“Sunflower” OKO M4 Quick Start Guide

1) Rip open the white label and hold the red pull pin string.
   If the white label has already been broken or ripped opened, it is highly recommended to run the field test before deployment.
2) Test the battery. Remove the red pull pin from the Sunflower to turn on the device. It should slow blink green.
   If the Yellow LED is shown, please replace the battery.
3) Reinsert the red pull pin and remove the green block terminal.
4) Connect the removed green block terminal to the candle. Ensure the candle leads are properly secured and cannot be pulled out.
5) Next, properly couple the candle with the explosive device and attach the Sunflower to the device as appropriate. Do not connect the block terminal to the Sunflower.
6) Emplace the explosive device.
7) Securely attach the green block terminal to the Sunflower terminal connector.
   A click will be heard or felt, verifying it is properly plugged in.
8) Power on the Sunflower by removing the red plastic pull tab (string attached). The green LED will blink slowly and the red LED will be OFF.
9) Step away at least 5 meters.
   The green LED will blink for 5 minutes.
10) After 5 minutes, the Green LED will turn off and the Red LED will start blinking slowly for 5 minutes. In this state, if the Sunflower is either moved or detects a change in the magnetic field, it will reset the safety timer and return to the start of Step 9 (blinking Green for 5 minutes).
    The Sunflower is checking for steady state.
11) ***DO NOT APPROACH THE SUNFLOWER AT THIS STAGE***
    The Red LED will start the fast blink pattern to indicate 30 seconds remain until it is armed.
    The unit is still checking for steady state, any change in the magnetic field will return it to Step 9. We strongly recommend that in this state, the device is treated as if it were live, as it soon will be.

Unit is Now Armed (Munition is Hot)

12) The LED’s are turned off. The unit has detected a steady state and is armed and ready to initiate.
    At this point the unit cannot be disabled. Any movement or changes in magnetic field (metal coming close or being removed from its detection radius) will trigger the device.

    The device's sensors can detect infantry at a distance of up to ≈ 0.75 meters and light vehicles moving at speeds up to 60 km/h at a distance of up to ≈ 2.75 meters. Note, these distances are based on testing, but may vary (increase or decrease) depending on how much metal/steel the object has, and the speed at which it is travelling.

IMPORTANT NOTE FOR USERS:

Due to the potentially wide area of detection and effect of this system, it is vital that friendly forces are notified about system deployment and that locations are marked on maps, briefings etc. to avoid friendly fire (blue on blue) incidents and accidents.

Configuring Parameters / Configure Initiator

Parameters are configured and unit is optimised using the Android App OKO-M4.

The App OKO-M4 will only work with compatible M4 hardware. See Appendix B for Diagram.

The App will run on all Android devices including phones and Tablets. App will NOT run on IOS.

Connect the M4 unit by first connecting the programming module to your android device via USB-C or Micro-B connector (note – the programmer connects to Android via cables on the side with both USB-C and Micro-B connectors, see Appendix B).

OK permissions to allow OKO-M4 app to access FTDI hardware.

Select “CONFIGURE INITIATOR” button under the heading “Save settings on initiator”

Connect M4 unit via the supplied Micro-B cable to the programmer.
NOTE1: if the M4 unit is plugged into any regular USB port it will NOT be recognised. No harm will occur to either port but the unit will not be detected.

The M4 unit does not need to be powered on (tab removed), it will power on in a non firing state by using power from the Android device. The unit in this state cannot create an initialisation pulse as the charge capacitor is grounded/disabled.

The M4 unit should be recognised and the on-board parameters read. If it is not, press the “DISCONNECT” button and then the “CONNECT” button.

Scroll down to the “Settings” and modify any settings as desired and required.
NOTE: if you attempt to enter a setting below the minimum, it will set the parameter to the minimum value. If you attempt to enter a setting above the maximum, it will set the parameter to the maximum value.

To program/save the new values to the unit, press “SAVE SETTINGS TO BOARD”. The app will reply with “Settings saved to board”.

Restoring Factory Defaults

Factory defaults can be set to the unit by pressing the “FACTORY DEFAULTS” button in the M4 app once the board has been detected. No further action is necessary.

Saving Various Profiles for Programming Later

By using the sub section “Create and change presets for the initiator”, various parameter / profiles can be created and saved within the app.

Select “Manage Presets”

Creating a brand new Preset

No unit needs to be connected
Select “FACTORY DEFAULTS” to populate parameters or select a previously programmed Preset by selecting “READ” for that preset
Modify Parameters as desired
Select a Preset Slot from the “Presets configuration list:” by saving to that entry
The preset name can be changed by selecting “NAME”

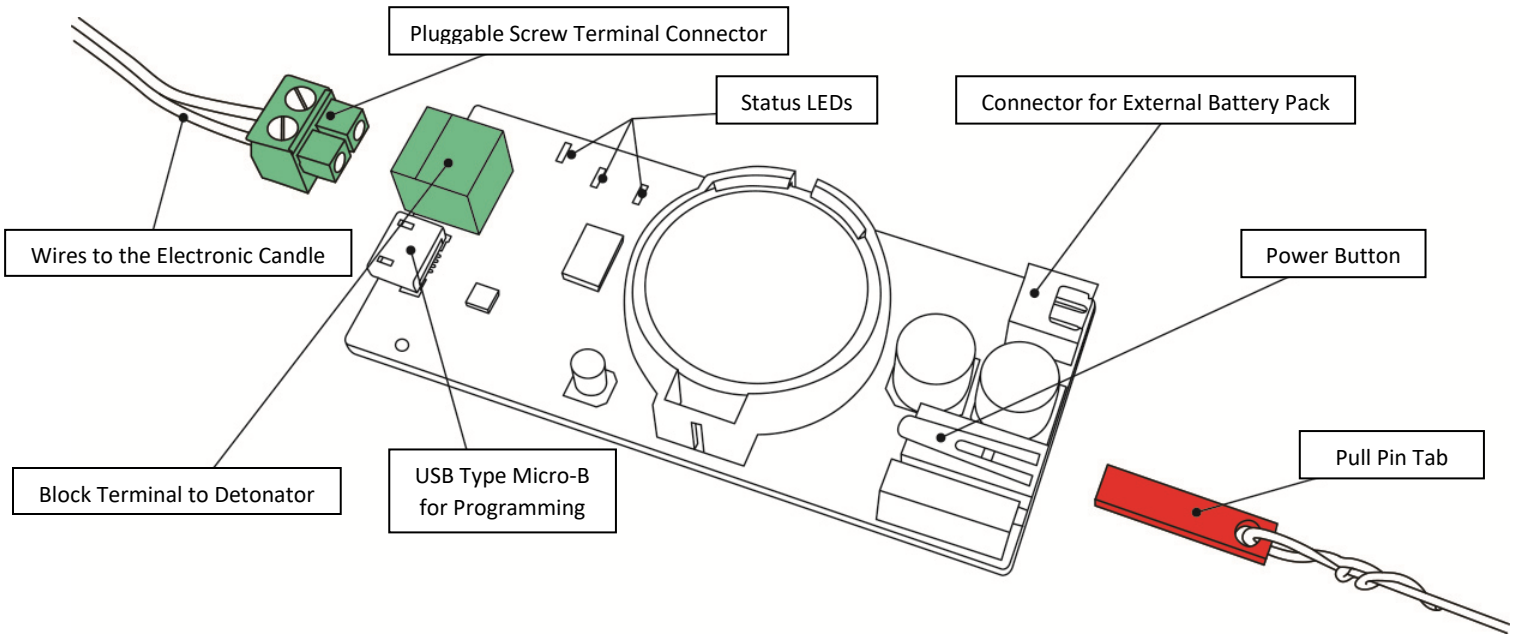
Saving Parameters from a pre-programmed unit as a Preset

Connect Unit
Select “Read Board”
App will indicate Success or Failure of Read and Parameters will be displayed
Modify, if needed, any Parameters
Select a Preset Slot from the “Presets configuration list:” Save the entry to your preferred preset slot by clicking on the save button next to the slot number.
The name can be Changed by selecting “NAME”

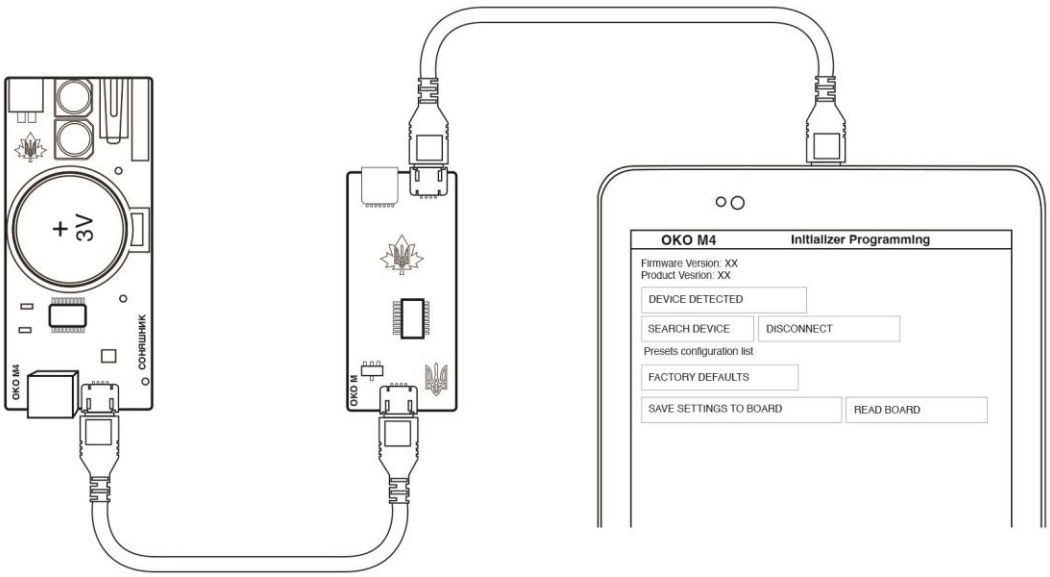
Programming Presets to a unit

Select “CONFIGURE INITIATOR” from the top menu screen
Connect Unit
If board is not Auto Detected select “Search Device” – sometimes you may need to “DISCONNECT” and then “CONNECT” again
Select “SAVE PRESET TO BOARD” button beside Preset desired in “Presets configuration list:” section

Board should be programmed.



Appendix B


+ 3V
СОНЯШНИК
OKO M4
OKO M
OKO M4
Initializer Programming
Firmware Version: XX
Product Vesrion: XX
DEVICE DETECTED
SEARCH DEVICE
DISCONNECT
Presets configuration list
FACTORY DEFAULTS
SAVE SETTINGS TO BOARD
READ BOARD