eyePower Limited

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eyePower Lock Off – Latch On

Version 1.2

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A customer requested a facility to dump a set of relays very quickly when switching over to the Backup supply to reduce the load on the UPS. Load shedding using the existing ‘relay off’ macro commands is not fast enough for multiple relays to be shed before the load was transferred to the UPS. The relays needed to be turned off faster than the time taken for the changeover relay to change over.

We have added some new commands to the macro language to allow for this and more.

&H55 and &H56 define relays that are to be locked off when on the Main (A) supply.

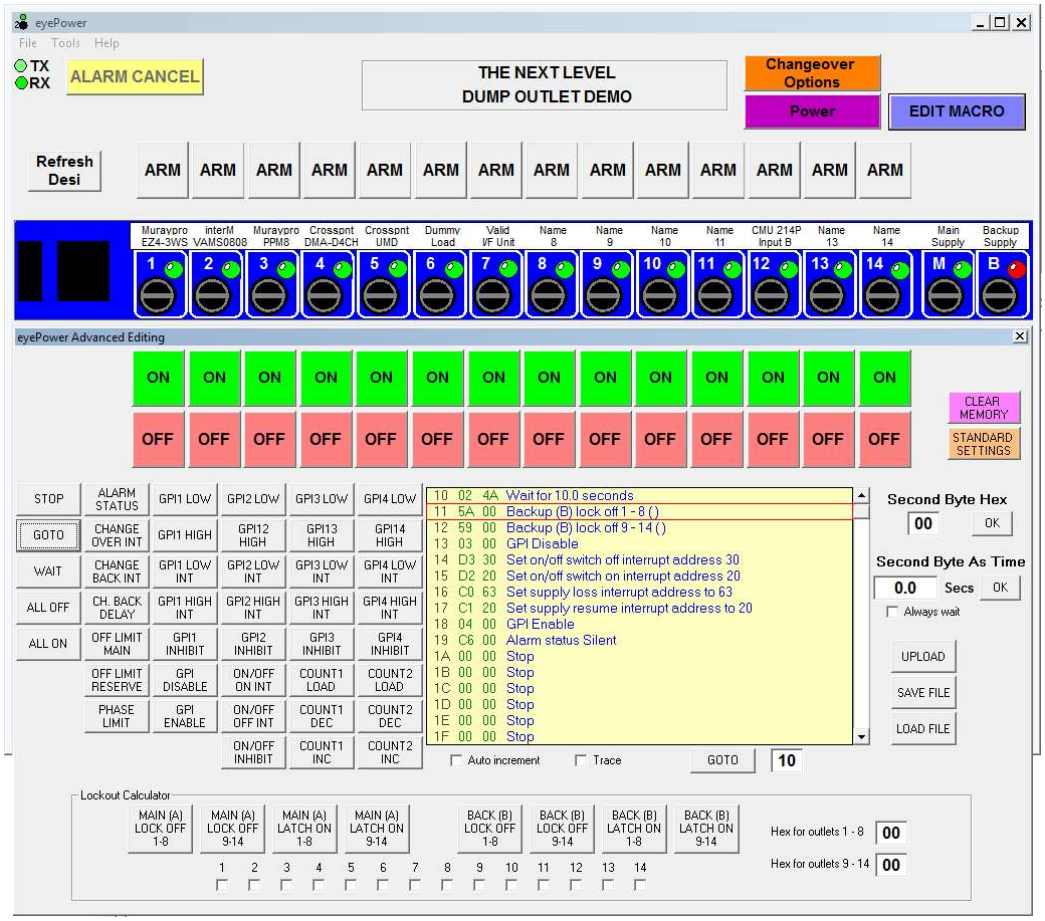
&H57 and &H58 define relays that are to be latched on when on the Main (A) supply.

&H59 and &H5A define relays that are to be locked off when on the Backup (B) supply.

&H5B and &H5C define relays that are to be latched on when on the Main (A) supply.

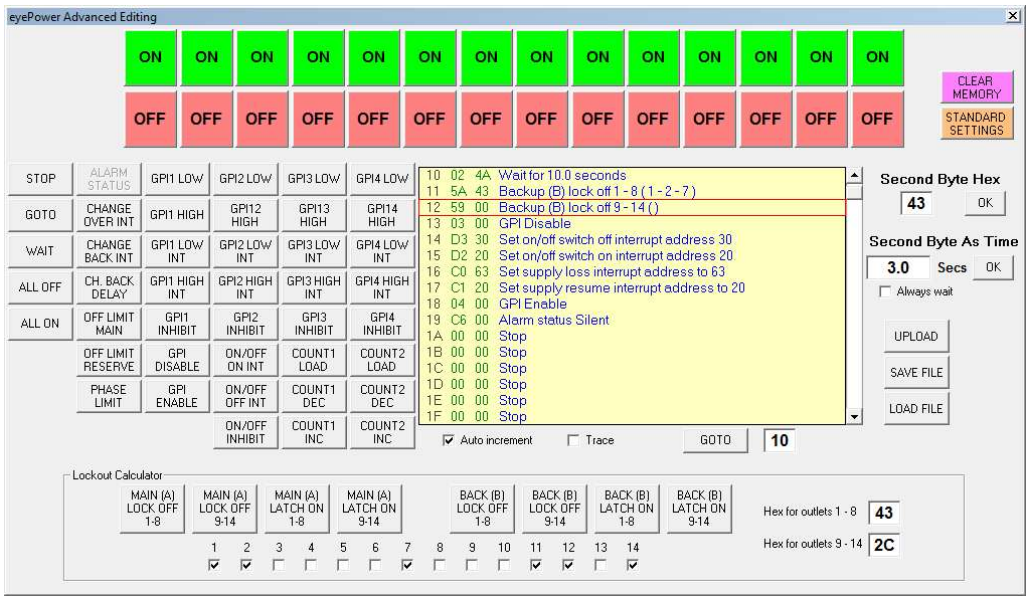
The hex values define which relays are affected by setting individual bits to 1. We have added a section to the macro editing form to calculate the hex values automatically.

Below is an edited macro template with two added lines for relays locked off when on the B supply, with no relays set.



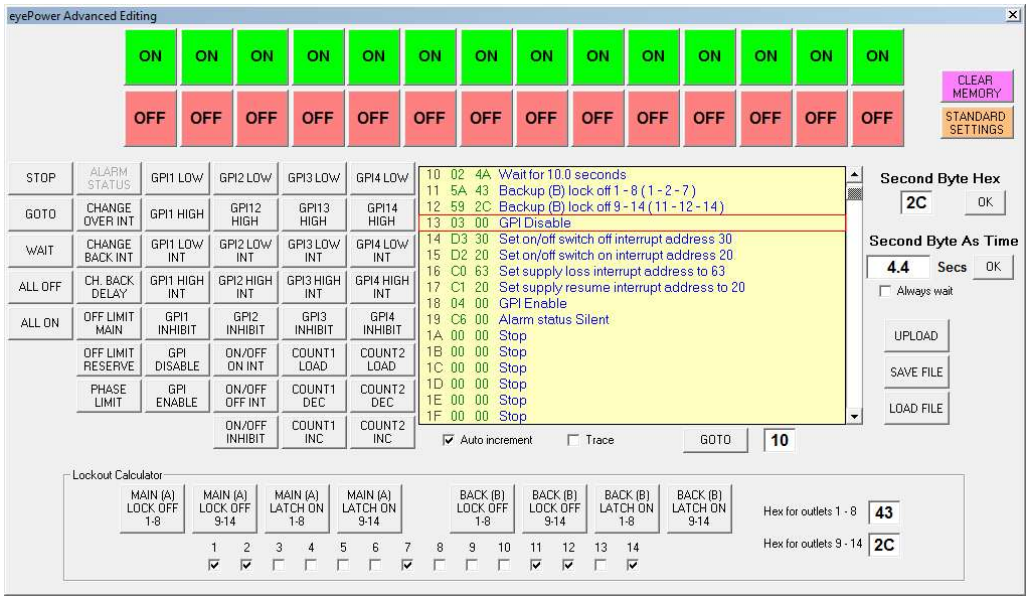
To set the relays you want to turn off when on Backup, tick the check boxes in the calculator.
Select line 11 in the macro list and set auto increment.
Click on the “BACK (B) LOCK OFF 1-8” button.

Line 11 will update to show the relays you have selected within the group 1 – 8.



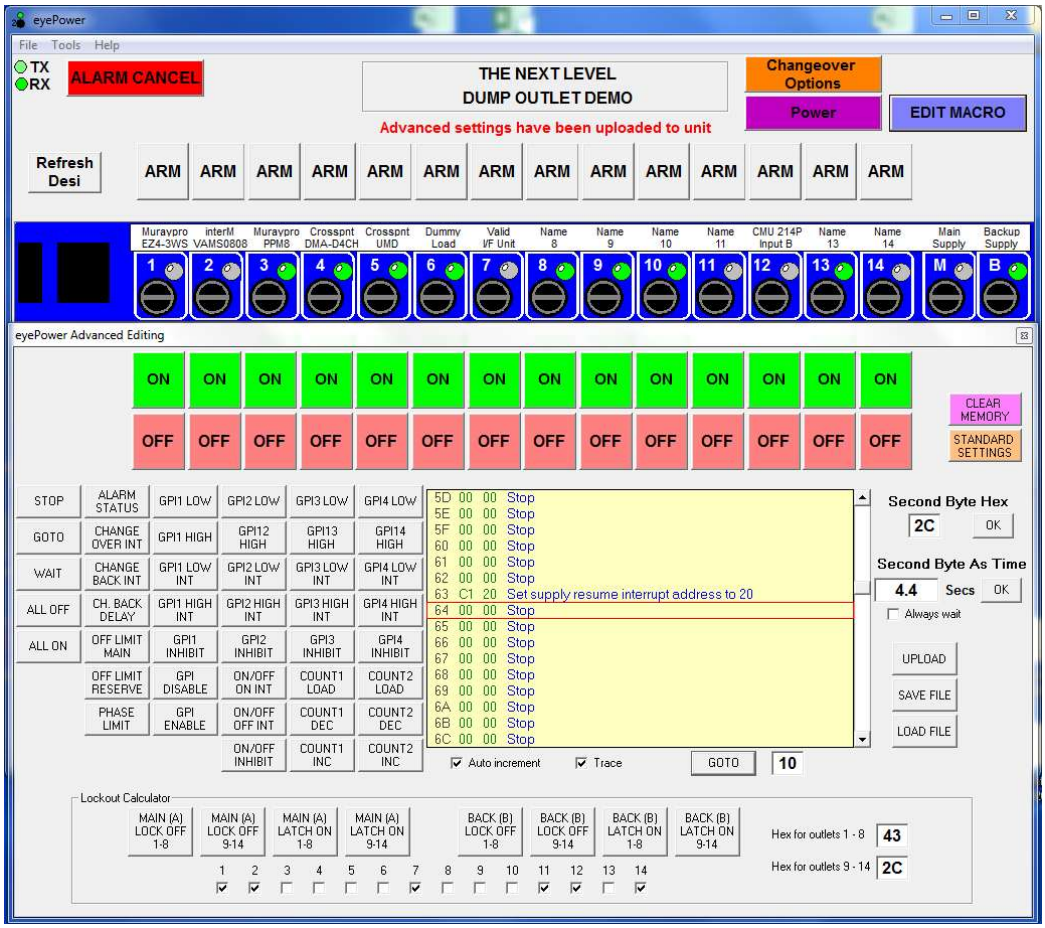
Click on the “BACK (B) LOCK OFF 9-14” button.

Line 12 will update to show the relays you have selected within the group 9 – 14.



Click Upload to upload the new macro code and them power cycle the PDU.

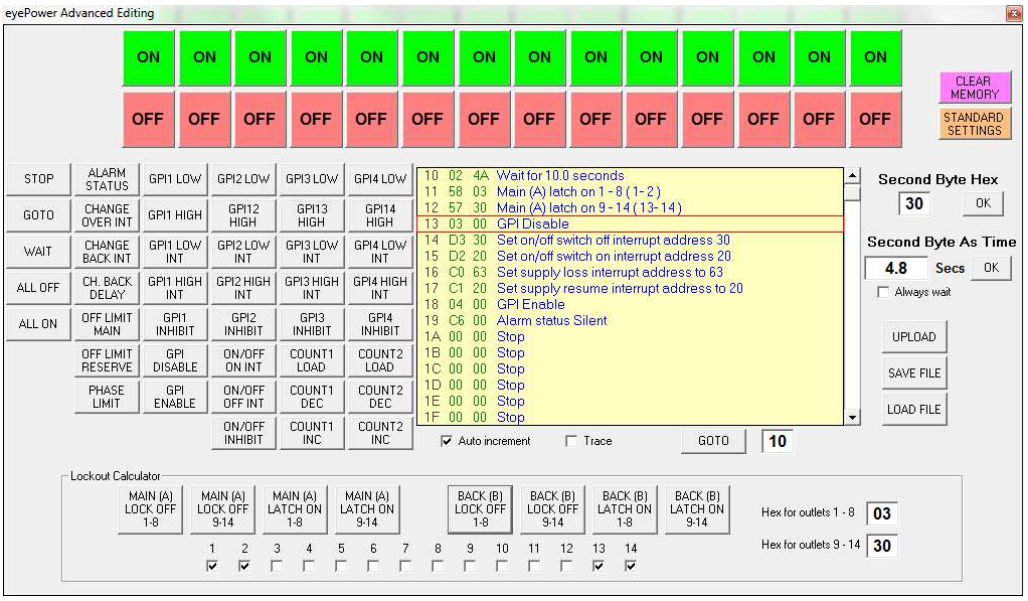
When the unit switches to the Backup supply, the selected relays will turn off immediately.



When the unit switches back to the Main supply, the relays turned off will be sequenced back on again using the existing macro code.

The relays that have been turned off using the ‘Lock Off’ macro command cannot be turned on from macro commands, the web browser interface, or using ‘relay on’ commands over serial/TCP.

Using the same user interface, we have also added the facility for relays to be latched on.



Note: This command does not turn on relays if they are off but will latch them on once they have been turned on by other commands.

The relays that have been latched on using the ‘Latch On’ macro command cannot be turned off from macro commands, the web browser interface, or using ‘relay off’ commands over serial/TCP.

Cycle timers, added previously for the same customer to power a load off then back on, will still operate even if an output is latched on.

If you set the same relay to be both ‘Latch On’ and ‘Lock Off’ for the same supply, the ‘lock off’ setting will take precedence.

Reading/Setting the Lock/Latch settings over serial/TCP.

Two new serial/TCP commands have been added to read and set the Lock/Latch settings from external control systems.

To read an eyePower Lock/Latch status,

Read lock/latch status **6BH**

and that address will respond

Status 6BH
Lock off Main (A) 9 – 14
Lock off Main (A) 1 – 8
Latch on Main (A) 9 – 14
Latch on Main (A) 1 – 8
Lock off Backup (B) 9 – 14
Lock off Backup (B) 1 – 8
Latch on Backup (B) 9 – 14
Latch on Backup (B) 1 – 8

	128	**64**	**32**	**16**	**8**	**4**	**2**	**1**
Main (A) Lock Off	Always 0	Always 0	Relay 14	Relay 13	Relay 12	Relay 11	Relay 10	Relay 9
	Relay 8	Relay 7	Relay 6	Relay 5	Relay 4	Relay 3	Relay 2	Relay 1
Main (A) Latch On	Always 0	Always 0	Relay 14	Relay 13	Relay 12	Relay 11	Relay 10	Relay 9
	Relay 8	Relay 7	Relay 6	Relay 5	Relay 4	Relay 3	Relay 2	Relay 1
Backup (B) Lock Off	Always 0	Always 0	Relay 14	Relay 13	Relay 12	Relay 11	Relay 10	Relay 9
	Relay 8	Relay 7	Relay 6	Relay 5	Relay 4	Relay 3	Relay 2	Relay 1
Backup (B) Latch On	Always 0	Always 0	Relay 14	Relay 13	Relay 12	Relay 11	Relay 10	Relay 9
	Relay 8	Relay 7	Relay 6	Relay 5	Relay 4	Relay 3	Relay 2	Relay 1

To change the Lock/Latch settings of the eyePower MDU, affecting all supply/relays combinations,

Set Lock/Latch settings **6CH**
Lock off Main (A) 9 – 14
Lock off Main (A) 1 – 8
Latch on Main (A) 9 – 14
Latch on Main (A) 1 – 8
Lock off Backup (B) 9 – 14
Lock off Backup (B) 1 – 8
Latch on Backup (B) 9 – 14
Latch on Backup (B) 1 – 8

The response is the same as for 6BH

Using this command will overwrite the Lock/Latch settings from the Macro command. Lock Off relays will be turned off if the relevant supply is active, but Latch On relays will not be turned on. They must be turned on by using the normal macro Relay On commands.

The macro settings for Lock Off/Latch On can be reinstated by using the GOTO command to the correct macro address.

Please note that Lock/Latch settings set by serial/TCP are not remembered over a power cycle of the unit.