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M020 Operational Guide

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1 Introduction

This document provides general information about the operation of the M020 payment terminal and gives detailed instructions to be used as the basis for device filtering and fault diagnostics. The intention is to convey all necessary information about the operation of the terminal in one document. This document does not cover any operations which are controlled by third-party applications (either those running on the terminal or those running on the smart device).

It is envisaged that the information in this document will then be used by Miura partners, in conjunction with other information they have about the system as a whole, to produce other documents / web-pages for end-users and teams within the partner's organisation.

Appendix B contains regulatory information about the device. It is recommended that this information is added to all end-user documentation. **It is mandatory** that the Declaration of Conformity (or a link to it) should be included in the end-user documentation, along with a statement that the equipment meets the essential requirements of Directive 2014/53/EU. For example, "This product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. The declaration of conformity may be consulted at"

In addition the name, registered trade name, or registered trade mark, and the postal address of the reseller or distributor should also be included in the user documentation.

2 M020 Feature Guide



Ref Feature Function

- 1 Charging Red/Green LED indicates unit is charging (Red) and fully charged (Green). A flashing red LED indicates a fault condition.
- 2 Charging cradle contacts Charging contacts for standard or fast charge cradles. From right: 5V fast charge, USB 5V VBUS, USB D-, USB D+, USB ID, GND (as seen from the back of the M020).
- 3 Revive™ button Pin-hole reset button used to activate the Revive feature
- 4 USB connector USB Micro-B receptacle - used for charging / file transfer
- 5 Swipe slot Reads magnetic stripe cards (stripe downwards and facing away from user)
- 6 Power button. Used to power the terminal on and off and enter sleep mode
- 7 Contactless display icons to indicate different stages of a contactless card transaction
- 8 Function key for Bluetooth and WiFi communication
- 9 Colour TFT Display (which touch-screen on M021 variant).
- 10 Cancel key Cancels actions including PIN entry
- 11 Enter key Confirms actions including PIN entry
- 12 Clear key. Deletes last PIN digit entered
- 13 Smart Card Slot. Reads chip cards (insert card with chip facing upwards)
- 14 Cut outs used to lock the device into the retail cradle or fast charger

3 Operating the M020 Payment Terminal

3.1 Introduction

This section covers the basic operation and use of the terminal. This covers power on and off, charging, basic Bluetooth connection, transaction PIN entry and terminal maintenance. The logos displayed in this document are configurable. This document assumes that the Miura (MPI) application is loaded and the default logos are still in use.

3.2 Power and charging

3.2.1 Turning the terminal ON

To power up, the operator must push the power button or plug the terminal into a USB power source. The power-up sequence starts with the display of the boot logo whilst the terminal starts up. Once the terminal is ready to use, the Bluetooth icon will start to flash or stay solid at the top left corner of the display depending on whether the terminal has been paired with any smart device. The battery status indicator will be loaded on the top right corner of the display when the terminal is ready to use.

3.2.2 Turning the terminal OFF

To switch off a terminal the operator must press and hold the power button until the display shows “Shutting Down” and the display turns off. Once off, the terminal will not react to any key presses, except Power button and the Revive™ switch.

3.2.3 Sleep

The terminal can be put into sleep mode. In this mode the terminal's power consumption is very low (WiFi and Bluetooth is switched off), but when it is woken it will be ready to use within a few seconds. The terminal will enter sleep mode if the power button is briefly pressed, or after a period of inactivity.

The terminal will wake on any of the following activities:

- Any key press
- USB charge cable inserted
- Smart-Card inserted
- Magnetic Stripe Card swiped

3.2.4 Charging the Battery

The terminal is fitted with an internal rechargeable battery which cannot be removed or replaced. This battery should be charged for at least 3 hours when using the terminal for the first time or if the terminal has not been used for a long time. The battery is charged by plugging the terminal into either a computer or external USB adapter using the USB lead provided. Charging via a USB wall adaptor is faster but the adaptor must be capable of supplying at least 850mA (1A recommended). The battery may also be charged by placing the terminal into a Retail Comms Cradle (connected either to a computer or external USB power adapter), or into a Fast Charge Cradle which will allow the fastest charging time by using a 2A power supply.

When the unit is charging and running normally the charging icon will be displayed in the top right hand corner of the display. The battery status icon will also indicate the real time battery power.

3.2.5 Low Battery

If the battery power goes below the configured Low Battery Threshold, the low battery warning screen will be displayed. If the battery power goes below a critical level the terminal will sleep until the charge has increased above this level.

3.2.6 Battery usage guidelines

- Keep the battery well-charged and do not let it discharge completely.
- Charge at normal room temperature (charging is disabled outside the range 0°C to -45°C).
- Keep the terminal away from heat sources (such as heaters or direct sun-light)
- Fully charging the terminal every 6 months (even when not in use) is strongly recommended to prolong the lifetime of the battery.

3.3 Bluetooth

3.3.1 Start up

Once the terminal is ready to use, the Bluetooth icon and the battery status indicator will be displayed at left and right top corners of the display respectively and the terminal enters one of the following modes:

- Ready To Pair
- Ready to Connect

3.3.2 Ready To Pair:

If the terminal has never been paired with any Bluetooth device previously, the terminal starts in **Ready To Pair** mode. The Bluetooth icon will be flashing once per second. In this mode the terminal will be discoverable by other Bluetooth devices. The remote Bluetooth device can now pair with the terminal. The terminal will remain in this state until the remote Bluetooth device successfully completes the pairing process, at which point it will drop to **Ready To Connect** mode.

For most modern smart devices the numeric comparison pairing method will be used. This involves both devices displaying the same random number. The user should check that these numbers match and if so confirm on both devices. For the Miura terminal the green tick key is used for this. For older Bluetooth devices, PIN pairing may be used. If the user is prompted for a Bluetooth PIN during the pairing process, it will be the last 6 digits of the terminal's serial number.

3.3.3 Ready To Connect

If the terminal has previously been paired with a Bluetooth device, and the pairing information is still available in the terminal, it will start in **Ready To Connect** mode. In this mode the terminal will allow connections with the paired Bluetooth device and will not be discoverable by other Bluetooth devices. In this state the Bluetooth icon will stay solid.

To activate the **Ready To Pair** mode press and hold the **ENTER(✓)** key until the Bluetooth Icon starts to flash. Once pairing is complete the old pair will be removed (this is the only way to remove old pairs). To exit **Ready To Pair** mode without making a new pair, press the **CANCEL(X)** key. The terminal will also exit **Ready To Pair** after a configurable time-out.

3.3.4 Connected

The terminal enters **Connected** mode once a Bluetooth connection is established with an application on the smart device.

3.4 Transaction Mode

3.4.1 PIN Entry

If the terminal is expecting PIN entry from the user, the instructions will be displayed. Once PIN entry is complete, the user should press **ENTER**(✓) key to continue.

During PIN entry the user can press **CLEAR** (←) to delete the previous digit or **CANCEL**(X) to delete all the digits and re-start PIN entry. Pressing **CANCEL**(X) when no digits are entered will cancel the PIN entry.

3.4.2 PIN OK

If the PIN is correct, the terminal will display "PIN OK".

3.4.3 PIN Incorrect

If the PIN is incorrect the terminal will display "INCORRECT PIN" for 2 seconds and request for Pin entry again.

3.4.4 Last Try

If the user is attempting last try for Pin entry, the terminal will indicate "ENTER PIN: (Last Try)".

Note: The Pin Entry instruction are language dependent and will change depending on the language configured. The Language can be configured from the application on the smart device.

3.5 Contactless

Due to the compact nature of the device, and mandated range of the contactless antenna, it is likely that contactless cards placed in or near the mag-swipe slot will be read by the contactless interface if enabled. It is therefore suggested that the interface is only enabled when the customer has confirmed that they wish to make a contactless payment.

3.5.1 Contactless transactions

When the M020 is ready to take a contactless payment, the screen below will be displayed (with the relevant transaction amount shown). The contactless card should be introduced to the unit with the card centralised on the contactless logo on the screen.



3.6 Terminal Maintenance

3.6.1 Security Check

The terminal automatically performs a full security check every 24 hrs. The terminal can be configured by the application to trigger this security test when the terminal is idle. During this time the Bluetooth will be switched off. The files that failed the security check will be removed from the terminal.

3.6.2 Software Update

The software on the terminal can be updated by the application on the smart device. The software update will be transferred to the terminal over the Bluetooth or WiFi, once this is complete the software update will start. The terminal will indicate if a software update is in progress and will report success/failure. If the software update fails, the operator has to acknowledge the failure by pressing **ENTER** (✓) to proceed further. In the unlikely event that a software update fails, a Factory-reset (see Revive™ section) may be required to make the terminal operational. Software update in progress. The terminal will display the success or failure message accordingly.

3.7 Error states

3.7.1 System Tampered

If the terminal identifies a tamper, the terminal will immediately close the Payment application aborting any transaction in progress. The tamper state is indicated on the display. A Tampered terminal should be returned for investigation.

3.7.2 Ready To Install

The terminal will be in Ready To Install state if no application has been installed or has been deleted. A terminal in Ready to Install state should be returned for investigation.

4 Revive™

Miura products include a Revive™ feature which is activated using a pin-hole reset switch, this is situated next to the power button. See M020 [Features](#) section point 7.

Pressing the Revive™ button will trigger a hardware reset, and the terminal will display the Revive Menu. This is best done when there is no external power applied, if external power has been applied the terminal will request to disconnect the external power. The end-user should use this feature if the terminal is running but is “locked up” and not responding to the power button.

The Revive™ Menu has three options, namely:-

- Power up as Normal
- System Restore
- Total Factory Reset

4.1 Power up as Normal

Selecting this option will reboot the terminal resulting in a complete hardware and software reset.

4.2 System Restore

The “System Restore” option will restore the terminal to an earlier point in time. If the terminal becomes unresponsive to power button or is not running as expected and the 1st option in the revive menu was unsuccessful in recovering the terminal the “System Restore” option can be used. The terminal requires the operator to confirm the “System Restore” selection in order to avoid unintentional system restoration. Confirmation of the “System Restore” action; “System Restore” in progress. The terminal will display the success or failure message for the System Restore. If the system Restore process fails, the operator has to acknowledge the failure by pressing the ENTER(✓) key. In the unlikely event that a system restore fails, the terminal may be in an unusable state. The operator should then try “Total Factory Reset” to recover the terminal.

4.3 Total Factory reset

The “Total Factory Reset” option allows the end-user to reset all software and configuration back to the state it was in when the terminal left the factory. This feature should be used if there are any issues with the terminal operation which could not be solved by a Reboot or “System Restore”.

Following a successful “Total Factory Reset”, the user will need to repeat the pairing process, and the controlling application on the smart device will need to perform any software configuration and key injection required. The terminal requires the operator to confirm the “Total Factory Reset” selection in order to avoid unintentional factory reset operation. Confirmation of the “Total Factory reset” action; Factory Reset in progress.

The terminal will accordingly display the success or failure message for the Total Factory Reset. If the Total factory reset process fails, the operator has to acknowledge the failure by pressing the **ENTER(✓)** key. If the factory reset fails the terminal has to be returned for further investigation.

4.4 Terminal Diagnostics

The Revive™ button can also be used to activate the terminal's diagnostics facilities. This involves exporting operating system log files and running a built-in hardware functional test. It is not envisaged that this will be done by an end-user.

The diagnostics state is entered by activating the Revive™ button whilst holding the '0' key. Once the terminal has booted, it will export XXX-XXXXXX-Conf.txt, XXX-XXXXXX-Info.txt and XXX-XXXXXXEvents.txt diagnostic files in the USB Mass Storage Device, where XXX-XXXXXX is the serial number of the terminal. Example contents and format of these files are described in [Appendix A: Example diagnostics Files](#). When returning a terminal under RMA, these files should be returned as well.

Once these files have been retrieved the USB cable can be removed and the terminal automatically starts the functional test, see the [Functional Test](#) section.

Creating Terminal diagnostic data: This state is notified when the diagnostics state is entered by activating the pin-hole switch.

Terminal diagnostics data exported in USB Mass Storage Device: Once the diagnostics log files have been created, the files will be exported in the Mass storage device. The files can be retrieved by connecting the USB lead to a computer. Unplugging USB lead after this will start functional tests. **Failed to export Terminal diagnostics data in Mass storage device:** If the terminal fails to export the diagnostics log files in mass storage device, the terminal will display a failure message. The terminal should be identified as a return under warranty and all details of the terminal and the fault recorded.

5 Functional Test

The Miura Operating System contains a built-in hardware functionality test which allows an operator to fully test the hardware. In order to perform the tests the following are required (and can be obtained from Miura):

- A Miura test card with Mag-swipe and smartcard.
- A Miura Bluetooth responder. This is a modified terminal running specific software with a pre-set Bluetooth address.
- A 5 Volt power supply, current limited to 1.5A.
- Equipment which can supply the voltage to the charge cradle contact points on the terminal.
- A small paper-clip (not a sharp object) to activate the pin-hole reset switch.

The functional tests are activated when the USB lead is unplugged after the retrieval of the diagnostics files from USB Mass Storage Device (MSD).

The following are general points for functional tests:

- For each test, the instructions will be shown using the display.
- For a pass, the next test will be loaded
- For a fail, the operator has to acknowledge the failure by pressing **ENTER(✓)** to continue to next test. Pressing **CANCEL(X)** when a Test has failed will abort the functional test.
- Some tests can be aborted by pressing **CANCEL(X)**
- If any tests fail or are aborted, the final result will be fail
- If a test was aborted or performed incorrectly all tests must be repeated
- If all tests pass the final result will be pass.
- Either way, a results text file of the form `XXX-XXXXXX_Results.txt` will be exported in the MSD.

Where XXX-XXXXXX is the serial number of the terminal.

NOTE: If tests are skipped or performed incorrectly (e.g. if a card was swiped badly or the Bluetooth responder was not switched on), the terminal will appear to have failed when it is not faulty. It is therefore important to make sure all test are performed correctly. The sections below describe the procedure for functional tests.

5.1 Beeper Test

The beeper will sound for 2 seconds at the start of the factory test. After hearing the beeper a confirmation screen to which the operator has to press **ENTER(✓)** if the beeper is working correctly or **CANCEL(X)** otherwise.

5.2 Display Test

Five colour test screens will be displayed, each for 2 seconds. These are red, green, blue, white and lastly black. The operator has to look for a colour problem, stuck pixels or any abnormalities in the display. The black screen is a confirmation screen to which the operator has to press **ENTER(✓)** if the display is working correctly or **CANCEL(X)** otherwise.

5.3 Keypad Test

The terminal requires the operator to press each of the keys on the Keypad. The terminal will indicate which key should be pressed and then moves to the next key if the press was successfully registered, until all keys have been tested.

5.4 Mag-Swipe Test

The operator should swipe the test card provided. The terminal, on reading the swipe card, will record the success or failure. The operator is allowed a second try if the first swipe was not done properly.

5.5 Smart card Test

The terminal will request the operator to insert the test card provided into the smart card slot. The terminal will read the card and record the result. The terminal will then request the operator to remove the card to proceed to the next test.

5.6 Contactless card Test

The operator has to bring a contactless card near the contactless logo when prompted. The terminal will read the card and record the success or failure accordingly.

5.7 Charger Test

The terminal will request the operator to insert the USB cable connected to PC or USB wall adapter and check for Red charging LED next to the USB connector, if ON press **ENTER(✓)** otherwise **CANCEL(X)**. The terminal will then request the operator to remove the USB and check if the Red LED is off, if OFF press **ENTER(✓)**.

5.8 Charging Cradle Test

This will test that the charging contacts for use with a Fast Charge Cradle or Fast Charge Rack are working correctly. The contacts to be tested are 5V fast charge and GND, as shown in item 2 in the [M020 Features](#) section. The terminal will request the operator to place the terminal in the Fast Charge Cradle, which in turn is powered by a 5V 2A power supply.

NOTE: The polarity of the charging contacts should be carefully noted. Applying the wrong voltage to these contacts will damage the unit.

After a short period the terminal will then request the operator to remove it from the charging cradle, which removes power from the charging contacts. The operator will be notified if the test fails.

5.9 Bluetooth Test

The operator should have the provided Bluetooth responder powered on and in Bluetooth range for this test. This test is automated and does not require any other input from the operator. The result will be recorded accordingly by the terminal and the operator will be notified if the test fails.

5.10 WiFi Test

The operator should have the provided WiFi responder powered on and in range for this test. This test is automated and does not require any other input from the operator. The result will be recorded accordingly by the terminal and the operator will be notified if the test fails.

5.11 Apple Co-Processor Test

This is an automated test. The operator will be notified if the test fails.

5.12 Hardware Functionality Test Completion

Once all the tests have been executed, the test results will be exported in the MSD. The terminal will indicate on the display that the results have been exported in MSD. The results can be retrieved and attached to any reports as needed. The terminal can then be powered off.

6 End-user Troubleshooting

It is not possible for Miura to define end-user troubleshooting, as there are many components in the end-user experience which are not defined or controlled by Miura. It is envisaged that the partner will define the troubleshooting process, in part using information from this document.

This section gives some suggestions about what should be included as part of this process. Note that problems reported as the terminal not responding may in fact be caused by an issue with the smart device or the application running on it.

Does the device power on?

- If the terminal does not power on, it should be charged for at least 3 hours (refer to [Charging the battery](#)). The red charging LED can be used as an indication that the terminal is charging correctly.
- If the terminal still will not power on, the power source and USB cable being used should be verified.

Does the terminal perform as expected?

- If the terminal displays [System Tampered](#) it should be returned for investigation
- If the terminal does not perform as expected, and the issue is believed to be with the terminal as opposed to the smart device, then the user should [Reboot](#) the terminal using the Revive™ feature.
- If the terminal is still not functioning as expected, and everything possible has been done to rule out the smart device and application, a [System Restore](#) should be performed.
- If the terminal is still not functioning as expected, a [Total Factory Reset](#) should be performed.

7 Filtering Process

This section is aimed at determining if a given terminal is functioning correctly and is acceptable for use in the field. It is not envisaged that this process will be carried out by the end-user, but will form the basis of testing performed by Miura and the partner at various stages in the terminal's life cycle including: Miura OBA (Out of Box Audit), Partner QA Testing, Partner returns filtering and Miura returns filtering. Each of these stages will no doubt include other additional tests and processes as defined by the organisation performing the stage (and documented separately) but the filtering process defined in this section should be common to all.

Equipment required is as detailed in [Functional Test](#) plus the following:

- Adequate light source
- Magnifying glass
- Inspection gloves (to avoid leaving fingerprints on new units)
- 1A USB mains adaptor and USB cable (enough to charge all units before-filtering)

Step1: Perform a visual inspection on the terminal (to check for imperfections, damage, rattles etc)

- If this passes go to step 2.
- If this fails the damage should be photographed and recorded.

Step 2: Charge the terminal and Power it on.

- Charge each terminal for at least 1 hour using a 1A USB mains adaptor and USB cable.
- Take the terminal off charge and switch it on (if it is not on already)
- If the terminal powers on, go to step 3.
- If the terminal will not power on, it is faulty.

Step 3: Check the terminal starts up.

- If the terminal starts up normally (see [Operating the M020 Payment Terminal](#)), go to step 4.
- If the terminal displays [system tampered](#), the terminal is faulty.
- If the terminal is in any other state, record the error state, obtain and store the [terminal diagnostics](#) files and attempt to recover the terminal by performing a [factory reset](#).
- If the terminal now starts normally, go to step 4.
- If not, the terminal is faulty.

Step 4: Run the Terminal Diagnostics and Functional Test.

- Run the [terminal diagnostics](#) and [functional test](#).
- Retain all the log files created during these processes
- If the terminal passes all functional tests, the terminal is deemed no fault found.
- If the terminal fails any of the tests, it is faulty. All retrieved diagnostic files should be retained as they will be needed in any diagnostics which may be carried out.

NOTE: The terminal will also report a failure after a Factory Test if the tests are carried out incorrectly, or if any test is skipped, in which case the test needs to be repeated in full. If a particular test fails, the operator can choose to continue with the remaining tests.

8 Appendix A: Example Diagnostic Files

020-000110-Conf.txt

This file identifies the hardware and software configuration of the Terminal.

Customer=Generic

Sound=N/A

GSM=N/A

Charge_cradle=5V

Smartcard=TDA8029HN

Flash=NAND 2kblocks*64pages*2112bytes*8b

USB_WiFi=N/A

RAM=LPDDR 4Banks*8Mwords*16b

Contactless=M020-EMVPCDHW-V1

Hardware=M020-TEST01-V2-0

Series=M020

USB_Bluetooth=6223E-UUD

Backlight=N/A

Serial=020-000050

Power=LP3910

OS=M000-DEVOS-V7-2

Ethernet=N/A

Printer=N/A

Light_sense=N/A

Battery_Low=N/A

Mag_sense=N/A

Battery_Stats=N/A

USB_OTG=500mA

Display=Mono 128*64 SSD1309

Processor=MCIMX258CJM4A

Keyboard=3x5(NA,M020,CLR,1,2,3,4,5,6,7,8,9,CNL,0,ENT)+Pwr+Revive

KB_backlight=N/A

MFi=MFI337S3959

LEDs=M020

PCBA=M020-PCBA01A-V1-5

Mag=3-Track MRD532

020-000110-Info.txt

This file provides information about the Terminal, including: hardware part number, current OS part number, Serial Number, current application part number and finger print of the Remote Key Injection CA certificate loaded in manufacture.

Hardware : M020-PROD01-V2-0

Software : M000-OS-V7-4

Serial : 020-000050

App-version : M000-MPI-V1-28-CONF15-V1

CA-fingerprint: 93:DD:63:E0:19:50:FE:15:FF:57:F7:59:C7:34:65:5A:0E:75:4C:F8

020-000110-Events.txt

The File records the system events happened from the manufacture of the Terminal.

Jun 18 11:32:41 miura miura-monitor: Couldn't access shutdown time data

Jun 18 11:32:41 miura miura-monitor: Startup time - Wed Jun 12 11:32:08 2013

Jun 18 11:32:42 miura miura-monitor: Start-Up event - Wipe (4)

Jun 18 11:32:44 miura factory-test: Starting terminal key verification

Jun 18 11:32:44 miura factory-test: Terminal key verification success

Jun 18 11:32:46 miura factory-test: Ready to install Application

Jun 18 11:34:33 miura factory-test: Application installation starting

Jun 18 11:34:56 miura miura-auth: Request for make_factory

Jun 18 11:34:57 miura miura-auth: Request for make_restore

Jun 18 11:34:57 miura factory-test: Application installation successful

Jun 18 11:36:23 miura miura-monitor: Shutdown time - Wed Jun 12 11:35:01 2013

Jun 18 11:36:23 miura miura-monitor: Startup time - Wed Jun 12 11:35:57 2013

Jun 18 11:41:26 miura miura-monitor: Shutdown time - Wed Jun 12 11:35:01 2013

Jun 18 11:41:26 miura miura-monitor: Startup time - Wed Jun 12 11:41:00 2013

Jun 18 11:41:26 miura miura-monitor: Start-Up event - Start Terminal Diagnostics (7)

020-000110-Results.txt

Summary of the functional tests.

***** LCD Test *****

LCD Test: SUCCESS

***** LED Test *****

Pinpad LED Test: SUCCESS

***** Keypad Test *****

Keypad Test: SUCCESS

***** Mag-Swipe Test *****

Mag-swipe-test: TRK1 - PASS

Mag-swipe-test: TRK2 - PASS

Mag-swipe-test: TRK3 - PASS

Mag Swipe Test: SUCCESS

***** Smart-Card Test *****

Smart card Test: ATR Received: Size = 19.

Smart card Test: ATR: 3b5f9500807300010059434c5a1b0011409000

Smart card Test: SUCCESS

***** Contactless Card Test *****

Contactless: Card Detected!!!

Card in field

Contactless card Test: SUCCESS

***** Charger Test *****

Charger Test: SUCCESS

***** Cradle Test *****

Cradle Test: SUCCESS

***** Bluetooth Test *****

Manufacturer: Fn Link

Firmware tbd

HCI version: 4.0, LMP version: 4.0

Waiting for connection...

accepted connection from 20:12:11:15:16:5D

received [hello!]

Bluetooth Test: SUCCESS

***** Apple co-processor test *****

Apple co-processor test co-processor info:

Device version 5

Firmware Version 1

Protocol Major version 2

Protocol minor version 0

Device ID 0x00000200

Apple Co-Pro Test: SUCCESS

Factory Test: Functionality tests completed.

9 Appendix B: Regulatory Information

Battery: This product uses a Lithium-Ion battery.

Do not use it in a humid, wet and/or corrosive environment. Do not put, store or leave your product in or near a heat source, in a high temperature location, in strong direct sunlight, in a microwave oven or in a pressurised container, and do not expose it to temperatures over 60°C (140°F). Failure to follow these guidelines may cause the battery to leak acid, become hot, explode or ignite and cause injury and/or damage. Do not pierce, open or disassemble the battery. If the battery leaks and you come into contact with the leaked fluids, rinse thoroughly with water and seek medical attention immediately. For safety reasons, and to prolong the lifetime of the battery, when not in use store your product in a cool, dry place. Charging will not occur at low (below 0°C/32°F) or high (over 45°C/113°F) temperatures.

Caution: Do not remove or attempt to remove the non-user-replaceable battery. THE BATTERY CONTAINED IN THE PRODUCT MUST BE RECYCLED OR DISPOSED OF PROPERLY ACCORDING TO THE LOCAL LAWS AND REGULATIONS AND ALWAYS KEPT SEPARATE FROM HOUSEHOLD WASTE. BY DOING THIS YOU WILL HELP CONSERVE THE ENVIRONMENT.

CE marking

This equipment complies with the requirements for CE marking when used in a residential, commercial, or light industrial environment, achieving all the appropriate provisions of the relevant legislation in the EU.

RED directive

Hereby, Miura Systems Ltd declares that Miura Systems Ltd products and accessories are in compliance with the essential requirements and other relevant provisions of the EU Directive 2014/53/EU. The declaration of conformity can be found here: www.miurasystems.com/certifications

WEEE directive

The wheellie bin symbol on the product or its packaging indicates that this product shall not be treated as household waste. In line with EU Directive 2002/96/EC for waste electrical and electronic equipment (WEEE), this electrical product must not be disposed of as unsorted municipal waste. Please dispose of this product by returning it to the point of sale or to your local municipal collection point for recycling. By doing this you will help conserve the environment.

Pacemakers

Pacemaker manufacturers recommend that a minimum of 15cm (6 inches) be maintained between a handheld wireless device and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with independent research and recommendations by Wireless Technology Research.

Guidelines for people with pacemakers

- You should ALWAYS keep the device more than 15cm (6 inches) from your pacemaker.
- You should not carry the device in a breast pocket.

Other medical devices

Please consult your physician or the manufacturer of the medical device, to determine if the operation of your wireless product may interfere with the medical device.

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Radiation Exposure Statement

The product complies with the FCC portable, RF exposure limits set forth for an uncontrolled environment in accordance with FCC rule part §2.1093 and KDB 447498 D01.

Minimum separation distance 5mm from device to the human body.

Canada IC

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) this device must accept any interference received, including interference that may cause undesired operation.

L'émetteur/récepteur de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) L'appareil ne doit pas produire de brouillage.

(2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Radiation Exposure Statement

The product complies with the safety requirements for RF exposure in accordance with RSS-102, issue 5 for portable use conditions.

Minimum separation distance 5mm from device to the human body.

Déclaration d'exposition aux radiations

Le produit est conforme aux exigences de sécurité pour l'exposition aux RF conformément à la norme RSS-102, numéro 5, pour les conditions d'utilisation portables.

Distance minimale de séparation 5mm de l'appareil au corps humain.