



## DISPATCHABLE IRRIGATION LOAD CONTROL SYSTEM

REMOTE MONITORING & CONTROL

OF HIGH VOLTAGE PUMP &

IRRIGATION SYSTEMS FOR

THE PURPOSE OF ELECTRIC

DEMAND SIDE MANAGEMENT



## OVERVIEW & HIGHLIGHTS

- Field tested, utility proven
- Dispatch on demand
- Web-based monitoring and control
- Customer notification and opt-out capabilities
- Fully integrated high voltage monitoring and control in a single box
- Two-way communications anywhere
- Complete measurement and verification data

**The three components of the M2M Lodestar system have been optimized specifically for irrigation load control.**

1. High voltage control unit, designed for outdoor environments
2. Two-way cellular communications with satellite backup
3. High performance web-based Network Operations Center (NOC)



## A CONTROL UNIT DESIGNED FOR THE JOB

The Lodestar is a web-to-wireless remote monitoring and control system with an internal wireless modem for two-way communications with the automated M2M Network Operations Center and the web site ([www.m2mcomm.com](http://www.m2mcomm.com)). Best of all, there's no requirement for a local cellular account.

### The Lodestar is an intelligent, remotely controlled power switch designed specifically for load control (demand side management) applications.

- Flexible remote control on/off schedules can be set from the web site
- One command opens normally-closed control relays for a programmable amount of time
- High voltage operation including 120, 240, and 480 VAC, without external transformers
- Direct measurement of connected voltages
- AC power outage and restoration reporting
- Locally and remotely configurable, including over-the-air firmware updates

### Real time wireless reports from the Lodestar field unit to the M2M NOC are sent for three reasons:

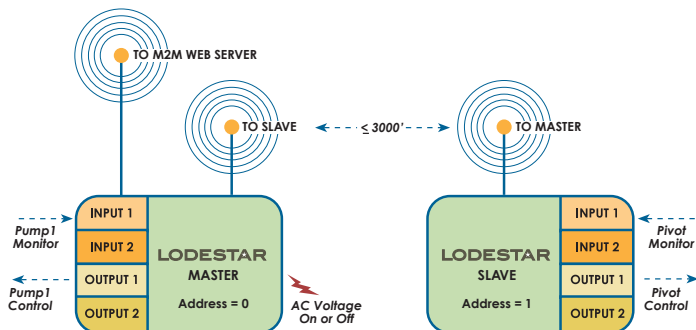
1. Equipment change occurs such as a pump start or stop
2. Time scheduled report is due
3. A command or report request is received from the web site

On/off status of the connected equipment is reported along with a variety of system configuration information. Status reports can be requested at any time from the web site.

The Lodestar is contained in a weatherproof enclosure. It has a hinged, lockable door with both 1/2" and 3/4" knockouts.

### Wireless Expansion of the Local Control System

Up to six RF wireless slave units, each with its own on-board voltage monitors and control relays, can be added to each master device. Status of both master and slaves can be reported and controlled as a single system, making it an ideal solution for controlling an irrigation pump and the connected pivots as an integrated system.



## TWO-WAY COMMUNICATIONS

Cellular communication provides wide spread coverage throughout North America and around the world. The Lodestar is designed to work with either the GSM/GPRS or the CDMA (1xRTT) digital cellular networks, depending on the operator's location and cell carriers in the area.

For remote areas where is no cell coverage, the Lodestar also works with the Orbcomm system, a satellite-based, wireless telecommunications network designed to send and receive data anywhere in the world.

### Lodestar two-way communications provide important benefits:

- Coverage anywhere
- Remote monitoring and control
- Complete measurement and verification - all units acknowledge all control commands
- Complete knowledge of equipment on/off status before, during, and after dispatch events
- Measurement of free ridership – equipment that is already off when the dispatch event begins
- System maintenance – immediate awareness of non-responsive units

## THE M2M NETWORK OPERATIONS CENTER

### The M2M Network Operations Center (NOC) is the heart and brain of the Lodestar system, and provides many important functions:

- Maintains complete on-line information for every site, and organizes the sites and equipment into logical groups
- Maintains a secure connection to the field units through multiple wireless carriers
- Provides secure, web-based access to utility operators, as well as to individual equipment owners
- Receives, processes, stores, displays, and acts upon incoming data reports
- Sends control and configuration commands to the field units
- Sends equipment status change and dispatch notifications to all users
- Manages the complete dispatch process, including customer notifications and opt-outs
- Maintains a complete history log of all events

## On-line Site Information Database

The secure, web-based NOC stores all site information and provides appropriate levels of access to the operations team, utility, and grower, including:

- Customer name and contact information
- GPS-based equipment locations and interface to Google Earth maps
- All account and ID numbers
- Equipment descriptions including inspection records and digital photos
- KW and/or horsepower load being controlled
- Feeder/substation
- Crop type

## FEATURE EXPANSION OPTIONS

We have found that many growers expect and ask for more.

**Advanced monitoring and control products are available to provide additional benefits:**

- All existing and future Valley Trackers are fully compatible with the load control program
- If an irrigation system is already equipped with a Tracker, then there is no equipment cost to add it to the load control program
- Both the Loadstar and most Tracker products can be used with all brands of irrigation equipment

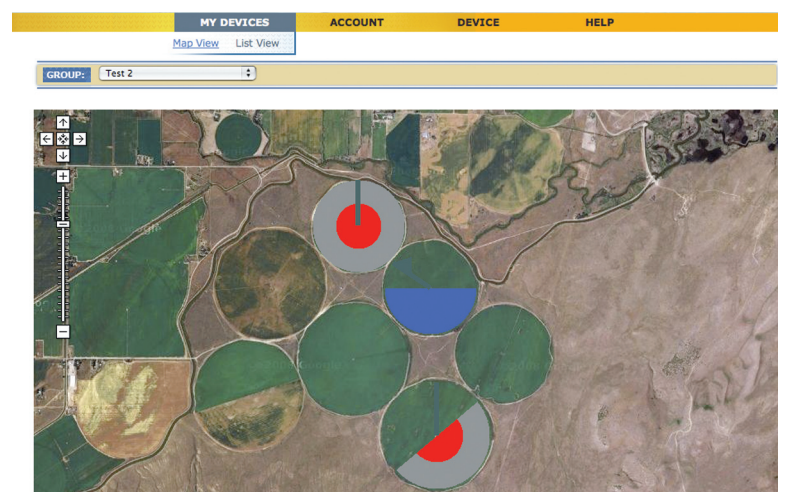
**Added Value Information That Can Be Reported:**

- System running / stopped
- Direction of travel
- Speed
- Water on/off
- Water pressure
- Auxiliary inputs  
(Fertilizers/chemicals/etc on/off)
- AC power on/off
- Safety fault on/off
- Current position in the circle
- Notification when a position is reached
- System voltage
- End gun on/off
- Hours of run time
- Hours wet

**Added Value Remote Control Actions:**

- Set system to run or stop
- Set direction of travel
- Adjust speed
- Set water on or off
- Control auxiliary outputs  
(Fertilizers / chemicals / etc on or off)
- Set AC power to on or off
- Set end gun to on or off

Providing growers with access to these remote monitoring and control features provides an additional reason for them to participate in the load control program. Access is available via the web site, the mobile (cell phone) web site, and the telephone voice processing system. User notifications of alarms and equipment status changes via email and voice messages are a very popular feature.



Map view of pivots. This map can be expanded or shrunk with the arrows on the left.

| MY DEVICES               |       |           |       |          |          |           |                       |                        |                     |        |        |                 |                    |
|--------------------------|-------|-----------|-------|----------|----------|-----------|-----------------------|------------------------|---------------------|--------|--------|-----------------|--------------------|
| ACCOUNT                  |       | DEVICE    |       | HELP     |          |           |                       |                        |                     |        |        |                 |                    |
| Map View                 |       | List View |       |          |          |           |                       |                        |                     |        |        |                 |                    |
| GROUP: Test 2            |       |           |       |          |          |           |                       |                        |                     |        |        |                 |                    |
| <b>Pro Panels</b>        |       |           |       |          |          |           |                       |                        |                     |        |        |                 |                    |
| Name                     | Power | Direction | Water | Aux In 1 | Aux In 2 | Aux Out 1 | Aux Out 2             | Position               | % Timer             | Status | Alarms | Status Duration | Last Report        |
| Device 10150             | On    | FWD       | On    | Off      | Off      | Off       | On                    | 304                    | 30                  | ✓      |        | 23h 19m         | 12/17/2008 1:41 PM |
| <b>Mechanical Panels</b> |       |           |       |          |          |           |                       |                        |                     |        |        |                 |                    |
| Name                     | Power | Safety    | Drive | Water    | Aux 1    | Aux 2     | Status                | Last Report            |                     |        |        |                 |                    |
| South 4963 (GSM)         | Off   | Out       | Off   | Off      | Off      | Off       | ⚠                     | 12/18/2008 10:03:35 AM |                     |        |        |                 |                    |
| <b>Other Devices</b>     |       |           |       |          |          |           |                       |                        |                     |        |        |                 |                    |
| Name                     | Power | Direction | Water | Position | % Timer  | Status    | Alarms                | Status Duration        | Last Report         |        |        |                 |                    |
| Tracker II               | N/A   | N/A       | N/A   | 0        | 0        | ⚠         | Signal Strength Alarm | 8 minutes              | 12/18/2008 10:52 AM |        |        |                 |                    |

A list view of devices.

**A variety of reports are available to facilitate system maintenance:**

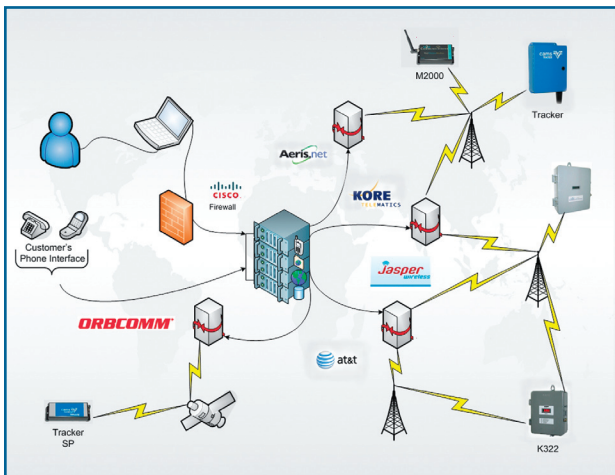
- Equipment inventory
- Measurement and verification data (M&V)
- Non-responsive units
- Equipment status change history log files
- Voice and email notification log files
- Communication Quality of Service data
- Customer usage history logs
- Customer opt-outs



## A secure connection to the field units

The M2M NOC connects to a wide variety of cellular carriers plus the Orbcomm satellite network via secure private gateways.

The M2M NOC is hosted in a secure facility in Boise, Idaho. The facility includes a backup generator with a long-term fuel supply as well as a chemical fire suppression system. It is staffed 24 x 7 by technical personnel.



## Secure web based access

Access to the Lodestar field units is through the secure M2M web site at [www.m2mcomm.com](http://www.m2mcomm.com). The web site is "co-branded", meaning that all web site pages and voice prompts are labeled with your company name and logo.

### After entering a unique user name and password, users can:

- View both current and historical data for all units
- Customize displays with informative labels and units
- Define data exporting options
- Create and maintain remote control commands, reporting options, and user notification messages
- Define time scheduled reports and commands
- Request current status reports
- Establish time/date scheduled command sequences

## Multi-Level Accounts & Grouping

The field units can be organized into logical groups based on location, crop type, control schemes, etc. Commands can be sent to any individual Lodestar or to any predefined group of units. The utility has access to all units and customer records under an Admin level user name and password. All group reports can be run from this login.

Individual customers have their own user names and password to securely access their customer information and units.

MY DEVICES ACCOUNT DEVICE HELP

Airtime History Setup Scheduled Commands Send Commands Details

DEVICE: Tracker LT Device Name: Tracker LT Device ID: 4096 Model: TrackerLT

| Description              | Status                 | Duration   | Last Report            |
|--------------------------|------------------------|------------|------------------------|
| AC Power                 | On                     | 7 days     | 12/18/2008 11:12:52 AM |
| Pivot Drive              | Stopped                | 23h 5m     | 12/18/2008 11:12:52 AM |
| Water Pressure           | 0                      | 15 days    | 12/18/2008 11:12:52 AM |
| Water Pressure Range     | Low                    | 31 days    | 12/18/2008 11:12:52 AM |
| Local Maintenance Mode   | Off (Normal Operation) | 31 days    | 12/18/2008 11:12:52 AM |
| Signal Strength          | (Weak)                 | 22h 50m    | 12/18/2008 11:12:52 AM |
| Remote Maintenance Mode  | Off (Normal Operation) | 31 days    | 12/18/2008 11:12:52 AM |
| Daily Transmission Limit | Ok                     | 31 days    | 12/18/2008 11:12:52 AM |
| Stop Control             | Off                    | 31 days    | 12/18/2008 11:12:52 AM |
| End Gun                  | On                     | 27 minutes | 12/18/2008 11:12:52 AM |
| End Gun Program          | On                     | 6 days     | 12/18/2008 11:12:52 AM |
| Output 3                 | Off                    | 31 days    | 12/18/2008 11:12:52 AM |
| Percent Timer            | 100                    | 22h 51m    | 12/18/2008 11:12:52 AM |
| Position                 | 0                      | 14 days    | 12/18/2008 11:12:52 AM |
| Latitude                 | 94339553               | 10 days    | 12/8/2008 3:12:06 PM   |
| Longitude                | 211620306              | 10 days    | 12/8/2008 3:12:06 PM   |
| Satellites in View =     | 21                     | 10 days    | 12/8/2008 3:12:06 PM   |

[Show More](#)

## Receive, process, store, display, and act on incoming data reports

At the M2M NOC, incoming data is validated and processed for distribution to the end user. All data is saved in redundant databases using Microsoft SQL Server.

The primary decision making intelligence of the Lodestar system is maintained at the NOC level. The field unit maintains no long term plans or control schemes and has no real time clock. They are primarily intelligent "input and output" devices. Software changes, time based operations, and control schemes are stored at the NOC level and can be changed and updated at one central location without a need to visit the field locations. The software can be customized as needed to add different methods of control or to add additional reporting options. This enhances our ability to customize the system to meet current and future requirements.

## Send control and configuration commands to the individual field units

Configuration and control commands can be sent from the web server to the field units. These commands can be one time ("send now") or can be time scheduled. Scheduled commands can be configured in a variety of useful ways.

The end users can use the Send Command screens to control their own equipment. This provides an additional valuable benefit to the equipment owners.



| Device      | Pwr | Drv | Wtr    | Pos  | Alm |
|-------------|-----|-----|--------|------|-----|
| Miller Sout | On  | Off | 25 PSI | 197° | ●   |
| Sids Pivot  | On  | FWD | 23 PSI | 259° | ●   |
| Miller Nort | On  | FWD | 25 PSI | 197° | ●   |
| Pivot 5     | On  | REV | 23 PSI | 257° | ●   |
| 14          | On  | Off | Off    | N/A  | ●   |
| Home Place  | Off | Off | Off    | N/A  | ●   |

**MY DEVICES    ACCOUNT    DEVICE    HELP**

Airtime   History   Setup   Scheduled Commands   **Send Commands**   Details

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DEVICE: Tracker LT    Device Name: Tracker LT    Device ID: 4096    Model: TrackerLT

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**ALL COMMANDS**

**PIVOT COMMAND CONTROLS**

Select Command(s)

**REQUEST REPORTS**     Status Report

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**CONTROL COMMANDS**

Set Pivot Drive to                      Stop ▾

Set Set End Gun to to                      Automatic ▾

Set Set Output 3 to to                      Off ▾

[Show Advanced Options](#)

Send Command(s)
Schedule Command(s)

The Command request page. These commands can be sent instantly, or can be scheduled to occur at a certain time.

## In addition to the primary Internet site, there are two other methods of access

1. Accessing the M2M Mobile web site on an intelligent cell phone display provides the same information and control capabilities, in a convenient mobile format.
2. Dialing the automated M2M NOC toll-free number provides a spoken status report of all monitored equipment and facilities from any telephone. The text-to-speech based status message may be as complex as a listing of all monitored inputs and outputs or it may be as simple as "the pump is off." Remote control commands can also be entered directly from the telephone.





## Event notifications

The M2M NOC includes a voice-based notification system that can simultaneously call many phone numbers and speak a customized text message. It can then ask for and listen for an acknowledgement that the message was received and understood.

Each customer can create and edit their own list of people to be called or e-mailed as well as the current phone numbers and e-mail address for each person. Each list can contain up to 10 different phone numbers or e-mail addresses.

After a voice message is spoken, the system will ask the customer to acknowledge the message by pressing the \* key on the telephone. If they do not, the next person on their list will be called.

Event notifications can be used by the individual customers for their own benefit. They can define, and edit notification rules at any time, so that they are notified when an equipment status change is reported to the NOC. For example, a notification might be set up to call the "West Farm Manager" list with a message such as "West Farm Pump Power Failure" if the unit reports a loss of AC power.

| MY DEVICES                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ACCOUNT                               | DEVICE                                                         | HELP                                                            |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |
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| <a href="#">Airtime</a> <a href="#">History</a> <a href="#">Setup</a> <a href="#">Scheduled Commands</a> <a href="#">Send Commands</a> <a href="#">Details</a>                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                       |                                                                |                                                                 |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |
| DEVICE: Tracker LT    Device Name: Tracker LT    Device ID: 4096    Model: TrackerLT                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                       |                                                                |                                                                 |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |
| Step 1 > Device Data<br>Step 2 > Device Location<br>Step 3 > End Guns<br>Step 4 > Contacts<br>Step 5 > Contact Lists<br>Step 6 > Display Settings<br><b>Step 7 &gt; Event Notifications</b><br>Step 8 > Device Groups | <table border="1"> <thead> <tr> <th>Monitored Data Point</th> <th>Enable/Disable Reporting from the Field Devices to the Website</th> <th>State Change Watched for Notification</th> <th>Contact List to Notify</th> <th>Enable/Disable Notifications from the Website to a Contact List</th> </tr> </thead> <tbody> <tr> <td>AC Power</td> <td><input checked="" type="checkbox"/></td> <td>any value</td> <td>Status Email List</td> <td><input type="checkbox"/> edit</td> </tr> <tr> <td>Pivot Drive</td> <td><input checked="" type="checkbox"/></td> <td>any value</td> <td>Test1</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Stop Control</td> <td><input checked="" type="checkbox"/></td> <td>any value</td> <td>Test1</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>End Gun</td> <td><input checked="" type="checkbox"/></td> <td>Off</td> <td>Test1</td> <td><input type="checkbox"/> edit</td> </tr> <tr> <td>Output 3</td> <td><input checked="" type="checkbox"/></td> <td>any value</td> <td>Status Email List</td> <td><input type="checkbox"/> edit</td> </tr> <tr> <td>Automatic End Gun Change Report</td> <td><input type="checkbox"/></td> <td>any value</td> <td>Status Email List</td> <td><input type="checkbox"/> edit</td> </tr> <tr> <td>Water Pressure Range</td> <td><input type="checkbox"/></td> <td>any value</td> <td>Status Email List</td> <td><input type="checkbox"/> edit</td> </tr> <tr> <td>Local Maintenance Mode</td> <td><input checked="" type="checkbox"/></td> <td>any value</td> <td>Status Email List</td> <td><input type="checkbox"/> edit</td> </tr> <tr> <td>Remote Maintenance Mode</td> <td><input checked="" type="checkbox"/></td> <td>any value</td> <td>Status Email List</td> <td><input type="checkbox"/> edit</td> </tr> <tr> <td>Device did not respond</td> <td></td> <td></td> <td>Status Email List</td> <td><input type="checkbox"/> edit</td> </tr> </tbody> </table> | Monitored Data Point                  | Enable/Disable Reporting from the Field Devices to the Website | State Change Watched for Notification                           | Contact List to Notify | Enable/Disable Notifications from the Website to a Contact List | AC Power | <input checked="" type="checkbox"/> | any value | Status Email List | <input type="checkbox"/> edit | Pivot Drive | <input checked="" type="checkbox"/> | any value | Test1 | <input checked="" type="checkbox"/> edit | Stop Control | <input checked="" type="checkbox"/> | any value | Test1 | <input checked="" type="checkbox"/> edit | End Gun | <input checked="" type="checkbox"/> | Off | Test1 | <input type="checkbox"/> edit | Output 3 | <input checked="" type="checkbox"/> | any value | Status Email List | <input type="checkbox"/> edit | Automatic End Gun Change Report | <input type="checkbox"/> | any value | Status Email List | <input type="checkbox"/> edit | Water Pressure Range | <input type="checkbox"/> | any value | Status Email List | <input type="checkbox"/> edit | Local Maintenance Mode | <input checked="" type="checkbox"/> | any value | Status Email List | <input type="checkbox"/> edit | Remote Maintenance Mode | <input checked="" type="checkbox"/> | any value | Status Email List | <input type="checkbox"/> edit | Device did not respond |  |  | Status Email List | <input type="checkbox"/> edit |  |  |  |
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| AC Power                                                                                                                                                                                                              | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | any value                             | Status Email List                                              | <input type="checkbox"/> edit                                   |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |
| Pivot Drive                                                                                                                                                                                                           | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | any value                             | Test1                                                          | <input checked="" type="checkbox"/> edit                        |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |
| Stop Control                                                                                                                                                                                                          | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | any value                             | Test1                                                          | <input checked="" type="checkbox"/> edit                        |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |
| End Gun                                                                                                                                                                                                               | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Off                                   | Test1                                                          | <input type="checkbox"/> edit                                   |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |
| Output 3                                                                                                                                                                                                              | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | any value                             | Status Email List                                              | <input type="checkbox"/> edit                                   |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |
| Automatic End Gun Change Report                                                                                                                                                                                       | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | any value                             | Status Email List                                              | <input type="checkbox"/> edit                                   |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |
| Water Pressure Range                                                                                                                                                                                                  | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | any value                             | Status Email List                                              | <input type="checkbox"/> edit                                   |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |
| Local Maintenance Mode                                                                                                                                                                                                | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | any value                             | Status Email List                                              | <input type="checkbox"/> edit                                   |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |
| Remote Maintenance Mode                                                                                                                                                                                               | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | any value                             | Status Email List                                              | <input type="checkbox"/> edit                                   |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |
| Device did not respond                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                       | Status Email List                                              | <input type="checkbox"/> edit                                   |                        |                                                                 |          |                                     |           |                   |                               |             |                                     |           |       |                                          |              |                                     |           |       |                                          |         |                                     |     |       |                               |          |                                     |           |                   |                               |                                 |                          |           |                   |                               |                      |                          |           |                   |                               |                        |                                     |           |                   |                               |                         |                                     |           |                   |                               |                        |  |  |                   |                               |  |  |  |

| MY DEVICES                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ACCOUNT                                  | DEVICE                                   | HELP    |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
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| <a href="#">Airtime</a> <a href="#">History</a> <a href="#">Setup</a> <a href="#">Scheduled Commands</a> <a href="#">Send Commands</a> <a href="#">Details</a>                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                          |                                          |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| <b>Phone Contacts</b> <a href="#">Add Phone Contact</a>                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                          |                                          |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Step 1 > Device Data<br>Step 2 > Device Location<br>Step 3 > End Guns<br><b>Step 4 &gt; Contacts</b><br>Step 5 > Contact Lists<br>Step 6 > Display Settings<br>Step 7 > Event Notifications<br>Step 8 > Device Groups | <table border="1"> <thead> <tr> <th>Name</th> <th>Phone Number</th> <th>Retries</th> <th></th> </tr> </thead> <tbody> <tr> <td>Jimmi Hendrix</td> <td>18090000000</td> <td>1</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Jim Morrison</td> <td>18018010000</td> <td>1</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Gram Parsons</td> <td>19090000000</td> <td>0</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Elvis Presley</td> <td>19000000000</td> <td>1</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Keith Moon</td> <td>19000000000</td> <td>1</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Colonel Tom Parker</td> <td>19000000000</td> <td>0</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Janis Joplin</td> <td>19000000000</td> <td>1</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Muddy Waters</td> <td>19000000000</td> <td>0</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Johnny Cash</td> <td>19000000000</td> <td>0</td> <td><input checked="" type="checkbox"/> edit</td> </tr> </tbody> </table> | Name                                     | Phone Number                             | Retries |               | Jimmi Hendrix            | 18090000000                              | 1           | <input checked="" type="checkbox"/> edit | Jim Morrison                             | 18018010000  | 1                     | <input checked="" type="checkbox"/> edit | Gram Parsons  | 19090000000                           | 0                                        | <input checked="" type="checkbox"/> edit | Elvis Presley          | 19000000000                              | 1 | <input checked="" type="checkbox"/> edit | Keith Moon | 19000000000 | 1 | <input checked="" type="checkbox"/> edit | Colonel Tom Parker | 19000000000 | 0 | <input checked="" type="checkbox"/> edit | Janis Joplin | 19000000000 | 1 | <input checked="" type="checkbox"/> edit | Muddy Waters | 19000000000 | 0 | <input checked="" type="checkbox"/> edit | Johnny Cash | 19000000000 | 0 | <input checked="" type="checkbox"/> edit |  |  |  |
| Name                                                                                                                                                                                                                  | Phone Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Retries                                  |                                          |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Jimmi Hendrix                                                                                                                                                                                                         | 18090000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                                        | <input checked="" type="checkbox"/> edit |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Jim Morrison                                                                                                                                                                                                          | 18018010000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                                        | <input checked="" type="checkbox"/> edit |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Gram Parsons                                                                                                                                                                                                          | 19090000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                                        | <input checked="" type="checkbox"/> edit |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Elvis Presley                                                                                                                                                                                                         | 19000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                                        | <input checked="" type="checkbox"/> edit |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Keith Moon                                                                                                                                                                                                            | 19000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                                        | <input checked="" type="checkbox"/> edit |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Colonel Tom Parker                                                                                                                                                                                                    | 19000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                                        | <input checked="" type="checkbox"/> edit |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Janis Joplin                                                                                                                                                                                                          | 19000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                                        | <input checked="" type="checkbox"/> edit |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Muddy Waters                                                                                                                                                                                                          | 19000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                                        | <input checked="" type="checkbox"/> edit |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Johnny Cash                                                                                                                                                                                                           | 19000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                                        | <input checked="" type="checkbox"/> edit |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| <b>Email Contacts</b> <a href="#">Add Email Contact</a>                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                          |                                          |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
|                                                                                                                                                                                                                       | <table border="1"> <thead> <tr> <th>Name</th> <th>Email Address</th> <th></th> </tr> </thead> <tbody> <tr> <td>Jimmi's Email</td> <td>Hendrix@deadrockstar.com</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Jim's Email</td> <td>jim@psychedelics.com</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Gram's Email</td> <td>grammy@whataleyou.com</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Elvis's Email</td> <td>elvis@friedpeanutbuttersandwiches.com</td> <td><input checked="" type="checkbox"/> edit</td> </tr> <tr> <td>Janis's email</td> <td>jangirl@gonetosoon.com</td> <td><input checked="" type="checkbox"/> edit</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Name                                     | Email Address                            |         | Jimmi's Email | Hendrix@deadrockstar.com | <input checked="" type="checkbox"/> edit | Jim's Email | jim@psychedelics.com                     | <input checked="" type="checkbox"/> edit | Gram's Email | grammy@whataleyou.com | <input checked="" type="checkbox"/> edit | Elvis's Email | elvis@friedpeanutbuttersandwiches.com | <input checked="" type="checkbox"/> edit | Janis's email                            | jangirl@gonetosoon.com | <input checked="" type="checkbox"/> edit |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Name                                                                                                                                                                                                                  | Email Address                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                          |                                          |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Jimmi's Email                                                                                                                                                                                                         | Hendrix@deadrockstar.com                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <input checked="" type="checkbox"/> edit |                                          |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Jim's Email                                                                                                                                                                                                           | jim@psychedelics.com                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <input checked="" type="checkbox"/> edit |                                          |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Gram's Email                                                                                                                                                                                                          | grammy@whataleyou.com                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input checked="" type="checkbox"/> edit |                                          |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Elvis's Email                                                                                                                                                                                                         | elvis@friedpeanutbuttersandwiches.com                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input checked="" type="checkbox"/> edit |                                          |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |
| Janis's email                                                                                                                                                                                                         | jangirl@gonetosoon.com                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <input checked="" type="checkbox"/> edit |                                          |         |               |                          |                                          |             |                                          |                                          |              |                       |                                          |               |                                       |                                          |                                          |                        |                                          |   |                                          |            |             |   |                                          |                    |             |   |                                          |              |             |   |                                          |              |             |   |                                          |             |             |   |                                          |  |  |  |

## Automated dispatch process

**A dispatch operation consists of several steps. The dispatch setup and notifications typically occur on the day before the actual load shed.**

1. Select the loads to be controlled. Any units or groups of units can be selected.
2. Select the date, time and the duration of the load shed in minutes (from 1 to 9999).
3. Enter, test, and edit the notification message
4. Edit the notification call-out list, if necessary
5. Start the process

**The system will begin the process by notifying all equipment owners/ operators. The notification messages are completely customizable, so any message can be sent. The telephone voice-based messages are delivered by an automated text-to-speech program, and are typically delivered in the afternoon before the dispatch day.**

- After the message is spoken, the system will ask the customer to acknowledge the message by pressing the \* key on the telephone. If they do not, the next person on their customer list will be called.
- When a person does acknowledge the message, the person's name will be recorded in the history log.
- If no one on the call-out list acknowledges the call, the notification process will be repeated the next morning
- This system can be used to send any message to the customer list at any time
- If the dispatch event is cancelled or changed, the utility operator can simply create and send a new message and then abort or reschedule the event.

## Opting Out

The M2M NOC gives the customers the option to not participate in any specific dispatch (They may "opt-out"). An opt-out is for one dispatch event for one controlled site. If they want to opt-out for more than one event or site, they can repeat the opt-out process for each site.

**The opt-out can happen at any time after an event has been scheduled and before the event has begun. The customer will:**

- Log onto the web site
- Uncheck the "Enable" check box next to the scheduled event.

At the scheduled start time, a control command will be sent to each of the selected units, instructing them to open the normally closed relay for the specified time. The units will do so, and will then respond with an ACK report, verifying both that the control relay is now open AND that the measured voltage to the controlled equipment is now OFF.

When the controlled duration has expired, the field unit will close the control relay and will report both that the relay is now closed AND that the voltage to the controlled equipment is now ON (or that it remains OFF if another switch is still controlling the equipment off).

During and after the dispatch time, a load-shed report is created, showing the total kW load shed, typically with 5-minute resolution. Customer participation, opt-outs, and free rider reports are also readily available. Since every unit reports its status before, during, and after the event, complete measurement and verification is readily available.

## History Logs

A detailed history log is maintained for each unit including all equipment status changes, commands sent, user notifications, and acknowledgements.

The log includes the time and date of each event plus all details of the event. In the case of control commands and acknowledgements, the user name of the operator is also saved. It also maintains a detailed record of all dispatches including customer opt-out actions.

| MY DEVICES                                                                            |                                                                                                                                                                                                                                                                                                      | ACCOUNT | DEVICE        | HELP               |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------|--------------------|
| Airtime                                                                               |                                                                                                                                                                                                                                                                                                      | History | Setup         | Scheduled Commands |
|                                                                                       |                                                                                                                                                                                                                                                                                                      |         | Send Commands | Details            |
| DEVICE: Tracker LT    Device Name: Tracker LT    Device ID: 4096    Model: TrackerLT  |                                                                                                                                                                                                                                                                                                      |         |               |                    |
| DISPLAY Show 1 Months of history ending on 12/18/2008    Load    MANAGE Delete Export |                                                                                                                                                                                                                                                                                                      |         |               |                    |
| Date                                                                                  | Event                                                                                                                                                                                                                                                                                                |         |               |                    |
| 12/18/2008 11:12 AM                                                                   | <b>Status Report:</b> Call Reason = Water Pressure Range Change, AC Power = On, Pivot Drive = Stopped, Stop Control = Off, End Gun = On, End Gun Program = On, Output 3 = Off, Water Pressure = 0, Water Pressure Range = Low, Position = 0, Signal Strength = (Weak)                                |         |               |                    |
| 12/18/2008 11:12 AM                                                                   | <b>Configuration Report:</b> Call Reason = Power On, Model = Tracker LT, Firmware Version = 1, AC Power = On, Pivot Drive = Stopped, Stop Control = Off, End Gun = Off, End Gun Program = On, Output 3 = Off, Water Pressure = 0, Water Pressure Range = Low, Position = 0, Signal Strength = (Weak) |         |               |                    |
| 12/17/2008 12:49 PM                                                                   | <b>Status Report:</b> Call Reason = Water Pressure Range Change, AC Power = On, Pivot Drive = Stopped, Stop Control = Off, End Gun = On, End Gun Program = On, Output 3 = Off, Water Pressure = 0, Water Pressure Range = Low, Position = 0, Signal Strength = (Weak)                                |         |               |                    |
| 12/17/2008 12:49 PM                                                                   | <b>Configuration Report:</b> Call Reason = Power On, Model = Tracker LT, Firmware Version = 1, AC Power = On, Pivot Drive = Stopped, Stop Control = Off, End Gun = Off, End Gun Program = On, Output 3 = Off, Water Pressure = 0, Water Pressure Range = Low, Position = 0, Signal Strength = (Good) |         |               |                    |
| 12/17/2008 12:35 PM                                                                   | <b>Status Report:</b> Call Reason = Status Change, AC Power = On, Pivot Drive = Stopped, Stop Control = Off, End Gun = On, End Gun Program = On, Output 3 = Off, Water Pressure = 0, Water Pressure Range = Low, Position = 0, Signal Strength = (Weak)                                              |         |               |                    |
| 12/17/2008 12:33 PM                                                                   | <b>Status Report:</b> Call Reason = Remote Command Acknowledgment, AC Power = On, Pivot Drive = Running Reverse, Stop Control = Off, End Gun = Off, End Gun Program = On, Output 3 = Off, Water Pressure = 0, Water Pressure Range = Low, Position = 0, Signal Strength = (Weak)                     |         |               |                    |
| 12/17/2008 12:32 PM                                                                   | <b>Command Sent:</b> Status Report    Username: Roy Rogers                                                                                                                                                                                                                                           |         |               |                    |
| 12/17/2008 12:29 PM                                                                   | <b>Status Report:</b> Call Reason = Remote Command Acknowledgment, AC Power = On, Pivot Drive = Running Reverse, Stop Control = Off, End Gun = Off, End Gun Program = On, Output 3 = Off, Water Pressure = 0, Water Pressure Range = Low, Position = 0, Signal Strength = (Weak)                     |         |               |                    |
| 12/17/2008 12:29 PM                                                                   | <b>Command Sent:</b> Status Report    Username: Roy Rogers                                                                                                                                                                                                                                           |         |               |                    |

The Device History page. This page can be expanded from one day to one year.





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