

V3 – Monitoring Station Assembly Instructions

Thank you for choosing the V3 Monitoring Station. Please read the following instructions carefully.



Inspection

1) Inspect the monitoring station before accepting and signing for the delivery. Unbind the top 2 straps and inspect the solar panel.



If the solar panel appears broken, cracked or damaged please deny the shipment and have it return to Matheson Mining Consultants. Contact us at 888-456-5638 for a replacement.



Inspect the steel exterior, if there appears to be damage, large dents, large scratches, punctures, etc. Deny the shipment and have it returned to Matheson Mining Consultants. Contact us for a replacement.

Unpacking – may require 2 people.

After inspecting the exterior and solar panel for damage, cut the remaining binding straps and using the handles on each side lift and remove the V3 from the shipping pallet. (NOTE: Save the pallet for return freight if you are leasing the V3).

IMPORTANT – Secure the solar panel to the kick-stand before opening the V3.



Remove the padding and packing material from the solar panel and lift the solar panel up. You will see the kick stand which should have 1/4" hardware attached. Remove the nut, lock washer and bolt from the kick-stand and place the kick-stand upright on the top of the V3. Insert the bolt and lock washer through the middle hole of the solar panel and then the bolt should be inserted through the hole in the kick-stand. Last, place the 1/4" nut on the bolt and tighten securely.



Open the VM3 and Attach Antennas

Cut the zip tie from the pad lock and open the lid of the V3. The small box inside contains the two cellular antennas and a copy of these instructions. The two black antennas will screw onto the antenna bases located on either end of the solar panel on the lid of the V3. Please be careful when screwing the antennas to the base so that you don't damage the threads.



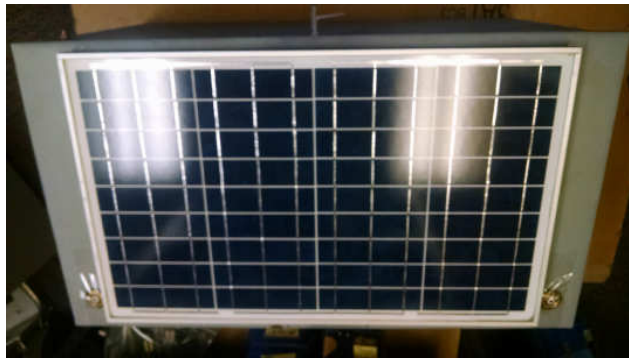
**Call 888-456-5638 with any questions or concerns.
Thank you for using the V3 Monitoring Station!**

V3 Remote Monitoring Station

Thank you for choosing the V3 Monitoring Station. Please read these instructions carefully! If you have already unpacked and inspected your V3 you are in the right place. If you haven't unpacked and inspected your V3, refer to the documentation on unpacking and inspecting the V3 monitoring station.

Included with the V3

30 Watt - Solar Module



Antenna Mounts



Antennas



Battery Cable



Charge Controller



Micromate Power Cable



Series III/Series IV Power Cable (optional)



Power Distribution Block



Modem – RV50 or GX400



Timer and Modem Power Cable



Modem Cable



BATTERIES ARE NOT INCLUDED!

Matheson Mining Consultants recommends the following battery. These may be found at Batteries Plus or Ace Hardware.

AGM 35AH Deep Cycle Battery Duracell Ultra 12V SLA Sealed Lead Acid



IMPORTANT NOTE FOR LEASE CUSTOMERS – If you choose to use a different battery than the recommended battery, the ring terminals on the battery cable and charge controller may not fit your battery. You may choose to modify the ring terminals or remove them and replace them with different ring terminals. Matheson Mining Consultants (MMC) expects the battery cable and charge controller to be returned in the condition that they were received, this means MMC needs to receive the battery cable and charge controller with ¼ inch ring terminals. If the ¼ inch ring terminals are not replaced you will be billed for the replacement and associated labor.

Initial Setup

- 1) If you have not attached the solar panel kickstand, do this first with the ¼ inch hardware (included).
- 2) With the solar panel kickstand attached, open the lockbox lid, the modem antennas are inside the V3 in a box, remove them and screw them onto the antenna mounts. Be careful screwing the antennas onto the mounts. **DO NOT CROSS THREAD THE ANTENNAS.**

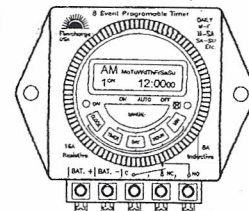
Field Installation

- 1) Familiarize yourself with the removal of the steel shelf, you will need to remove this in order to mount your geophone. The best way to remove this is to pull the exterior V3 carry handles all the way out so the shelf can be removed easily. The V3 may be secured to the surface using rebar, soil nails, screw-eyes or concrete anchors. There are four mounting tabs for this purpose. After securing the V3 and mounting the geophone, carefully replace the shelf.
- 2) Remove the charge controller and battery cable from the mounting panel, these are attached to the mounting panel using twist ties. If you don't see these items attached to the mounting panel they are in box with the modem antennas.

- 3) Connect the charge controller and battery cable to your battery. Be very careful that you connect the Red wires to the positive (+) terminal Red side of the battery. The Black wires are connected to the negative (-) terminal Black side of the battery. **DOUBLE CHECK YOUR BATTERY CONNECTIONS BEFORE CONTINUING. YOU ARE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM CONNECTING THE BATTERY INCORRECTLY.**
- 4) Identify the Power Distribution block on the left side of the mounting panel. This is where the power components are connected. The solar panel should be connected already. The charge controller and either the Micromate or Series III/Series IV power cable should also be connected here. Connect these components carefully matching Red to Red and Black to Black. The connector will only fit the correct way, do not force the connector.
- 5) Connect the battery cable to the timer using the *Red/Red/Black* connector. **DO NOT ATTEMPT TO CONNECT THIS TO THE DISTRIBUTION BLOCK.**
- 6) The modem cable should be connected to the modem. Connect the other end depending on your seismograph type.
Micromate – USB port on the top left.
Series III – Aux port or Modem side of RS-232/Alarm splitter cable
Series IV – Aux port or Modem side of RS-232/Alarm splitter cable
- 7) Exterior port holes. If you are using a microphone or you are connecting AC power to your seismograph and modem loosen the nut holding the rubber stopper in place and remove the stopper.
- 8) Timer. Use the attached Timer instruction sheet to set the clock time and timer ON/OFF times. If you are using the timer make sure you leave the timer in Auto mode so the timer can turn the modem ON and OFF. If you leave the Timer ON it will keep the modem on all the time and deplete your 12-volt battery.
- 9) Security - A padlock is recommended to lock and secure the V3. The V3 is not theft proof, you are responsible for theft and vandalism.
- 10) Weather – Water and electronics DO NOT MIX. The V3 is weather resistant but is not waterproof. You are responsible for any weather-related damage to the equipment. For example, DO NOT place the V3 over an irrigation sprinkler head.
- 11) Consult our website for help with using Instantel's AutoCall Home feature for data transfers and general remote monitoring questions.
www.mathesonmining.com
If you don't see the answer to your question on our website, please call 888-456-5638 for assistance.

Flexcharge™ USA PROGRAMMABLE TIMER

7 Day, 8 Event Pairs, 16 Amp Resistive, 8 Amp Inductive, 12 Volt



OVERVIEW

Now you can have full control of lights with the accuracy of a Quartz clock. Perfect for sign, yard lights, etc. The light can be turned on and off at specific times of day and many times a day if needed. When used in conjunction with the Flexcharge NC12L12 or Night Watchman Dusk to Dawn controls, you can delay the evening turn on until it is dark but still have an exact turn off time. This will automatically compensate for changing sunset times. An internal replaceable Lithium battery will retain your programming in the event of a system power failure. The basic system is capable of controlling loads up to 16 amps at 12 volts and can easily drive an external relay to load capacities up to 100 amps.

INSTRUCTIONS

Follow the wiring diagram to connect the wires to your 12 volt system. The timer must operate from 12 volts AC or DC but the switch will control any voltage up to 250V. The BAT+ and BAT- terminals must be connected to a 12 volt source to switch the load on and off. **You must supply power to the Common (C) terminal for the load to obtain power.** This can be any voltage up to 250 volts to meet your load requirements. For example if your load is to operate from the same power source as the timer clock, connect the (C) terminal to the battery positive terminal.

SETTING TIME

Set the clock to your local time and the day of the week.

- 1) Press and hold the **CLOCK** button.
- 2) Set the day of the Week by pressing the **DAY** key until the correct day appears.
- 3) Set the **HOURL** by pressing the **HOUR** key until proper hour appears. (24 hour time)
- 4) Set **MINUTE** by pressing the **MIN** key until the proper minute appears

When the time and day is set, release the **CLOCK** key

PROGRAMMING: It is not necessary to use all 8 event pairs but you will need to set both an **ON** time and an **OFF** time for each event.

1) Pressing the **TIMER** key will enter the Program mode. Pressing the **TIMER** key will scroll through the events. Stop on the event you want to set. There are 8 events and an **ON** and **OFF** time for each event.

2) Press **DAY** key to select the day or group of days. Press the **HOUR** key to set the hour and the **MIN** key to set the minute. To clear the event, press the **DAY** key until the setting clears. Always set an **OFF** time for each **ON** time. It is possible to have one **OFF** event for several **ON** events. For example, if you have a light that comes on at different times each day but is to be **OFF** at the same time every day. One **OFF** event is all that is needed as long as it covers all of the **ON** days.

When the programming is complete, press the **CLOCK** key.

The **MANUAL** key will select **ON**, **AUTO**, and **OFF**. For Automatic operation it must be set to **AUTO**. You can manually turn the load **ON** and **OFF** by selecting **ON** or **OFF**.

All programming and time can be reset to New settings by pushing the **RESET** button with a pencil or pen. **Use caution, all programming will be lost when this button is pushed**

Units manufactured after 10/01/00. After several years the battery may need replacement, contact the manufacture or your dealer for further instructions.