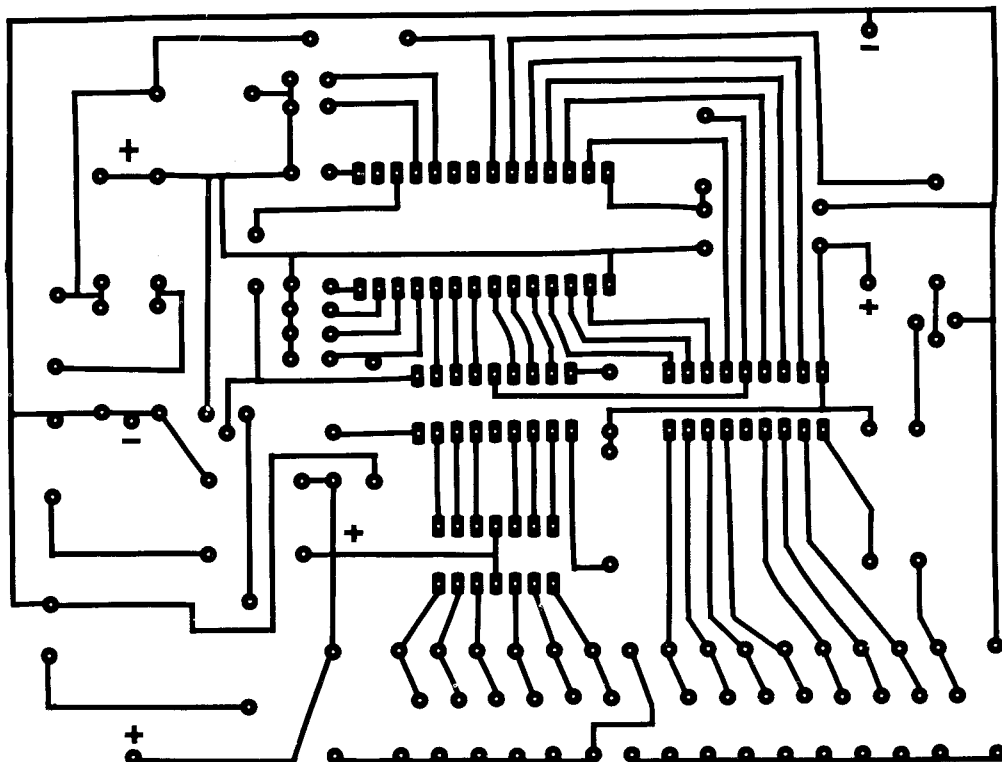
SNOOZE FEATURE – AM-INDICATION 24 HOUR ALARM – AUTOMATIC INTENSITY CONTROL

The circuit shown below is an interface between the Mostek 50250 six-digit alarm clock chip and gas discharge displays such as the Burroughs CD-60733-CM or Beckman Instrument SP-151. Utilizing Dionics' high voltage monolithic display driver circuits, the design is sufficient to interface with any gas discharge display which is operable from a +190 volt supply, drawing up to 1.0 ma of current per segment. Resistors R2 and R7 control intensity and may be varied according to individual display needs. A spare line in the level shifter circuit (CK 267N) is used to drive a NE-2 lamp which flashes in unison with the alarm audio output. Photocell (G) provides automatic intensity control of the display, brightening it at high ambient light levels and dimming it in the dark.

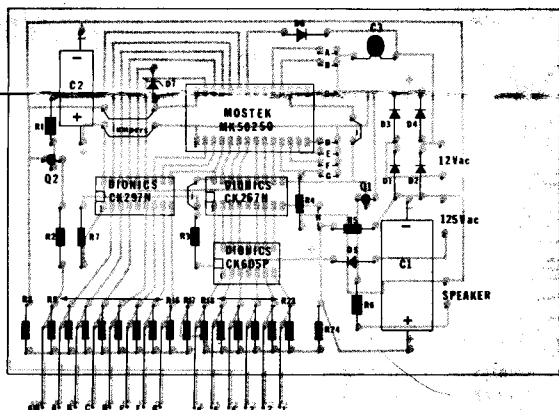
CIRCUIT SCHEMATIC



FULL SIZE P.C. LAYOUT



COMPONENT LAYOUT



PARTS LIST

- C 1 - 10 UFD @ 250 v Electrolytic Capacitor
- C 2 - 220 UFD @ 35 v Electrolytic Capacitor
- C 3 - .005 UFD Disc Capacitor
- R 1, R 3, R 7 - 1,000 ohm 1/4 watt Resistor
- R 2 - 33,000 ohm 1/4 watt Resistor
- R 4 - 47,000 ohm 1/4 watt Resistor
- R 5 - 100,000 ohm 1/4 watt Resistor
- R 6 - 220 ohm 1/4 watt Resistor
- R 8 - 120,000 ohm 1/4 watt Resistor
- R 9, R 16 - 920,000 1/4 watt Resistor
- R 17 - 100,000 ohm 1/4 watt Resistor
- R 18, R 23 - 560,000 ohm 1/4 watt Resistor
- R 24 - 190,000 ohm 1/4 watt Resistor
- D 1, D 4 - IN4001 Diode or Equiv.
- D 5 - IN4004 Diode or Equiv.
- D 6 - IN914 Diode or Equiv.
- D 7 - 9.1 v Zener IN4739A or Equiv.
- Q 1 - DTN 209 NPN Transistor
- Q 2 - DTN 205 NPN Transistor
- Mostek MK 50250 Clock Circuit
- Dionics CK 297N Segment Driver Circuit
- Dionics CK 267N Level Shifter Circuit
- Dionics CK 605P Anode Driver Circuit
- T 1 - Power Transformer Stancor P8 624

Represented In Your Area By:

P.C. BOARD CONTROL POINT TERMINALS

- A. N.O. Momentary Contact SPST Pushbutton Switch - Snooze Alarm
- B. SPST Minitoggle Switch - Alarm Enable
- C. SPDT Minitoggle Switch - Alarm Set / Real Time
- D. N.O. Momentary Contact SPST Pushbutton Switch - Hours Set
- E. N.O. Momentary Contact SPST Pushbutton Switch - Tens Set
- F. Jumper or SPST Minitoggle Switch - Display Enable
- G. Photoresistor - Clairex CL 904L - Auto-Dim Control
- H. NE-2 - Alarm Indicator Lamp



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Printed in USA