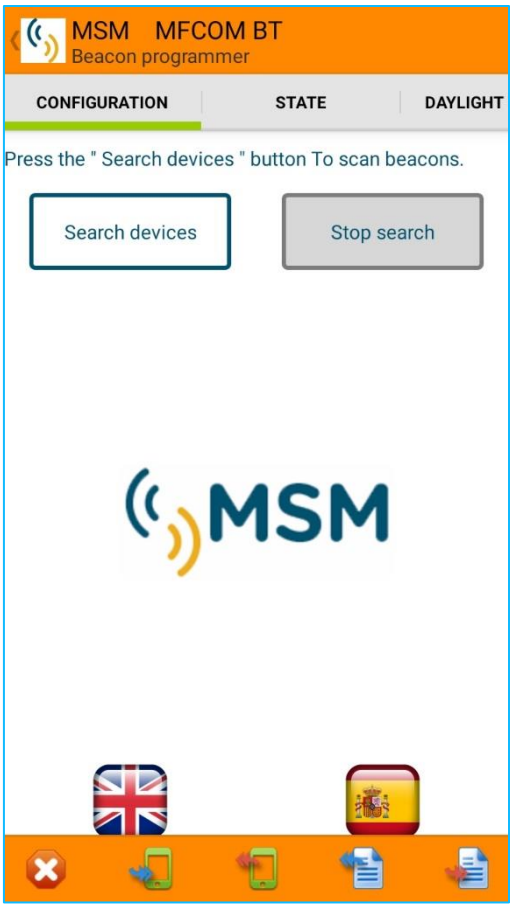


USER MANUAL

CONFIGURATION APP

MFCOM BT

mesemar.com

USER MANUAL

REF: MFCOM BT

REV 05

REV	DATE	REVISION
05	01/12/2020	New format

INDEX

CONFIGURATION APP **MFCOM BT**

1. Introduction

The MFCOM BT APP is required to configure MSM beacons from Android devices.

This specially designed MSM software is able to detect the type of beacon it is connected to and display only the parameters unique to that beacon.

The MFCOM BT application is available for a number of devices, among which are:

Series MBL	MBL150
	MBL160
	MBL170
	MBL400-C
	MBL500LD
Series MCL	MCL200
	MCL250
	MCL330
	MCL400

Note: This list is subject to change. MSM does not undertake to keep this list up to date.
Note: From 2021 Bluetooth is installed as standard in the above equipment in standard production. Products manufactured before this date or custom-made products may not have it available.

2. Main features

The MFCOM BT application allows the user to change parameters such as the identifier, configuration, flash parameters, power supply, etc.

The APP screenshots in this manual may vary in appearance depending on the mobile device used, its screen resolution and the Android version in use.

Main functions:

- Flashing rate selection.
- Sensitivity photocell adjustments in Lux.
- Day-night offset: photocell delay in the day-night transition.
- 6 user's flash characters programming.
- Synchronism offset mode selection to produce running lights.
- Dimer mode for dim night reduction for leading lights.
- Adjustable LED intensity with reduction in %.
- Low battery voltage alarm configuration.
- Solar charge regulator settings configuration (just series MCL).
- Automatic display adjustment to available functions in the flasher version

3. Download and install

3.1. REQUIREMENTS

MFCOM BT APP requirements are:

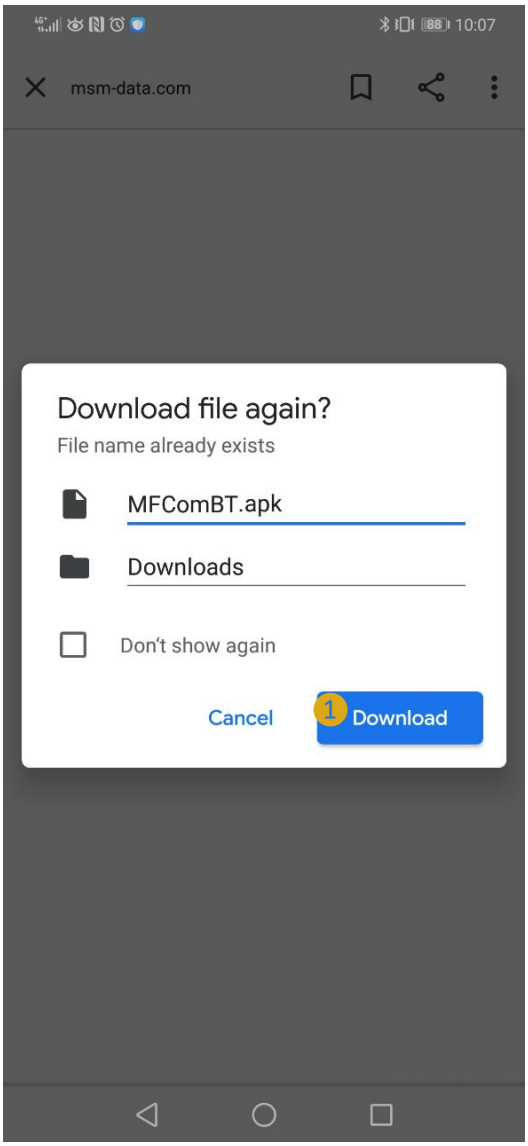
- Android device or Tablet:
  - On the user's account.
  - The device must have an app installed for reading QR codes.
- MFCOM BT Program: Download instructions from point 3.2.

3.2. DOWNLOAD

Note: The MFCOM BT application is not available in the Play Store.

To download the application, you have to approach the camera of the mobile device through the QR code reader app to the following image:

Once the capture has been made, the following download window opens automatically. Click on Download 1



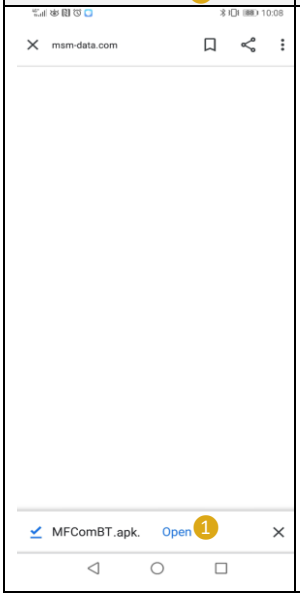
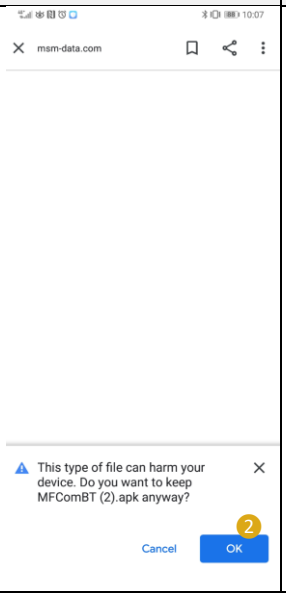
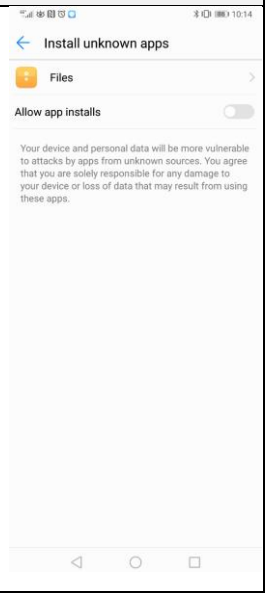
3.3. INSTALL

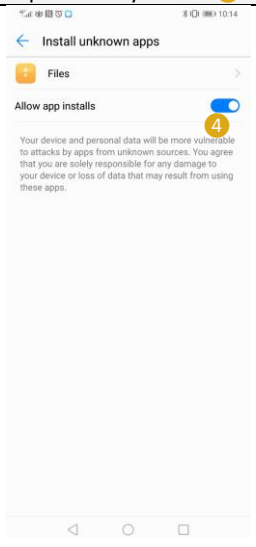
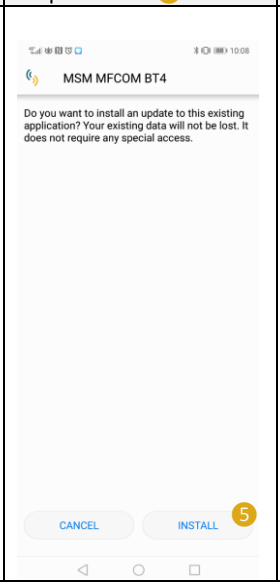
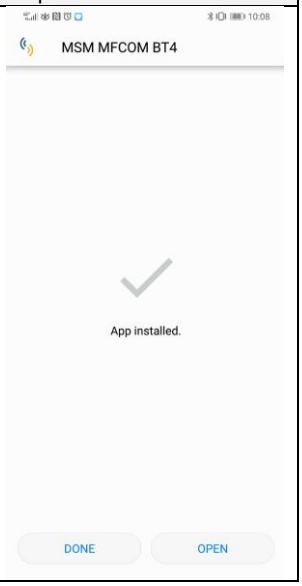
IMPORTANT

Warning: For security, your device is set to block installation of applications not obtained from Google Play. Before installing the file MFComBT.apk, you should enable third party apps installation on the Android in "Settings -> Security" and then check the box next to "Unknown sources".

The path shown may vary slightly depending on the mobile device.

Next, install sequence is shown:

Step 1: Open the downloaded file. 1	Step 2: Click on accept. 2	Step 3: Go to settings and allow installation 3	Step 4: View "Install unknown sources"
			

Step 5: Modify access 4	Step 6: Install 5	Step 7: Installation finished
		

4. Flasher MF12 configuration

The MFCOM BT App is required to configure the MF12 flashing beacon from Android devices.

When installing the MFCOM BT App on an Android device, connect the battery to the beacon, once this step is done, we will open the MFCOM BT on the Tablet or mobile device. Click on the following icon:

Then, enter in the application for configuration screen and connection.
The login screen will appear. The default login is 88888.

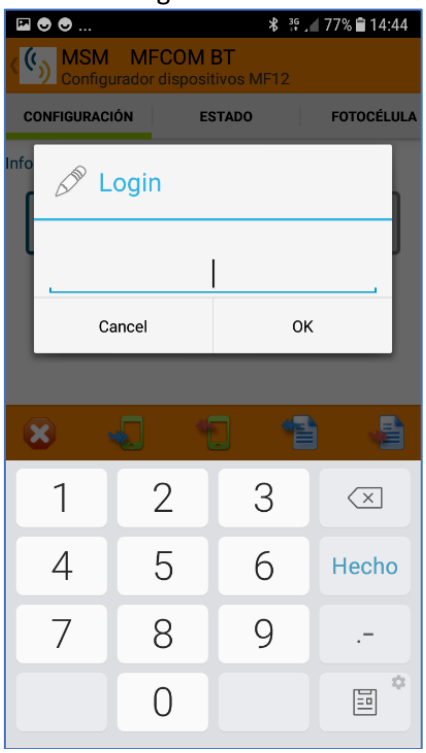


Figura 1. MFCOM BT Configuration and connection.

If you need to change the language, press the flag corresponding to the desired language. You will have to reinitiate the application to update the selection (leave the application with the exit button and enter again).

Press on **Search devices**.

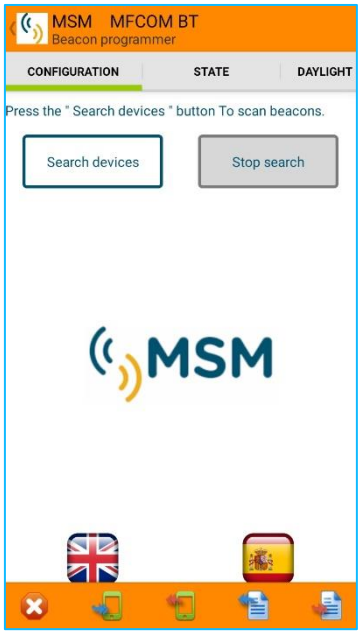


Figura 2. MFCOM BT Search devices.

Select the desired device in the list of beacons detected.

If you want to list more beacons press the icon to scroll between the different beacons.

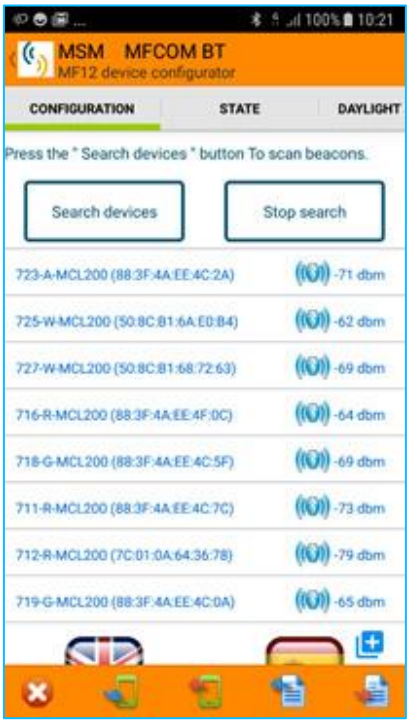


Figura 3. MFCOM BT Select device.

Enter the Bluetooth PIN (default PIN: 123).

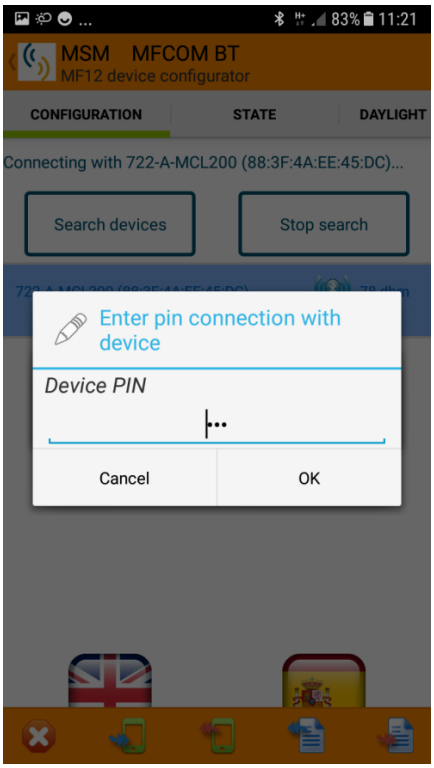


Figura 4. PIN Introduction.

Once the connection is established, the App shows that the connection has been established.

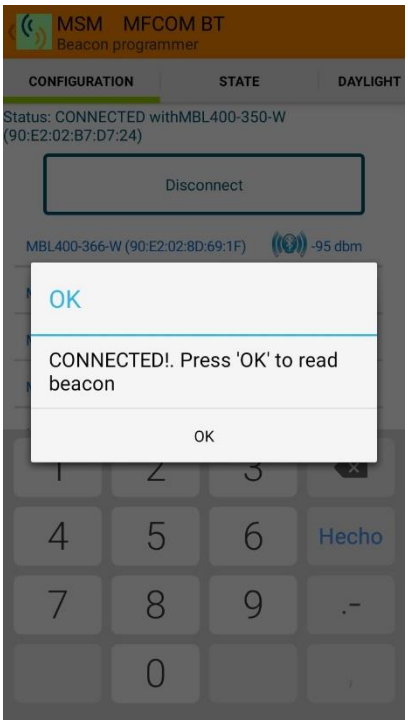


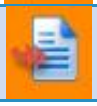
Figura 5. MFCOM BT Connection Settings Set.

Pressing OK starts reading the flashing configuration by loading the beacon data and displaying the configuration in the different tabs of the application.

If you want to read the beacon data again, click on the “READ MF” icon  . The data of the beacon will be identified, and its parameters shown through tabs.

We can browse through the different configuration and data visualisation tabs, swiping right or left in the top menu, or swiping right or left on the main screens of configuration and data visualisation (Configuration, State, Daylight Sensor, Power, Flashes, Communications, Remote Control, Rhythms).

4.1. FUNCTION BUTTONS DESCRIPTION

	Exit APP
	Download current beacon settings (reception). Beacon → APP
	Upload new parameters (transmission) APP → Beacon
	Open old configuration files from the Android device.
	Save configuration files in the Android device.

4.2. STATUS MENU

Basic information about the flasher is shown in the status menu as:

- Beacon identifier, number ID
- MF12 flasher model
- Flash Rate Table version
- Firmware version
- Hardware version
- Serial Number

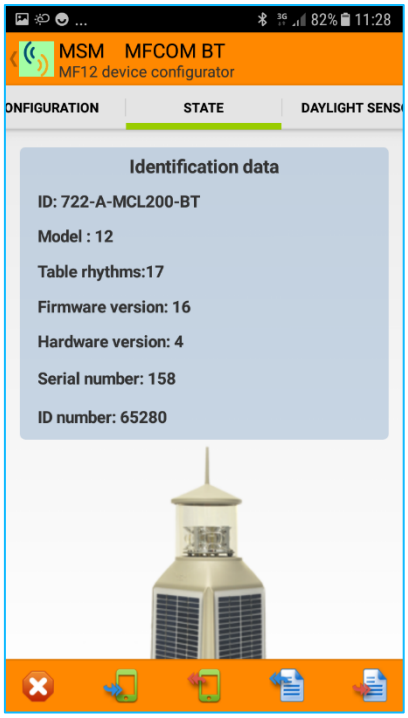


Figura 6. MFCOM BT Status menu.

4.3. DAYLIGHT SENSOR MENU

The on-off switching of the beacon is controlled by the photocell included in the beacon. The sensitivity of this photocell can be adjusted to different lux levels.

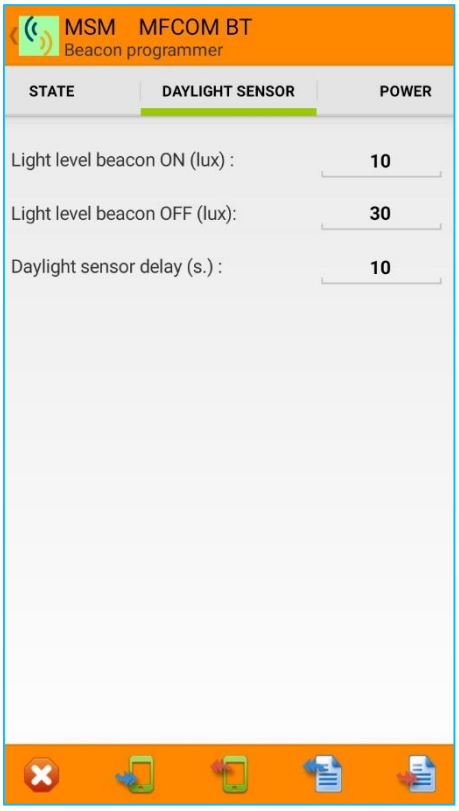


Figura 7. MFCOM BT Daylight sensor menu.

Recommended values for photocell adjustment:

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

The ON lux value must be lower than the OFF lux value to avoid oscillations in the switching on and off of the beacon.

The daylight sensor delay is a waiting time 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:

4.4. POWER MENU

El menú de “Alimentación”, permite el ajuste de los límites de detección de las alarmas de corriente y de temperatura que emplea el destellador para generar las alarmas de mal funcionamiento.

The Power menu allows adjusting the detection limits of the current and temperature alarms that the flasher uses to generate malfunctioning alarms.

To correctly adjust these values, you must know the beacon nominal power and its current in normal operation mode.

Parameters to set:

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

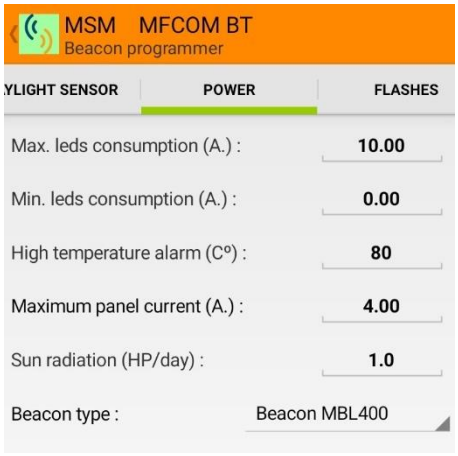


Figura 8. MFCOM BT Power Menu.

SOLAR SYSTEM CONFIGURATION IN SELF-POWERED LANTERS

Self-powered lanterns integrate a solar system which 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 according to the consumption of the programmed flashing rate and the solar radiation available in the place where the flashing beacon will be installed.

Therefore, we must set the flashing beacon correctly if we use the MCL series, Self-Powered lanterns.

Sun radiation.

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

The data should be consulted in reliable sources that allow us to determine the solar energy that the flashing beacon is going to have on the winter worst month.

Beacon type

The beacon type will allow us to choose the self-powered beacon model being used.

- MCL200: Select models MCL180, MCL200 sunlight.
- MCL250: Select Solar MCL250 model.
- MBL400: select the model MBL400, MBL400S, MBB500.

4.5. FLASHES MENU

This menu allows the adjustment of the flash characteristic.

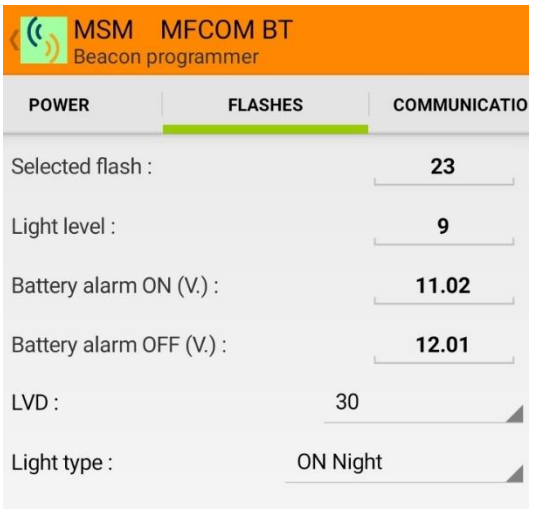
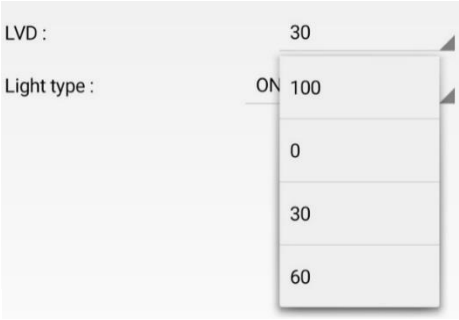


Figura 9. MFCOM BT Flashes Menu.

Selected flash: Indicates the number of selected flashes within the table of 256 rhythms tables included in the beacon User Manual.
Light level: The light level of the beacon can be selected from 1 to 10.
Battery alarm ON: Voltage level for alarm activation.
Battery alarm OFF: Voltage level for alarm deactivation.
LVD: The alarm triggers the beacon to activate the LVD mode which acts to prevent full battery discharge and possible battery damage. The LVD mode has 4 configurable options:

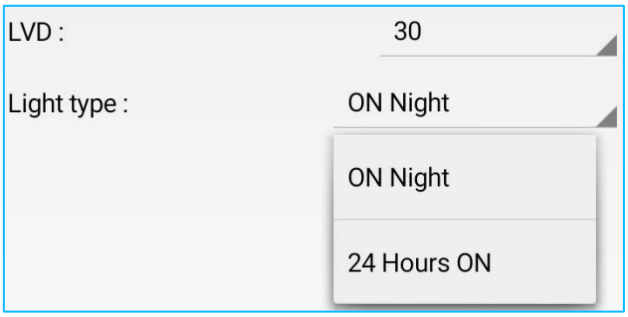
1. It keeps on working at 100% consumption. (100)
2. Switch off the light in order not to discharge further the battery. (0)
3. Decrease consumption by 30% by reducing (30)
4. Decrease consumption by 60% by reducing (60)



(*)Reduction of power consumption means reduction of the luminous intensity in the same proportion. Check that the beacon still provides adequate reach.

LIGHT TYPE

There are two light modes available:
ON Night: Night operation only at **X % (between 0-100)** of LED intensity.
24 hours ON: The light remains on 24 hours a day, at **X % (between 0-100)** LED intensity during the day and dimmed by **X % (between 0-100)** during the night to prevent dazzling. This mode is used for LED leading lights and other beacons on request.



4.6. COMMUNICATIONS MENU

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

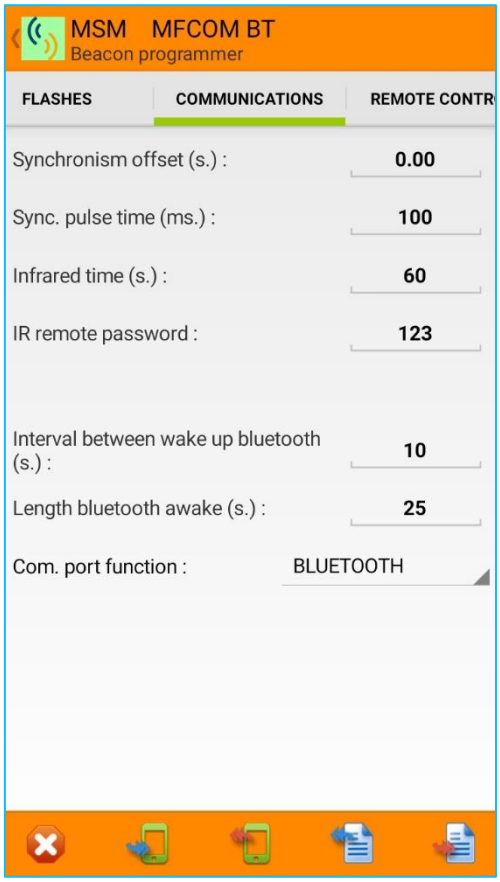


Figura 10. MFCOM BT Communications Menu.

Synchronization pulse time

This parameter allows the selection of different sync pulse lengths that may allow synchronisation with other manufacturers. Default time from factory is 100 ms.

IR Programmer configuration

The MF12 flasher can also be controlled with an IR remote programmer that allows the remote configuration of the beacon.

The IR programmer has a configurable access password (123 by default).

The same infrared password is shared to protect the Bluetooth connection.

The IR data reception is activated after transition from night to day for a configurable time (60sec by default).

Figura 11. IR Programmer configuration.

Configuration of the remote-control port TEL

The MF12 flasher has a RS232 communications port for remote control of the beacons. The TEL port can be programmed to work with different remote-control devices with different protocols:

Disconnected: If the remote control is not used, the TEL port must be disconnected.
MFGSM: Connection with the remote-control modules MFGSM, MFSAT, MFUHF y MFVHF via RS232.
RS485: Beacon connection with remote stations by RS485 with MODBUS protocol.
AIS: RS422 connection with AIS Transponder to emit Message 21 and 6.

4.7. REMOTE CONTROL MENU

In Remote Control, the actual beacon status is shown. By clicking on “Read” 1, the results can be visualized, indicating if the beacon is on night or day mode, the voltage data, etc. If the operation is correct it will be shown in Green. If there is any alarm for improper operation it will be shown in red.

In addition, commands can be sent to the beacon to allow different status as:

- Force ON 2 to switch on the beacon (Night mode).
- Force OFF 3 to switch off the beacon (Day mode).
- Normal mode using photocells for switching OFF/ON.

We can force Day Mode 2 or Night Mode 3 by clicking on the buttons to test proper beacon performance.

IMPORTANT
Once the test is finished, do not forget to set the beacon on Normal mode (Daylight sensor) 4**.** Otherwise, the beacon will remain on (Night mode) or off (Day mode)

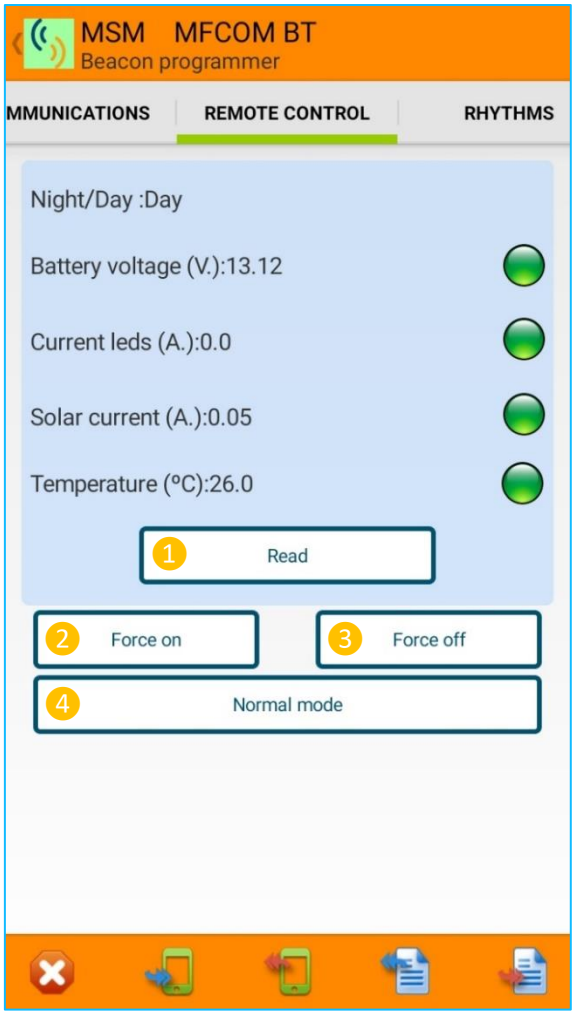


Figura 12. MFCOM BT Remote Control Menu.

4.8. RHYTHMS MENU

This screen allows the user to edit the rhythms from 1 to 6 from the table of rhythms to use flash rhythms that are already configured as standards and shown in the table of the manual.

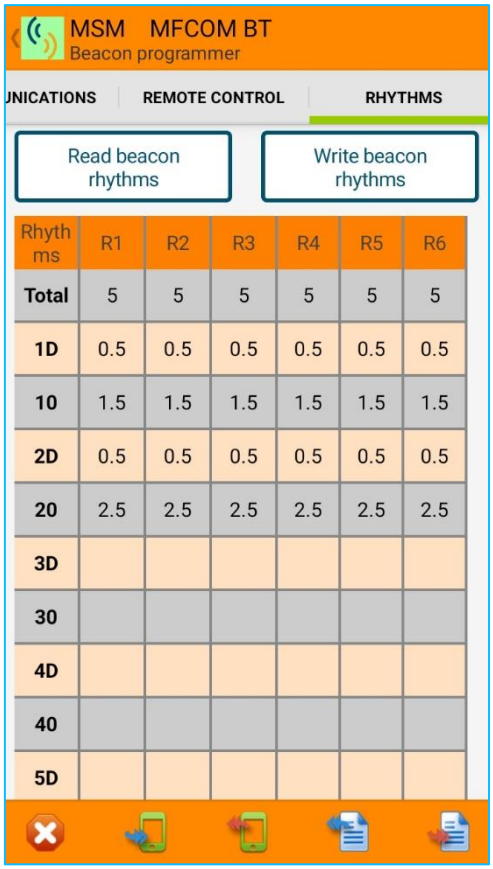


Figura 13. MFCOM BT Rhythms Menu.

The maximum rhythm length allowed is 16 On/Off cycles.
'Write rhythms' to store the edited flashes into the flasher to be used.
'Read rhythms' to load the flasher memory with the last flashes transmitted.

WARNING
It is necessary to maintain activated for a few seconds the cell of which we want to change the value of the rhythm so that the corresponding edition screen appears.

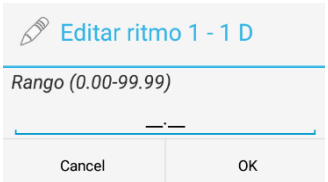


Figura 14. MFCOM BT User Rhythms Edition.

4.9. DATA UPDATE

Once the parameters have been modified and adjusted on the Tablet or mobile device we need them to become effective, to do so the "Write MF" icon must be pressed, loading it into the flashing lamp.

To verify that the data are correctly recorded press the "Read MF" icon to check that the changes have been successful.

The option "Save" icon saves the configuration file, that can be uploaded later on.

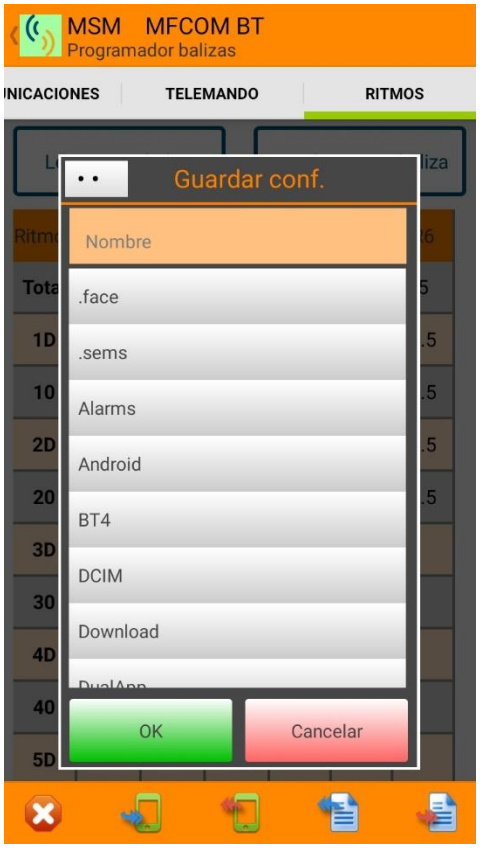


Figura 15. MFCOM BT Upload configuration.

The “Upload file” icon  allows uploading a previously saved configuration file.

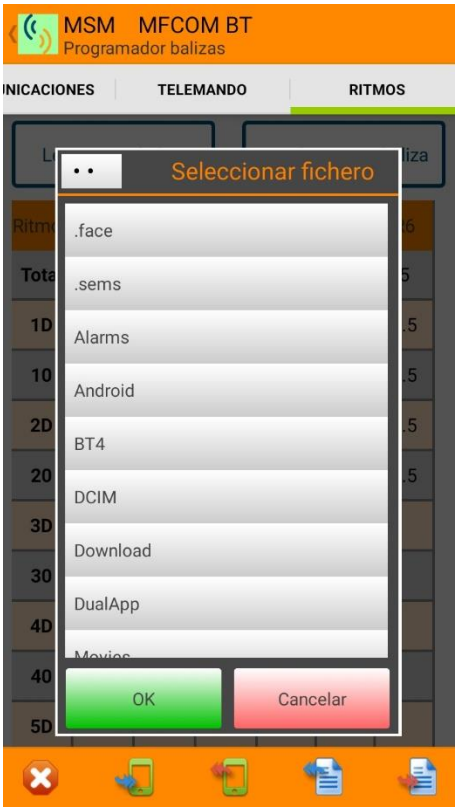


Figura 16. MFCOM BT Cargar configuración.

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