VOKKERO
RADIO COMMUNICATION SYSTEM

VOKKERO ELITE FCC

User Guide Version 1.1

VOKKERO

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- This guide describes the functionality of the system Vokkero® ELITE, options and accessories. It explains how to configure it to allow a conference-type communication between multiple users.

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ENGLISH

INFORMATIONS

Document Information	
Title	VOKKERO ELITE FCC
Subtitle	ELITE
Document type	User Guide
Version	Version 1.1

This document applies to the following products:

Name	Reference
VOKKERO ELITE FCC - ELITE	From : VO8364AA
VOKKERO ELITE - Configurator	From : VO7674AA
VOKKERO ELITE - Charger	From : VO8363AA

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TECHNICAL SUPPORT

Website

Our website contains a lot of useful information: information on modules and wireless modems, user guides, and configuration software and technical documents which can be accessed 24 hours a day.

If you have technical problems or cannot find the required information in the provided documents, contact our Technical Support on our website: www.vokkero.com. This ensures that your request will be processed as soon as possible.

Helpful Information when Contacting Technical Support

When contacting Technical Support, please have the following information ready:

- Product type
- Firmware version (for example V1.0)
- A clear description of your question or the problem
- A short description of the application

COMPLIANCE TO FCC US/CAN

This device complies with part 15 of the FCC rules and Industry Canada licence-exempt RSS standard(s).
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 of the device.

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 instruction, may cause harmful interference to radiocommunication. 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 or more 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.

Changes or modifications not expressly approved by VOGO could void the user'sauthority to operate the equipment.
This device is limited to operating the frequencies authorized by Part 15 and cannot be configured by end users or professional installers to operate outside the authorized bands.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lower) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be chosen so that the equivalent isotropically radiated power (e.i.r.p.) is not superior than necessary for successful communication.

Ce dispositif est conforme aux règles de la FCC part 15 and à la norme CNR-247 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Cet équipement a été testé et déclaré conforme aux limites d'un appareil numérique de classe B, conformément à la partie 15 des règles de la FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre de l'énergie radiofréquence et, s'il n'est pas installé et utilisé conformément aux instructions, peut causer des interférences nuisibles aux radiocommunications. Il est cependant toujours possible que des interférences se produisent dans le cadre d'une installation particulière.
Si cet appareil produit des interférences nuisibles à la réception des programmes de radio et de télévision –détectables lors de la mise hors tension ou en tension de l'appareil-l'utilisateur est encouragé à mettre en œuvre une ou plusieurs des mesures suivantes pour remédier à ces interférences :

- Réorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre l'équipement et le récepteur.
- Branchez le matériel à une sortie sur un circuit différent de celui auquel le récepteur est branché.
- Prendre conseil auprès du commerçant ou d'un technicien de radio/TV expérimenté.

Tout changement ou modification non expressément approuvé par la partie responsable des mesures de conformité peut amener l'utilisateur à se voir interdire l'usage de l'appareil.
Cet appareil est limité à l'exploitation des fréquences autorisées Partie 15, et ne peut pas être configuré par des utilisateurs finaux ou des installateurs professionnels à fonctionner en dehors des bandes autorisées.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

FOR PORTABLE DEVICE USAGE (<20cm from body/SAR needed)

Radiation Exposure Statement:
This device complies with the FCC and ISED portable RF exposure limit set forth for an uncontrolled environment and is safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available. This portable equipment with its antenna complies with FCC's and ISED RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance follow the instructions below:
1. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2.Avoid direct contact with the antenna, or keep it to a minimum while using this equipment.
The SAR limit adopted by USA and Canada is 1.6 W/kg averaged over 1 gram of tissue. The highest SAR value reported to FCC and ISED for this device complies with this limit.

Déclaration d'exposition aux radiations:
Le produit est conforme aux limites d'exposition FCC (Etats-Unis) et ISED (CANADA) pour les appareils portables RF établies pour un environnement non contrôlé. Le produit est sûr pour un fonctionnement tel que décrit dans ce manuel. La réduction supplémentaire aux expositions RF peut être obtenue si l'appareil peut être conservé aussi loin que possible du corps de l'utilisateur ou que le dispositif est réglé sur la puissance de sortie la plus faible si une telle fonction est disponible.
Cet équipement portable avec son antenne est conforme aux limites d'exposition aux radiations RF de la FCC définies pour un environnement non contrôlé.
Pour maintenir la conformité, suivez les instructions ci-dessous :
1. Cet émetteur ne doit pas être situé ou fonctionner conjointement avec une autre antenne ou un autre émetteur.
2. Évitez ou réduisez au minimum tout contact direct avec l'antenne pendant l'utilisation de cet équipement.
La limite de DAS adoptée par les États-Unis et le Canada est de 1,6 W / kg en moyenne sur 1 gramme de tissu. La valeur SAR la plus élevée signalée à la FCC et à ISED pour cet appareil est conforme à cette limite.

Identification :

- FCC ID: 2AU6N-VO8364AA
- IC ID: 25704-VO8364AA

Product reference: USA/CANADA: VO8364AA

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USAGE RESTRICTIONS : THE USE OF VOKKERO ELITE IN US/CAN
IMPORTANT: Before using the device, please observe the legal provisions in force in your country.

OPERATING FREQUENCIES of VOKKERO ELITE FCC

FHSS Mode: 2 Hopping tables are available

	H1	H2
Min	915,795	915,420
Max	927,420	927,420
1	927,045	925,17
2	916,545	926,67
3	918,42	919,545
4	922,17	923,67
5	923,295	922,92
6	925,17	915,42
7	921,42	921,42
8	915,795	924,795
9	925,545	916,545
10	918,795	915,795
11	926,67	921,045
12	921,795	919,17
13	916,17	918,045
14	918,045	922,17
15	922,545	916,92
16	925,92	917,67
17	920,295	927,42
18	917,67	916,17
19	920,67	918,795
20	927,420	923,295
21	924,42	924,045
22	923,67	918,42
23	916,92	927,045
24	924,045	921,795
25	926,295	924,42
26	917,295	

DTS mode: Each device proposes 15 channels using digital modulation techniques (DTS mode). Available channels are listed below.

	Single DTS
Min	915,400
Max	927,400
1	915,4
2	916,2
3	917
4	917,8
5	918,6
6	919,4
7	921
8	921,8
9	922,6
10	923,4
11	924,2
12	925
13	925,8
14	926,6
15	927,4

Inside the stadium, a spectrum referent may be available to assist in frequency allocation.
For the use of ELITE outside US/CAN, please contact customer support: “www.vokkero.com/Support/Technical Support”. In the VOKKERO HELPDESK space, log in with your identifiers (or sign up to create your account) to access the support.

INTRODUCTION

All rights to this manual are the exclusive property of VOKKERO. All rights reserved. Copying this manual (without written permission from the owner) via printing, copying, recording or by any other means, translating this manual (in full or partially) into any other language, including all programming languages, using any electrical, mechanical, magnetic or optical devices, manually or any by other methods, is prohibited.

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ENVIRONMENTAL RECOMMENDATIONS

All superfluous packaging materials have been eliminated. We have done everything possible to make it easy to separate the packaging into three types of materials: cardboard (box), expanded polystyrene (filler material) and polyethylene (packets, foam protective sheets). Your device is composed of materials that can be recycled and reused if it is dismantled by a specialist company. Please observe local regulations concerning the manner in which waste packaging material, used batteries and your obsolete equipment are disposed of.

WARNINGS

Valid for :
VOKKERO ELITE FCC - ELITE : VO8364AA
VOKKERO ELITE - Configurator : VO7674AA
VOKKERO ELITE - Charger : VO8363AA

Read the instructions in the manual.

The safety of this product is only guaranteed when it is used in accordance with its purpose.
Maintenance should only be carried out by qualified persons.

To fulfill RF exposure limit, the device VO8364AA must be worn with the armband or the belt provided by VOKKERO.

Please note: Do not install the equipment close to a heat source or in damp conditions.
Please note: When the equipment is open, do not carry out any operations other than the ones set out in this document.

Please note: Do not open the product as there is a risk of electrical shock.

Please note: For your own safety, you must ensure that the equipment is switched off before carrying out any work on it.

Please note: For your own safety, the power supply circuit must be SELV (Safety Extra Low Voltage) and must be from limited power sources.

The product must be equipped with a switching mechanism so that the power can be cut. This must be close to the equipment. Any electrical connection of the product must be equipped with a protection device against voltage spikes and short-circuits.

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DISPOSAL OF WASTE BY USERS IN PRIVATE HOUSEHOLDS

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste by taking it to a collection point designated for the recycling of electrical and electronic appliances. Separate collection and recycling of your waste at the time of disposal will contribute to conserving natural resources and guarantee recycling that respects the environment and human health. For further information concerning your nearest recycling centre, please contact your nearest local authority/town hall offices, your household waste collection company or the shop where you bought the product

Warning: If the charger is used with any other batteries or products whatsoever, there is a risk of an explosion. After use, the batteries must be disposed of at an appropriate recycling centre. They must not be thrown away to degrade in the environment. When batteries are replaced, the device must be corectly implemented.

Warning for Switzerland : the annex 4.10 of SR 814.013 Standad must be applied for batteries.

This symbol on the devode or its packaging means the use of a DC voltage.

RECOMMANDATIONS REGARDING USE FOR VO8363AAAA & VO7674AAAA

- Before using the system, check that the power supply voltage shown in the user manual corresponds to your supply. If it doesn't, please consult your supplier.
- Place the device against a flat, firm and stable surface.
- The device must be installed in a location that is sufficiently ventilated so that there is no risk of internal heating and it must not be covered with objects such as newspapers, cloths, curtains, etc.
- The device must never be exposed to heat sources such as heating equipment.
- Do not place the device close to objects with naked flames such as lit candles, blowtorches, etc.
- The device must not be exposed to harsh chemical agents or solvents likely to damage the plastic or corrode the metal parts.

The operations described below allow you to rapidly and easily implement your VOKKERO ELITE communication system.

All the operations described are valid for all the VOKKERO ELITE terminals listed below:
VOKKER-ELITE-FCC001-ELITE FCC : VO8364AA
Note: Your product reference is given on the label on the back of the terminal housing.

The VOKKERO ELITE is a ready-to-use system with the following three main elements:
- Terminals: VOKKER-ELITE-FCC001-ELITE FCC : VO8364AA
- Configurator: VOKKERO ELITE - Configurator : VO7674AA
- Optional Charger: VOKKERO ELITE - Charger : VO8363AA

All the operating settings of the VOKKERO ELITE system are managed by the configurator which gives access to the Settings menu via a touchscreen. The configurator must be connected to the power unit (otherwise it will not work) and up to 4 extensions can be associated with the configurator.

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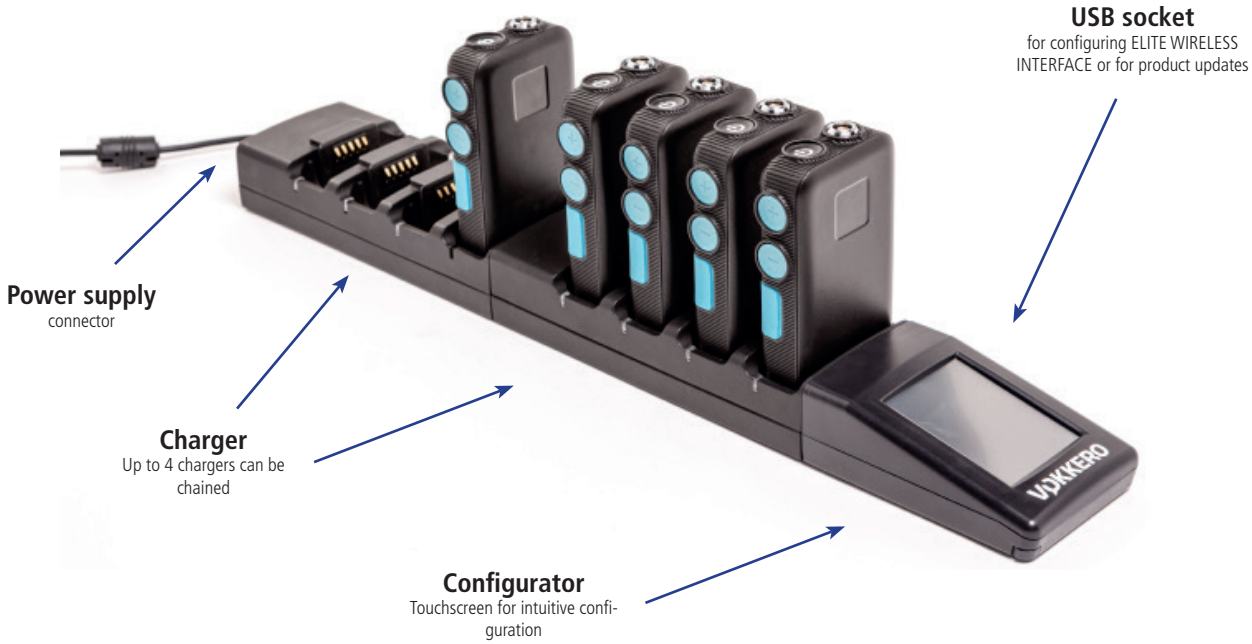
1. SYSTEM INSTALLATION PROCEDURE

- Connect the power unit to the end charger (if several are connected in a row).
- Connect the power unit to the mains.
- Connect the VOKKERO ELITE terminals as shown below.

Note 1: the order and position of the terminals on the charger(s) are not of importance at that time.
Note 2: if the purpose of the operation is only to charge terminals, then the configurator is not required.



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2. SYSTEM DESCRIPTION

2.1. VOKKERO ELITE FCC Terminal

2.1.1. Description of product interface

2.1.2. General characteristics

General Specifications	Value
Supply voltage	3.7V nominal
Maximum consumption	800mA (emission)
Terminal power supply	Lithium battery
Battery life	More than 8 hours
Charging time	4 hours from 0 to 100% battery life
Operating temperature	-20°C / +55°C
Dimensions	57 x 96 x 23 mm
Weight	130g (including battery)

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2.2. VOKKERO ELITE FCC Charger/Configurator

2.2.1. Description of product interface

2.2.2. General Technical Specifications

Specifications	Value
AC/DC Power Converter (standard)	100 to 240V 12VDC/5A - 50/60Hz
Operating temperature	-5°C / +40°C
Dimensions Configurator	105x70x36
Dimensions Charger	180x70x35
Weight Configurator	100g
Weight Charger	180g
Terminal charging indicators (leds)	
- Red	No terminal or defective terminal
- Orange	Terminal charging
- Green	Terminal charged

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3. QUICK START OF THE CONFERENCE

3.1. Setting up Audio Conference

The terminals are delivered pre-configured and ready-to-use. The first step consists in turning on the terminals and in particular the Master role terminal. This role is used to synchronize the other terminals. You can recognize the Master terminal thanks to its purple network icon.

In case no terminal show the purple network icon or if several terminals shows this purple network icon, that means that you have no Master or several Master roles in the network. In that case, the audio conference won't work properly. Put all the terminals on the configurator dock and launch a "Quick Config.". See §5 QUICK CONFIG. MENU for more info on the different "Quick Config."modes, options and functionnalities.

The Master role is automatically attributed to the terminal located in the first slot of the configurator during a normal"Quick Config".
The Master role is attributed to the terminal located either in the first slot or in the fourth slotof the configurator during a VAR Football"Quick Config".

With "Quick Config.", you can rapidly reconfigure all the conference and attributes the Master role to a single terminal which is the key to a valid VOKKERO audio conference.

With Football "Quick Config." you can configure all terminals for VAR Football application usage. In that case, a spare Master role will be created (and shall be of course kept shut-off if the Master is turned-on).

3.2. Description of the terminal

Press the On/Off button to turn on the terminal.

Note 1: all settings, including volume, remain unchanged when the terminal is turned off (i.e., will be identical when the terminal is turned again).

Network icon

• Colour of the Network Icon shows the role of the terminal in the VOKKERO conference.
If icon is purple: the terminal is the MASTER of the conference (can speak and listen and gives synchronization network to others terminals).
If icon is green: the terminal is a USER of the conference (can speak and listen).
If icon is white: the terminal is a LISTENER of the conference (cannot speak, only listen).

• Status of the Network Icon shows that the terminal is connected or not to a VOKKERO conference.
If icon blink: the terminal is searching for a VOKKERO conference.
If icon is fixed: the terminal is connected to a VOKKERO conference or the terminal is the MASTER of the conference.

Central Ref icon

• If a purple whistle appears, that means that this terminal has been selected as a Central Ref product (whatever its Network role, MASTER

or USER). That only means that an extra robust radio is active (can be active only on one terminal in the conference/network).
This gives even more robustness in case of radio interferences to that terminal. We recommend to give to give that terminal to the main referee (or the one speaking to VAR or to public announcement).

Recording Icon

If icon does not appear: No recording.
If icon is fixed: A recording of the VOKKERO conference is going-on.
If icon blinks: The SD card for the recording cannot accept recording (full memory).

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3.3. Connecting a headset

3.3.1. Plugging in a headset

Plug the headset into the slot at the top of the product, beside the LCD.
Line up the 2 red marks of the product and the headset and push the connector
Do not force the headset; it should connect easily; if this is not the case, check the headset to make sure it isn't damaged and check that you align the red dot with the red mark.

3.3.2. Removing the headset

Pull on the ring of the headset to release the connector switch.
Then remove the headset connector.

⚠ Do not attempt to remove the headset by pulling the cable.

⚠ Do not turn the connector.

3.4. Adjust Volume

Push + to increase the audio volume
Push – to decrease audio volume
5 steps of volume are available. A vocal synthesis (heard in the headset) indicates the step (volume 1 to volume 5). A vocal synthesis indicates that "Minimum volume" is reached, another vocal synthesis indicates that "Maximum volume" is reached.
To avoid possible hearing damage, do not listen at high volume for a long time.

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3.5. Launch a recording

Insert a SD card into the dedicated slot (FAT32 formated)
Push during 2 seconds the Function button
The recording icon should appear and stay fixed.
In case it blinks and then disappears it means that your SD card is not present, well-inserted or well-recognized.
To stop recording, push the Function button again. The recording icon should disappear.
A vocal synthesis (heard in the headset) indicates the "Start of Recording", another vocal synthesis indicates the "End of recording" (in case the user stops the recording or if the SD card memory is full).

3.6. Locking and unlocking the terminal

You can lock the buttons of the terminal by pressing and holding the + and – buttons during 3 seconds.
All icons blinks one time when locking is activated. On/Off button remains functional.
Press and hold again during 3 seconds the + and - buttons to unlock.
All icons blinks one time when unlocking.

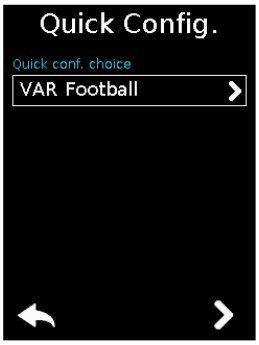
4. START AND HOME SCREEN OF THE CONFIGURATOR

The configurator does not have an On-Off switch. To turn it on, the configurator must be connected to the power unit provided with the VOKKERO ELITE.
The configurator has a USB port for updates.
The configurator screen is a high-resistance touchscreen.
Immediately upon starting up the system, the configurator displays the VOKKERO logo, with the software version of the configurator, followed by the Home Screen.

4.1. Home Screen

The screen indicates the number of terminals that the charger has on it (each number corresponds to one terminal).
The configurator uses a color code to indicate the terminal battery's charging status, using the following colour scheme.
Plain round green: battery charged
Plain round orange: battery in charge
No visible round whereas a terminal is plugged in this charger's slot: terminal in default, try positioning again the terminal and contact our support in case it stays in that state.
You can rapidly configure the entire system by selecting the runner icon ("Quick config.").
You can fine-tune the system configuration by using the settings icon (Settings).
Note: You can also proceed directly to the configuration of the terminal by clicking on the desired terminal number.

5. QUICK CONFIG. MENU



The terminals are delivered pre-configured and ready-to-use.
However, with "Quick Config.", you can rapidly reconfigure all the conference (selecting another frequencies or modifying terminal role).
Start the configuration by selecting a "Quick Config." (Football or Normal).

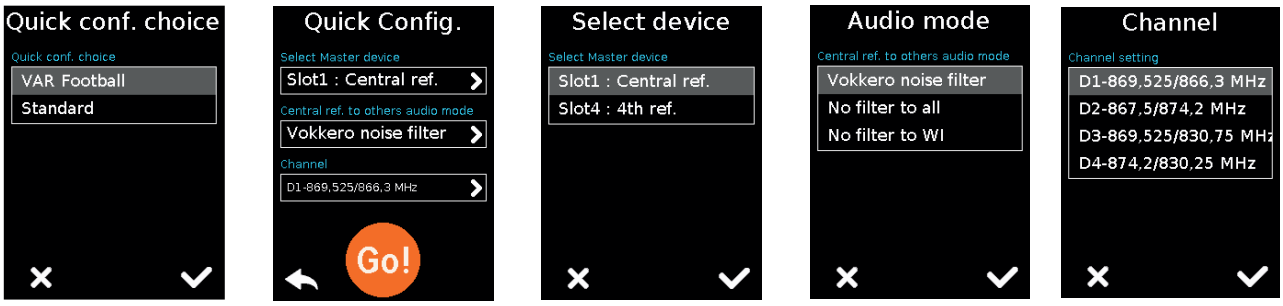
VAR Football is dedicated to quick configure the product for VAR Football use case.
Normal is dedicated to any other usage.

5.1. VAR Football «Quick Config.»

The VAR Football «Quick Config.» the terminals are paired in communication and there is an automatic configuration of terminals which is crafted for games with VAR where a technician can assist referees and has to setup main and backup VAR audio lines as well as backup spare terminals for referees. The VAR Football «Quick Config.» allows:

- naming of the terminals
- possibility to give the MASTER ROLE to the CENTRAL REF or to the 4th Assistant REF
- pairing of two WIRELESS INTERFACE (WI) for main and backup pitch-to-VOR audio lines
- creation of spare identical terminals for all different roles (allowing a technician to swap terminals during half-time if needed)
- creation of Listener terminals

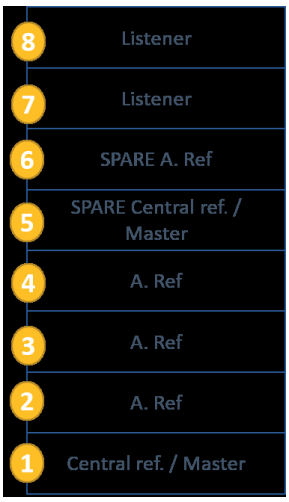
1. Connect your main Wireless Interface (WI) on the USB dock of the configurator and turn on the Wireless Interface.
2. Put at least 4 ELITE terminals on the charger
3. Select which slot you want for MASTER ("Select Master device"). Can be either the CENTRAL REF (Master role given to the device in Slot n°1) or an assistant referee such as the 4th referee (Master role given to the device in slot n°4)
4. Select the audio mode you want for Central Referee terminal ("Central referee to others audio mode"). See below §5.3 for more explanation of these audio modes.
5. Choose a frequency.
6. Unplug MAIN WI and connect a second WI if you want to add a backup WI & validate. Unplug USB cable both sides when completed.
7. If the configuration completes successfully, the indication "COMPLETED" displays. Alternatively, the indication "ERROR" displays if a problem is encountered.
8. To return to the Home Screen, use the left arrow.



With Football "Quick Config.", the terminals are automatically configured this way (by order of slots on the charger):

<u>If you have chosen the Slot 1 (the CENTRAL REF) for MASTER ROLE:</u>

1. CENTRAL REF / MASTER ROLE (purple antenna icon / whistle icon)
2. A.REF (green antenna icon)
3. A.REF (green antenna icon)
4. A.REF (green antenna icon)
5. SPARE MASTER Role / CENTRAL REF (spare terminal with purple antenna icon / whistle icon, to be kept switched-off!)
6. SPARE A.REF (green antenna icon)
7. LISTENER (white antenna icon)
8. LISTENER (white antenna icon)
9. LISTENER (white antenna icon)
10. …



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If you have chosen for instance the Slot 4 (the 4th REFEREE) for MASTER ROLE:

1. CENTRAL REF (green antenna icon / whistle icon)
2. A.REF (green antenna icon)
3. A.REF (green antenna icon)
4. 4th REF / MASTER (purple antenna icon)
5. SPARE CENTRAL REF (Central REF spare with whistle icon, to be kept switched-off!)
6. SPARE REF (green antenna icon)
7. SPARE 4th REF / MASTER (MASTER spare terminal with purple antenna icon, to be kept switched-off!)
8. LISTENER (white antenna icon)
9. LISTENER (white antenna icon)
10. LISTENER (white antenna icon)
11. …

In case you put less than 4 ELITE terminals on the charger, the Football "Quick Config."won't be possible.
In that case the Football "Quick Config." will propose to configure only additional terminals with the same role for all terminals aon the charger : LISTENER or SPARE REF

5.2. Normal "Quick Config."

With Normal «Quick Config.» the terminals are all paired in communication and all terminals are configured the same way (all users of the conference with green antenna icon) except the terminal located in slot n°1 which will be CENTRAL REF Role + MASTER Role.

1. Select the audio mode you want for Central Referee terminal ("Central referee to others audio mode"). See below for more explanation of these audio modes
2. Choose a frequency
3. If the configuration completes successfully, the indication "COMPLETED" displays. Alternatively, the indication "ERROR" displays if a problem is encountered.
4. To return to the Home Screen, use the left arrow.

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IN ANY CASE AND NO MATTER THE "Quick Config." CHOSEN:
Always make sure:
- To have only one MASTER ROLE terminal in the conference (only one terminal with purple antenna icon displayed)
- To have only one Central REF in the conference (only one terminal with whistle icon displayed)

5.3. CENTRAL REF TO OTHERS AUDIO MODE

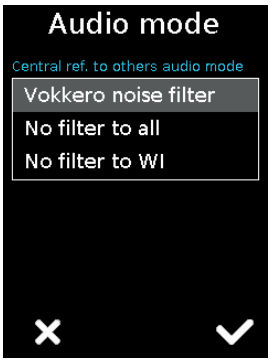
During the "Quick config." you are invited to chose which terminal you want to apply the CENTRAL REF enhanced radio capabilities.

On top of that extra robustness to interferences, you may select a specific audio mode for this CENTRAL REF terminal only. This audio mode will define the way the audio from the CENTRAL REF will be sent to the others terminals / users.

• VOKKERO filters : it is the default mode. It enables the noise filtering VOKKERO technology (only the voice is transmitted). The CENTRAL REF terminal audio out will be noise filtered, just as the other terminals.

• NO-Filter : it allows free audio out (without noise filtering) to all others users (i.e. to all other terminals, and to the WIRELESS INTERFACE…). This can be chosen to enable other users to hear a raw unfiltered audio from the CENTRAL REF with ambiance sound in it. We won't recommend that settings in crowdy stadiums/arenas.

• NO-Filter-to-WI : it allows free audio out (without noise filtering) only to the WIRELESS INTERFACE. This can be chosen to enable VAR referees or TV to hear a raw unfiltered audio from the CENTRAL REF with ambiance sound in it.



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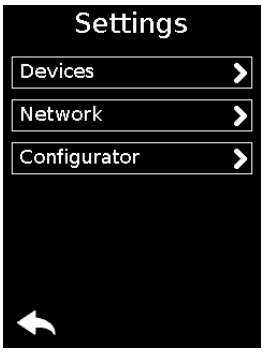
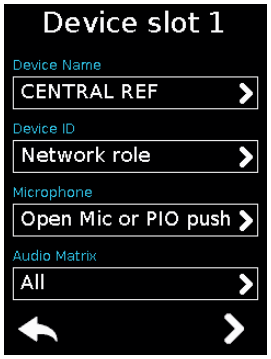
6. SETTINGS MENU

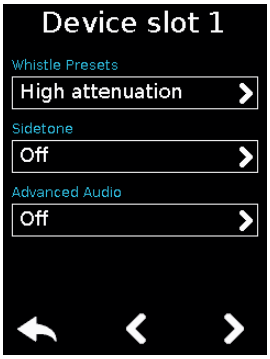


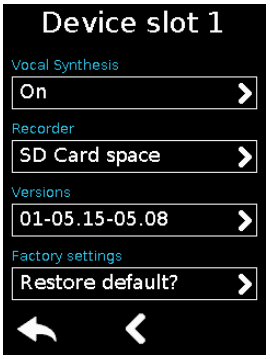
This menu enables a more detailed configuration of the system in order to configure the terminals, the system or the configurator.
• In "Devices", you can access the settings of the terminals which are currently positioned on your charger.
• In "System", you can change the settings of the whole VOKKERO network
• In "Configurator", you can set the configurator parameters.
The details for each element are given below.

6.1. DEVICES

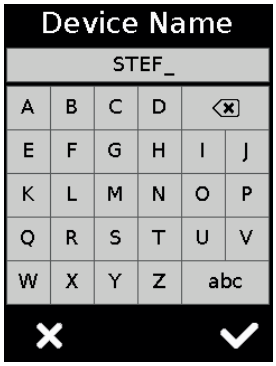
The first screen indicates the terminals present on the configurator. The charge status as well as the name of each terminal displays.
The terminals display in their order of presence on the configurator, going from the closest (position 1) to the furthest away.
To modify a product, select the product row; this displays all the settings available for the selected terminal.





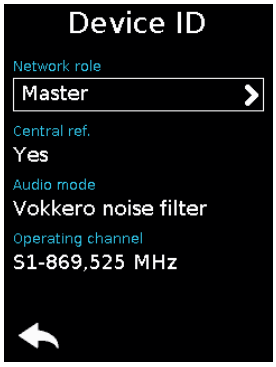


6.1.1. Terminal name



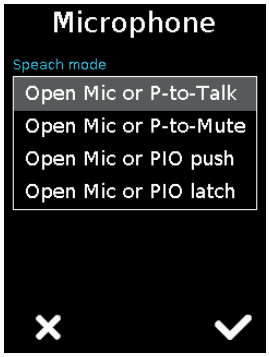
To change the name of the terminal, you can use the available keyboard.
Three screens/keyboards are available to de-fine the product name. To switch between screens/keyboards, use the button on the bottom right-hand side.
• "abc" to switch to the lowercase words screen
• "123" to switch to the numbers and symbols screen
• "ABC" to switch to the uppercase words screen
• Use _____to delete the most recently entered character
• To validate, select on the bottom right-hand side.

6.1.2. Device ID



This menu allows a quick check of some parameters of the terminal (that may have been applied during a «Quick Config.».
• Network role: Master, User or Listener (this Network role can be changed there in this menu).
• Central Ref role: Yes or No
• Audio mode: Vokkero noise filter which is the standard default mode or eventually one of the two No-filter modes, see §5.3; the two latest being only possible for only possible with a Central Ref terminal.
• Operating channel frequency

6.1.3. Microphone

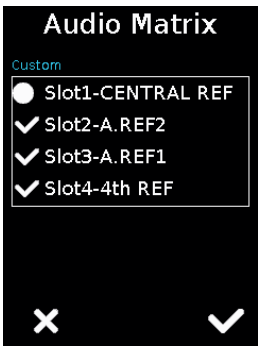


• Open mic or Push-to-talk (that means if you plug a normal headset you will have open mic functioning, if you plug a headset with a button you will have push-to-talk functioning)
• Open mic or Push to mute (that means if you plug a normal headset you will have open mic functioning, if you plug a headset with a button you will have push-to-mute functioning)
• Open mic with PIO push (that means if you plug a normal headset you will have open mic functioning, if you plug a headset with a button you will still have open mic functioning but with specific WI audio-out mode if you hold pressing the button).
• Open mic with PIO latch (that means if you plug a normal headset you will have open mic functioning, if you plug a headset with a button you will still have open mic functioning but with specific WI audio-out mode if you press the button, and then you need to press again to stop specific WI audio-out mode).

Note that these two PIO modes have to selected if you want to:
- Make Push-to-announce with a WIRELESS INTERFACE authorizing WI audio-out (Public announcement in some sports) or,
- Make private conversations with a WIRELESS INTERFACE avoiding WI audio-out (keep referees discussion away from being broadcasted on TV in some sports).

To make these two modes work, it has to be set in conjunction with the proper WI parameter depending on what specific WI audio-out you want (see User Guide of VOKKERO WI ELITE):
- PIO - Public announcement
- PIO - Audio out muted
Make your selection and validate.

6.1.4. Audio Matrix



For each terminal (even Listener terminals), it is possible to select what terminal you want to listen to. The default setting is for all devices to be selected.

• Select the terminals that should or should not be listened to by the terminal you are currently configuring.
Note: If the listening selection has already been modified, the word "Custom" will appear. If all the terminals are being listened to, "All" will appear.
• Once the selection has been made, click on the "OK" button in order to validate it, or on "Escape" in order to exit from the sub-menu.
• When the "OK" button has been clicked on, a window will appear confirming that the operation has been duly completed.
• Click on "OK" and then on "Escape" to return to the home screen.

6.1.5. Whistle Presets

The whistle detector allows the terminal to detect that a whistle call has been made and then transmits the audio of this whistle to the other terminals accordingly to your choice.
Note: this is very helpful to have other users hearing the whistle while preserving their hearing health. We strongly recommend to keep the Whistle detector on with attenuation if you have selected another audio mode than VOKKERO filters during the Quick Configuration process for the CENTRAL REF to avoid any damage to other users audition.

• No attenuation : the whistle is detected and sent to other users at high volume.
• Low attenuation : the whistle is detected and sent to other users at moderate volume.
• High attenuation : this is the default mode. The whistle is detected and sent to other users at low volume.
• Total attenuation : the whistle is detected and is NOT sent to other users (filtered)
• Whistle detector OFF : this is a backup mode in case the whistle detector shows unwanted behavior in some arenas (with other whistles coming from the crowd). In that case, the whistle is not detected and the audio results may depend from the audio mode you have chosen during the Quick Configuration process for the CENTRAL REF.

Make your selection and validate.

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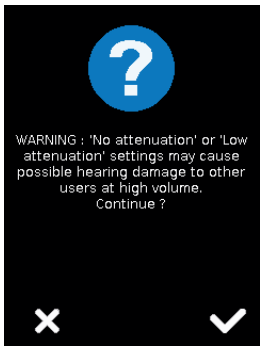

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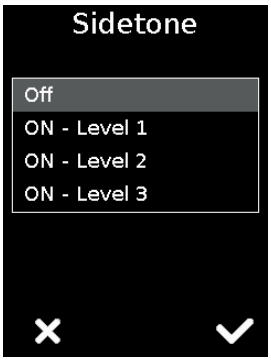
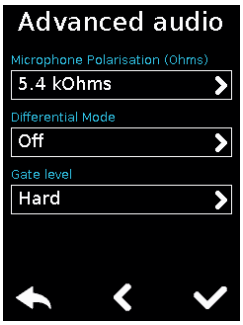
6.1.6. Sidetone

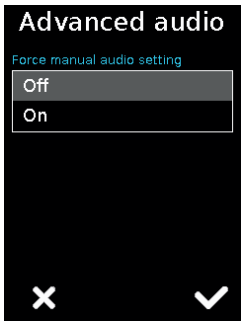
The Sidetone mode enables you to turn on and adjust the audio return level (enabling you to listen to your own voice) in your headset. The default mode is OFF.

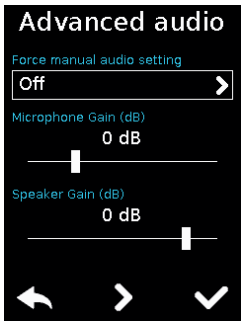


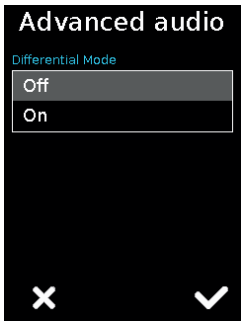
6.1.7. Advanced audio

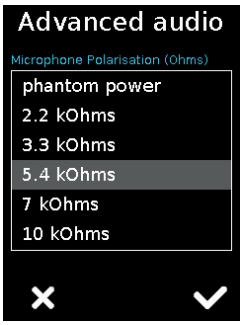
This mode allows our customers to fine-tune themselves (Manual mode) some audio parameters including microphone and speaker gain, differential mode, gating or electrical polarization. We cannot provide tips as our headsets are engineered to be automatically recognized by the terminal which then applies the best settings so that our customers do not need to enter that Advanced audio mode. If you are willing to try different audio settings or your own headsets, force the terminal into Manual Mode and adjust the parameters. Please note that it may bring the terminal/headset association to bad or erratic functioning. Please consider this as an expert mode and play carefully with it.





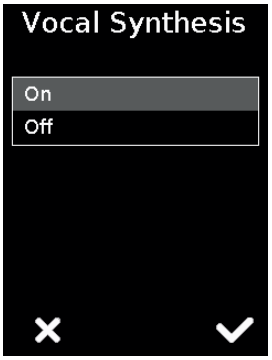






6.1.8. Vocal Synthesis

This menu allows disabling or re-enabling the vocal synthesis alerts which can be heard in the user' headset.



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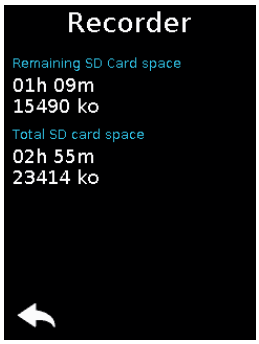
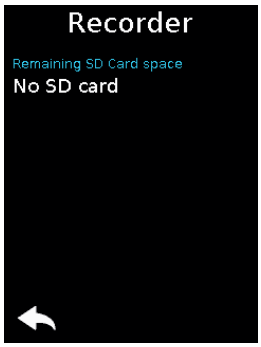
6.1.9. SD Card space

This menu gives the remaining time that can be stored with the Recorder on the inserted SD Card.



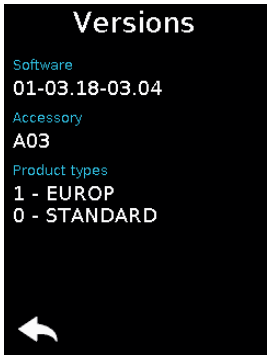


6.1.10. Factory settings

This menu brings back, to the factory settings, a terminal or all terminals connected to the configurator.
After selecting and validating your choice, the configurator lets you know if the return to factory settings has completed successfully. To finalize the operation, select the arrow on the bottom left-hand side to return to the configuration screen of the terminals.

6.1.11. Versions

This menu provides the Product types, the accessory table reference and the software release which are embedded into the terminal.
These information are useful to contact our Support.



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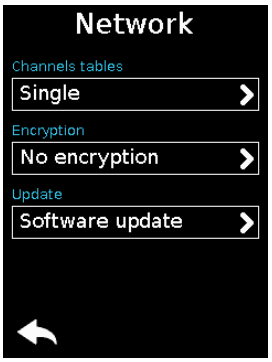
6.2. SYSTEM



6.2.1. Channel mode

Use this menu to select a predefined mode of channels.

By default, the system is configured to operate on FHSS mode (i.e., «HOPPING» selected); this means that the terminals send their radio frames to other terminals on 25 (or 26) frequencies with Frequency hopping spread spectrum functioning.

With «HOPPING» channel mode, the «Quick config.» provides access to two table channels (H1 or H2).

By selecting the «SINGLE» channel mode, the system will be configured to operate on single frequency channel mode (DTS mode). That means that only one frequency is used by all the terminals to send radio frames.

With «SINGLE» channel mode, the «Quick config.» provides access to S1 to S15 channels.

A full list of available channels and potential associated restrictions of usage is given in this user guide page 7.
Inside the stadium, a spectrum referent may be available to assist in frequency allocation.

For the use of ELITE outside US/CAN, please contact customer support: "www.vokkero.com/Support/Technical Support". In the VOKKERO HELPDESK space, log in with your identifiers (or sign up to create your account) to access the support.

6.2.2. Encryption

The encryption key is used to make communications within a given system secure.
Only the devices using the same encryption key are authorized to communicate on the network.

Several options are available:
• No encryption: the communications are not secure; any VOKKERO ELITE terminal can join the network.
• Fixed AES 128 key: the system uses one single encryption key when pairing the terminals during the "Quick Config." process; this key can be occasionally changed by the user by selecting "New Key"
• New Key with each configuration: the configurator generates a new AES 128 key with each new successfully performed "Quick Config." process.

If you take advantage of "No encryption" or "Fixed AES 128 key" settings to add further terminals after completing previously a "Quick Config." always make sure:
- To have only one MASTER Role terminal in the conference (only one terminal with purple antenna icon)
- To have only one Central REF in the conference (only one terminal with whistle icon)

6.2.3. Software

This menu is used to update the software versions of the terminals. Contact our support or your VOKKERO dealer to obtain the most recent software version.

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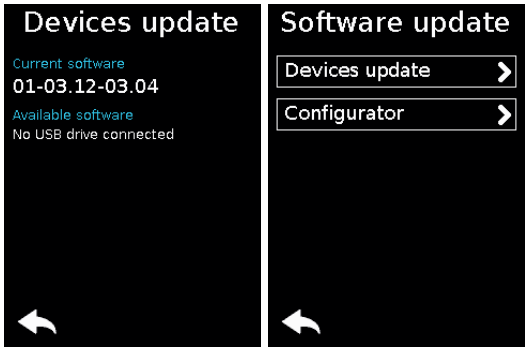
Updating terminals

To update terminals you have to use a USB key. The USB key used must be < or = 4Go.
On the USB key:
- Copy the update software to the root
- The files mustn't be in a folder
- No others files or folder have to be on the USB key

The version currently installed in the terminal appear on the display.
To configure a new software version on the terminals:
• Once the USB key ready, insert it into the dedicated USB port, situated on the left located on the left side of the configurator.
• Once the USB key connected, the available software version is displayed. (Screen No. 3)
(If the USB key is empty or involves wrongs files, you will read on the display: «Update file missing from the USB key»)
• Click «GO» to validate.
• Then, click to launch the installation.
• The update of the terminals is launched
• The update is finished
Note: All terminals on the Configurator will be updated regardless of their location on the Configurator.



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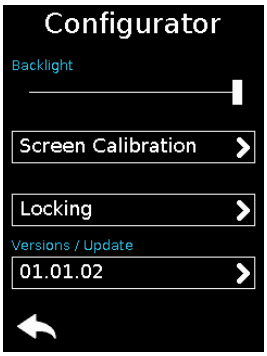
6.3. CONFIGURATOR



6.3.1. Backlight

Slide the cursor from left and right to decrease and increase, respectively, thescreen lighting.

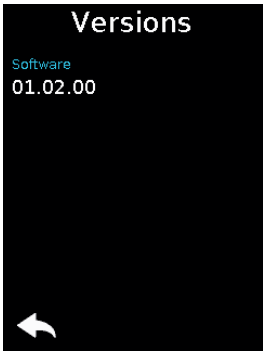
6.3.2. Screen calibration

The configurator touchscreen is already calibrated in the factory; you can however calibrate your own touchscreen if you note a significant change in screen detection.
To do this, carry out the following 5 steps:
Select each angle with the yellow pointer, then select the circle at the middle of the screen.

6.3.3. Locking

Allows you to block access to the configurator using a PIN code.
In Lock mode, only the «Quick Configuration" menu is available. You can only access the other settings after validating the PIN code.
Note: The PIN code consists of 1 to 6 digits
Once the lock has been activated, the PIN code can be modified or desactivated (see screen below showing the options available in the «Lock» menu, once the lock has been activated).

6.3.4. Versions / Software



Resetting the configurator functions
In order to put the configurator back in factory mode (and thus cancel all the configuration changes made previously), do the following:
1. Unplug the configurator
2. Reconnect the configurator
3. When the configurator is switched on, on the first home screen, consisting of the «VOKKERO®» logo: press the 2nd «O" of VOKKERO
4. Then you can restore the default settings of the configurator
5. Confirm
6. The configurator parameters have been reseted

Updating the configurator

To update the configurator you have to use a USB key. The USB key used must be < or = 4Go.
On the USB key:
- Copy the update software to the root
- The files mustn't be in a folder
- No others files or folder have to be on the USB key

The version currently installed in the configurator appear on the display. To configure a new software version on the configurator:

- Once the USB key ready, insert it into the dedicated USB port, situated on the left located on the left side of the configurator.
- Once the USB key connected, the available software version is displayed. (If the USB key is empty or involves wrongs files, you will read on the display: «Update file missing from the USB key»)
- Click «GO» to validate.
- Then, click to launch the installation.
- The update of the configurator is launched.
- The update is finished.

EN

DOCUMENT HISTORY

Version	Contents
V1.0	Creation
V1.1	Revision