

**M3P/M3P-T BUOYS**

**LONGLINE**

UM022EN05 USER MANUAL

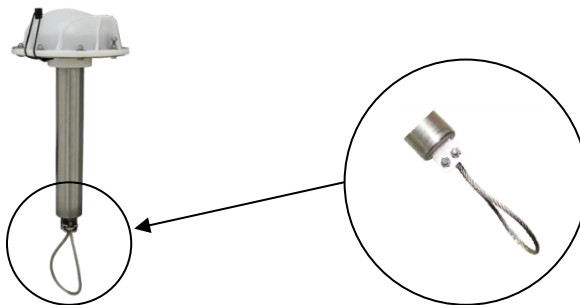


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## 1 USAGE RECOMMENDATIONS

1. Do not open the buoy. If it is opened, buoy watertightness cannot be guaranteed.
2. Do not expose the buoy to temperatures higher than 40 °C or lower than 5 °C during transport in order to ensure good battery conditions.
3. **DO NOT CUT** the ground cable (M3P buoys).



4. Do not clean using alcohol, acetone, solvents, or oil by-products.
5. Avoid blows to the buoy when raising it from the water.

## 6. Batteries:

- ✎ Do not replace internal batteries by others different from those provided by Marine Instruments.
- ✎ Recharge when low-battery symbol appears in MSB Palangre.

## 7. Antenna:

- ✎ Screw the antenna manually with the O-ring coated with the silicone grease provided.
- ✎ Do not tie anything to the antenna, even if it is a non-conductive material. Use the perforation on the cover.
- ✎ Do not drop or hoist holding the buoy by the antenna.






## 8. Float:

- ✎ The float provided by Marine Instruments is NOT rounded. Follow the shape in the image.
- ✎ Recommended inflation pressure: **0.15 bar at 25 °C.**



## 2 SAFETY INSTRUCTIONS

The following precautions should be taken due to the neodymium magnet:

-  The use of permanent magnets is particularly not advised for people with pacemakers.
-  People wearing ferromagnetic metal prostheses should be advised to keep a minimum safe distance from every element that generates a magnetic field.
-  Keep the magnet away from electronic devices, watches, credit cards, magnetic cards, calculators, precision instruments, etc. as it can alter or irreversibly damage their proper functioning.

Take special care of the buoy transport to avoid personal damage.

Special precaution should be taken with the antenna, whose handling can cause damage due to its longitude.



**USER WARNING: PLEASE KEEP YOURSELF AND OTHERS AT A MINIMUM DISTANCE OF 20 CM FROM THE BUOY ANTENNA WHEN OPERATIONAL**

## 3 SYSTEM OVERVIEW

### 3.1 M3P and M3P-T buoys



M3P and M3P-T buoys have been designed to be used in bottom-set or surface-set longline fishing. Its use involves great fuel savings by enabling route optimization during deployment and collection, and an improvement in the organization of the tasks performed on board, being able to perform a complete tracking of the longline and all the buoys.

These buoys transmit by radio and at no cost encrypted messages that can only be interpreted by their owner, which can be received 50 miles away.

The M3P-T buoy transmits its position and battery level, and the water surface temperature data.

## 3.2 Sizes and weights



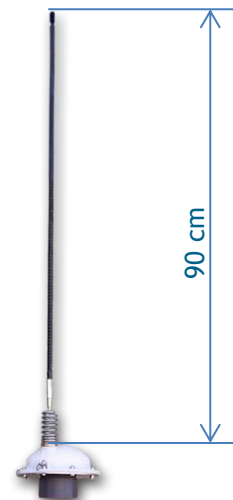
Weight: 1.6 kg

M3P



Weight: 2.4 kg

M3P-T

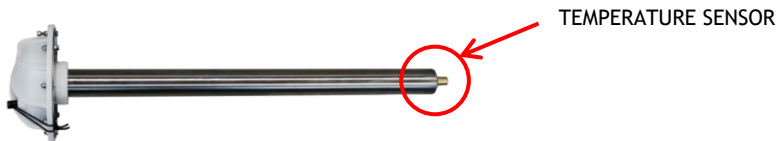


Weight: 0.4 kg

Antenna detail

### 3.3 Technical features

- ✎ Around **50 MILES** range.
- ✎ **ZERO** communications cost (transmissions via radio).
- ✎ Message transmission every **5, 10 or 15 minutes**. This feature can be programmed by the user, although the default value is 10 minutes.
- ✎ **Fuel saving** and improvement in the organization of tasks performed on board by means of the longline automatic monitoring.
- ✎ Positioning **flash** (it can be disabled when programming).
- ✎ Transmission of **GPS position** and **battery level**.
- ✎ In M3P-T models, also data on water surface temperature is sent.

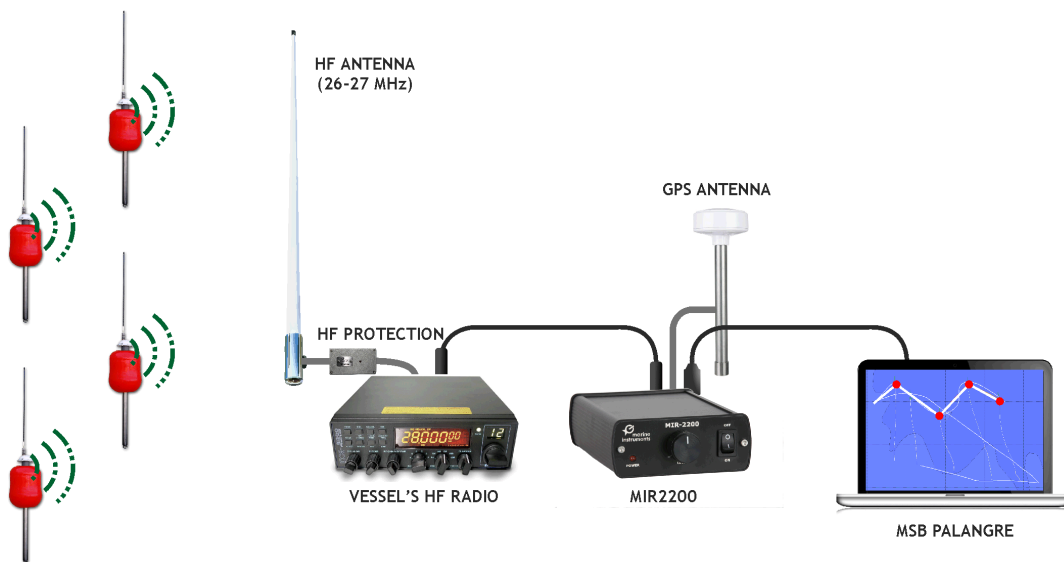




- ✎ They can be fully re-configured (frequency, transmission window, security code, ON/OFF LEDs) through the software designed for that purpose.
- ✎ **SECURITY:** Encrypted messages.
- ✎ **RECHARGEABLE BATTERIES**, through the antenna (up to 8 days of operation for M3P, up to 16 days for M3P-T).
- ✎ Single battery charger supplied with each buoy. MIP-C multiple charger (24 V<sub>DC</sub> or 220 V<sub>AC</sub>) available, enabling the simultaneous and independent charge of 4 buoys.
- ✎ Threaded stainless steel body, usable with the most common pipes with float for convenient storage inside the vessel.
- ✎ GPS.
- ✎ Buoy operating temperature: 0°C to +50°C.
- ✎ Whip antenna.

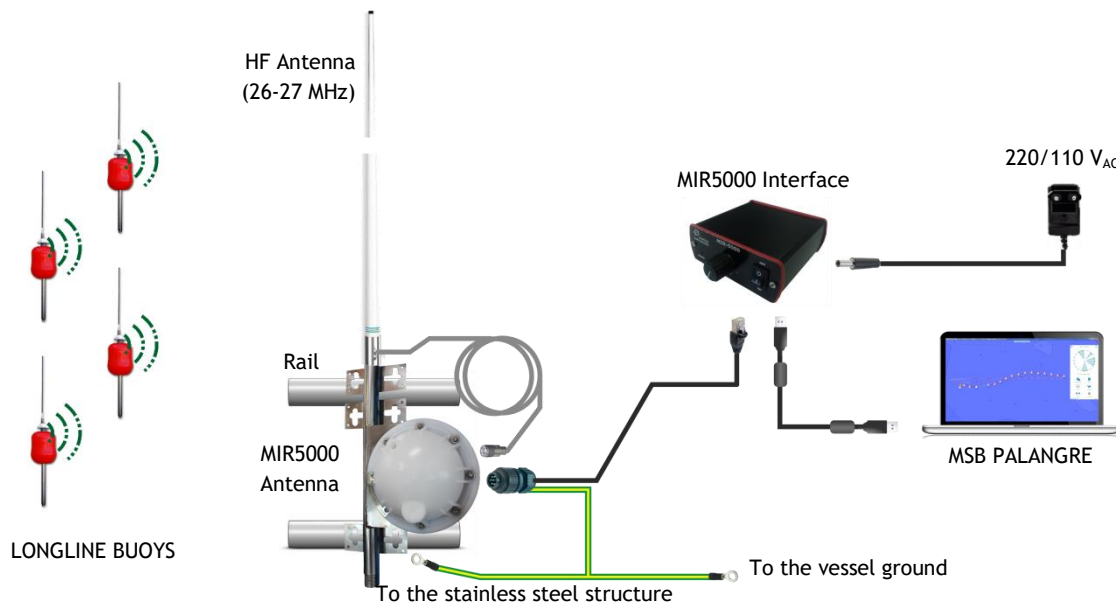
### 3.4 Buoy reception with MIR2200 receiver

The buoys transmit the position of the longline by radio. The position is received through the vessel's HF receiver and digitalized by the MIR2200 equipment. Messages are interpreted by the MSB Palangre software, which represents the longline on the screen.



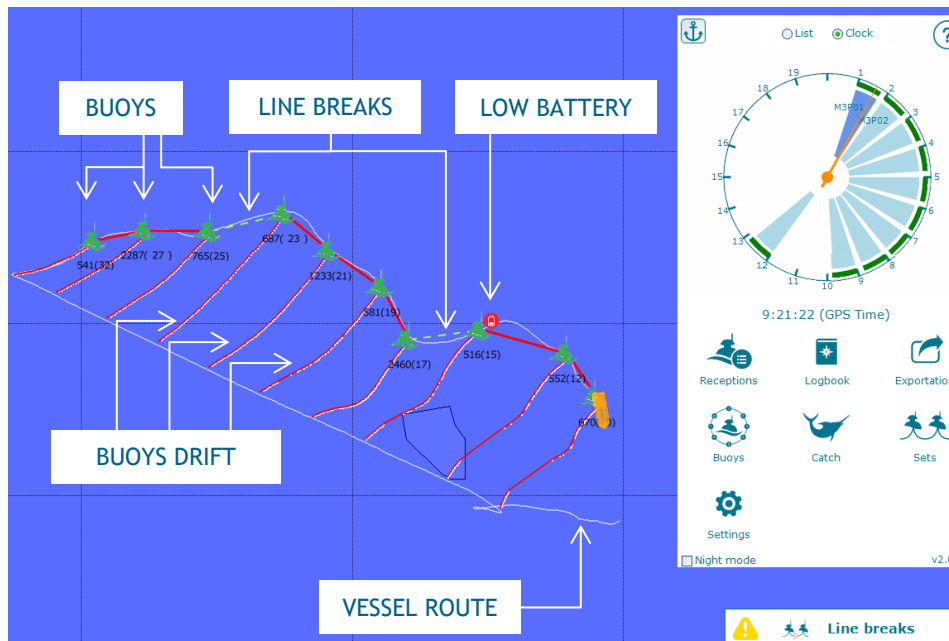
### 3.5 Buoy reception with MIR5000 receiver

The buoys transmit the position of the longline by radio. The position is received through the MIR5000 receiver, which transmits the messages to the MSB Palangre software, which represents the longline on the screen.



### 3.6 Buoy representation in MSB PALANGRE


An example of the longline representation in the MSB Palangre is shown below.



## 4 FIRST USE OF M3P AND M3P-T BUOYS

To start using the buoys, follow these steps:

**STEP 1.** Install the reception equipment (MIR5000 or MIR2200) and the MSB Palangre software on your computer. If the information is entered manually, the buoy data should be entered into the software according to the card included with each buoy

TRANSMISSION INTERVAL	→	<b>10 Min</b>	Número serie: Serial number:	<b>9878</b>
BUOY'S IDENTIFICATION SERIAL NO.	→			
RECEPTION FREQUENCY OF THE BUOY	→	Frec. recepción(Mhz): Reception Freq.(Mhz): <b>26.164</b>		
RECEPTION WINDOW	→	Ventana: Window: <b>30</b>		
BUOY RECEPTION CODE	→	Código: Code: <b>G</b>		
				

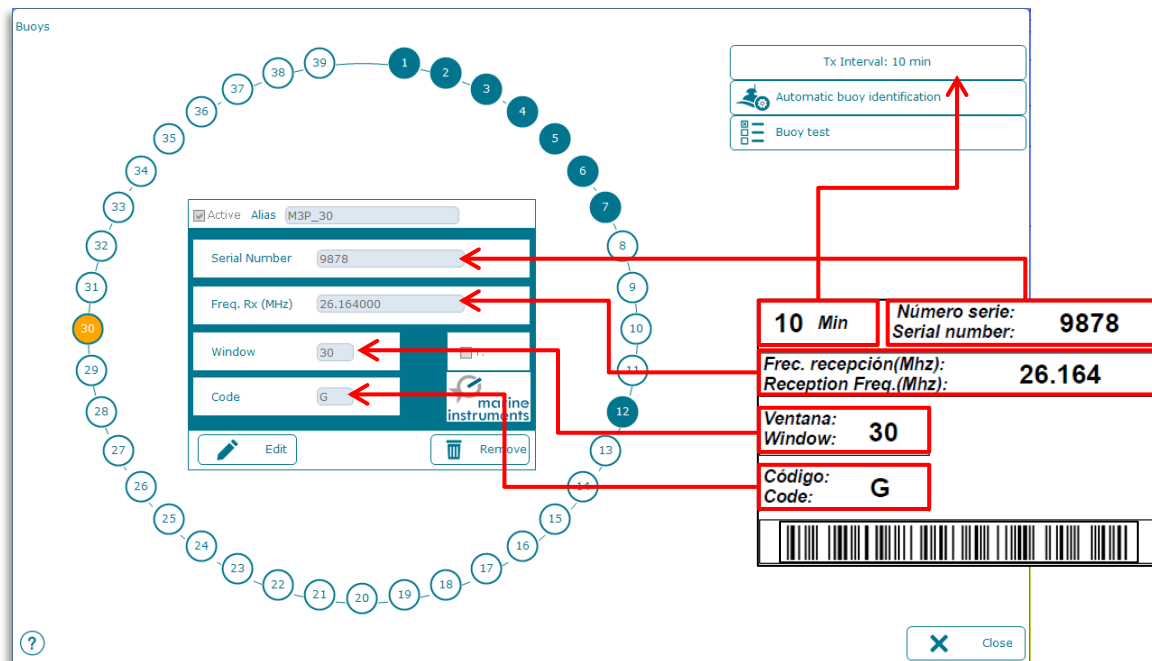


If the buoy data entered is incorrect, the buoy will not be displayed on the chart.



Both with MIR5000 or MIR2200, data may be entered automatically. Refer to MSB Palangre User Manual.

Example of buoy window after buoy data is entered:



**STEP 2.** Place the buoy in a clear location.

**STEP 3.** Remove the magnet to turn it on.



**STEP 4.** Check the green, red and white flashes. The flash can be enabled or disabled through the buoy reprogramming.

**STEP 5.** Before casting the buoy into the water, verify that the software has received at least one position and that the buoy is shown on the chart.

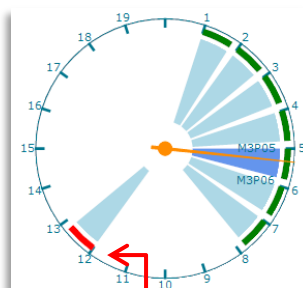




BUOY RECEIVED



BUOY NOT RECEIVED



M3P06	Time left:23s	●
M3P07	Time left:38s	●
M3P12	Time left:1min 53s	●



The buoy is in normal operation when only the white LEDs are on and blinking.



The longline buoys within the same system should transmit positions in the same transmission interval to ensure that no position is lost.



Also, in MIR-2200 systems, the transmission frequency should be the same for all buoys.



Under no circumstances two buoys may be in the same window.

## 5 BATTERY RECHARGE

The M3P and M3P-T buoys are powered by rechargeable batteries which provide approximately 8 days of operation for the M3P and 16 days for the M3P-T with transmissions every 10 minutes. Battery life varies depending on the selected transmission interval.

These buoys transmit the battery charge level. This data can be checked in the Buoy Reception Window of the MSB-Palangre software.

**It is recommended to perform the recharge when the level goes below 11.8 V.** The user is warned about a low battery buoy in different ways.

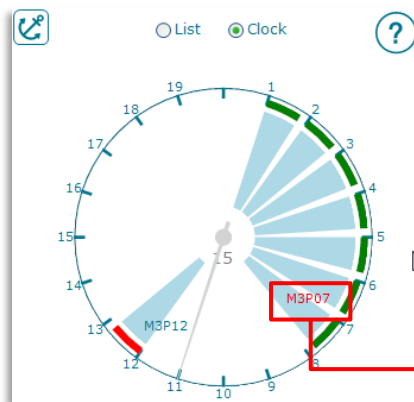
### 5.1 Low battery warning in MSB PALANGRE

1. Low-battery icon in the chart.

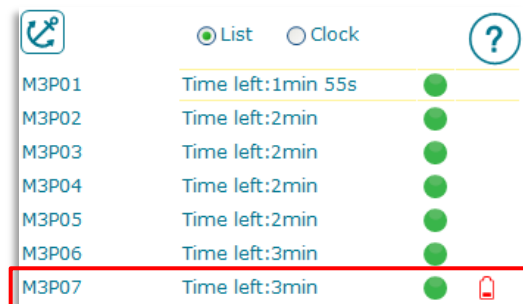


Low battery buoys.

2. In the buoy list or clock:



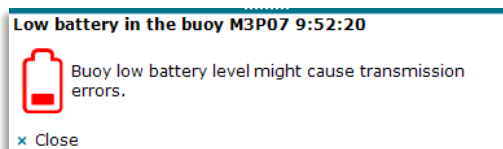
The name of the low battery buoy will appear in red.



The list view shows a table of buoy status. The 'List' tab is selected. The table has three columns: Buoy ID, Time left, and Status. M3P07 is highlighted in red, indicating a low battery status.

Buoy ID	Time left	Status
M3P01	Time left:1min 55s	Green
M3P02	Time left:2min	Green
M3P03	Time left:2min	Green
M3P04	Time left:2min	Green
M3P05	Time left:2min	Green
M3P06	Time left:3min	Green
M3P07	Time left:3min	Red with battery icon

3. In addition to the low battery warning icons, a message for each low battery buoy will be displayed on screen:





**IMPORTANT:** Recharge the buoy as soon as this notice appears on the screen.



When the buoy battery level is below 11.8 V, the buoy starts to transmit every 30 minutes, regardless of the transmission level set.

With values below 10.8 V or after 6 hours transmitting every 30 minutes, the buoy stops sending positions and remains on stand-by.

## 5.2 Buoy end-of-charge led

M3P and M3P-T buoy electronic board includes an improvement in their battery protection, avoiding their overcharge and so extending their life. These protections might make the chargers end-of-charge led false the real state of the buoy battery charge.



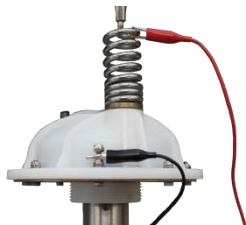
An end-of-charge led (**fixed green**) in the buoys shows when the buoy battery is fully charged. While the buoy battery is being charged, this green led will be flashing.

### 5.3 Single charger

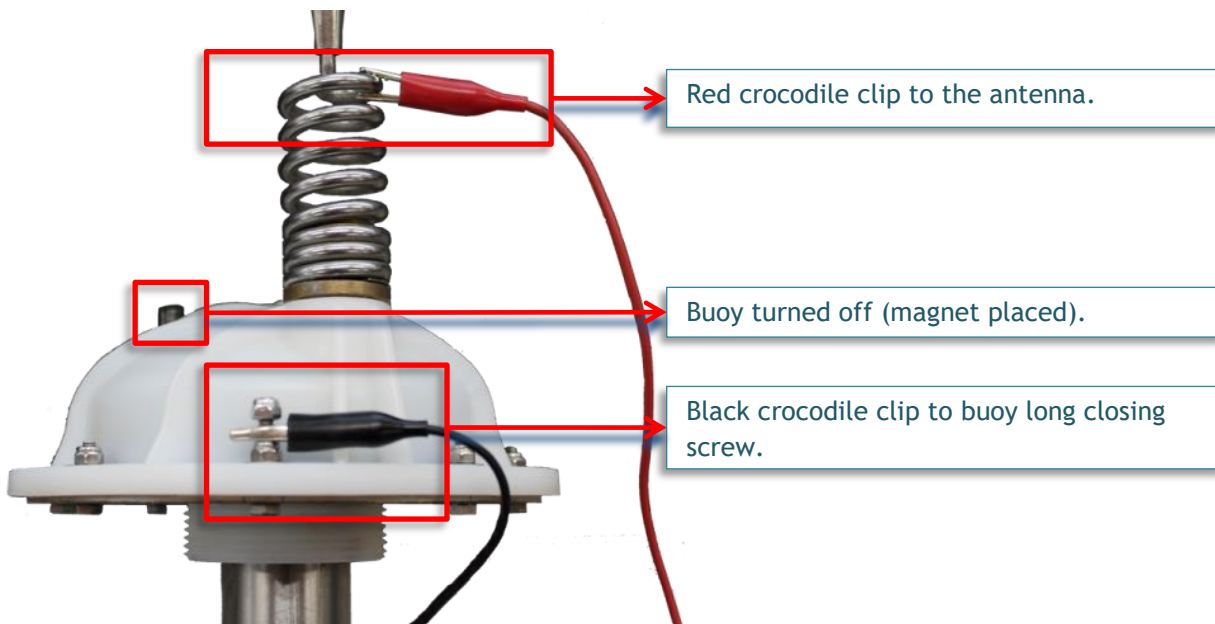
Every M3P or M3P-T buoy is delivered with a single charger which stops charging when it detects the battery is fully charged.



Single charger for M3P and M3P-T buoys



It recharges batteries through the antenna (red crocodile clip to the antenna, and black crocodile clip to the longest screw on the buoy cover).



## 5.4 MIP-C Smart Charger

MIP-C Smart Charger (optional) enables simultaneous and independent charging of 4 M3P / M3P-T buoys.

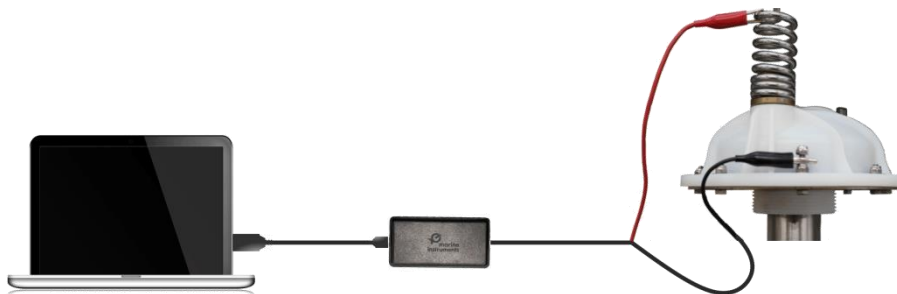
With the smart charging process, the user does not need to remember to charge the buoys. Once the buoy has been placed on the bracket, the MIP-C charger detects its presence, checks the battery level, and automatically starts the charging process.

When the charging process is over, the charger keeps the battery level preventing the batteries from discharging in case they remain on the bracket for long periods of time.



## 6 M3P AND M3P-T BUOY PROGRAMMING

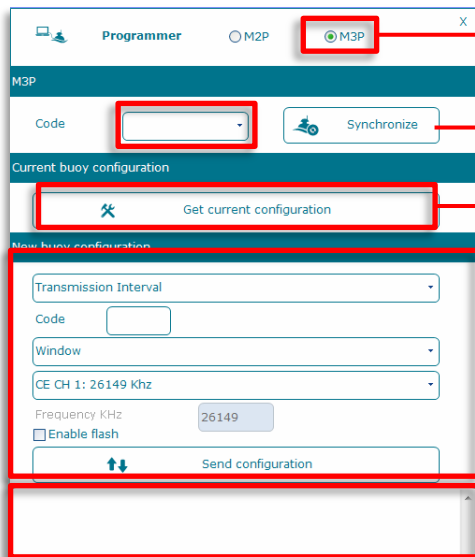
The M3P and M3P-T buoys are shipped with a default configuration indicated on the card included with the buoy (transmission frequency, interval between messages, security code, and window). These data can be modified by reprogramming the buoy through the antenna. This is done by means of a MIP-P programmer connected to the PC. The programming software is built in the MSB Palangre software (on the upper menu).





1. Connect the PROGRAMMER following the connection diagram shown above (red crocodile clip to the antenna, black crocodile clip to the buoy long closing screw).
2. **The buoy should be turned off (magnet in place).**
3. Enable buoy programming in MSB PALANGRE





The screenshot shows the 'Programmer' window for the M3P buoy. At the top, there are radio buttons for 'M2P' and 'M3P', with 'M3P' selected and highlighted by a red box. Below this, the 'M3P' section contains a 'Code' field with a dropdown arrow, highlighted by a red box, and a 'Synchronize' button with a circular arrow icon, also highlighted by a red box. The 'Current buoy configuration' section features a 'Get current configuration' button with a wrench icon, highlighted by a red box. Below this is the 'New buoy configuration' section, which includes several fields: 'Transmission Interval' (dropdown), 'Code' (text input), 'Window' (dropdown), 'CE CH 1: 26149 KHz' (dropdown), 'Frequency KHz' (text input with '26149' entered), and an 'Enable flash' checkbox. A 'Send configuration' button with up/down arrows is at the bottom of this section. A large red box at the very bottom of the window highlights the status message area. Red arrows point from these highlighted elements to numbered instructions on the right.

4. Select M3P buoy model.

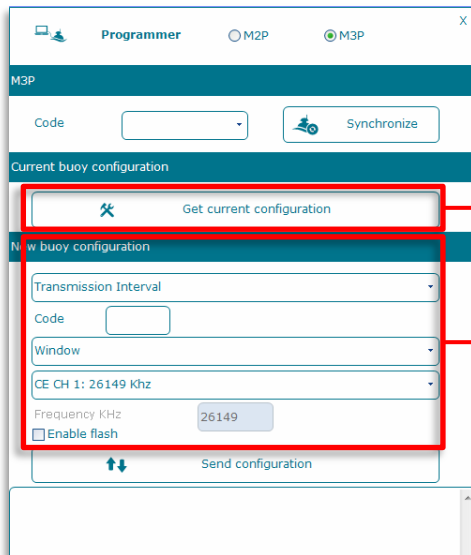
5. Connect the programmer to the computer, select port and click on Synchronize. The following message will be displayed:

Starting synchronization; switch the buoy on...  
Waiting for a reply...

6. Switch the buoy on (the buoy should be synchronized to be programmed).

7. Once synchronized, buoy data can be obtained or it can be programmed.

Status messages programming window.



Programmer M2P M3P

M3P

Code  Synchronize

Current buoy configuration

✖ Get current configuration

New buoy configuration

Transmission Interval

Code

Window

CE CH 1: 26149 Khz

Frequency KHz

☐ Enable flash

Send configuration

If current buoy data needs to be obtained, click on “Get current configuration”.

Transmission interval: 10 minutes  
Code: E  
Window 10  
Frequency KHz: 27164000  
Flash ON: true

Enter the new data and “Send configuration”

Programming buoy...  
Buoy correctly programmed...

To check the configuration, go back to “Get current configuration”.

Marine Instruments S.A. states, under its own responsibility, that this device complies with the provisions of Directive 99/05/EC of the European Parliament and Council of March 9 1999, transposed to the Spanish law through Royal Decree 1890/2000, of November 20.

**CE0341!**

FCC ID: 2AEES-MPTR

User should request managing authorization to the competent authorities in case of using these buoys outside international waters.

Changes or modifications not expressly approved by Marine Instruments S.A. could void the user's authority to operate the equipment.

Warranty terms and conditions of this product available on Marine Instruments' website.



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