

Base Station Alarm Commands

The OSMAC Base Station allows up to 8 alarm inputs. Pin #1 on the OSMAC Base Station corresponds to Alarm 1; Pin #6 corresponds to Alarm 6, and so on. Each one of these inputs will send its own pre-programmed command to any satellite or group of satellites.

Since the OSMAC Base Station does not provide 2-way communication between the satellites and the SitePro central, any alarm conditions and responses are completely contained within Base Station. When any alarm is pulled “low” or to ground (short out), it will generate a pre-programmed command. Conversely, when any input is registered “high” (or open), it will generate a different pre-programmed command

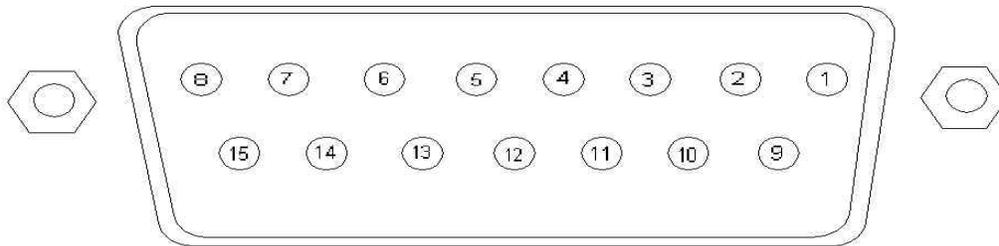
One application can involve the use of a Toro rain switch (part # 850-74) or the Mini-click™ rain switch. The differences between the two are how each will generate the alarm. The Toro rain switch is a normally open switch, whereas the Mini-click is normally closed.

Setting up the Wiring:

IMPORTANT: The alarm inputs are not surge protected. Supplemental surge protection on the field wiring is recommended in lightning-prone areas.

The cable required for the Base Station to rain switch can be purchased at a local electronics store. The part needed is a “15 pin game extension cable”, with one end having a female connection.

Wire colors on the game cable vary with different suppliers, so the use of an Ohmmeter is necessary to locate pins #1 and #15 and their corresponding wire. The pins on the OSMAC Base Station are listed on the following diagram (as you have back of the unit facing you):



To connect the Toro Rain Switch, using the 15-pin game cable, connect pin #15 to the large copper wire (ground wire), and the pin that corresponds to the alarm you wish to set up (pin #1 for Alarm 1; Pin #5 for alarm 5, etc) must be connected to the large silver wire on the rain switch. **(Important reminder: whatever wire number used, (wire #1 thru 8) that is the associated alarm input for that rain switch.** For simplicity, this example, and other examples in this document, will use Alarm 1 and pin 1. Alarm input 1 LOW will disable the system (256 75 43). Alarm input 1 HIGH will be used to re-enable the system (256 75 44). The other two wires, (the thinner ones) are not used and can be capped separately with a wire nut to protect them.

Once this wiring is complete, it is necessary to set up the OSMAC Base Station to recognize the alarm inputs. To set up the alarm commands, perform the following steps:

1. Select the program mode by pressing the “—“(dash key, without the quotes) on the keypad. The OSMAC Base Station will prompt you for a password.
2. Press 7 5 3 1 and the F1 key. You will not see the numbers, just the asterisk (*) character.
3. Press 4 to enter the Alarms sub-menu
4. When the “Alarm Number =” prompt is shown. Enter the number of the alarm you wish to configure, with only alarms 1-8 being valid. Press the F1 key.
5. When the alarm is triggered, the OSMAC Base Station will display “ALARM X PAGER” on the top line, and the satellite address number that will be triggered. Entering in a “256” command (without the quotes) is the global command for all satellites. Erasing the satellite address number disables the alarm. Press the F1 key when done.
6. The Base Station will display “ALARM LOW MSG:” on the top line of the LCD. On the second line, you may enter or edit the command code to be sent when the alarm input goes low. Press the F1 key when the message has been entered.
7. The procedure to set the “ALARM HIGH MSG:” is the same as setting the “ALARM LOW MSG:”.
8. Press the F1 key to return to the Programming mode menu. If completely finished, press the “—“ key until the LCD display reads PAGER NO=

Practical Applications:

The most common application for the OSMAC Base Station Alarm Commands would be when using a rain switch to put the system in a rain-hold. The procedure is as follows (NOTE: All key presses are in the quotation marks. These are for grammatical use only; there is no corresponding key on the Base Station):

1. Press the “—“ key to enter programming mode
2. Enter 7 5 3 1 when prompted for a password, then press F1
3. Select 4
4. Assign “1” to this alarm. It is necessary to press the backspace key to erase the zero holding the space for the satellite, or it will leave this leading zero and result in an incorrect satellite number. Once the zero has been deleted, enter “256”

5. For the “ALARM LOW MSG”, enter the OTA command for disabling the system (75 43). This will sequentially shut down and disable the RDR until the re-enable command is sent.
6. Enter the OTA command for re-enabling the RDR (75 44) for the “ALARM HIGH MSG”

Set up in this fashion, when the Rain Switch registers the “low” or ground condition, it will force the Base Station to transmit the 256 (global) 75 43 (sequential shut down and disable) command. No satellites or stations will run until the 256 75 44 command is transmitted to the RDR.

The procedure for setting up the Mini-Click is the same, with an important reminder: whatever wire number used, (wire #1 thru 8) that is the associated alarm input. For example, if you attach wire #15 from the game cable to the ground of the Mini-Click, and then put wire #4 on the other, you will need to set up Alarm Input 4 to “listen” for the status of the rain switch. Attach the selected wire from the game cable to the Mini-Click rain switch, and ensure wire #15 is attached to the ground. Setting up the alarms and responses is the same as listed above.

Practical Application #2:

Using the alarm commands and procedures to keep a lake at a constant level:

If a float were set to have the alarm register “closed” when the lake reaches capacity, there would be no action on the base station. Upon initiation of irrigation and the lake starts to empty, the switch would register an “open” condition and the base station could be programmed to start a station to fill the lake back up to the desired level.

The procedure would be as follows:

1. Press the “Program” key
2. Enter 7 5 3 1 when prompted for a password, then press F1
3. Select 4
4. Assign “1” to this alarm (if alarm condition 1 was already used, select a number that is unassigned). It is necessary to press the backspace key to erase the zero holding the space for the satellite, or it will leave this leading zero and result in an incorrect satellite number. Once the zero has been deleted, enter the satellite number where the float is connected (example: “023”)
5. For the “ALARM HIGH MSG”, enter the following string of numbers: 75 11 XX”, where “XX” is the station number. This will turn ON an individual station and will continue to be in this state until the float causes the switch to open, and refilling would begin.
6. For the “ALARM LOW MSG” enter the satellite number, followed by the 75 10 XX command, where again, the XX is the station number you wish to turn off.