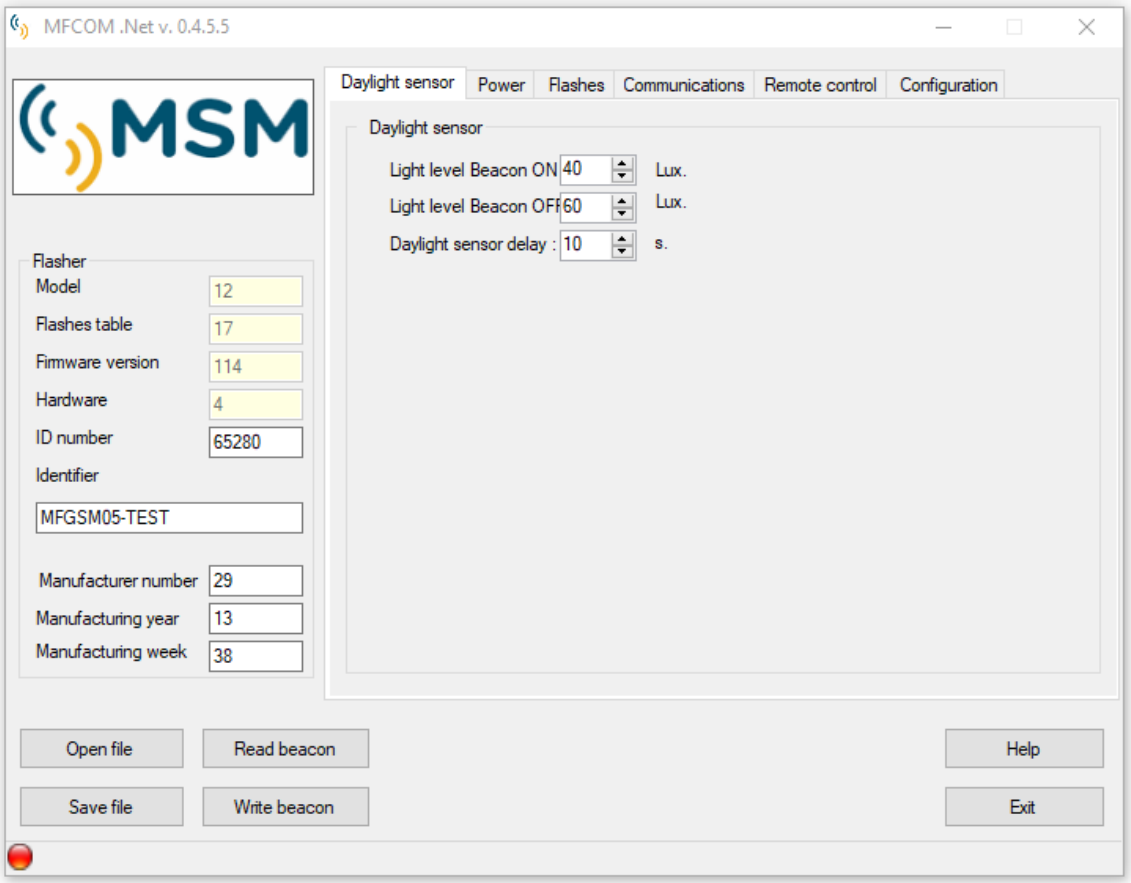
USER MANUAL

MFCOM.Net SOFTWARE



MSM

REF: MFCOM.Net-MAN-ING		
REV	**DATE**	**REVIEW**
01	30-11-16	Review 1

1. MF12 Flasher Configuration

The MFCOM.Net Software is required for the configuration of the MF12 flasher.

The flasher is set from factory and has no need for modifications. However, in case modifications of the original configuration are required, this software needs to be used. The MF12 flasher communicates with the PC through the use of C.PROG.MF12 communications cable, with the position of the selector on TX (transmission).

The MFCOM.Net allows the user to modify the MF12 parameters such as the identifier, configuration, flashing parameters, power, etc.

Main functions:

- 6 user's flash characters programming.
- Photocell sensitivity adjustment in Lux.
- Day-night offset: photocell delay from day to night.
- Synchronism offset mode selection to produce running lights.
- Dimer mode for night reduction for leading lights.
- Adjustable LED intensity with reduction in %.
- Low battery voltage alarm configuration.
- Solar charge regulator settings configuration.
- Automatic screen adjustment to available functions in the flasher version.

To set the flasher, the following is required:

- C.PROG.MF12 Programming cable in TX position.
- MFCOM.Net Software
- PC Windows based.

First, connect the battery to the beacon, and then connect the programming cable to the flasher and to the PC. Once those steps are made, start the MFCOM.Net software.

Before starting to read the beacon, in the Configuration screen of the MFCOM.Net, you must select the serial port to be used and select the language. After you have selected both, then you can read the beacon.

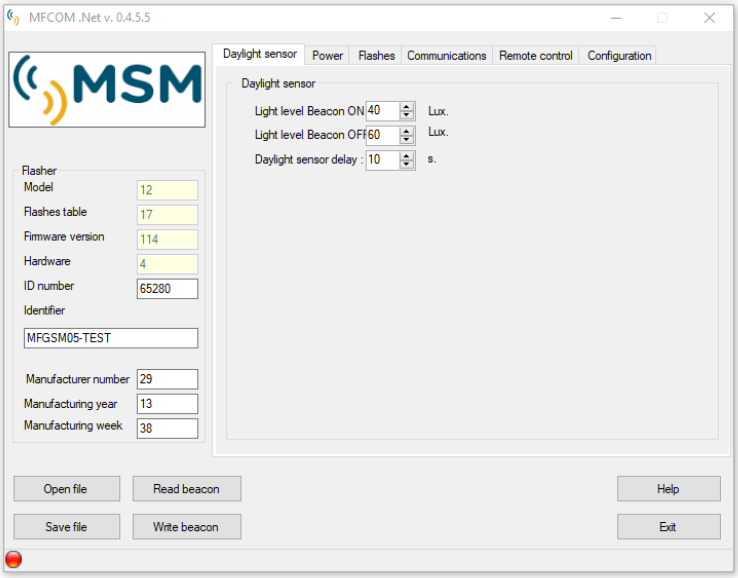
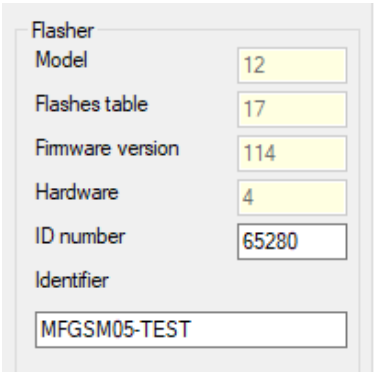


Figure 1. MFCOM.Net Configuration.

To start reading the flasher, click on the button “Read beacon”. The data of the beacon will be identified and its parameters shown through tabs.
In the left side of the screen, the basic information of the flasher will be shown:

- Model.
- Flashes Table.
- Firmware version.
- Hardware.
- ID number.
- Identifier.



Once you click on the “Read beacon” button, the software shows the “Daylight sensor” tab, that shows the Lux levels for the beacon to turn on and for the beacon to turn off.

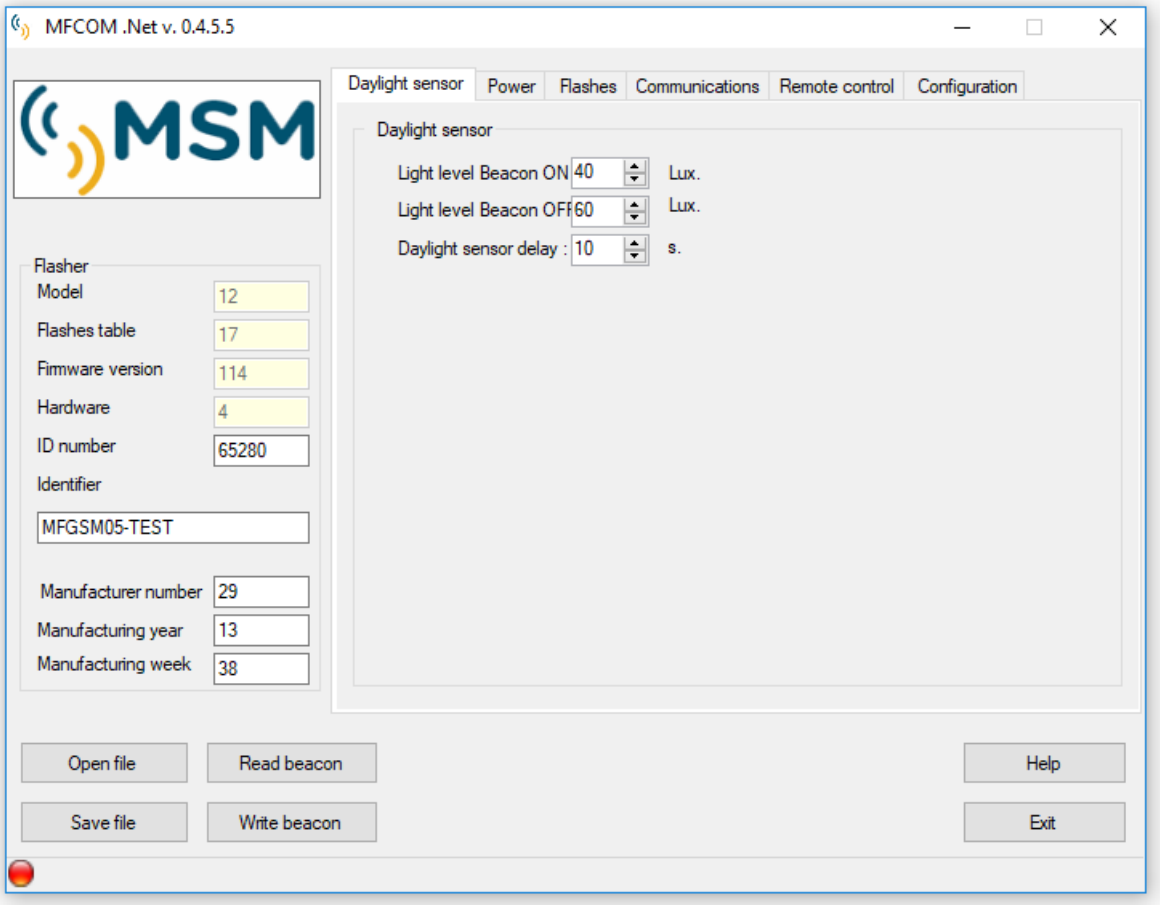


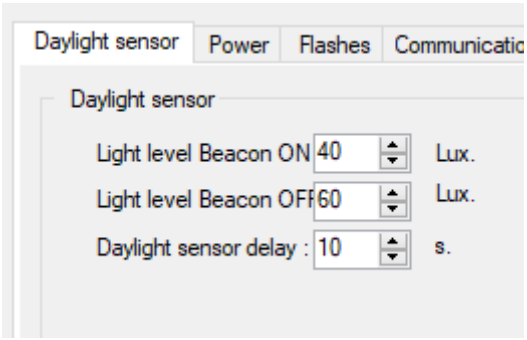
Figure 2. MFCOM.Net Daylight sensor.

1.1. FUNCTIONS DESCRIPTION

Read beacon	Current settings reception.
Write beacon	Parameter transmission
Save file	Save to PC configuration files.
Open file	Open saved PC configuration files.
Edit Flashes	Access flash character editing screen
Help	Access help.
Exit	Exit the program.

1.2. PHOTOCELL ADJUSTMENT

The beacon's activation is controlled by the daylight photocell included in the beacon. The sensitivity of the photocell can be adjusted in different lux levels.



Recommended values for the photocell adjustment:

Light level beacon ON: 40 lux.
Light level beacon OFF: 60 lux.

The daylight sensor delay is a delay in the activation of the beacon after detecting night in the photocell.

Once adjusted the new values, they have to be transmitted to the beacon through the button:

1.3. FLASH CHARACTER ADJUSTMENT

The menu allows the adjustment of the beacon flashes.

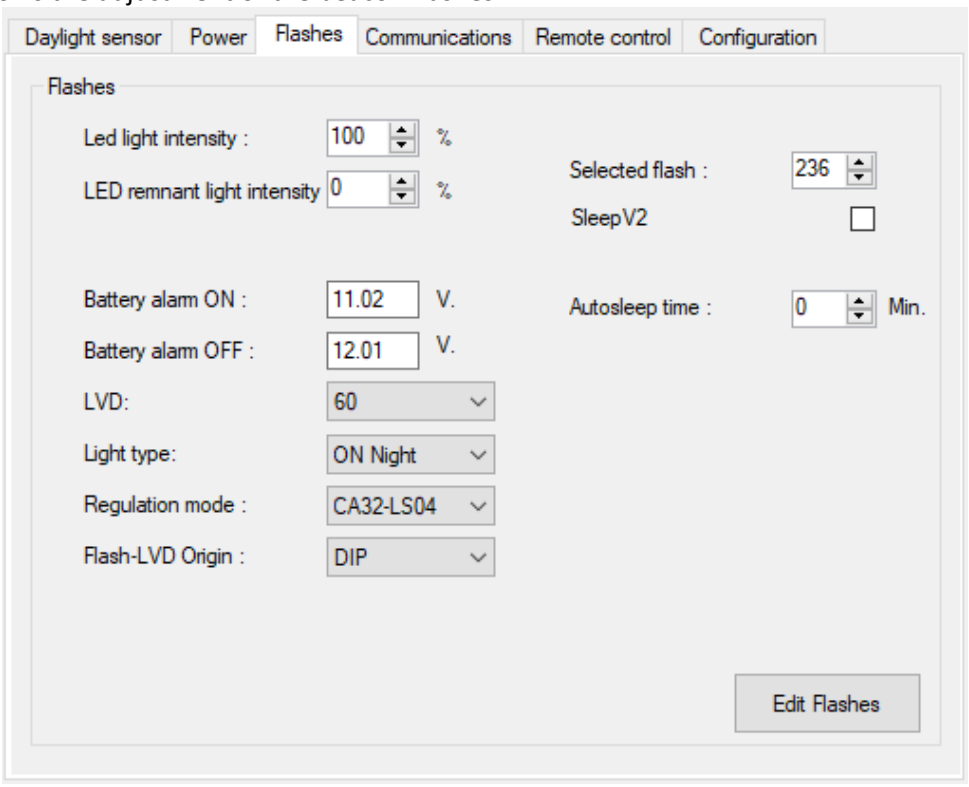


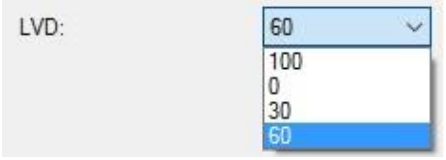
Figure 3. Flash character adjustment menu

- ***LED light intensity (%):*** This parameter is used to reduce the beacon intensity in order to reduce the power supply required by the beacon.
- ***LED Residual light intensity (%):*** It activates a second output with a residual light between flashes to simulate a rotating beacon.
- ***Battery alarm ON***: Voltage level for battery alarm activation.
- ***Battery alarm OFF***: Voltage level for battery alarm deactivation.
- ***LVD***: The alarm generates in the beacon the activation of the LVD mode, in order to avoid the complete discharge of the battery and possible damages. The LVD mode has 4 options configurable by miniDIPs or software:
    1. Continue on operating at 100% consumption.(LVD OFF 100%)
    2. Switch off the light in order not to discharge further the battery. (LVD ON 0%)
    3. Reduce the consumption to 30%. (LVD 30%)
    4. Reduce the consumption to 60%. (LVD 60%)

MINIDIPS ADJUSTMENT

LVD MODE	DIP 2	DIP 3
LVD OFF	OFF	OFF
LVD ON	ON	OFF
LVD 30%*	OFF	ON
LVD 60%*	ON	ON

SOFTWARE ADJUSTMENT

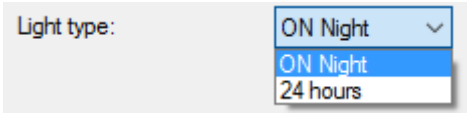


IMPORTANT.
(*)The reduction of consumption implies the reduction of the luminous intensity in the same proportion. Check that the lantern still provides the proper range.

LIGHT TYPE

The light type menu is used to select the beacon working mode:

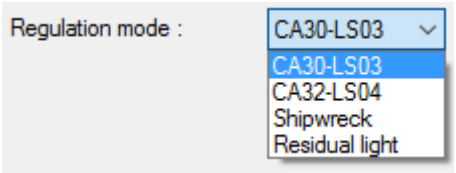
- ON Night: Working only at night at **X% (0-100) Intensity Led**
- 24H ON: Working 24 hours at to **X% (0-100) Intensity Led** by day and attenuated by **X% (0-100)** during the night to prevent the dazzling effect. This mode is used in LED leading lights.



REGULATION MODE

It allows between two modes:

- CA30: LED with fixed regulator not adjustable with PWM (LS03SR and CA30).
- CA32: LED with adjustable regulator with PWM (LS04SR and CA32).
- Shipwreck: Only for double LED output shipwreck lights (wreck marking lanterns) for blue and amber LED.
- Residual Light. It activates a second output with a residual light between flashes to simulate a rotating beacon.



FLASH –LVD ORIGIN

The MF12 Flasher can be set through the internal miniDIPs of the lantern and also using the IR programmer. Thus, we must select which option will be employed in the lantern.

- DIP: The lantern employs the selected flash character and the miniDIPs LVD configuration.
- MFCOM: The miniDIPs LVD configuration is not taken into account, and the lantern uses the data in the flasher memory set by PC or IR programmer.

USER'S FLASHES EDIT

Edit Flashes

This screen allows editing the 6 different user flashes rhythms from the flash table:

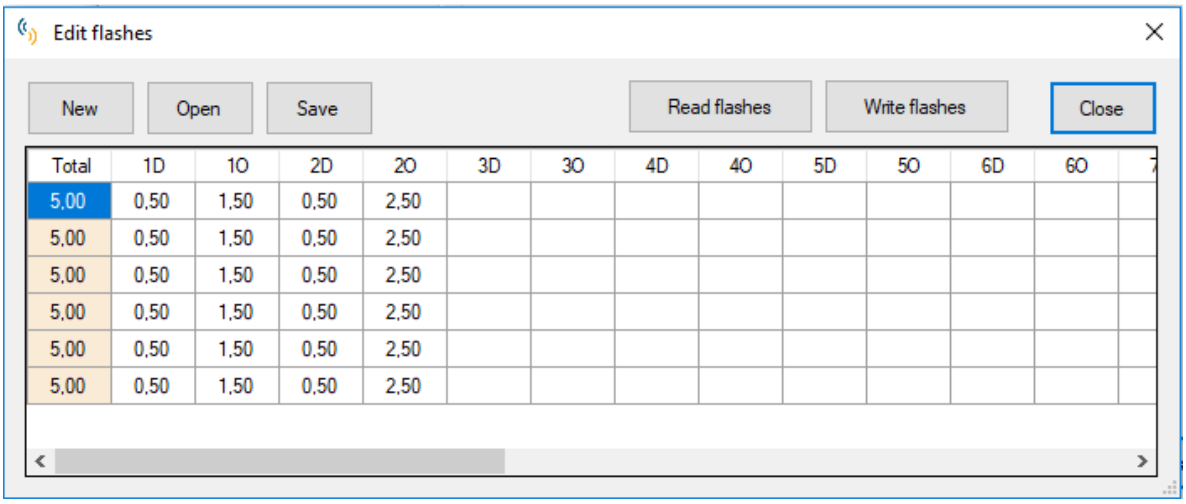


Figure 4. Flash character editor.

The maximum rhythm length allowed is 16 On/Off cycles.

'New' to erase all the table data to start a new edition.

'Open' to upload a rhythm file previously edited by PC.

'Save' to store the edited flashes to be used in the future.

'Read flashes' to load the last flashes edited.

'Write flashes' saves the edited rhythms in the table of the flasher.

The edited flashes can be saved for other transmissions.

1.4. COMMUNICATIONS

The flasher can be remotely controlled in multiple ways. On this screen you can configure the various options.

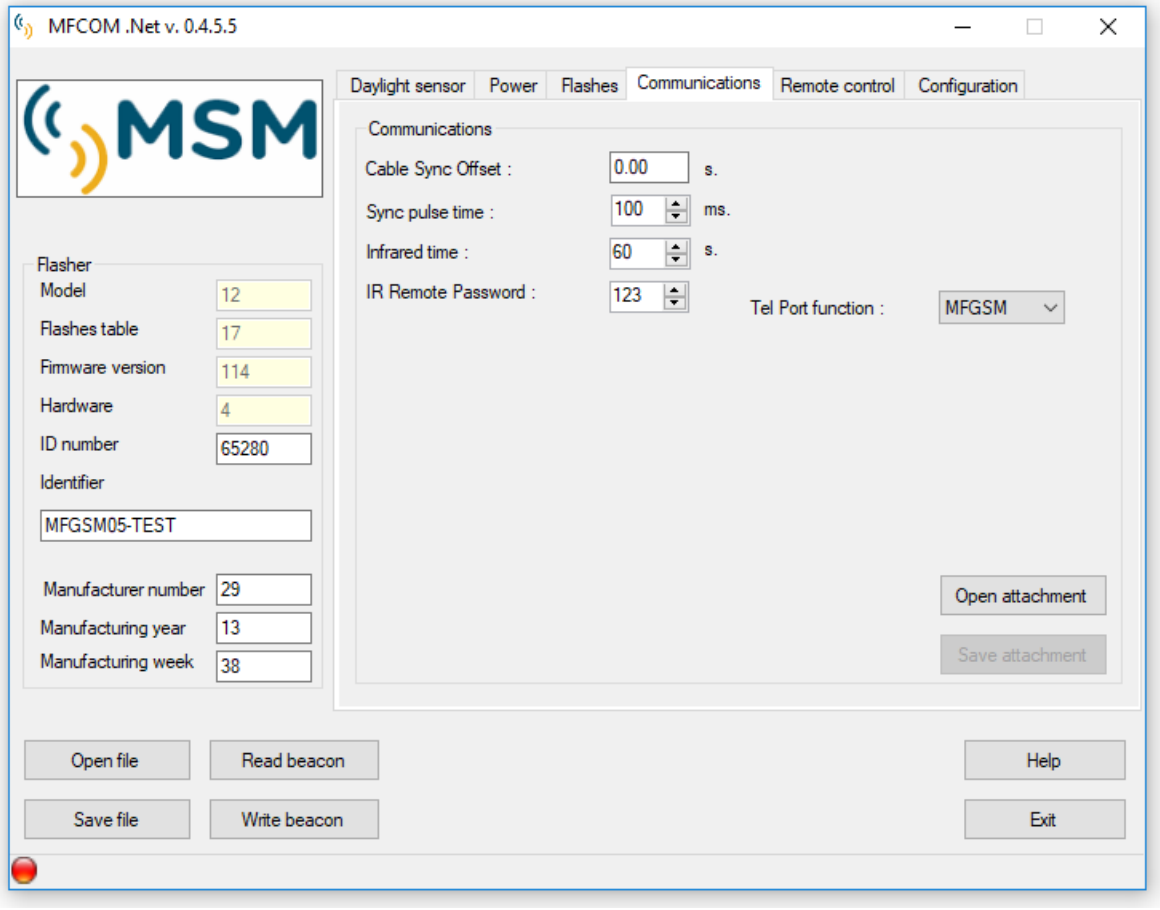
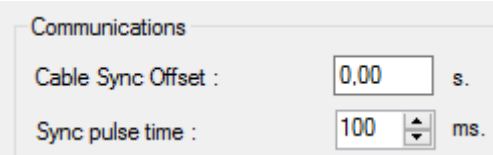


Figure 5. MFCOM.Net Communications

1.4.1. SYNCHRONISM SETTINGS

The flasher can be synchronized by cable or using the MFGPS synchronizer through GPS signals.



Synchronization offset

This parameter allows synchronized lights sweep effect for channels or alternated lights. The time will be set in seconds of delay required with regard to other synchronized lights. The maximum offset time allowed is limited by the length of the last off time of the selected flash rhythm.

Synchronization pulse time

This parameter is used to select different synchronization pulses length, in order to synchornize the MSM beacon with beacons from other manufacturers. From factory the standard time is 100msec.

1.4.2. IR PROGRAMMER CONFIGURATION

The MF12 flasher has versions controlled by an IR programmer.
It allows remote configuration and lantern control.
The IR programmer has a configurable access password (123 by default)
The IR data reception is activated after a day/night step during a configurable time (100 sec by default)

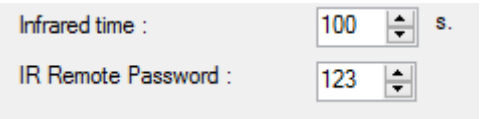
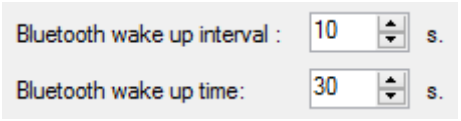


Figure 6. IR Programmer

1.4.3. BLUETOOTH LINK CONFIGURATION

The MF12-H4 flasher has a Bluetooth link activated by periods to reduce the power consumption. The activity is configured by using two parameters, which are described below:

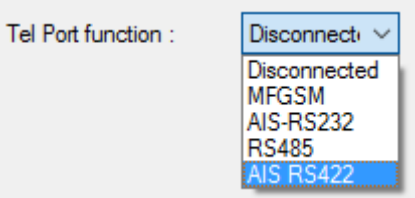
- ***Bluetooth wake up interval (sec.):*** Time to start the link
- ***Bluetooth wake up time (sec.):*** On time for the link**.**



1.4.4. TELECOMMAND PORT CONFIGURATION

The MF12-H4 flasher program has a communication port for beacon remote control. TEL port can be configured to work with various types of remote equipment with different protocols:

- *Disconnected*: If remote control is not used, you must disable the port TEL.
- *MFGSM*: Connection with remote control module MFGSM, MFUHF and MFVHF via RS232.
- *AIS RS232*: AIS transponder connection by RS232 to issue the Message 21.
- *RS485*: Flashlight connection with remote stations via RS485 with MODBUS protocol.
- *AIS RS422*: AIS transponder connection by RS422 to issue the Message 21.



1.5. REMOTE CONTROL

The MF12 flasher can be controlled by PC with RS232 serial connection and using this interface we can perform some functions remotely and receive instant performance data and possible alarms detected in the lantern.

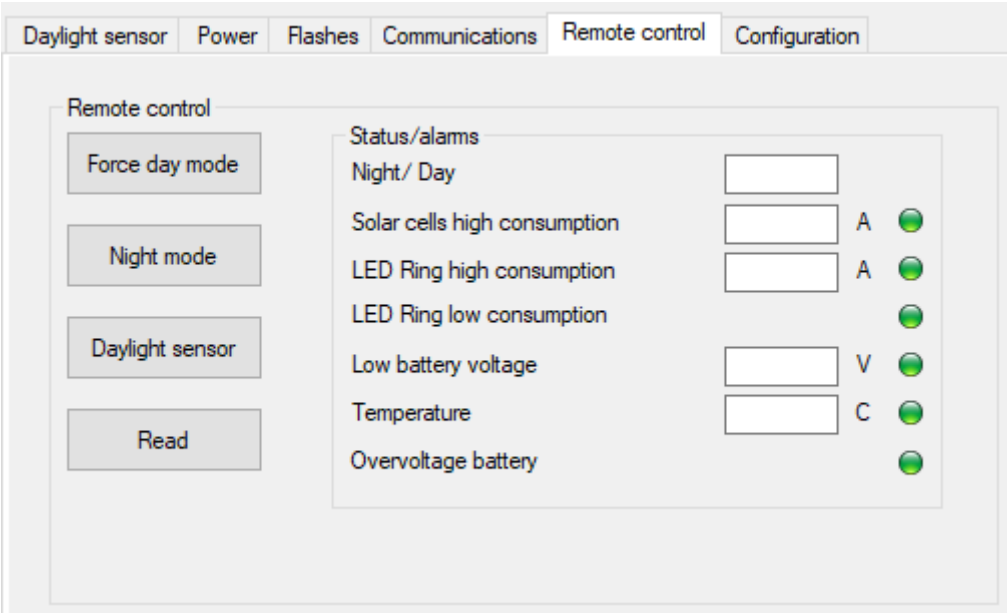


Figure 7. MFCOM.Net Remote Control

In “Remote control ” the actual beacon status is shown. By clicking on “Read”, the results can be visualized, indicating if the beacon is in night or day mode, the voltage data, etc., and if the operation is correct it will be shown with a green dot. If there is any alarm for improper operation it will be shown with a red dot.

1.6. PROGRAM CONFIGURATION

1.6.1. SERIAL PORT AND LANGUAGE SELECTION

The MFCOM.Net software can communicate through different RS232 serial ports.

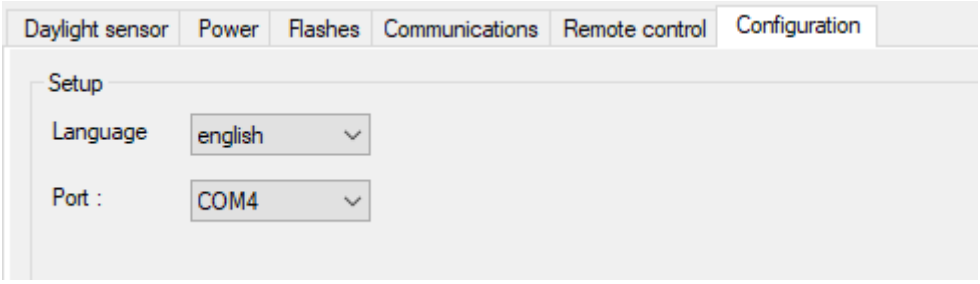


Figure 8. MFCOM.Net Serial Port and Language selection

1.7. POWER

In the “Power” tab, if there is any alarm, the correct parameters shall be configured to eliminate the alarm. In this “Power” tab, parameters set up in factory must not be modified. The only modifiable parameters are for adjusting LEDs consumption alarm limits and the solar panel consumption.
Parameters to be adjusted:

- Maximum LEDs consumption.
- Minimum LEDs consumption.
- High temperature alarm.
- Maximum panel current.
- Sun radiation.

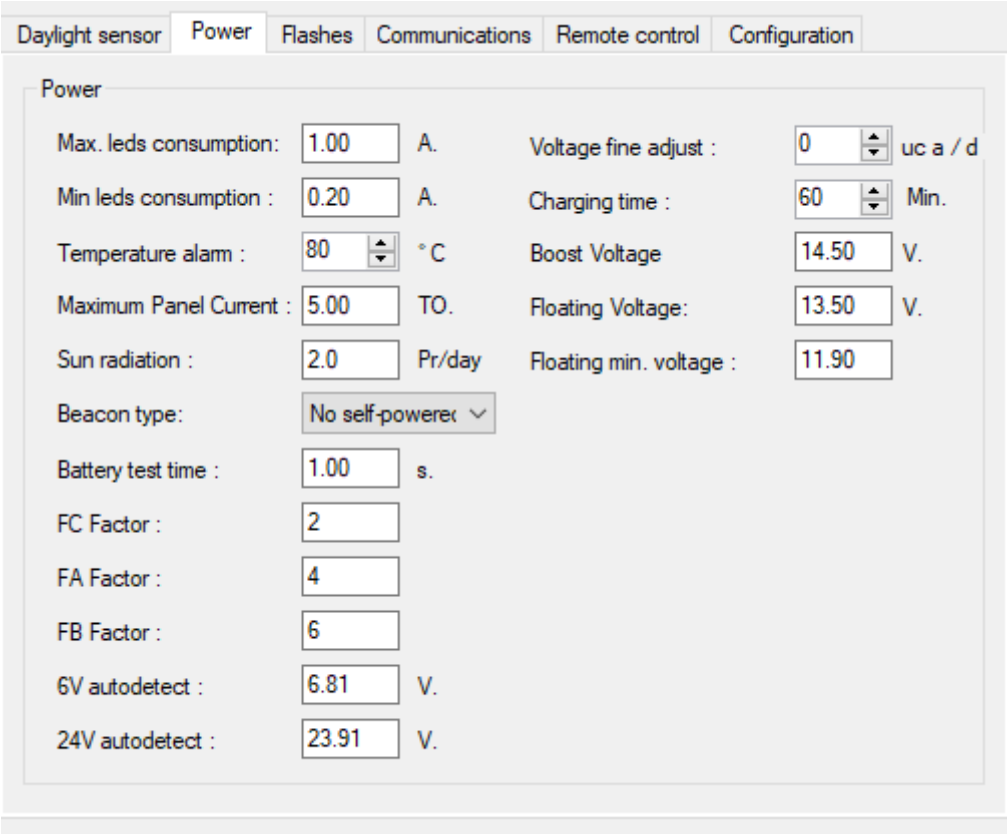


Figure 9. MFCOM.Net Power.

1.7.1. SELF-POWERED LANTERNS SOLAR SYSTEM CONFIGURATION

The solar system of self-powered lanterns can automatically manage their energy balance to avoid excessive battery drainage during the winter months.
This automatic system, calculates the power applied to the LEDs depending on the consumption rate of programmed flash and solar radiation available in the place where the lantern is installed.

Therefore we set the lantern correctly if we use the "Self-Powered".

Sun radiation

We will program the equivalent peak sun hours in the worst month of the year according to the orientation of the lantern panels.

The data should be consulted from sources that allow us to determine the solar energy that the lantern is going to have during the worst month in winter.

Beacon type

Beacon type allows us to choose the model of self-powered beacon that is being used.

- MCL200: Select for MCL180, MCL200 model.
- MCL250: Select for MCL250 model.
- MBL400: select for MBL400, MBL500 model.

1.8. UPDATE DATA

Once modified and adjusted the parameters, the modification will take effect when clicking on “Write beacon”, in order to load the information to the Flasher. To check the correct saving of the modifications click on the “Read beacon” button to see if the modifications have been made.
The “Save file” option allows to save the settings file and load it at any time.

Mediterráneo Señales Marítimas
Pol. Ind. Mas de Tous - C/ Oslo 12
46185 La Pobla de Vallbona - Valencia SPAIN
+34 96 276 10 22
msm@mesemar.com
www.mesemar.com