

#### **ELECTRICAL** Audio Alarm Alarm Out Keep Alive .00004A Battery 5 9. Ground to start Flight Time 4 Remote "Control" switch 28VDC activates 8 3 4V to 28V Starts Flight Time Serial Data Output /optional 6 28 Volts, .2A Serial Clock Output /optional GND ÷

#### **SPECIFICATIONS**

- GMT: full 6 digit, hours/ minutes/ seconds
- Local Time: 12 or 24 hour format, 4 digits
- Flight Time: Records in 99:59 standard, 99.99 option.
- Flight Time Alarm: Records Full set range of flight time.
- Four Digit Elapsed Time: count up starts minutes, seconds then hours and minutes up to 99:59
- Elapsed Time count down: settable from one second to 59 minutes 59 seconds

- Elapsed Time Alarm: activates at zero when counting down and flashes display.
- N.V.G. compatible
- Keep Alive Current: .00004 Amps.
- Battery: type AA alkaline
- Input Current: 500ma max
- Input Voltage: 28 volts D.C.
- Weight: 10 oz.
- Warranty: one year

# NVG DIGITAL CLOCK Full six-digit GMT clock Enhanced

Universal & Local Time Flight Time - Flight Time Alarm Elapsed Time - Count Up / Count Down Alarm

M880A

M880A



BG7B

**GREEN A** 

**NVG Compatible Display** 

#### **FEATURES**

•Two-button control system is natural and error-free. Setting operations are identical for all features US Patent #4,486,077

Control switch has remote capability

Incandescent displays

•N.V.G. filter

•Manual dimming of the display

•Full 6 digit display selectable GMT/Local

•Time/Elapsed Time

•Flight Time - Flight time alarm

•Elapsed Time is count up or down

•A 4 Megahertz crystal precision time reference

•Keep alive battery with 2 year life



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## M880A DIGITAL CLOCK

#### **CLOCK OPERATION**

#### **Normal Operation**

The Select, SEL button selects what is to be displayed in the four digit window and the Control, CTL, button controls what is being displayed. Pressing select sequentially selects GMT, Local Time, Flight Time, Elapsed Time, and back to GMT. The CTL button starts and resets Elapsed Time when momentarily pushed. Normal operation of the 850 cannot accidentally reset time.

#### Setting GMT

Select GMT for display in the four digit window with the SEL button. Simultaneously press both the SEL and CTL buttons to enter the set mode. The tens of hours digit will start flashing. The CTL button has full control of the flashing digit and each button push increments the digit. Once the tens of hour is set, the SEL button selects the next digit to be set. After the last digit has been selected and set with the CTL button, a final push of the SEL button exits the mode. The lighted annunciator will resume its normal flashing, indicting the GMT clock is running.

#### Setting LT

Select Local Time, LT, using the SEL button. Simultaneously push the SEL and CTL buttons to enter set mode. The tens of hours digit will start flashing. The set operation is the same as for GMT, except that minutes are already synchronized with the GMT clock. Minutes can be changed in 15 minute increments for special time zones.

#### **Control/Select Disable**

When there is no aircraft power applied in the clock CTL and SEL buttons are disabled.

#### Setting Flight Time Alarm

When Flight Time, FT, is displayed enter the set mode by pressing both buttons simultaneously. The alarm time is entered identically to GMT setting. When the Flight Time equals the alarm the display will flash and the alarm output activated. If FT was not being displayed at the time the alarm becomes active, the clock automatically selects FT for display. Pressing either the SEL or CTL button turns off the alarm. Flight Time is unchanged and continues counting.

#### Flight Time Reset

FT must be displayed when resetting. Hold CTL down for 3 seconds, or until 99:59 or 99:99 appears on the display. Flight Time will be zeroed upon the release of the CTL button. The digits that appear (99:59 or 99:99) depend on how the clock is programmed - in hours and minutes or in hours, tenths, and hundredths.

#### **Elapsed Time Count Up**

Select ET for display. Pressing the CTL button will start ET counting. Elapsed Time counts up to 59 minutes, 59 seconds, and then switches to hours and minutes. It continues counting up to 99 hours and 59 minutes. Pressing the CTL button again to stop counting. Second press resets to zero.

#### Elapsed Time Count Down

Select ET for display and enter set mode by pressing both buttons. The countdown timer can now be set. Entering the time is identical to GMT time setting. When the time is entered and the last digit is no longer flashing the clock is ready to start the countdown. Momentarily pressing the CTL button starts the countdown. When count reaches zero the displays flash and the external alarm is activated Pressing either SEL or CTL will deactivate the alarm. ET continues counting up. Next press to stop counting. Second press rests to zero.

### Test Mode

In GMT mode, hold the SEL button down for three seconds and the display will indicate 88:88 and activate all four annunciators.

#### **FIELD OPTION CHANGES**

When changes are made the connector of the clock must be grounded to the soldering iron or warranty may be void.

**Serial Time Data:** To change from GMT to LT, remove case and jumper LT.

**Local Time:** To change from 12 hour to 24 hour format, hold SEL in LT mode for 5 seconds till 12 HR or 24 HR flashes, then push CTL for desired format. Push SEL to exit set mode.

Flight Time: To change from recording in hours, minutes to recording in hours, tenths and hundredths, remove case and jumper 99.

**Battery Removal:** The battery and battery holder may be remover permanently if the aircraft battery is connected to the Keep Alive input (Pin 9). No changes in the clock are required. Recommend to remove AA battery if pin 9 is used.

**Remote Time Display:** Additional time displays can be driven by the M880A clock. Only two wires carry the time information to the remote display. The remote displays have independent dimming. Either GMT or LT may be displayed. Remote display units are available from Davtron, Inc.



**GMT** Time

**Local Time** 

DIM



#### MBBOA CHRONOMETER C CHRONOMETER C MBBOA MBBOA MBBOA CHRONOMETER C C

Flight Time

**Elapsed Time**