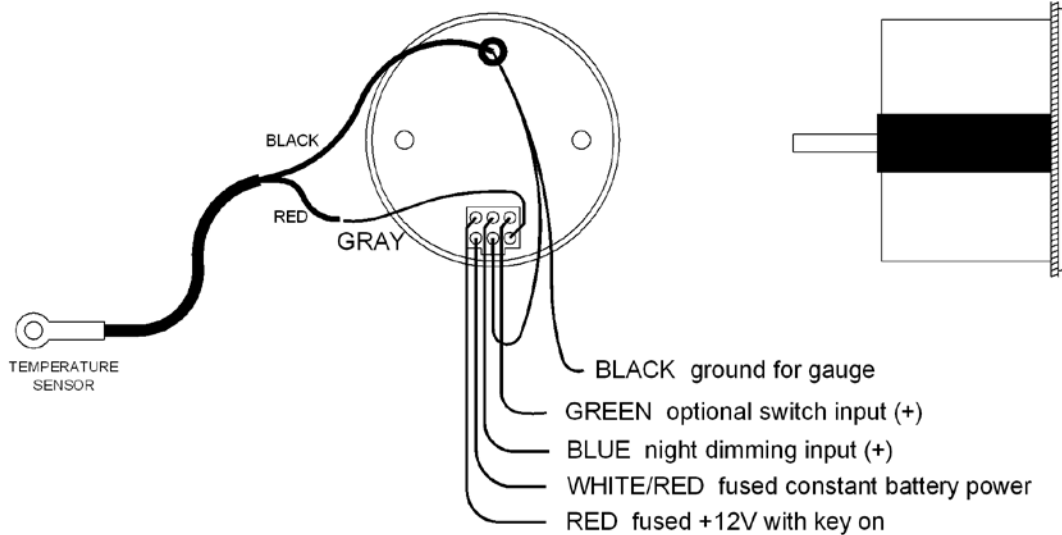


# Dakota Digital

## HLY-3161 rev. A CLOCK WITH DAY/DATE AND TEMP (weather and vibration resistant for exposed environments)



### Setting the time & temperature unit:

The switch on the front of the lens is used for adjusting the time, day, and date. At any time during the setup you can turn the key off and all of the changes you made will be saved. The next time the key is turned on the display will light up normally.

1. To enter the set mode, hold the switch in while turning the key on. The gauge will display the time, day of week, and temperature unit with the minutes selected.
2. Press and release the switch to increment the minutes. Press and hold the switch in to move to the hours.
3. While the hours are selected, press and release the switch to increment it. Press and hold the switch to move to the day of week.
4. While the day of week is selected, press and release the switch to increment it. Press and hold the switch to move to the temperature setup.
5. While the temperature unit is selected, press and release the switch to change it. Press and hold the switch to move to the date setup.
6. The year, date, and month will be displayed with the year selected. Press and release the switch to increment the years. Press and hold the switch in to move to the month.
7. While the month is selected, press and release the switch to increment it. Press and hold the switch to move to the date.
8. While the date is selected, press and release the switch to increment it. Press and hold the switch to move to the time adjustment.
9. The display will now show a number from -7 to +7. This is the current time adjustment setting. Pressing and releasing the switch will increment the value. A setting of zero does no adjustment, +2 adds two seconds per day (slows the clock down), -3 subtracts three seconds per day (speeds the clock up), and so forth. When the desired adjustment setting is displayed, press and hold the switch. The clock will now restart in its normal display mode.

### Mounting:

The gauge requires a round hole 2-1/16" in diameter. It should be inserted into the opening from the front and the U-clamp will be installed from the back. Tighten the two nuts on the U-clamp so that the gauge is secure. Gauge depth to the back of the case is 1-1/2". Gauge depth including the mounting studs is 2-3/8".

**Features:**

- Industry standard 2-1/16" gauge size.
- Weather-proof construction.
- 12 hour format with AM/PM display.
- Day of Week and Date of Month display.
- Outside Temperature display.
- Microprocessor stabilized readings.
- Night dimming with lens label lighting.
- Non-Glare, high contrast lens.
- High Visibility VFD display for sunlight readability.

**Operation:**

The white/red wire should be connected to a constant 12 volt feed to keep the time. The red wire should be connected to a 12 volt accessory feed. The case provides the gauge ground. Connect the ring terminal from the black wire to a screw at the top rear of the case. Attach the loose end of the black wire to a main vehicle ground and also the temp sensor black wire. When the blue wire has 12 volts, it will dim the display for night viewing. The gray wire attaches to the temp sensor red wire. The green wire can be used with an option remote mount switch that operates the same as the push button switch on the front of the lens. The remote switch should apply power to the green wire when pressed.

**POWER**

Connect the red wire from the main harness to accessory power from the ignition switch. This will light up the display. Connect the white/red wire from the main harness to constant 12 volt power. This will keep the time while the key is off.

Never connect this to a battery charger alone. It needs to have a 12 volt battery connected to it. Battery chargers have an unregulated voltage output that will cause the gauge to not operate properly.

**GROUND**

The black wire is the main ground for the gauge. A poor ground connection can cause improper or erratic operation. The black wire loops over to the top screw on the back of the case. This ensures a good case ground connection.

**NIGHT DIMMING**

Your display system has a dimming feature that dims the display intensity. Normally the system is at full brightness for daytime viewing. When the blue wire has 12 volts the display intensity will be reduced. This can be connected to a toggle switch to reduce the brightness at night. To have the system at full brightness all of the time, leave the blue wire disconnected or grounded.

**TEMPERATURE SENSOR CONNECTION**

**The sender must be Dakota Digital part SEN-15-1.** Sending units from other manufacturers will cause incorrect readings. The red wire on the sensor connects to the gray wire on the clock. The black wire connects to the black wire or the case of the clock.

The sensor will measure the temperature where its probe is located. The sensor has a 12' two wire cable to connect it to the gauge. This cable can be shortened or additional wire can be added. If additional wire is added, the added wire pair should be twisted and polarity of the wires should be carefully noted. If the probe temperature is below -39° the display will show "—". If a sender is not connected properly, the temperature display will not be available. If the SND terminal is shorted to ground, the display will show "---".

For outside temperature sensing, the best location will be near the front headlight or another location at the front of the cycle where it will have good air flow while you are moving. Do not mount the sensor too close to the engine or exhaust. Doing so will cause the temperature reading to be much higher than the actual outside temperature.

The air temperature gauge will operate and read correctly between the temperature range of -39 - 255° F (-39 - 125°C).

## Troubleshooting guide.

| Problem                                       | Possible cause   | Solution  |
|---|--|---|
| Clock will not light up                       | Ignition key is not on.  | Make sure the key is on.  |
|   | Red wire does not have power.<br>White/Red wire does not have power.<br>Black wire is not getting a good ground.<br>Power is reversed. | Connect to a location that has power only when the key is on.<br>Connect to a location that has power all of the time.<br>Connect ground to a different location.<br>Connect black to negative ground, red and white/red to +12V power. |
|   | Clock is damaged.  | Return clock for repair. (see instructions)   |
| Clock will not turn off when the key is off.  | The red wire has constant power.   | Connect the red to switched power, the white/red to constant power.   |
| Clock lights up, but does not read correctly. | Loose connection on white/red power wire.  | Reconnect white/red wire.   |
|   | Poor ground connection.<br>Time is not set.<br>Clock is damaged.   | Move ground to different location<br>Set time. (see instructions)<br>Return clock for repair. (see instructions)  |
| Clock will not keep time.                     | White/red wire does not have constant power.   | Connect to a location that has power when the key is on or off.   |
|   | Loose connection on white/red power wire.<br>Poor ground connection.<br>Time adjustment needs to be set.                               | Reconnect white/red wire.<br>Move ground to different location<br>See "Setting the time". Step 8 changes the fine tuning.   |
| Clock will not dim.                           | Blue wire is not connected correctly.  | Check wiring connections.   |
| Clock remains dim at all times.               | Blue wire is getting power all of the time.<br>Battery is very low.  | Connect blue wire to location that only has power when the headlights are on.<br>Recharge or replace vehicle battery.   |
|   | Clock is damaged.  | Return clock for repair. (contact factory)  |
| Gauge will not display the temperature.       | Temp sensor is not connected correctly.  | Check sensor connections to gauge.  |
| Temperature readout shows "---".              | Gray wire is shorted to ground.<br>Sensor harness is pinched or shorted.   | Check connections to gray wire.<br>Inspect sensor harness for damage.   |
|   | Sensor temperature is below -39F.<br>Sensor is damaged.  | Warm sensor up and watch for change.<br>Return sensor for repair. (see instructions)  |
| Temperature reads in C instead of F.          | Incorrect temp unit selected   | Change unit in setup. (see instructions)  |

## Technical specifications

|                                |   |   |
|--------------------------------|---|---|
| Minimum operating voltage      | - | 5 volts   |
| Maximum operating voltage      | - | 17 volts  |
|                                |   | (operating at or near maximum voltage for an extended time can damage unit) |
| Maximum temperature reading    | - | 250°F (125°C)   |
| Temperature accuracy           | - | ±2°F (±1°C)   |
| Clock accuracy                 | - | ±2 minute per month (±0.5 with adjustment)                                  |
| Standby current draw (key off) | - | 0.004 A   |
| Typical current draw (@ 13.8V) | - | 0.10 A  |

## **SERVICE AND REPAIR**

DAKOTA DIGITAL offers complete service and repair of its product line. In addition, technical consultation is available to help you work through any questions or problems you may be having installing one of our products. Please read through the Troubleshooting Guide. There, you will find the solution to most problems. **Should you ever need to send the unit back for repairs, please call our technical support line, (605) 332-6513, to request a Return Merchandise Authorization number.** Package the product in a good quality box along with plenty of packing material. Ship the product by UPS or insured Parcel Post. Be sure to include the RMA number on the package, and include a complete description of the problem with RMA number, your full name and address (street address preferred), and a telephone number where you can be reached during the day. Any returns for warranty work must include a copy of the dated sales receipt from your place of purchase. Send no money. We will bill you after repair.

### **Dakota Digital 24 Month Warranty**

DAKOTA DIGITAL warrants to the ORIGINAL PURCHASER of this product that should it, under normal use and condition, be proven defective in material or workmanship within 24 MONTHS FROM THE DATE OF PURCHASE, such defect(s) will be repaired or replaced at Dakota Digital's option.

This warranty does not cover nor extend to damage to the vehicle's systems, and does not cover removal or reinstallation of the product. This Warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, mishandling, misuse, neglect, or accident.

This Warranty is in lieu of all other expressed warranties or liabilities. Any implied warranties, including any implied warranty of merchantability, shall be limited to the duration of this written warranty. Any action for breach of any warranty hereunder, including any implied warranty of merchantability, must be brought within a period of 24 months from date of original purchase. No person or representative is authorized to assume, for Dakota Digital, any liability other than expressed herein in connection with the sale of this product.

***Dakota Digital***

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