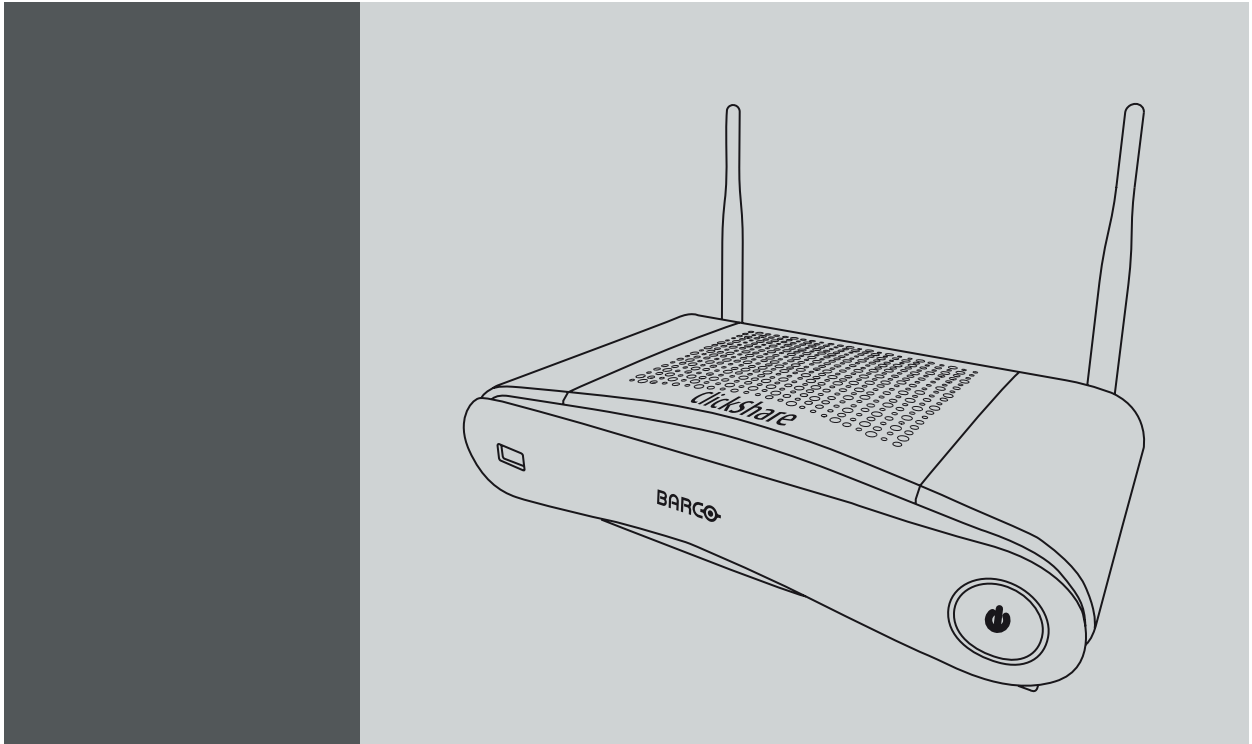


ClickShare CSE-200



Service manual

Barco NV

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Support: www.barco.com/en/support

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ttf-dejavu-sans-mono	
ttf-dejavu-sans	
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EN55032-CISPR32 Class B ITE (Information Technology Equipment)

This is a class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

If this equipment does cause interference to radio or television reception, the user may try to correct the interference by one or more of the following measures :

- Re-orientation of the receiving antenna for the radio or television.
- Relocate the equipment with respect to the receiver.
- Plug the equipment into a different outlet so that the equipment and receiver are on different branch circuits.
- Fasten cables connectors to the equipment by mounting screws.

Federal Communication Commission Interference Statement

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

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 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.

You may also find helpful the following booklet, prepared by the FCC: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402.

Changes and Modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commissions rules.

In order to maintain compliance with FCC regulations shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio & television reception.

FCC RF Radiation Exposure Statement: This device is capable of operating in 802.11a mode. For 802.11a devices operating in the frequency range of 5.15 - 5.25 GHz, they are restricted for indoor operations to reduce any potential harmful interference for Mobile Satellite Services (MSS) in the US. WIFI Access Points that are capable of allowing your device to operate in 802.11a mode (5.15 - 5.25 GHz band) are optimized for indoor use only. If your WIFI network is capable of operating in this mode, please restrict your WIFI use indoors to not violate federal regulations to protect Mobile Satellite Services.

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment.
This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Base Unit FCC ID: 2AAED-R9861520

Button FCC ID (model R9861006D01): XF6-RS9110N1103

Button FCC ID (model R9861500D01): 2AAED-R9861500D01

ClickShare Button R9861500D01 has been tested and meets the FCC RF exposure guidelines. The maximum SAR value reported is 0.915W/kg.

Compliance Anatel (Brasil)

1. Este produto está homologado pela Anatel, de acordo com os procedimentos regulamentados pela Resolução nº 242/2000, e atende aos requisitos técnicos aplicados, incluindo os limites de exposição da taxa de absorção específica referente a campos elétricos, magnéticos e eletromagnéticos de radiofrequência de acordo com as resoluções nº 303/2002 e 533/2009. Para maiores informações, consulte o site da Anatel - www.anatel.gov.br
2. Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

Canada, Industry Canada (IC) Notices

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Radio Frequency (RF) Exposure Information

The radiated output power of the Barco Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Barco Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

Caution: Exposure to Radio Frequency Radiation.

1. To comply with the Canadian RF exposure compliance requirements, this device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.
2. To comply with RSS 102 RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.

Base Unit IC ID: IC: 21559-R9861580

Button IC ID (model R9861006D01): 8407A-RS9110N1103

Button IC ID (model R9861500D01): 9393B-R9861500D01

IC Antenna statement

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

This radio transmitter 9393B-R9861520 has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Type: Dipole

Maximum Peak Gain: 2 dBi

Impedance: 50 Ohm

Canada, avis d'Industry Canada (IC)

Le présent appareil est conforme aux CNR d'Industrie 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, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par l'appareil de sans fil Barco est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil Barco de façon à minimiser les contacts humains lors du fonctionnement normal.

Avertissement: L'exposition aux rayonnements fréquences radio

1. Pour se conformer aux exigences de conformité RF canadienne l'exposition, cet appareil et son antenne ne doivent pas être co-localisés ou fonctionnant en conjonction avec une autre antenne ou transmetteur.
2. Pour se conformer aux exigences de conformité CNR 102 RF exposition, une distance de séparation d'au moins 20 cm doit être maintenue entre l'antenne de cet appareil et toutes les personnes.

IC ID Unité de Base: 9393B-R9861520

IC ID Button (modèle R9861006D01): 8407A-RS9110N1103

IC ID Button (modèle R9861500D01): 9393B-R9861500D01

Déclaration d'antenne d'Industrie Canada (IC)

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.

Le présent émetteur radio 9393B-R9861520 a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Type: Dipole

Gain maximum: 2 dBi

Impédance: 50 Ohm

根據NCC低功率電波輻射性電機管理辦法 規定

第十二條	經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
第十四條	低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。 前項合法通信，指依電信法規定作業之無線電通信。 低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

底座 CCAM16LP0650T5

按鈕 CCAM16LP1570T2

KCC Statement

기본 장치	<p>기기명칭: 특정소출력무선기기(무선데이터통신시스템용 무선기기)</p> <p>인증자상호: Barco N.V.</p> <p>모델명: R9861520</p> <p>인증번호: MSIP-CMM-BVY-R9861520</p> <p>제조연월: 2016.</p> <p>제조사/제조국: Barco NV/중국</p> <p>본 기기와 20 cm 이상 떨어져서 사용하시기 바랍니다</p> <p>해당 무선설비는 운용 중 전파혼신 가능성이 있음</p> <p>이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.</p>
버튼	<p>기기명칭: 특정소출력무선기기(무선데이터통신시스템용)</p> <p>인증자상호: Barco N.V.</p> <p>모델명: R9861500D01</p> <p>인증번호: MSIP-CMM-BVY-R9861500D01</p> <p>제조연월: 2016.</p> <p>제조사/제조국: Barco NV/중국</p> <p>해당 무선설비는 운용 중 전파혼신 가능성이 있음</p> <p>이 기기는 가정용(B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다</p>

모델명	전자파흡수율
R9861500D01	0.130 W/kg

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1. INTRODUCTION TO THE SERVICE GUIDE

In this section you get a short introduction to the available ClickShare documentation.

- About the documentation
- Symbols and fonts

1.1 About the documentation

List of available ClickShare documents

The ClickShare documentation consists of the following manuals:

Guide	Article number
User Guide	R5900025
Installation Guide	R5900023
Safety Guide	R5900032
Service Guide	R5900027
Button Guide	R5900007
Recycling Manual	R5900029
API Guide	R5900018



A printed copy of the Safety Guide and Quick Start Guide is included in the ClickShare box at purchase. Please check online for the other documents.

This Service Guide gives a detailed overview of all ClickShare components. It also contains information on how to prepare your ClickShare product for use and has an advanced troubleshooting chapter.








Not all documentation is publicly available. This Service Guide is only available to Customer Service partners.

1.2 Symbols and fonts

Symbol overview

The following icons are used in the manual :

	Caution
	Warning
	Info, term definition. General info about the term
	Note: gives extra information about the described subject
	Tip: gives extra advice about the described subject

Font overview

- Buttons are indicated in bold, e.g. **OK**.
- Menu items are indicated in *italic*.
- Step related notes, tips, warnings or cautions are printed in *italic*.
- Procedure related notes, tips, warnings or cautions are printed in **bold** between 2 lines preceded by the corresponding icon.

2. SAFETY INSTRUCTIONS

Overview

- General safety
- Environmental Condition Check
- Adapter types
- Repacking
- Connector instructions

2.1 General safety

Safety warnings

The installation of the device must comply with the guidelines in the ClickShare Installation Guide.

- Installation must be performed by qualified personnel only, and must conform to all local codes.
- External power connections must be properly insulated.
- Only use the DC power adapter supplied with the ClickShare device.
- To prevent injuries and physical damage, always read this manual and all labels on the system before connecting to the wall outlet.
- The ClickShare product is intended to be used in office and indoor environments only.
- Only use the power adapter supplied with your device. While appearing to be similar, other power adapters have not been safety tested at the factory and may not be used to power the device. For a replacement power adapter, contact your dealer.
- This product is intended to be supplied by a UL Listed Power Unit marked "Class 2" or "LPS" or "Limited Power Source" with output rated 12 VDC 1.5A min.
- Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- If an extension cord is used with this product, make sure that the total of the Ampere ratings on the products plugged into the extension cord does not exceed the extension cord Ampere rating.
- Never spill liquid of any kind on the product. Should any liquid or solid object fall into the cabinet, unplug the set and have it checked by qualified service personnel before resuming operations.
- Lightning - For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the device due to lightning and AC power-line surges.
- Only use attachments/accessories specified by the manufacturer.



WARNING: Ensure you understand and follow all safety guidelines, safety instructions, warnings and cautions mentioned in the product documentation.



WARNING: The mains power plug connected to the wall outlet must be easily accessible at all times for all installation modes.

Environment

Do not place this equipment on an unstable cart, stand, or table. The product may fall, causing serious damage to it.

2.2 Environmental Condition Check

Environment condition check

For installations in environments where the device is subject to excessive dust, then it is highly advisable and desirable to have this dust removed prior to it reaching the device clean air supply. Devices or structures to extract or shield excessive dust well away from the device are a prerequisite; if this is not a feasible solution then measures to relocate the device to a clean air environment should be considered.

It is the client's responsibility to ensure at all times that the device is protected from the harmful effects of hostile airborne particles in the environment of the device. The manufacturer reserves the right to refuse repair if a device has been subject to negligence, abandon or improper use.

2. Safety Instructions

Ambient temperature conditions

Max. ambient temperature : +40°C or 104°F at sea level, +35°C or 95°F at 3000m

Min. ambient temperature: 0°C or 32°F

Storage temperature: -10°C to +60°C (14°F to 140°F)

Humidity Conditions

Storage: 0 to 90% relative humidity, non-condensing

Operation: 0 to 85% relative humidity, non-condensing

Environment



The ClickShare product is intended to be used in office and indoor environments only.

Do not install the device in a site near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust or humidity. Be aware that room heat rises to the ceiling; check that temperature near the installation site is not excessive.

Maximum allowed altitude to use the product : 3000m (9843Ft). Due to China regulation the maximum altitude is limited to 2000 meter (6561 feet) for China mainland.

2.3 Adapter types



Refer to <http://www.iec.ch/worldplugs> for the type reference.

Power input AC clip



Image 2-1
Type A



Image 2-2
Type A



Image 2-3
Type C



Image 2-4
Type G



Image 2-5
Type I

2.4 Repacking

On Repacking

Save the original shipping carton and packing material; they will come in handy if you ever have to ship your equipment. For maximum protection, repack your set as it was originally packed at the factory.

2.5 Connector instructions

Connector instructions



Several types of connectors are used in the ClickShare product: it is important to disconnect them by pulling the connector, not the wire.

3. CLICKSHARE SERVICE ACTIVITIES

3.1 ClickShare detailed service model

Sales model

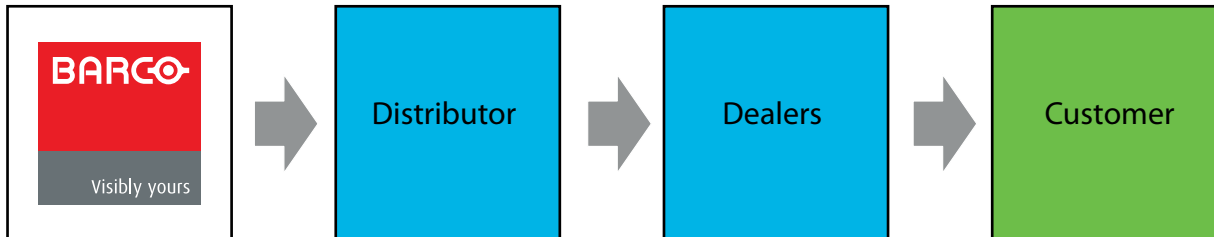


Image 3-1
Sales model

The way ClickShare comes to the customer:

1. Distributor purchases from Barco.
2. Dealers purchase from a distributor.
3. Dealers sell to the end customer.

Service model

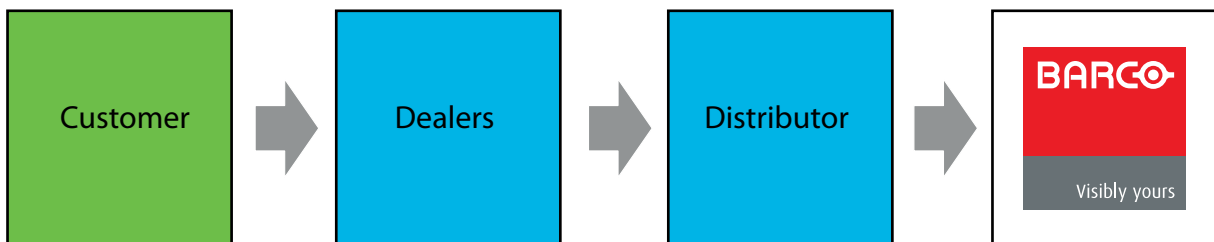


Image 3-2
Service model

When a customer experiences a problem, he or she should contact the dealer. Dealer gives Tier I support. He requests a RMA from Distributor to return the faulty product.

Tier I support consists out of:

- identifies ClickShare component failure
- RMA request by distributor
- Facilitates shipment of faulty unit from customer to distributor

The distributor troubleshoots the returned assemblies and gives Tier II support.

Tier II support consists of

- checks returned units according a standard test procedure.
- sends replacement unit to customer to replace the faulty unit.
- contacts Barco to request RMA to return faulty product.
- sends faulty product to Barco.

Barco receives the faulty product and validates failure.

3.2 Reporting an issue in Salesforce.com

How to report

1. Open a browser window and type the following address in the address line: <https://emea.salesforce.com/>
2. Login by entering your user name and password.
3. Create a new request by selecting *Swap/part delivery request*.

3. ClickShare Service activities

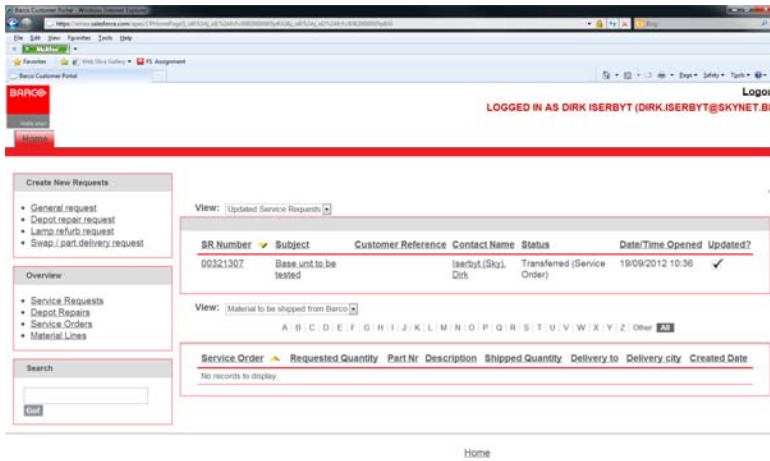


Image 3-3

4. Fill out the service request form

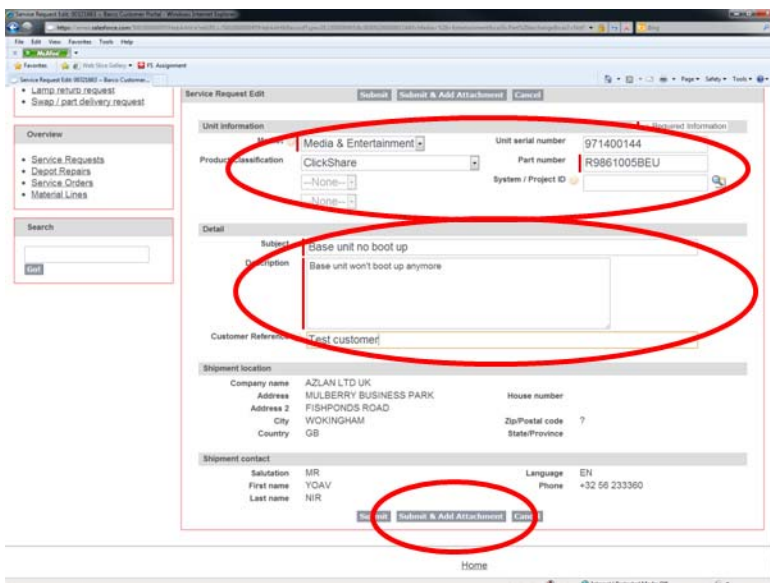


Image 3-4

5. Click **Submit & Add Attachment**.
6. Click **Choose File** and browse to the file to attach.
7. Click **Attach file**.
8. To add extra files, repeat the Choose File and Attach file action. When all files are attached click **Done**.

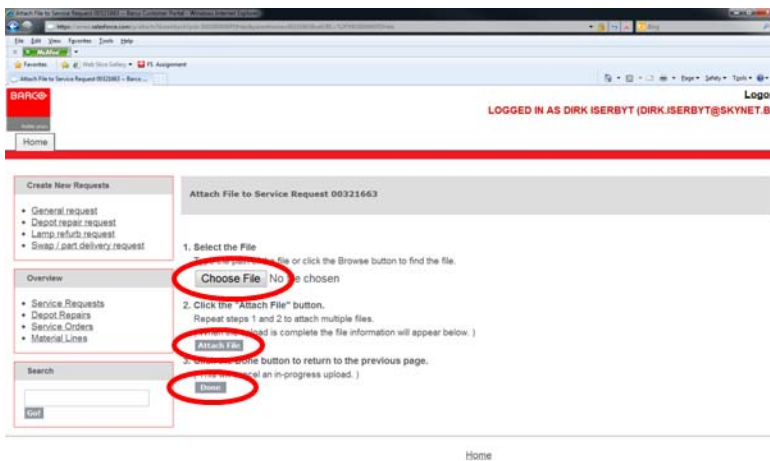


Image 3-5

An overview will be displayed. Extra information can be added.
Your service request is logged.

3.3 Reaching the local Barco helpdesk

How to reach

1. Go to Barco's website, www.barco.com.

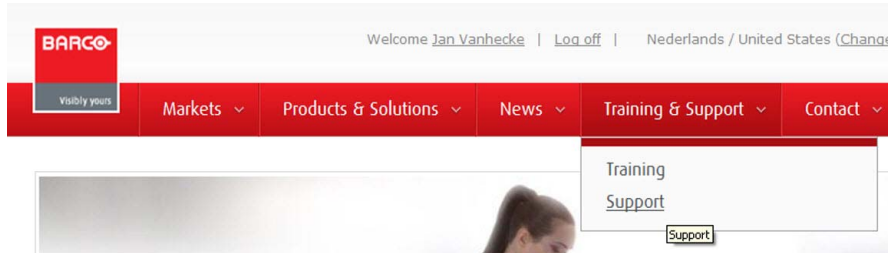


Image 3-6

2. Click on the drop down next to *Training & Support* and select *Support*.
3. Select your *Country* and the *Market*.



Image 3-7

Select for Market, *Media & Entertainment*, *Corporate AV*.

4. Click **Go**.

The local service contact page is displayed.

3. ClickShare Service activities

Welcome [Jan Vanhecke](#) | [Log off](#) | Nederlands /

BARCO
Visibly yours

Markets ▾ Products & Solutions ▾ News ▾ Training & Support

Home > Training & Support > Corporate AV services

Corporate AV services

Barco offers you a full suite of support services that is tailored to your business needs and ensures ultimate

Helpdesk

Our hotline provides you with prompt phone support. A team of experienced support representatives is available 8 am to 5 pm Monday - Friday.

Paid phone: +32 56 36 80 19
Email: Service.media_and_entertainment.emea@barco.com

Online support

For quick self-help around the clock, 365 days a year.

eSupport

- Technical questions
- Return Material Authorization (RMA)
- Status tracking of pending service requests
- Spare parts / Consumable orders
- Warranty information

[Log in](#) [Sign up](#)

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my.barco.com

- Product manuals
- Drivers & software
- General service information
- White papers

[Log in](#) [Sign up](#)

[Lost your password? >>](#)

Image 3-8

4. CLICKSHARE PRODUCT AND ITS COMPONENTS

Overview

- About the CSE-200
- CSE-200 specifications
- About the Base Unit
- About the Button
- Mobile Device Support
- Ports used by the ClickShare Base Unit

4.1 About the CSE-200

CSE-200 sets

CSE-200 makes connecting to the meeting room's video system a matter of clicking a Button. This CSE-200 not only helps the presenter get the presentation on-screen in a second, but it also allows the other people in the meeting to participate more actively. The result is enhanced meeting efficiency and better decision-making.

At the moment 3 different sets are available on the market. Each set is sold in its specific region and it can only be used in that specific region because of WiFi regulations.

Components CSE-200 set

A standard CSE-200 set consists of a Base Unit and 2 Buttons. Depending on the location where you buy the product, the software of the Base Unit is different. If needed, you can buy additional Buttons and a tray to store the Buttons.

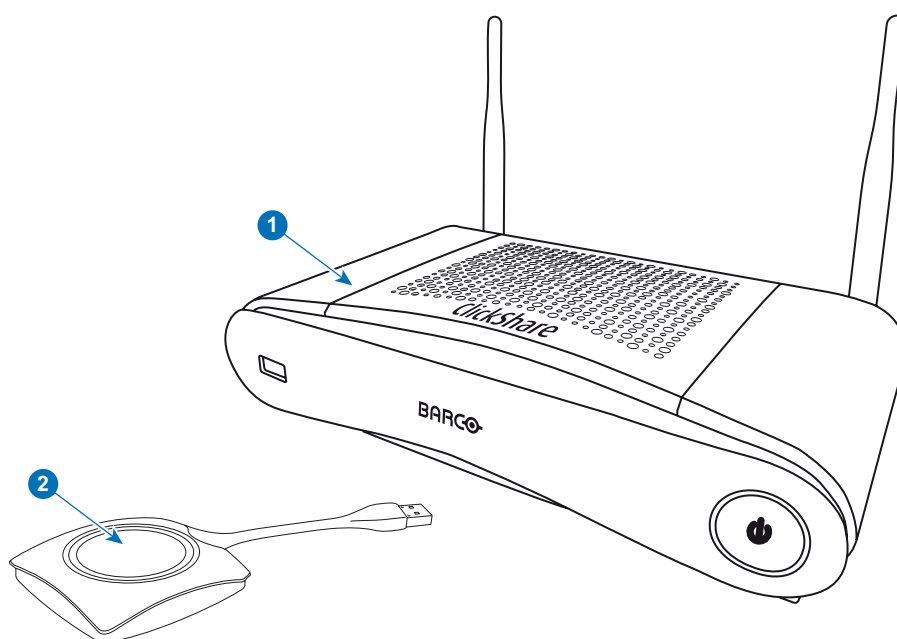


Image 4-1

1	Base unit
2	Button

Accessories included

Depending on the country where you buy the product, the following regionalized accessories are also included in the CSE-200 box.

4. ClickShare product and its components

Regional version	Contains	Accessories included
R9861520xx ¹	<ul style="list-style-type: none"> R9861520 2x R9861500D01 	<ul style="list-style-type: none"> DC adapter with AC clips type A, C, G, I USB stick with user documentation 2 antennas Printed safety manual

Contact your local sales representative for the correct regional variant to be used in your country.

4.2 CSE-200 specifications

Base Unit

Dimensions (HxWxD)	205mm x 115mm x 45mm (excl. antennas) / 8.1" x 4.5" x 1.8" 205mm x 150mm x 135mm (incl. antennas) / 8.1" x 5.9" x 5.3"
Power supply	Standard 110/220 V AC plug or Power over Ethernet (PoE Plus)
Power consumption	Operation: 6W (typical) / 18W (max) Standby: 2.6W (ECO standby) / 0.4W (Deep standby)
Weight	600g / 1.32lbs
AirPlay Support	iOS mirroring (AirPlay) from iOS 9.0 up to iOS 10.3 / Mac OS 10.11 El Capitan or higher
Operating system	Windows 7/8/8.1/10 32 & 64 bit Mac OSX 10.10/10.11/10.12 (Sierra) Android v5 & v6 (ClickShare app) iOS 8, 9 & 10 (ClickShare app)
Video outputs	1x HDMI
Frame rate	Up to 30 fps
Output resolution	1920x1200
Noise Level	Fanless
Number of sources simultaneous on screen	2
Number of simultaneous connections	16
Audio	Via HDMI, analog via Audio Jack 3.5mm, S/PDIF
iPad, iPhone and Android compatibility	Sharing of documents, browser, camera for both Android and iOS devices via ClickShare app
Extended desktop	Available (depending on the driver of your graphics card)
Authentication protocol	WPA2-PSK in stand alone mode WPA2-PSK or IEEE 802.1X in network integration mode
Wireless transmission protocol	IEEE 802.11 a/g/n
Reach	Adjustable with signal strength modulation; max. 30m (100 ft) between ClickShare Button and ClickShare Base Unit
Frequency band	2.4 GHz and 5 GHz (DFS channels not supported)
Connections	1x Ethernet LAN 2x (back) + 1x (front) USB Audio analog line out on mini jack socket (3.5mm), digital S/PDIF
Temperature range	Operating: 0°C to +40°C (+32°F to +104°F) Max: 35°C (95°F) at 3000m Storage: -20°C to +60°C (-4°F to +140°F)

1. xx=EU, CN, NA,

Humidity	Storage: 0 to 90% relative humidity, non-condensing Operation: 0 to 85% relative humidity, non-condensing
Anti-theft system	Kensington lock
Certifications	FCC/CE
Warranty	3 years standard Possible to extend to 5 years

Button

Weight	75 g/0.165 lb
Dimensions (HxWxD)	16.3 mm x 59.3 mm x 162.52 mm / 0.64" x 2.335" x 6.398"
Power consumption	Powered over USB 5V DC 350mA Typical 500mA Maximum
Frequency band	2.4 GHZ and 5 GHz
Wireless transmission protocol	IEEE 802.11 a/b/g/n
Authentication protocol	WPA2-PSK in stand alone mode WPA2-PSK or IEEE 802.1X in network integration mode

4.3 About the Base Unit



Base Unit

The Base Unit receives the wireless input from the Buttons and controls the content of the meeting room display and the sound of the meeting room's audio system.

The Base Unit can be installed in two different ways.

Front and Top layout of the Base Unit

At the front of the Base Unit you can find a power button and a USB port. Status LED ring is mounted around the standby button of the Base unit.

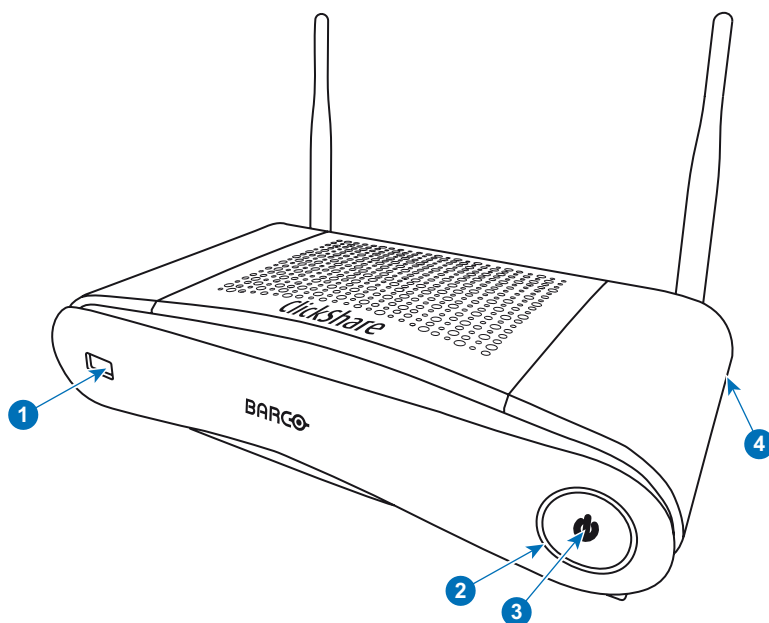


Image 4-2
Front panel Base Unit

4. ClickShare product and its components

1	USB port
2	Status LED ring
3	Standby Button
4	Kensington lock

Table 4-3

USB port

The USB port is used to update the soft- and firmware of both the Base Unit and the Buttons. See also "Software update", page 77.

When plugging in the Button into the Base Unit, the Button is paired to the Base Unit. The Base Unit checks whether the Button's software and firmware are up to date. If not, the Base Unit updates the software and/or firmware.

To update the Base Unit software, download the latest version of the software from the Barco website. Copy the file on a USB stick and plug it into the USB port of the Base Unit. Follow the progress and instructions on the display.

Status LED ring

The color of the LED at the front of the Base Unit give information on the status of the system.

LEDs behavior	Explanation
static red	<ul style="list-style-type: none">receiving content from the Buttons and streaming towards the display.pairing and software update of the Button is done. You can now unplug the Button from the Base Unit.during the first phase of the Base Unit boot process.
blinking white	<ul style="list-style-type: none">system is starting up (during the second phase)Button pairing is in progresssoftware update of the Base Unit
breathing white	<ul style="list-style-type: none">ECO standby mode
static white	<ul style="list-style-type: none">awake and ready (i.e. showing the welcome message on the display)pairing is done
red blinking	<ul style="list-style-type: none">an error occurred
dark	<ul style="list-style-type: none">deep standby/off

Standby button

The button at the front of the Base Unit has a standby function once the Base unit is powered

- When the system is in normal operational mode, a push makes the system goes to a pre-defined standby mode.
- When the system is in a standby mode, a push triggers the system to start up and to go to normal operational mode.

Back layout of the Base Unit

The connection panel is situated at the back of the Base unit.

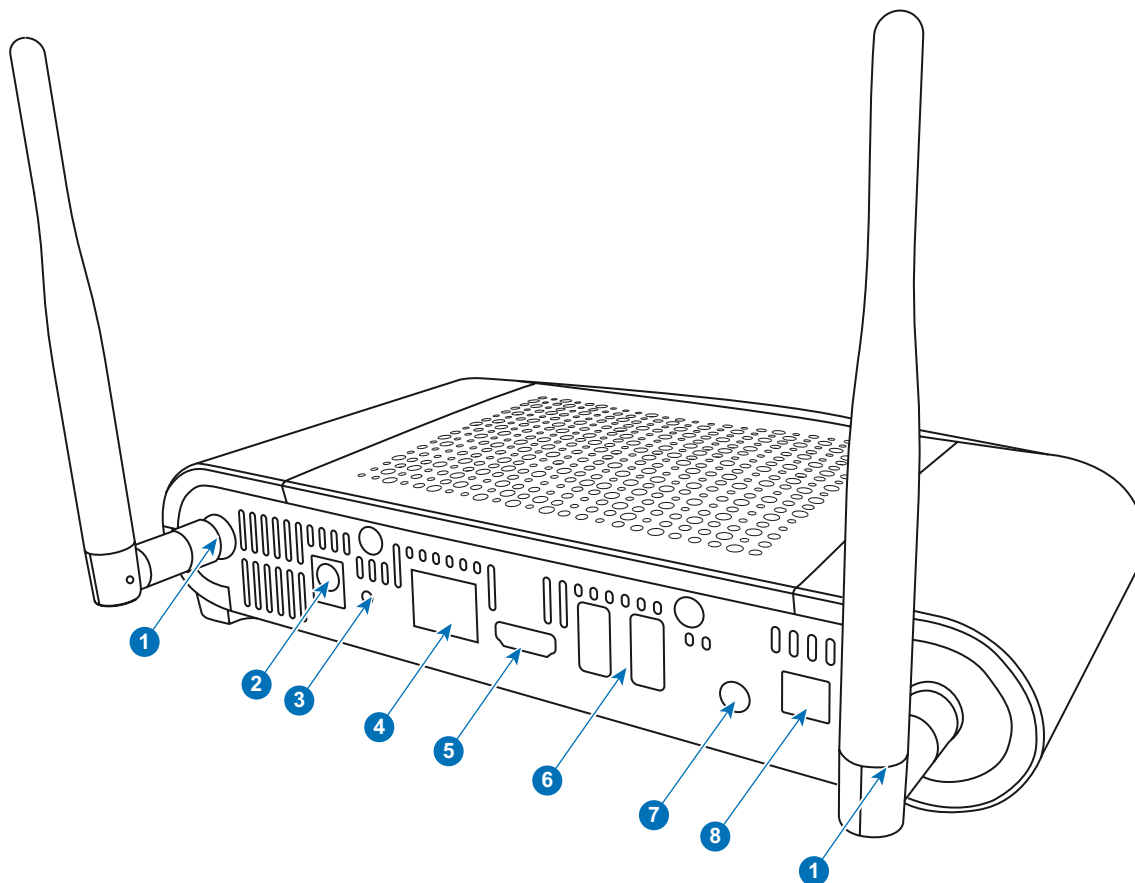


Image 4-3
Backside Base Unit

1	Fixture points for the antenna
2	Power connection
3	Reset
4	LAN Ethernet connection
5	HDMI connector
6	USB port
7	Analog Audio out
8	Digital Audio out

Mechanical fixture points

The mechanical fixture points are located at the bottom of the Base Unit

Antenna

Two antennas are included in the CSE-200 box. To avoid damage during transport, they are not pre-mounted.

The antennas can rotate for a better wireless connection.

Usage of antennas other than the ones provided with the unit are allowed within the restrictions on usage of other antennas defined by local regulations. Barco does not take responsibility for damage or disturbance of other devices that may be caused by using a different antenna. The use of an active power amplifier is not allowed.

Antenna type : Dipole

Gain : Maximum 2 dBi peak gain in 2.4GHz and 5GHz band

Bottom layout of the Base Unit

The serial number label containing the Barco part number, the revision number, production date (week-year) and the serial number.

The product label with the applicable certification logos.

4. ClickShare product and its components

The product label contains:

- the Barco logo
- the product name
- the Barco part number
- the power rating
- markings for applicable standards (CE, CCC, UL, ...)
- markings for waste regulation
- "Made in ..."

Bluetooth

Bluetooth functionality is currently not available and Bluetooth signal is disabled.

4.4 About the Button



Button

A Button toggles the sharing of the individual PC or MAC screen on the meeting screen.

Button layout

A Button consists of three main components.

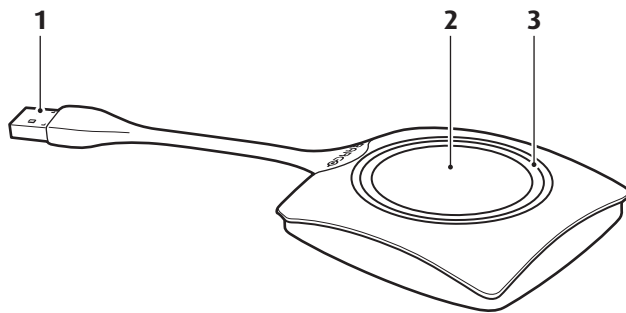


Image 4-4
Button layout

1	USB connector
2	Button
3	LED ring

Table 4-6

USB connector

Using the USB connector the Button can be plugged into a laptop (for sharing your screen) or the Base Unit (for pairing the Button to the Base Unit or updating its software).

Button

Click the Button to display the content of the laptop's screen on the meeting room display. Clicking the Button during the meeting will toggle the sharing of the screen.

LED ring

The LED ring indicates the current status of your ClickShare.

LEDs behavior	Explanation
white blinking	<ul style="list-style-type: none">• the Button is plugged in the laptop and initializing or waiting for the user to start the ClickShare application.• pairing/software update of the Button in the Base Unit is in progress.
static white	<ul style="list-style-type: none">• ClickShare is ready to start sharing your screen.• pairing is done. You can now unplug the Button from the Base Unit.

LEDs behavior	Explanation
static red	<ul style="list-style-type: none"> sharing your screen with the display. pairing and software update is done. You can now unplug the Button from the Base Unit.
red blinking	<ul style="list-style-type: none"> an error occurred.
off (no light)	<ul style="list-style-type: none"> the Button is not or not properly inserted into the USB port. the Button might be defective. the USB port or computer might be defective.

Button label

The label at the bottom of the Button contains:

- the Barco logo
- the Barco part number
- the serial number
- the revision number
- markings for applicable standards
- markings for waste regulation
- "Made in..."



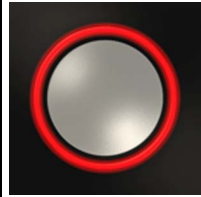
Handle the Button cable with care. Rough handling might cause defects.

4.5 Mobile Device Support

Overview

The below list of Apps are supported by ClickShare and can be installed on your mobile device from Google Play or Apple App Store.

Before you can use your mobile device with ClickShare, you have to connect the mobile device Wi-Fi with the ClickShare Base Unit Wi-Fi. Follow the instructions as given in your mobile device user guide.

App	Used on	Logo
ClickShare App	iOS Android	

4.6 Ports used by the ClickShare Base Unit

Overview

Sender	CSE-200 Base Unit	
ClickShare Button	TCP	6541; 6542; 6543; 6544; 6545
	UDP	514
ClickShare Presenter	TCP	6541; 6542; 6543; 6544; 6545
	UDP	5353
WebUI	TCP	80; 443
REST API	TCP	4000; 4001
	UDP	

4. ClickShare product and its components

Sender		CSE-200 Base Unit
Airplay	TCP	4100-4200; 7000; 7100; 47000
	UDP	4100-4200; 5353
Google Cast	TCP	8008; 8009; 9080
	UDP	1900; 32768:61000 ²

If Proxy settings are enabled in the Configurator for auto-update functionality, additional ports may be used.

2. Google Cast will pick a random UDP port above 32768 to facilitate video streaming

5. CSE-200 INSTALLATION

Overview

- Installation methods for the Base Unit
- Table mounting
- Wall mounting
- Recommendations about antenna placement and orientation

5.1 Installation methods for the Base Unit



For optimal performance, install the Base unit close to the display and avoid obstacles between the Base unit and the Buttons.

Introduction to the installation methods

The Base unit can be installed in different ways in a meeting room.

- Table mount
- Wall mount

At the side of the Base Unit, a Kensington lock is foreseen.

5.2 Table mounting

Overview

Put the Base Unit directly on the meeting room table.

The total weight of the Base Unit is 600 g.

5.3 Wall mounting

About wall mounting

No mounting bracket is needed to install the Base unit on the wall. The Base Unit can be mounted in any position on the wall, but it is preferred to mount it with the connections downwards.

The total weight of the Base Unit is 600 g.

Necessary tools

- a drill (type of drill depends on the type of wall)
- Screwdriver (depending on the used screws)

Necessary parts

- 2 mounting screws, maximum head diameter of 6.5 mm
- 2 plugs

How to install

1. Drill two holes in the wall or ceiling as indicated on the drawing.
Horizontal distance : 162 mm,

5. CSE-200 Installation

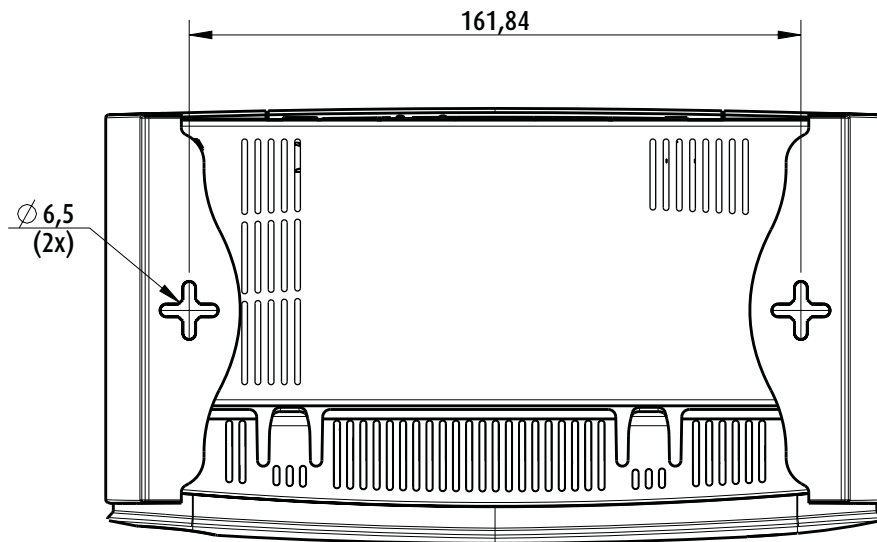


Image 5-1
Mounting holes

2. Insert a plug in each hole (if needed, depends on the wall or ceiling type) and drive in 2 screws. Do not drive in the screws completely.
Note: *Mounting screws and plugs are not included in the CSE-200 box . The type of screws and plugs depend on the type of wall (stone, wood, plasterboard, ...) you are mounting the Base Unit to. Make sure the head of the screw is not larger than the hole in the bottom plate of the Base Unit (< 6.5 mm).*
3. Hook the Base Unit on both screw heads and slide the Base Unit downwards until it is fixed.

5.4 Recommendations about antenna placement and orientation

Antenna placement rules

- The antennas should be oriented vertically, so perpendicular to the ceiling and parallel to the walls.
- The antennas should be installed far enough (at least 50cm/1.6ft) from metallic surfaces to avoid unwanted reflections and far enough (at least 1m/3.3ft) from other radio equipment that operates in the same frequency range, e.g. other Wi-Fi access points, cordless telephone, microwave ovens, It is also best to install antennas at least 15 cm (6 inches) from concrete walls.
- The most favorable situation is a direct line of sight between antennas and Buttons. Any obstruction will cause the signal to follow a longer propagation path, which can result in performance degradation.
- Due to the particular radio pattern of the dipole antennas, the antennas should not be placed just above potential positions of ClickShare users. As a result, the advised position for the antennas is at the side of the meeting room.

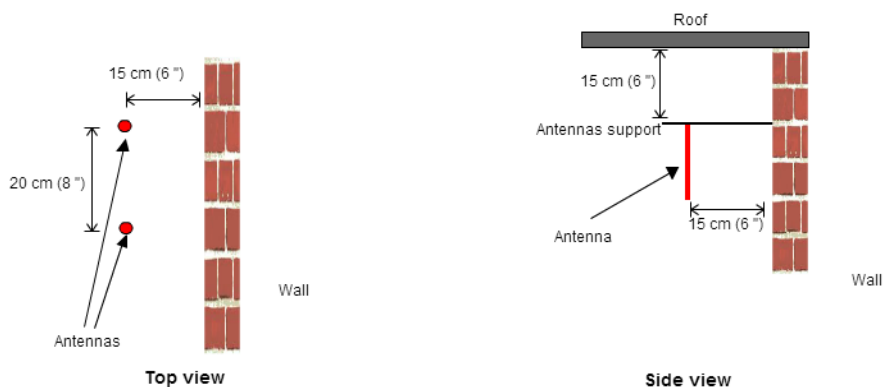


Image 5-2
Closer view of antennas installation in the meeting room

6. CONNECTING THE BASE UNIT

Overview

- Video signal connections to the Base unit
- Audio connection
- LAN connection
- Power connection



The ClickShare Base Unit is completely assembled at the factory. Only the installation, connection and configuration should be done at site. The actual installation (on table or wall mounted) is covered in the Installation Guide.

6.1 Video signal connections to the Base unit



CAUTION: Make sure the Base Unit is installed properly before connecting.

About Video signal connection

A single screen can be connected to the Base unit.

To connect a display, an HDMI connection should be made between the Base Unit and the display.

To connect

1. Connect the Base unit to the display using a display cable.
Note: No display cables are included in the ClickShare box at purchase.

When setting up a display configuration, connect the HDMI cable to the display. When necessary, use an adapter piece to connect to a display port or a DVI port on the display side.



Image 6-1
Display connection

6.2 Audio connection

About audio

The ClickShare Button captures the audio output of the user's laptop and sends it to the Base Unit together with the video signal. The audio will be output at line levels from the mini jack socket (3.5mm), TOSLINK socket and via the HDMI connector.

It is up to the user to decide whether or not to send the audio signal together with the video signal. The user can decide this by using the same tools as he would to control the laptop's speakers or a headphone: the audio controls of the operating system (eg for Windows: Control Panel > Sounds and audio devices) or the physical buttons on the keyboard of their laptop (mute/unmute, lower volume, higher volume).

There will be synchronization between the audio and video signal.

Audio via HDMI

When your display is connected via HDMI and it supports audio, a separate audio connection is not necessary. The audio signal is sent together with the video signal to the display.

How to connect separate audio

1. When using the analog output, connect an audio cable with mini jack (3.5mm) into the analog audio output of the Base Unit.
When using the digital output, connect an fibre optical cable with TOSLINK connector into the digital audio output of the Base Unit.
2. Connect the other side to the meeting room's sound system.



Audio output needs to be selected in the Configurator, for more info, see "Audio settings", page 50.

Sound is not sent out

In some Windows environments sound is not sent out. This can be solved as follow:

1. Right click on the sound icon in the system tray and select *Playback devices*. The *Sound* window opens.
2. Select Speakers ClickShare, select *Set default* and click **Apply**.

6.3 LAN connection

About LAN connection

The Base Unit can be connected to a local network or directly to a laptop. For normal operation, a LAN connection is not necessary.

The LAN connection can be used:

- to configure your CSE-200 unit
- to update the software
- for maintenance purposes
- for network integration of your CSE-200 unit

How to connect

1. Insert a network cable with RJ-45 connector into the LAN port.
2. Connect the other side to a LAN.

6.4 Power connection

About power

This product is intended to be supplied by a UL Listed Power Unit marked "Class 2" or "LPS" or "Limited Power Source" with output rated 12 VDC 1.5A min or Power over Ethernet (PoE) Plus IEEE802.3at Type 2 compliant Power Sourcing Equipment (PSE) rated 42.5-57 VDC, 0.4-0.3A.

An external power adapter is delivered with the product.



Once the Base unit is powered, it starts up. Then the power button can be used to switch on or off.

How to connect the external power adapter.

1. Plug the barrel connector of the power adapter into the power input of the Base unit.
2. Slide a power input adaptor piece (US, CN, EU or UK) on the power adapter of the ClickShare Link . Use the one which is applicable in your country.
 - a) Slide down the button on the adapter (1).
 - b) Insert the latch (2) of the adapter piece into notch (3)

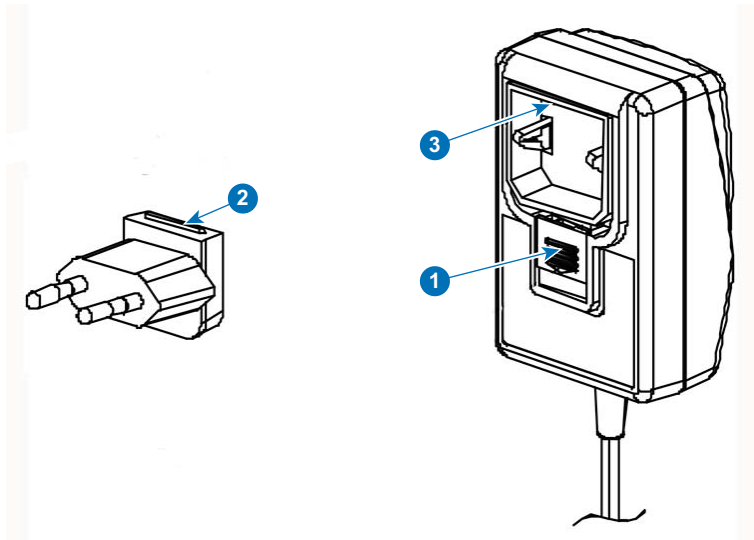


Image 6-2
Mounting adapter piece



Image 6-3
Type A



Image 6-4
Type A



Image 6-5
Type C



Image 6-6
Type G



Image 6-7
Type I

3. Connect the power cable to the wall outlet.

7. PREPARING THE BUTTONS

Overview

- Pairing
- Pre-install of the Launcher service
- ClickShare launcher installer

7.1 Pairing

Pairing of the Buttons with the Base Unit

To be able to use a Button it should be assigned to the Base Unit you are using. This process is called pairing. By default, the Button(s) delivered with the CSE-200 set are already paired to the specific Base Unit.

In case you buy additional Buttons or when a Button should be assigned to another Base Unit, the Button needs to be paired (again). The Button software update runs in the background and will not impact users while using the system. If desired, this feature can be disabled in the Web Interface. When downgrading or updating to an older version of the Base Unit software the Buttons need to be paired manually to update their software and that only in case the Button update over Wi-Fi is disabled.



A Button can only be paired to one Base Unit at a time.

The Button will always make connection to the Base Unit it was last paired to.

To pair a Button to the Base unit

1. Insert the Button in the USB port at the front of the Base Unit you are using.

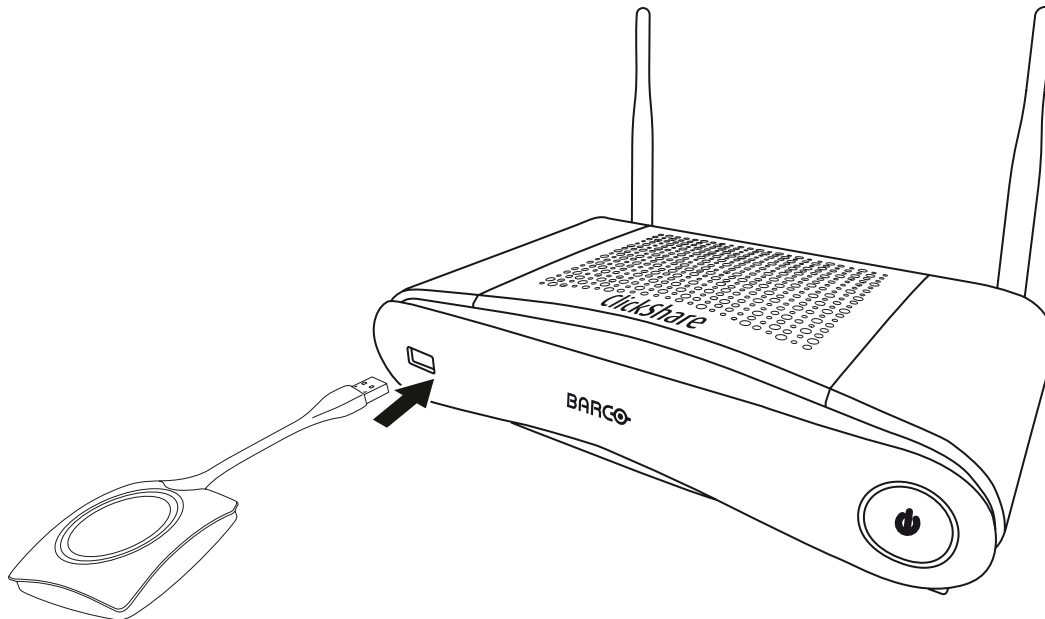


Image 7-1

7. Preparing the buttons

Both the LEDs of the Button and the LEDs of the Base Unit are blinking white. This means pairing is in progress.

The Base Unit automatically checks whether the software of the Button is up to date. If not, the Base Unit updates the Button software. This may take more time.

During the pairing and update process, a small status bar is display.

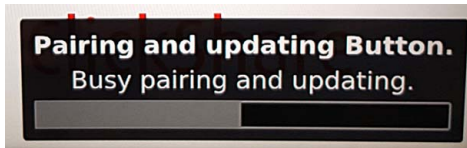


Image 7-2
Pairing message

The result of the pairing process can be as follows:

- When the LEDs become static white, the Button is paired to the Base Unit, but no software update was needed. You can unplug the Button from the Base Unit.
- When the LEDs become static red, the Button is paired to the Base Unit and the software update has finished. You can unplug the Button from the Base Unit.

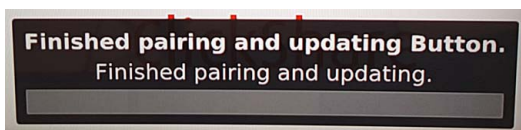


Image 7-3
Pairing finished

2. Unplug the Button from the Base Unit.

The Button is now ready for use.

7.2 Pre-install of the Launcher service

Launcher service pre-install

The ClickShare Launcher service can be pre-installed on your laptop or on company level. How this is done depends on your IT infrastructure.

When the Launcher service is pre-installed, a launcher application runs in the background. When you plug the Button in your laptop, the ClickShare application will be run from the Button automatically. There is no need to run the file from the Button.

The pre-installer can be downloaded from the Base Unit's configurator.

Where to download the launcher installer?

The launcher service (installer) can be downloaded via the technical download section per device from Barco's website www.barco.com/clickshare.

7.3 ClickShare launcher installer

Interactive setup

In this setup, user runs the installer and installs the ClickShare launcher to the computer after accepting EULA and specifying the installation directory. Follow the instructions on the displayed screens.

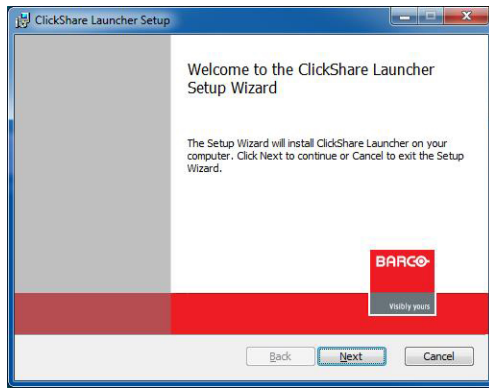


Image 7-4

After the setup finished, the ClickShare launcher will be started automatically.

Silent setup

In this setup, a user or an IT admin can install the ClickShare launcher using the Windows command prompt. Following is an example of a silent installation (version numbers are only given as example, always check Barco's web for the latest version):

```
msiexec.exe /i ClickShare_Launcher_01_11_0_4_Setup_Win.msi ACCEPT_EULA=YES INSTALLDIR=C:\
LAUNCH_APP=YES /qn
```

Parameter	Description
ACCEPT_EULA	This parameter shows that the installer accepts the EULA text as is. This parameters must be set to YES in order to continue to the installation.
INSTALLDIR	This parameter specifies the installation directory for ClickShare launcher. If not specified, the default folder will be the Program Files folder.
LAUNCH_APP	The ClickShare launcher application will be started right after the installation finishes if this parameter is set to YES. Otherwise, the launcher application will not be started.
/qn	This parameter indicates that the installation will be done in silent mode, meaning that there will be no visible windows during the installation.

Following command line can be used to uninstall the ClickShare launcher in silent mode :

```
msiexec.exe /x ClickShare_Launcher_01_11_0_4_Setup_Win.msi /qn
```

Windows environment variable

A windows environment variable can be introduced to start from a custom location.

The variable to be used is CLICKSHARE_LAUNCHER_CLIENT_PATH. The value should be the path to the client software.

8. STARTING WITH CSE-200

Overview

- Activating the base unit
- User Interface
- Capture more
- Shared desktop: primary - extended
- Audio configuration

8.1 Activating the base unit

About power mode

The Base Unit is powered via an external power adapter. Once connected, the Base Unit is automatically switched in standby mode. For more information about power connection, see CSE-200's installation manual.

Standby button

1. Push the button shortly.

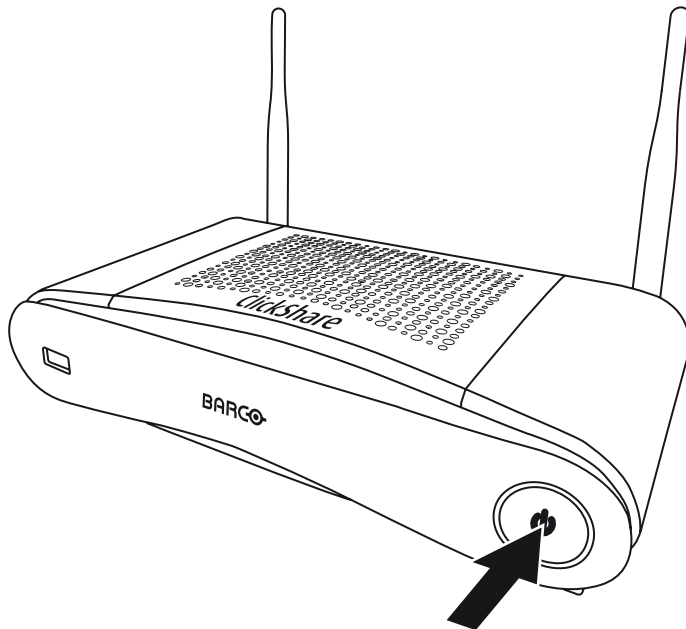


Image 8-1
Standby button

When the Base Unit was on, it goes to standby
When the Base Unit was in standby, it starts up.

8.2 User Interface

User Interface functionality

After launching the client, the ClickShare icon appears in the system tray.

ClickShare context menu

The content of the context menu is related to the operating system.

1. Right-click the ClickShare icon in the system tray.

The context menu appears.

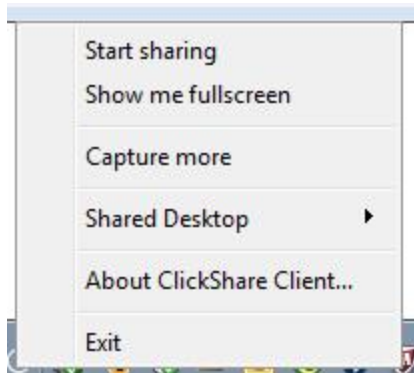


Image 8-2
Context menu

2. From the list, click the action you want to perform.

Click	To	Result
Start sharing	to show your screen on the display.	The LEDs of your Button become red.
Show me fullscreen	to bring the content of your screen on the display full screen.	The screens of other users that were shown on the display disappear.
Capture mode	to choose to capture video with more (slower performance) or less detail (faster performance).	Tune video performance and quality
Shared desktop (only for Windows7, Windows8 and Windows10)	to select primary or extended desktop	Depending on the selection the primary or the extended display is displayed.
About ClickShare Client	to find out the ClickShare software version.	Here you can find more information on the ClickShare software version.
Exit	to close ClickShare.	The ClickShare icon disappears from the system tray and the LEDs of the Button start blinking white.

8.3 Capture more



Only for Windows XP, Windows Vista and Windows 7 & 8.

About capture more

ClickShare is optimized for optimum video performance. Upon starting the client software it will disable Win7 Aero Glass to maximize video performance. Upon quitting the ClickShare applications your Aero Glass settings will be restored.

Transparent alpha layers are by default not captured. Therefore some windows may not be shown or may appear different on screen. For example content of video players using overlays will not be shown.

With "Capture More" selected, Win7 Aero Glass settings will be restored and capturing of alpha layers is enabled. In this mode, video throughput may decrease a bit and more details will be captured.

Default setting: Not checked.

How to change

1. Right click on the ClickShare icon in the system tray (1).

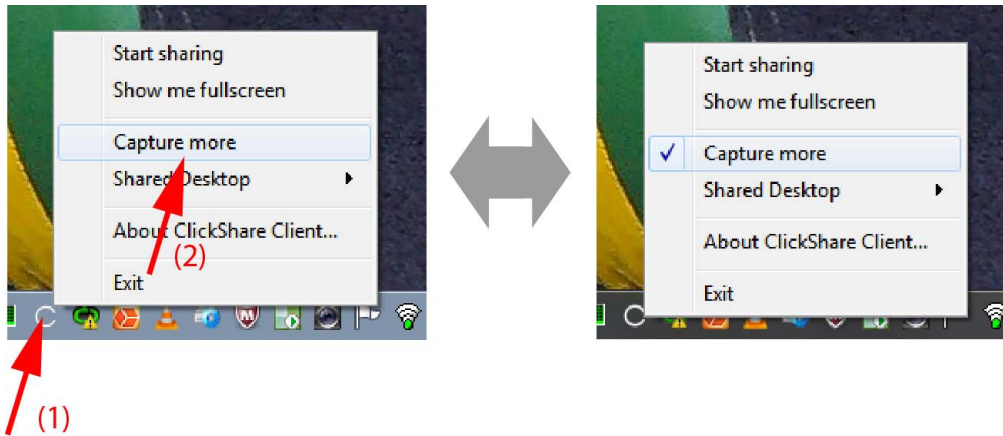


Image 8-3
Change capture mode

1. A context menu opens.
2. Click *Capture More* to toggle.
 - Checked: capture with more details but may have a lower performance.
 - Not checked: capture will be faster but may lose some of the details

Starting the client automatically in Capture More

The Capture more mode can be started by default so that the Aero Glass settings are not disabled. To do so, an environment variable should be introduced in your windows. Ask you administrator or consult your windows documentation to find out how to create.

The following variable should be introduced :

Variable	Value
CLICKSHARE_CAPTUREMOREBYDEFAULT	1

8.4 Shared desktop: primary - extended



Only for Window7 and Windows8

About shared desktop

Depending on your selection, your primary screen or your extended screen will be captured and displayed via ClickShare. That extended screen can be a physical screen or a virtual screen.

With extended desktop you can take advantage of both your laptop screen and the central meeting room display. Presentation notes or other material on primary screen will not be displayed to everyone.

PC with virtual extended screen:



Image 8-4

Primary screen displayed on the PC, extended screen displayed on the meeting room display.



Image 8-5

PC with one extended screen connected. That extended screen will be captured and displayed on the meeting room display.



Image 8-6

PC with two extended screens connected. The first extended screen, screen 2 will always be captured and displayed on the meeting room display.



To know if your system supports the extended desk top feature, press **Window key + P**. It should bring up the following pop-up on screen:



Image 8-7

How to select

1. Right click on the ClickShare icon in the system tray (1).

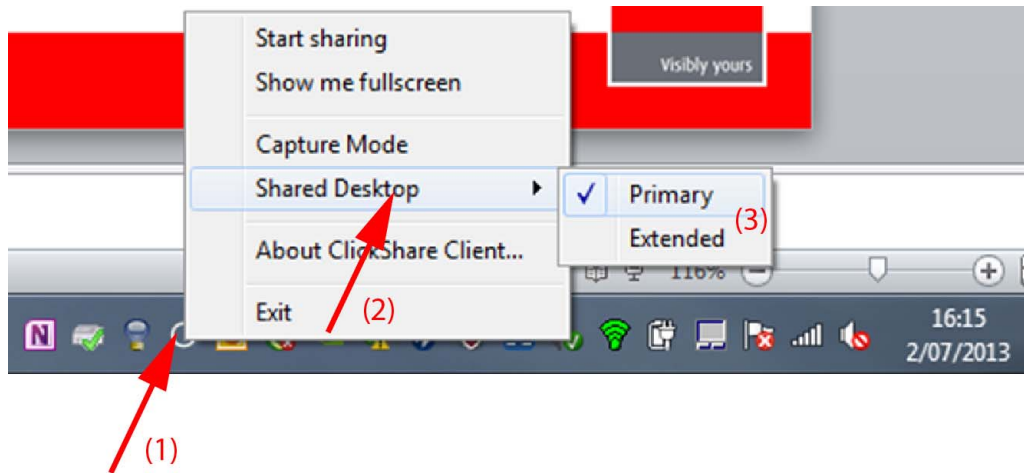


Image 8-8
Shared desktop selection

A context menu opens.

More than one extended desktop can be shown, e.g. extended desktop (center) and extended desktop (right).

2. Select *Shared Desktop* (2).
3. Select the desired setting (3).

Primary : the primary PC screen is displayed on the meeting room display.

Extended always the secondary screen is displayed on the meeting room display.

Known issue

- Virtual Extended Desktop not supported on some Windows8 and Windows10 systems due to a problem in recent versions of the AMD graphical driver. Downgrade to an older version of the driver might resolve the issue but make sure the AMD driver updated above version 13.8 .

8.5 Audio configuration

Audio configuration

The connected user must control his own audio signal using the audio configuration of his computer. If he does not want to broadcast his audio signal, he has to mute audio on his computer.

For some operating system, it is necessary to set ClickShare as your default output device. Once you unplug the Button, the default setting is switched back to the previous setting.

Set ClickShare as default in Windows

1. Right click on the speaker icon in the system tray (1).

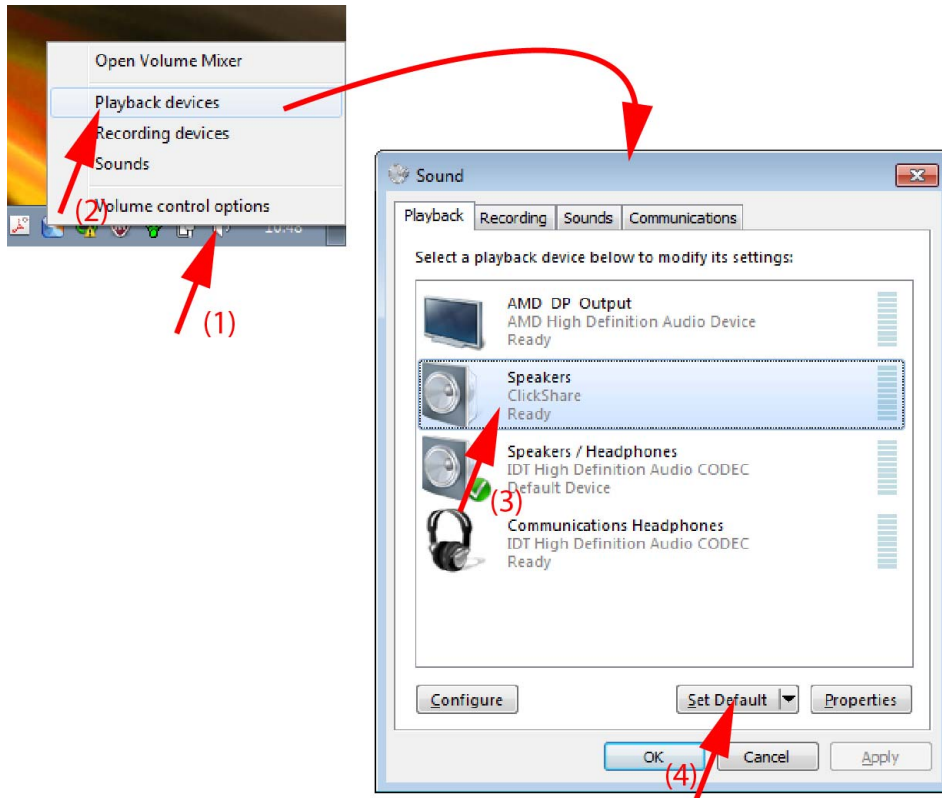


Image 8-9
Speakers ClickShare, default (example Windows 7)

2. Click *Playback devices* (2).
The *Sound* window opens on the *Playback* tab.
3. Select *Speakers ClickShare* (3) and click *Set default* (4).
4. Click **Apply** or **OK** to activate the new setting.

Set ClickShare as default on MAC

1. Click on the Apple logo on the menu bar (1) and select *System Preferences...* (2).

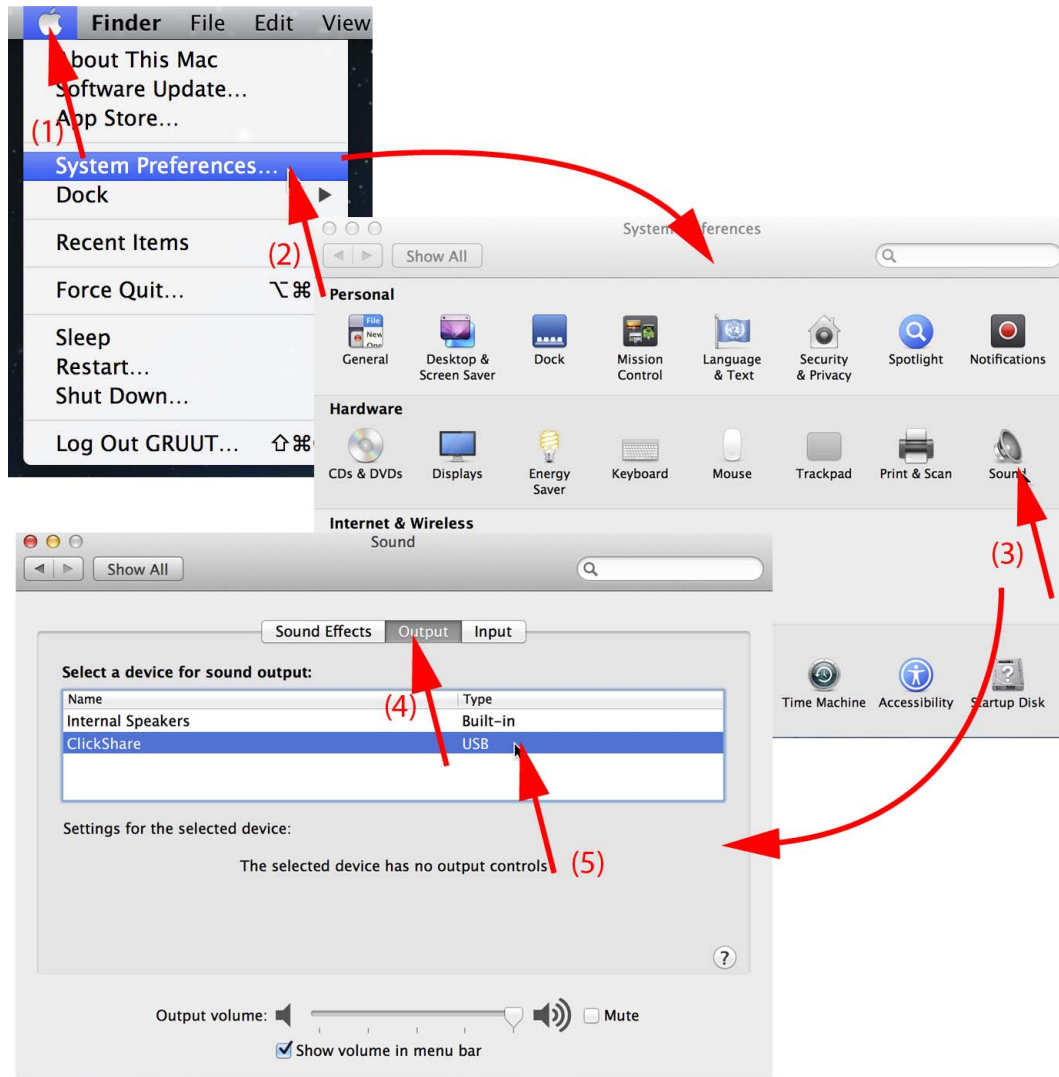


Image 8-10
Speakers ClickShare, default

2. Click on the *Speaker* icon (3).
The *Sound* window opens.
3. Select the *Output* tab (4) and activate ClickShare (5).



Short way to select ClickShare as audio device: Click with the mouse on the *Speaker* symbol in the menu bar while holding **ALT**. ClickShare will be visible as an option.

9. CSE-200 CONFIGURATOR

Overview

- Accessing the Configurator
- ClickShare Configuration Wizard
- On-Screen Language and Text Size
- Meeting room information
- Personalisation, wallpaper
- Personalisation, Personalized wallpaper
- Manage configuration files
- Display setup
- Audio settings
- WiFi settings
- LAN settings
- Network integration, activation
- Network integration, EAP-TLS security mode
- Network integration, EAP-TTLS security mode
- Network integration, PEAP security mode
- Network integration, WPA2-PSK security mode
- Services, mobile devices
- Service, ClickShare API, remote control via API
- CMGS Server Integration
- Security, compatibility
- Security, security level
- Security, passwords
- Status information Base Unit
- Date & Time setup, manually
- Date & Time setup, time server
- Energy savers
- Buttons
- Firmware Update
- Support & Updates, Troubleshoot, log settings
- Factory defaults

9.1 Accessing the Configurator

Getting access to the Configurator

There are three ways to access the Configurator:

- Via the LAN
- Direct Ethernet connection between PC and Base Unit.
- Via the Base Unit's wireless network

When accessing the configurator for the first time, the ClickShare Configuration Wizard starts automatically.

This configuration wizard can be started at any moment to change your configuration instead of using the menus.

To access the Configurator via the LAN

1. Open a browser.

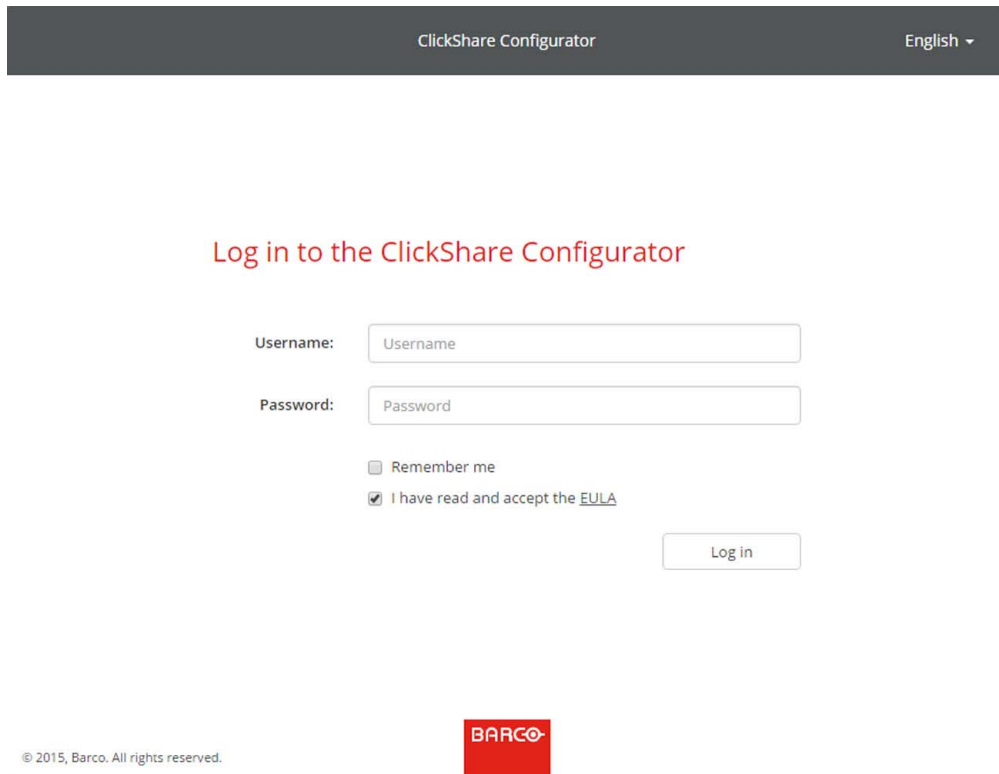
Note: Supported browsers are Internet Explorer 10 or higher, Firefox, Google Chrome and Safari.

2. Browse to the IP address you can find in the bottom left corner of the startup screen.

Note: The Wired IP address is only visible when the Base Unit is connected to the LAN. If not, the default wired IP address is indicated.

9. CSE-200 Configurator

A login screen appears.



ClickShare Configurator English ▾

Log in to the ClickShare Configurator

Username:

Password:

Remember me

I have read and accept the [EULA](#)

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Image 9-1
Login screen

3. To change the language of the Configurator, click on the drop down next to the current selected language and select the desired language.

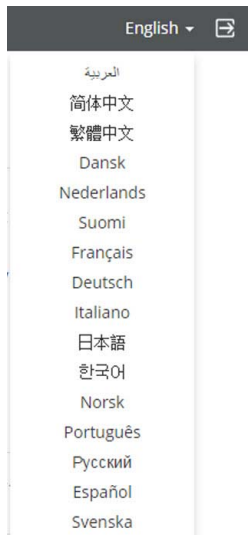


Image 9-2
Configurator languages

The following languages are possible:

- Arabic
- Simplified Chinese
- Traditional Chinese
- Danish
- Dutch
- English
- Finnish
- French
- German
- Italian
- Japanese
- Korean
- Norwegian
- Portuguese
- Russian
- Spanish
- Swedish

The Configurator language changes to the selected language.

4. Enter the user name 'admin' and the password, read and accept the EULA and click **OK**.

By default, the password is set to 'admin'.

The configurator opens.

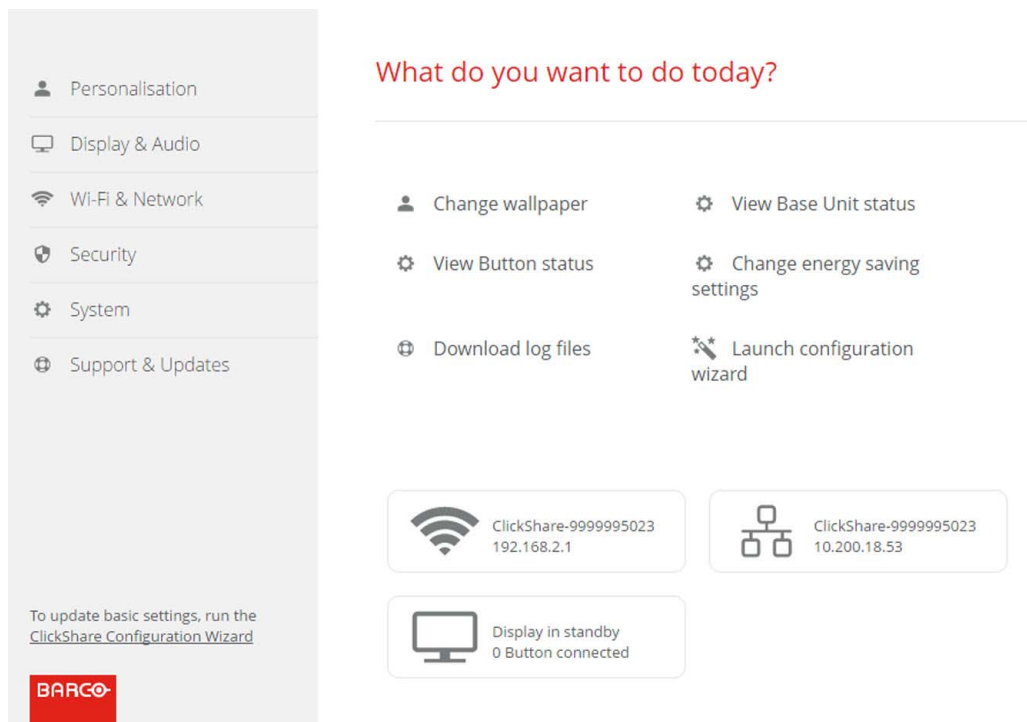


Image 9-3
Start screen

The language of the configurator can be changed on any page in the interface.

The screen is split up in 2 panes. Left pane with the selection buttons and a right pane to configure the selected function.

The startup screen itself shows:

- the wired IP address
- the wireless IP address
- the wireless SSID
- the number of Buttons connected
- the system state



If you cannot find the IP address (e.g. there is no screen available) you should connect to the Base Unit directly with your laptop via an Ethernet crossover cable and access the web interface using the fixed IP address 192.168.1.23. Make sure your own LAN adapter is set in the 192.168.1. range.

To access the Configurator via a direct connection.

1. Connect the Base Unit to your laptop using an Ethernet cable.
2. On your laptop, open a browser.
Note: Supported browsers are Internet Explorer, Firefox and Safari.
3. Browse to <http://192.168.1.23>.
A login screen appears.
4. Enter the user name 'admin' and the password, read and accept the EULA and click **OK**.
By default the password is set to 'admin'.
The configurator opens.

To access the Configurator via the Base Unit wireless network

1. On your laptop, connect to the Base Unit wireless network.
The default SSID and password to connect to the Base Unit are respectively 'ClickShare-<serial base number>' and 'clickshare'.
2. On your laptop, open a browser.
Note: Supported browsers are Internet Explorer, Firefox and Safari.
3. Browse to <http://192.168.2.1>.
A login screen appears.
4. Enter the user name 'admin' and the password, read and accept the EULA and click **OK**.
By default the password is set to 'admin'.
The web interface opens.



Older laptops might not support the 5 GHz Frequency Band. If your Base Unit is set to that frequency range, those devices will not be able to connect to the Base Unit via the wireless network.

Overview of functions

Group	Function
Personalization	On-Screen ID
	Wallpaper
	Configuration Files
Display & Audio	Display & Audio
Wi-Fi & Network	Wi-Fi Settings
	LAN Settings
	Network integration
	Services
Security	Compatibility
	Security levels
	Passwords
System	Base Unit Status
	Date & Time
	Energy Savers
	Buttons
Support & Updates	Firmware
	Troubleshoot

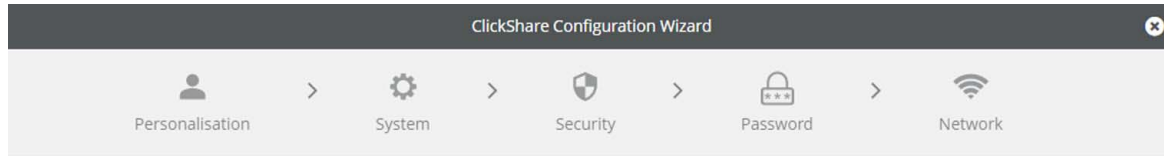
When a setting is changed, always click **Save changes** to store the changes.

9.2 ClickShare Configuration Wizard

About the configuration wizard

During the first start up of the Base Unit, the configuration wizard starts up automatically.

All basic settings necessary to configure the Base Unit are covered by the configuration wizard. Once the configuration wizard is finished, the Base Unit is ready to be used.



Welcome to the ClickShare Configuration Wizard

This wizard will guide you through a couple of steps to configure your ClickShare Base Unit. Click "Start configuration" to begin. At any time you can abort the wizard by clicking the close button.



Image 9-4
Configuration wizard

To start the wizard, click on **Start Configuration**.

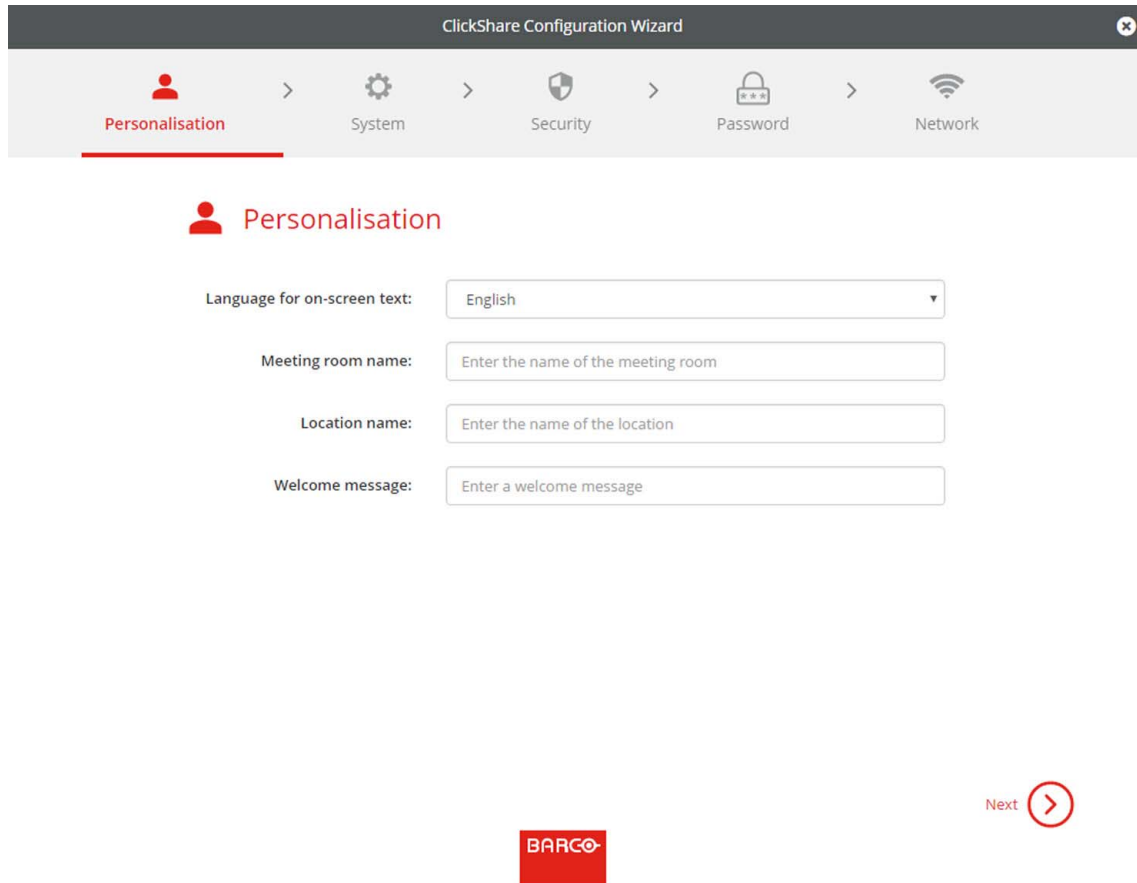


Image 9-5
Configuration wizard, Personalisation

Fill out the necessary field and click **Next** to continue.

To return to the previous step, click on **Back**.

For more information about a specific topic, see one of the following topics.

The ClickShare Configuration Wizard can be started at any time to change the configuration just by clicking on **ClickShare Configuration Wizard** at the left bottom of each screen.

Personalisation

	Language on-screen text	See "On-Screen Language and Text Size", page 43.
	Meeting room name, location name and welcome message	See "Meeting room information", page 45.
System	Time zone, manual time setup	See "Date & Time setup, manually", page 69.
	Use NTP	See "Date & Time setup, time server", page 70.
Security	Level settings	See "Security, security level", page 66.
Password	WebUI password	See "Security, passwords", page 67.
Network	Frequency band, channel Wi-Fi passphrase	See "WiFi settings", page 51.

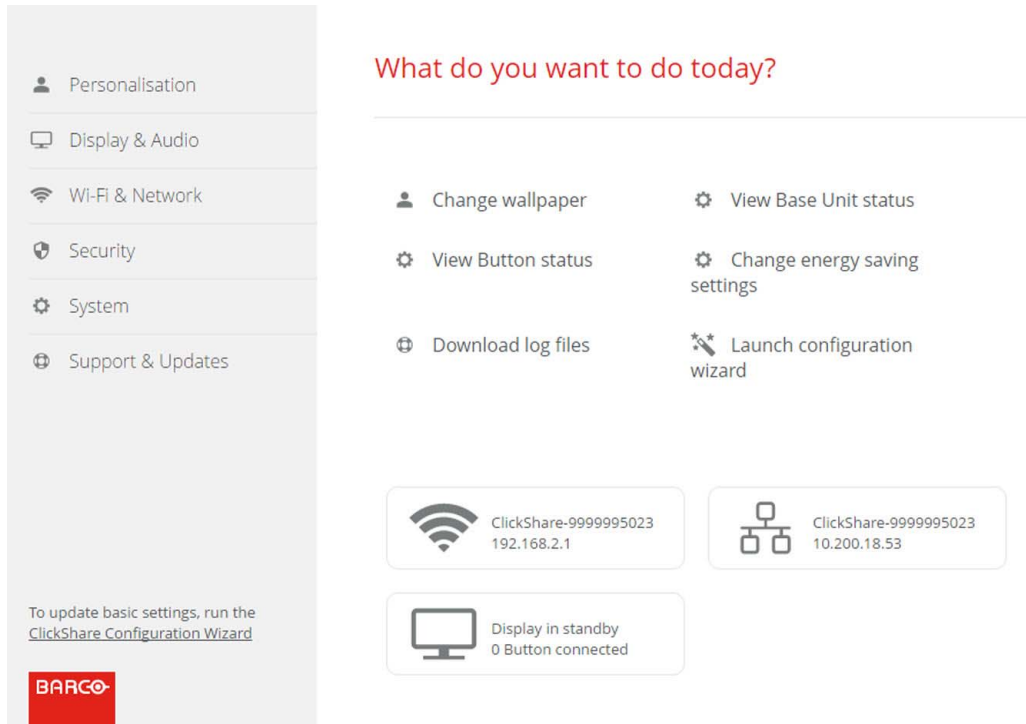


Image 9-6
Configuration Wizard start

9.3 On-Screen Language and Text Size

About the on-screen language.

The on-screen language can be set independent of the configurator language. The on-screen text size can be changed between small, medium or large.

Language selection

1. Log in to the *Configurator*
2. Click *Personalisation* → *On-Screen ID*.

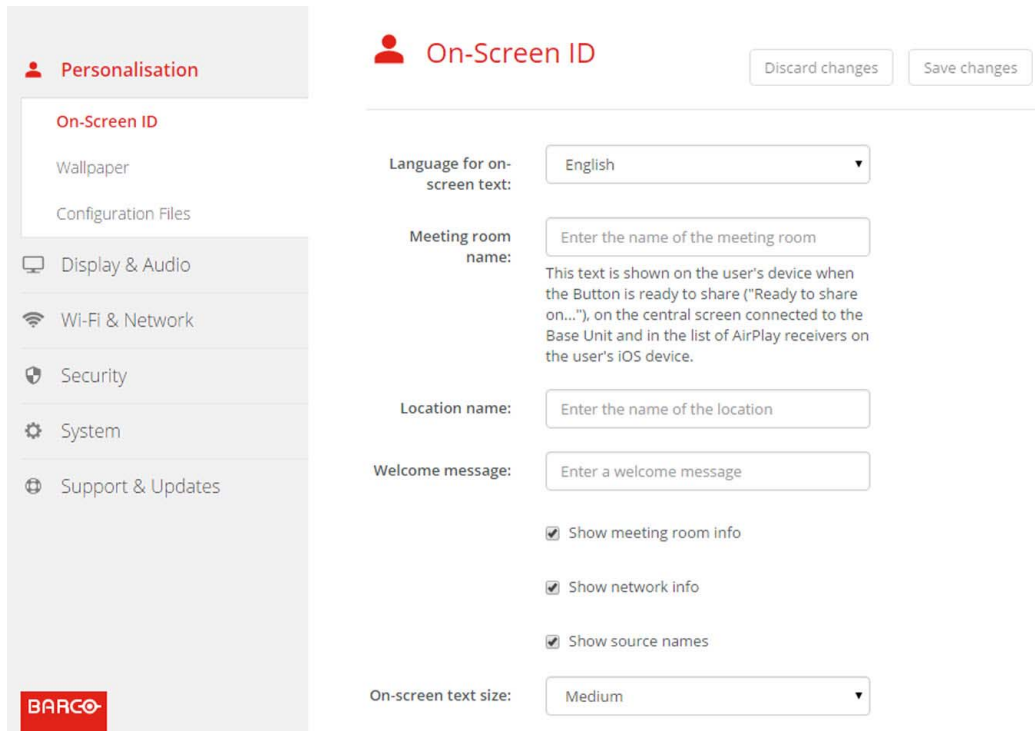


Image 9-7
Personalisation, On-Screen ID

3. Select the language of the on-screen text. Click on the drop down box next to *Language for on-screen text* and select the desired language.

The following languages are possible:

- Arabic
- Simplified Chinese
- Traditional Chinese
- Danish
- Dutch
- English
- Finnish
- French
- German
- Italian
- Japanese
- Korean
- Norwegian
- Portuguese
- Russian
- Spanish
- Swedish

Text size

1. Log in to the *Configurator*

2. Click *Personalisation* → *On-Screen ID*.

3. Click on the drop down box next to *On-screen text size* and select the desired font size.

The following sizes are possible:

- Small
- Medium
- Large

9.4 Meeting room information

About meeting room settings

The following settings are possible:

- Meeting room name
- Meeting room location
- Welcome message on the ClickShare screen
- Show meeting room info
- Show network info
- Show source names

Image 9-8
Personalisation, On-Screen ID

Meeting room name, location and welcome message

1. Log in to the Configurator.
2. Click *Personalisation* → *On-screen ID*.
3. Click in the input field next to *Meeting room name* and enter a name for the meeting room.

This text is shown on the user's device when the Button is ready to share ("Ready to share on..."), on the central screen connected to the Base Unit and in the list of AirPlay receivers on the user's iOS device.

4. Click in the input field next to *Location name* and enter the location.
5. Click in the input field next to *Welcome message* and enter the desired message.

Show on-screen information

1. Log in to the Configurator.
2. Click *Personalisation* → *On-screen ID*.
3. Check the check box in front of *Show meeting room info*.
Checked: meeting room name, location and welcome message are displayed on-screen when nothing is shared.
Not checked: nothing is shown on-screen.
4. Check the check box in front of *Show network info*.
Checked: LAN information such as wired IP address, hostname are displayed. Also the Wi-Fi IP address and SSID are displayed.
Not checked: no LAN nor Wi-Fi information is displayed.
5. Check the check box in front of *Show source names*.

Checked: the source name of the shared content is displayed on the screen.

Not checked: no source info displayed on the screen.

9.5 Personalisation, wallpaper

About wallpaper

When CSE-200 starts up, a background (wallpaper) is displayed. The display of this background wallpaper can be disabled.

By default a general ClickShare and a quick start wallpaper are available. The possibility exists to upload personal backgrounds (wallpapers). The default wallpapers cannot be removed from the system.

Wallpaper selection

1. Log in to the Configurator
2. Click *Personalisation* → *Wallpaper*.

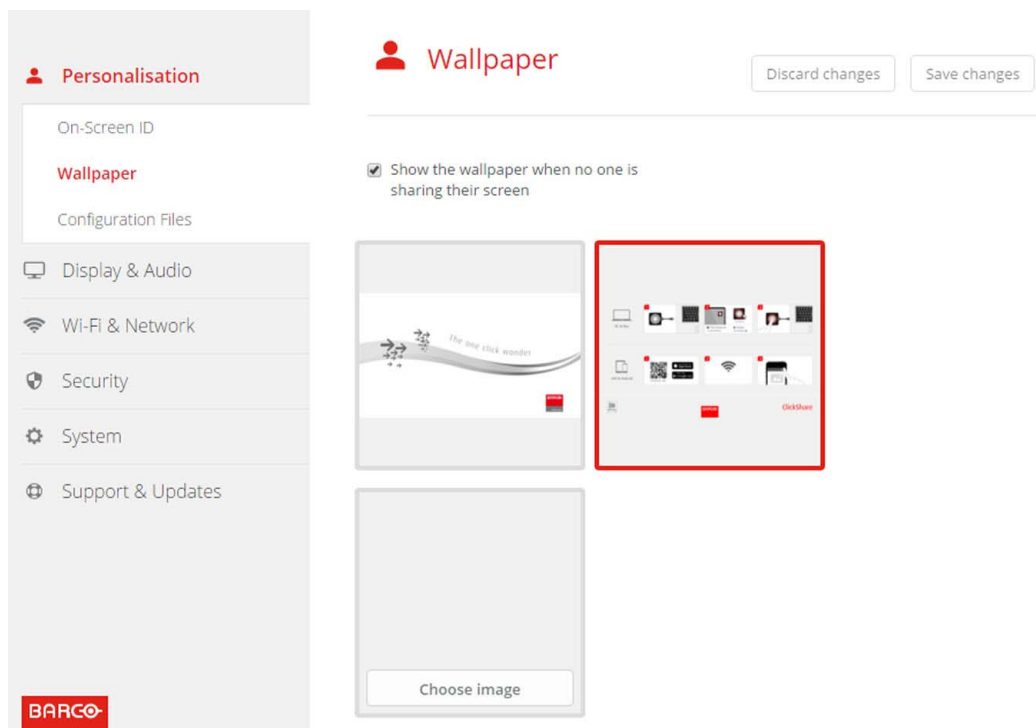


Image 9-9
Wallpaper selection

The *Wallpaper* selection pane is shown. The current selected wallpaper is shown with a red border.

3. Select one of the available wallpapers and click on **Save Changes**.
Note: By default a general Barco CSE-200 wallpaper and a CSE-200 Quick Start Guide wallpapers are available.

They are automatically resized to fit the aspect ratio of the screen.

The selected wallpaper is indicated with a red border.

The message **Successfully applied changes** appears on top of the wallpaper selection window.



You can also add a personal wallpaper, e.g. your company logo. For more information on adding a new wallpaper to the list, see "Personalisation, Personalized wallpaper", page 47.

Download wallpaper

1. Hoover with your mouse over the wallpaper to download and click on the download symbol on the upper right corner.



Image 9-10
Download wallpaper

The wallpaper is downloaded to your PC.

Enable - disable Wallpaper

1. Within the Wallpaper pane, check the check box next to *Show the wallpaper when no one is sharing their screen.*

Checked: wallpaper will be displayed when no one is sharing content.

Not checked: no wallpaper will be displayed when no one is sharing content. The video output of the Base Unit is disabled when no content is shared. This feature is especially useful when the Base Unit is integrated in a larger AK system

9.6 Personalisation, Personalized wallpaper

About a personalized wallpaper

Via the Configurator it is possible to upload personalized backgrounds or wallpapers.

The upload file should be a JPEG, PNG, BMP or TIFF format with a maximum size of 2.5MB.

Maximum one custom wallpaper can be uploaded. To upload another, the first uploaded will be overwritten.

How to upload

1. Log in to the Configurator
2. Click *Personalisation* → *Wallpaper*.

The *Wallpaper* selection pane is shown. The current selected wallpaper is shown with a red border.

3. Hoover your mouse over the free place and click on **Choose image**.

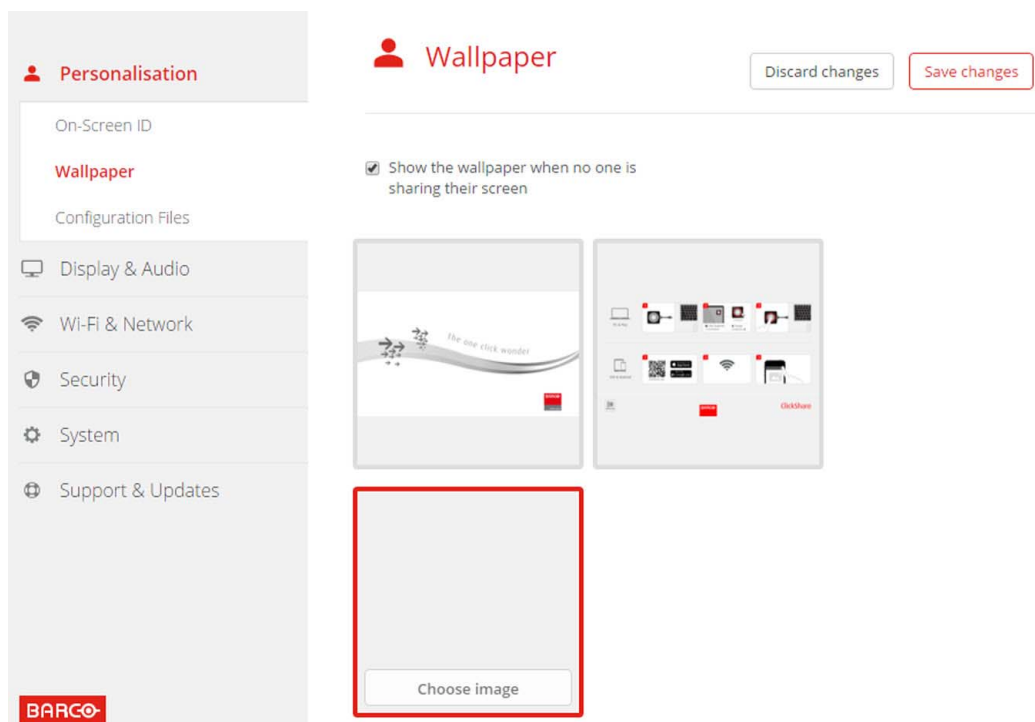


Image 9-11
Personalized wallpaper selection

A browser window opens.

4. Browse for the desired image, click Open to load the image.

The content of the file is checked and when valid (format and size), the file is uploaded. The new wallpaper gets a red border.

5. Click on **Save changes** to apply the personalized wallpaper

The message **Successfully applied changes** is displayed on top of the page.

Change personalized image

1. Click *Personalisation* → *Wallpaper*.
2. Hoover your mouse over the current personalized image and click **Change image**.

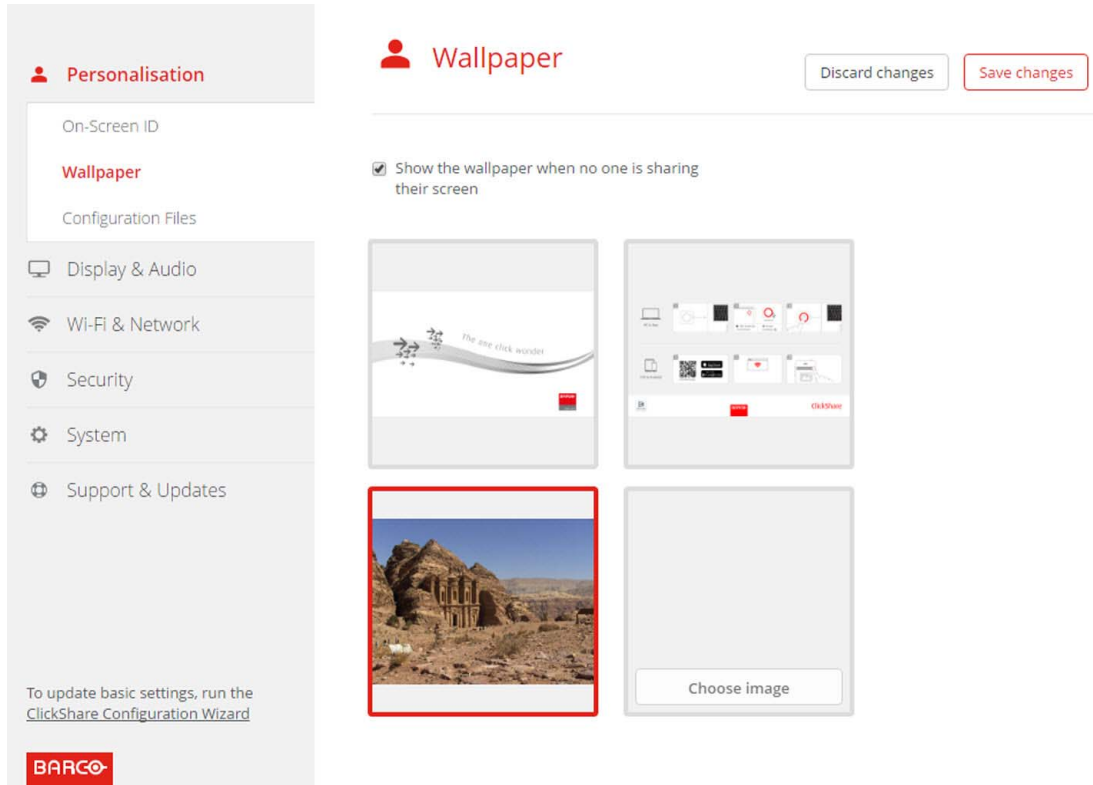


Image 9-12
Change image

3. Browse for the desired image, click Open to load the image.

The content of the file is checked and when valid (format and size), the file is uploaded. The new wallpaper gets a red border.

4. Click on **Save changes** to apply the personalized wallpaper and replace the previous file.

The message **Successfully applied changes** is displayed on top of the page.

Remove personalized wallpaper

1. Hoover your mouse over the current image and click on the trash bin to remove the image.

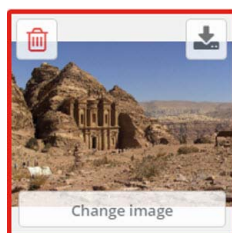


Image 9-13
Remove wallpaper

The personalized wallpaper is removed and the default wall paper is activated.

9.7 Manage configuration files

About Manage configuration files

A full backup can be downloaded but cannot be used to duplicate configuration settings to other Base units. Therefore, it is possible to download a Portable version. This portable version can be uploaded via the upload configuration button on other Base units (same type). Via the same button, the full backup can be uploaded on the original Base Unit.

A portable backup contains:

- Wallpapers
- Wallpapers settings
- Logging settings
- All display settings
- OSD language
- Location
- Welcome message
- WiFi channel
- WiFi frequency

To manage the configuration files

1. Log in to the *Configurator*.
2. Click *Personalisation* → *Configuration Files*.

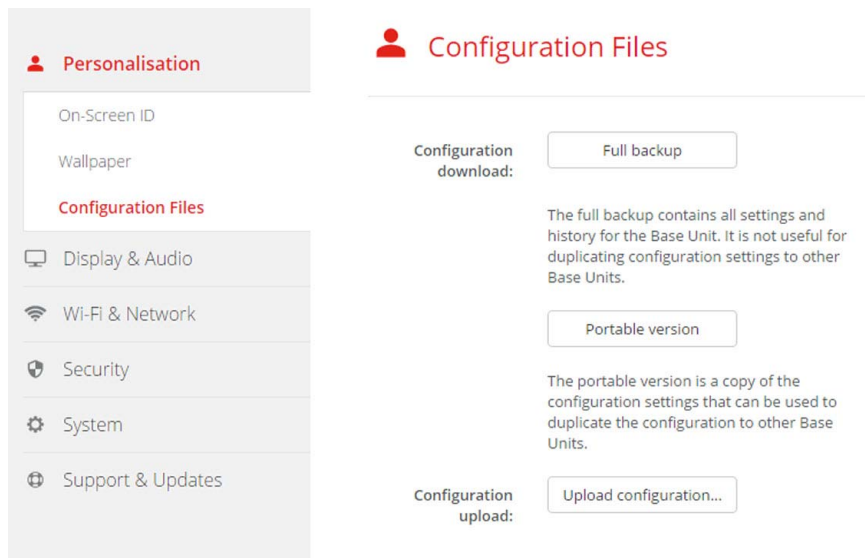


Image 9-14
Configuration files

3. To download a full backup, click on **Full Backup**.

An xml file, containing all information and history will be downloaded. This file can be reused on the same Base Unit only.

4. To download a portable version, click on **Portable Version**.

An xml file, containing portable information to duplicate settings on another Base Unit.

5. To upload a configuration, click on **Upload Configuration**.

A browser window opens. Navigate to the upload file (xml file) and click **Open** to upload.

A full backup can be uploaded on the Base Unit where the backup was created and a portable version can be uploaded on any other Base Unit of the same model.



When uploading a config file, the history of software updates and paired Buttons is lost. Paired buttons will however remain functional if the Base Unit has not changed from SSID or wireless password.

9.8 Display setup

Resolution

The output resolution to the display is set on Auto. That means that the CSE-200 output resolution is automatically adapted to the resolution of the display. For HDMI displays, a hot plug detection is available.

Screen saver setup

1. Log in to the *Configurator*.
2. Click *Display & Audio* → *Display & Audio*.

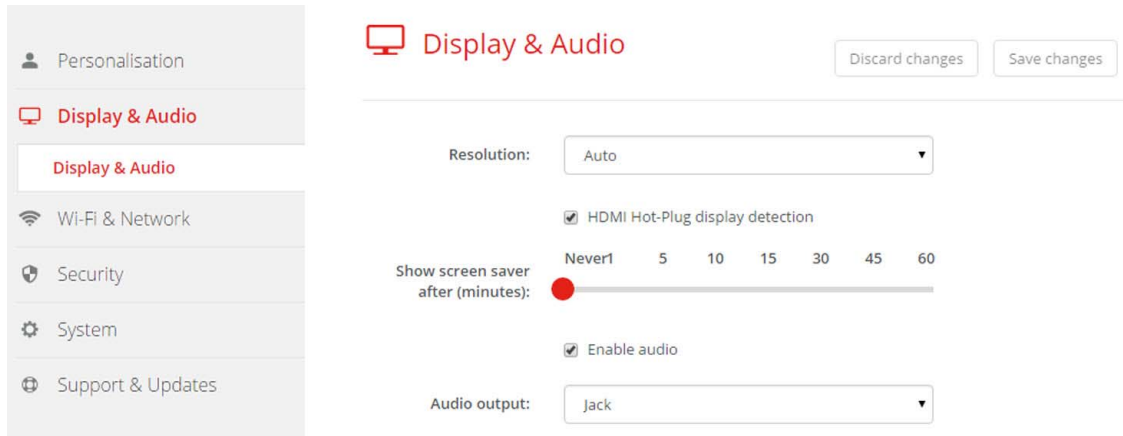


Image 9-15
Display settings

3. To activate the screen saver, drag the slider bar to the left or to the right until the desired delay time is reached.
When the slider is set completely to the right, the screen saver will never be activated.

9.9 Audio settings

About the audio settings

The audio functionality can be disabled or enabled. When the enable and/or disable setting is changed, the Buttons must be re-paired before the setting becomes active.

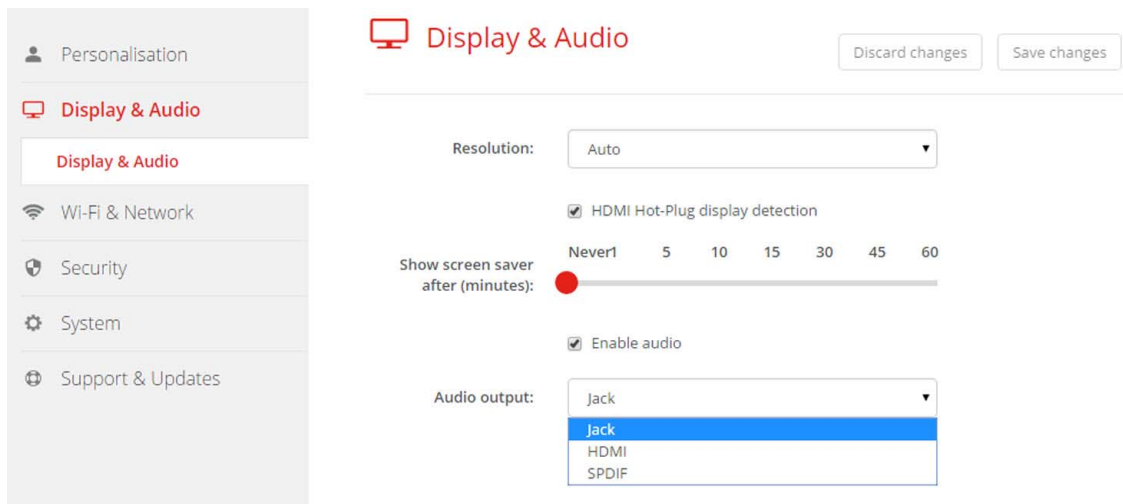


Image 9-16
Audio settings

How to change

1. Log in to the *Configurator*.
2. Click *Display & Audio* → *Display & Audio*.
3. Check or uncheck the check box next to Enable Audio.

Checked: audio is enabled.

Unchecked: audio is disabled.

- To select the audio output, click on the drop down box and select the desired audio output.

Jack: audio output via jack.

HDMI: audio output via HDMI.

SPDIF: digital audio output via TOSLINK

- Click on **Save changes** to apply the new settings.

9.10 WiFi settings



WARNING: It is not allowed to operate the Base Unit outside its intended geographical region.

About WiFi

A connection with the Base Unit can be made via a wireless connection. A fixed wireless IP address is used to establish the connection.

The transmission power of the wireless signal can be reduced.

Image 9-17
WiFi settings



Changing the IP address will require a repairing of the Buttons used with this Base Unit.

IP address & subnet mask

- Log in to the *Configurator*.
- Click *Wi-Fi & Network* → *WiFi Settings*.

3. To change the IP address or subnet mask, click in the input field and enter the 4 octets of the new IP address or subnet mask.
Note: This must NOT be 0.0.0.0 for static IP-Address assignment.

Frequency band & channel

1. Select the wireless connection channel by clicking on the drop down box and selecting the desired channel.
The channels available in the list vary according to the regional version of your Base Unit. Re-pairing the Buttons is not required when changing the frequency band or wireless connection channel.
2. Select the wireless connection frequency band: 2.4 GHz or 5 GHz by clicking on the drop down box and selecting the correct band.
Note: Make sure your PC's wireless interface supports the 5 GHz band before selecting it on the Base Unit.

SSID & passphrase

1. Enter a public name (SSID) for the wireless network.
The default SSID is *ClickShare-<serial number Base Unit>*.
2. If you want to broadcast this SSID, check the checkbox before *Enable SSID broadcast*.
3. Enter a new WiFi passphrase and confirm that passphrase.

Signal strength

1. Select the Signal Strength. Click on the slider and reduce the broadcasted power (signal strength) until the desired strength is obtained.
Note: Too low power and interference by others might lead to connection issues. If so, increase again the signal strength until the issues are solved.
By default the strength is set to 100%.

WebUI access via Wi-Fi

1. To allow access to the configurator via Wi-Fi, check the check box in front of *WebUI available via Wi-Fi*.
Checked: Configurator accessible via Wi-Fi.
Not checked: access to the configurator via Wi-Fi is blocked.

9.11 LAN settings

About LAN network settings

A network connection can be configured through DHCP or by manually entering a fixed IP address.



DHCP

Dynamic host configuration protocol. DHCP is a communications protocol that lets network administrators manage centrally and automate the assignment of IP addresses in an organization's network. Using the Internet Protocol, each machine that can connect to the Internet needs a unique IP address. When an organization sets up its computer users with a connection to the Internet, an IP address must be assigned to each machine. Without DHCP, the IP address must be entered manually at each computer and, if computers move to another location in another part of the network, a new IP address must be entered. DHCP lets a network administrator supervise and distribute IP addresses from a central point and automatically sends a new IP address when a computer is plugged into a different place in the network.

Hostname & method

1. Log in to the *Configurator*.
2. Click *Wi-Fi & Network* → *LAN Settings*.

The screenshot shows the 'LAN Settings' configuration page. On the left is a sidebar with navigation options: Personalisation, Display & Audio, Wi-Fi & Network (selected), Security, System, and Support & Updates. The main content area is titled 'LAN Settings' and includes a 'Discard changes' and 'Save changes' button at the top right. The settings are as follows:

- Hostname: ClickShare-1871900030
- Method: Automatic (DHCP)
- IP address: 10.200.18.80
- Subnet mask: 255.255.254.0
- Default gateway: 10.200.18.1
- MAC address: 00:04:A5:00:2B:24

Below these settings is the 'LAN Proxy Settings' section, which includes a checkbox for 'Use a proxy server'.

Image 9-18
LAN settings

- Click in the input field next to *Hostname* and enter a host name for the Base Unit.
The default host name is *ClickShare-<serial number Base Unit>*.
- To select the method, click on the drop down box next to *Method* and select the *Automatic (DHCP)* or *Manual*.
When *Automatic (DHCP)* is selected, the IP address, subnet mask and default gateway fields are grayed out but the currently used settings are filled out.
- Click **Save changes** to apply the settings.

Manual (fixed) IP address

- Click on the drop down box next to *Method* and select *Manual*.
The IP address, subnet and gateway input fields are activated.
- Click in the input field of the *IP address* and fill out the 4 octets.
Note: *An address contains 4 octets with a maximum value of 255.*
This must NOT be 0.0.0.0 for static IP-Address assignment
- Click in the *Subnet mask* input fields and fill out the 4 octets as appropriate for the local subnet.
- Click in the *Default Gateway* input fields and fill out the 4 octets. Set the Default-Gateway to the IP-Address of the router (MUST be on the local subnet!).
Note: *This must NOT be 0.0.0.0.*
If there is no router on the local subnet then just set this field to any IP-Address on the subnet.
- Click **Save changes** to apply the settings.



Do not use IP address 192.168.2.x for a Subnet mask 255.255.255.0 and IP address 192.168.x.x for a Subnet mask 255.255.0.0

Use a proxy server

This setting is important for the auto-update feature of the Base Unit, which require internet access.

- Check the check box next to *Use a proxy server*.

Use a proxy server

Server address:

Server port (optional):

User name (optional):

Password (optional):

Image 9-19
Proxy settings

The proxy settings become available.

2. Enter the proxy server address. Enter the IP address or hostname.
Some proxy servers need a port number, user name and password, for others is this optional.
3. Optionally, enter the used server port.
4. Optionally, enter the user name.
5. Optionally, enter the password.
6. Click **Save changes** to apply the settings.

9.12 Network integration, activation

Introduction

“ClickShare Network Integration” aims at deploying ClickShare in larger organizations without interfering with the existing wireless network infrastructure. In a default stand-alone setup, the ClickShare Base Unit creates its own wireless access point (AP) which the ClickShare Buttons use to connect. These so-called “rogue” APs can become a nuisance in larger installations. Next to that, meeting participants who are sharing content from mobile devices have to switch networks to connect with the ClickShare Base Unit.

This is where ClickShare Network Integration comes in. Once fully configured and enabled, the built-in AP of the Base Unit is disabled. The Button or the mobile devices can then connect to a wireless access point that is part of the corporate network. At this point, the Base Unit needs to be connected to the corporate network via the wired Ethernet interface so that the Buttons and mobile devices can share their content on the Base Unit.

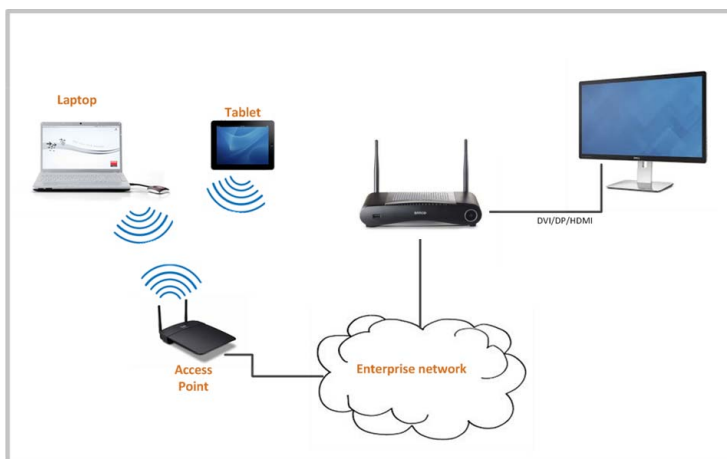


Image 9-20

Security modes

There are 2 security modes supported by the Button to connect to the corporate network:

- The first one, which applies to a typical corporate network setup, is WPA2-Enterprise with 802.1X.
- As we also want to support smaller organizations, which might have a more traditional Wi-Fi setup, there is also support for WPA2-PSK, also known as WPA2-Personal.

Both modes are based on Wi-Fi Protected Access (WPA). We talk about WPA2, an improved version of the original WPA standard, which adds AES encryption to improve security.

WPA2-Enterprise with 802.1X

WPA2-Enterprise relies on a server (using RADIUS) to authenticate each individual client on the network. To do this, authentication 802.1x is used (also known as port-based Network Access Control). 802.1x encapsulates the Extensible Authentication Protocol (EAP) for use on local area networks. This is also known as "EAP over LAN" or EAPoL. Using RADIUS, these EAPoL messages are routed through the network in order to authenticate the client device on the network – which, in the case of ClickShare, are the Buttons.

The 802.11i (WPA2) standard defines a number of required EAP methods. However, not all of them are used extensively in the field, and some other ones (which are not in the standard) are used much more often. Therefore, we have selected the most widely used EAP methods. The list of EAP methods supported in the ClickShare system is:

- EAP-TLS
- PEAP
- EAP-TTLS

Considerations

When you choose to integrate the ClickShare system into your corporate network, there are a few things to consider up front. First of all, make sure that all your Base Units can be connected to your network via the wired Ethernet interface. Also, take into account the amount of bandwidth that each Button needs to stream the captured screen content to the Base Unit – this is usually somewhere between 5 and 15 Mbps. So, prevent bottlenecks in your network (e.g. 100 Mbps switches) that could potentially degrade your ClickShare experience due to a lack of bandwidth.

Prerequisites

Before rolling out ClickShare Network Integration, make sure your infrastructure meets the following prerequisites.

Network

Once you enable the corporate network, the internal Wi-Fi access point of the ClickShare Base Unit is disabled. Make sure your Base Unit is connected to the corporate network via its wired Ethernet interface.

Firewall

To ensure that you can successfully share content via the ClickShare Button, or from mobile devices, to the Base Unit, make sure the ports mentioned in "Ports used by the ClickShare Base Unit", page 17 are open on your network:

VLAN

A lot of corporate networks are divided into multiple VLANs – for example, to separate BYOD (Bring Your Own Device) traffic from the "core" corporate network. Take this into consideration when integrating ClickShare into your network. ClickShare Buttons connecting to your wireless infrastructure should be able to connect to the Base Units. Furthermore, if you want to use the mobile apps, these should also be able to reach the Base Units. It is advisable to put all ClickShare Units into a separate VLAN so they are easily manageable.

DNS

For the Buttons to be able to stream their content to the Base Unit, they must be able to resolve the Base Unit's hostname within the network. If no DNS is available Buttons will fall back to the IP of the Base Unit at the moment of USB pairing. Because of this we strongly advise to reserve IP addresses in your DHCP server for each Base Unit to prevent issues when the hostname is not resolvable.

NTP

When using EAP-TLS, you must also configure NTP on the Base Unit. This can be done via the Base Unit WebUI. The Base Unit must have the correct time to handle the certificates required for EAP-TLS. Preferably, you should use an NTP server with high availability on the local corporate network. Be advised that, when using an NTP server on the internet, the Base Unit cannot connect through a proxy server.

Advice

To check if a button could reach the Base Unit please connect a PC in the same way a Button would connect (same user name, pw, certificates) and ping the Base Unit's hostname, you can find the hostname in the Based Units Configurator. If the ping fails try pinging the IP adjust your network setup so pinging the hostname is successful.

We strongly advise to reserve IP addresses in your DHCP server for each Base Unit to prevent issues when the hostname is not resolvable.

Start up

Due to the complexity of the ClickShare Network Integration feature, you must activate it first. To activate, go to the Network integration and click **Change configuration** button.



The Corporate Network Integration feature is provided "AS IS", without any liability or obligation of or on behalf of Barco. Barco cannot guarantee that the feature works in your corporate network. The reliability, quality and stability when sharing using the Corporate Network Integration depends on your network infrastructure.

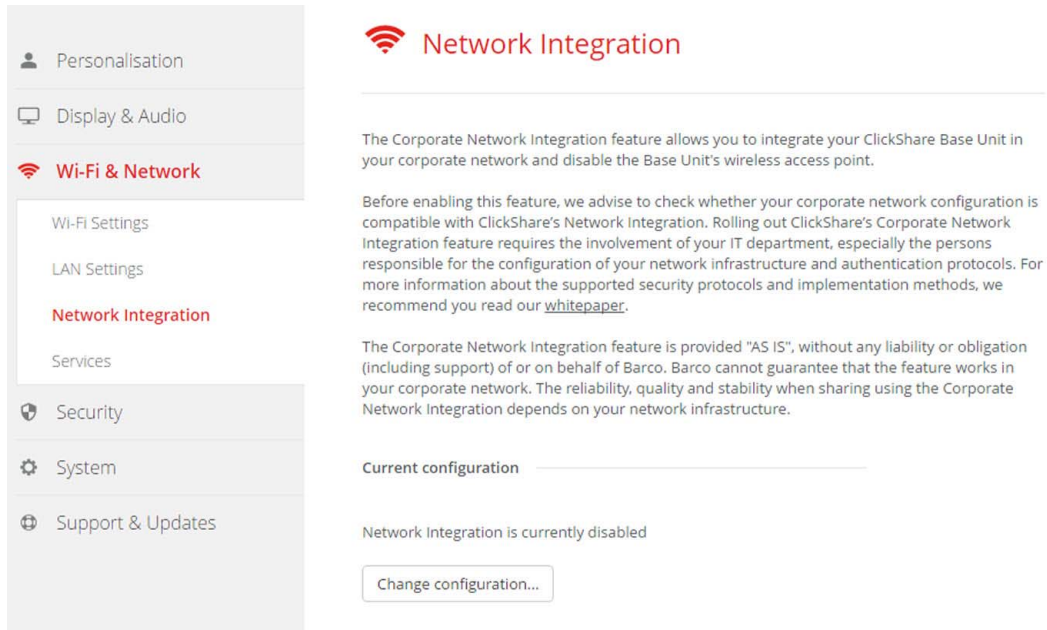


Image 9-21
Network integration, activation

A setup wizard starts up.

Apps

Once integrated into the network, any mobile device connected to the corporate network will be able to share content with any Base Unit on the network. (If so desired, you can prohibit sharing from mobile devices via the Base Unit's WebUI.) We advise to enable passcode authentication for mobile devices. This option can be found on the *Wi-Fi & Network > Services* page of the Configurator.



You must repair all the Buttons after completing the setup wizard !

9.13 Network integration, EAP-TLS security mode

About EAP-TLS

EAP-TLS (Transport Layer Security) is an EAP method based on certificates which allows mutual authentication between client and server. It requires a PKI (Public Key Infrastructure) to distribute server and client certificates. For some organizations this might be too big of a hurdle, for those cases EAP-TTLS and PEAP provide good alternatives. Even though a X.509 client certificate is not strictly required by the standard it is mandatory in most implementations including for ClickShare. When implemented using client certificates, EAP-TLS is considered one of the most secure EAP methods. The only minor disadvantage, compared to PEAP and EAP-TTLS, is that the user identity is transmitted in the clear before the actual TLS handshake is performed. EAP-TLS is supported via SCEP or manual certificate upload.

How to start up for EAP-TLS

1. Log in to the *Configurator*.
2. Click *WiFi & Network* → *Network integration*. Click on **Change configuraton**.
3. Select the radio button next to *EAP-TLS* and click **Next**.

ClickShare Network Integration Wizard

Choose Security Mode

- EAP-TLS
- EAP-TTLS
- PEAP
- WPA2-PSK
- Disable (Use built-in Wi-Fi)

Image 9-22
Network integration, EAP-TLS selected

The EAP-TLS mode window opens.
Two choices are possible:

- Auto alignment via SCEP
- Manually provide Client & CA certificates

ClickShare Network Integration Wizard

Choose EAP-TLS mode

- Auto enrollment via SCEP
- Manually provide Client & CA certificates

Image 9-23

Using SCEP

Select the radio button next to *Auto enrollment via SCEP* and click **Next**.

The Simple Certificate Enrolment Protocol (SCEP) is a protocol which enables issuing and revoking of certificates in a scalable way. SCEP support is included to allow a quicker and smoother integration of the ClickShare Base Unit and Buttons into the corporate network. Since most companies are using Microsoft Windows Server and its active directory (AD) to manage users and devices our SCEP implementation is specifically targeted at the Network Device Enrolment Service (NDES) which is part of Windows Server 2008 R2 and Windows Server 2012. No other SCEP server implementations are supported.

ClickShare Network Integration Wizard

Enter necessary data

Domain:

SCEP server:

SCEP username:

SCEP password:

Identity:

Corporate SSID:

Image 9-24

About NDES

The Network Device Enrollment Service is Microsoft's server implementation of the SCEP protocol. If you want to enable EAP-TLS using SCEP make sure NDES is enabled, configured and running on your Windows Server. For more details about setting up NDES, please visit the Microsoft website³. SCEP uses a so called "challenge password" to authenticate the enrollment request. For NDES, this challenge can be retrieved from your server at: `http(s)://[your-server-hostname]/CertSrv/mscep_admin`.

When you enter the necessary credentials into the setup wizard, the Base Unit will automatically retrieve this challenge from the web page and use it in the enrollment request, thereby fully automating the process.

Necessary Data to continue:

Domain	The company domain for which you are enrolling, should match with the one defined in your Active Directory.
SCEP ServerIP/host-name	This is the IP or hostname of the Windows Server in your network running the NDES service. Since Internet Information Services (IIS) supports both HTTP and HTTPS, also include which of the two you want to use. If not provided it will be default set to HTTP. E.g.: <code>http://myserver</code> or <code>https://10.192.5.1</code> or <code>server.mycompany.com</code> (will use http)
SCEP User name	This is a user in your Active Directory which has the required permission to access the NDES service and request the challenge password. To be sure of this, the user should be part of the CA Administrators group (in case of a stand-alone CA) or have enroll permissions on the configured certificate templates.
SCEP Password	The corresponding password for the identity that you are using to authenticate on the corporate network. Per Base Unit, every Button uses the same identity and password to connect to the corporate network.
Domain	The company domain for which you are enrolling should match the one defined in your Active Directory.
Identity	Identity of the user account in the Active Directory which will be used by the ClickShare Buttons to connect to the corporate network. When using EAP-TLS make sure that the necessary mapping exists between the Client Certificate issued by your CA and this user account.
Corporate SSID	The SSID of your corporate wireless infrastructure to which the ClickShare Buttons will connect.

Using manually upload of certificates

Select the radio button next to *Provide certificates manually* and click **Next**.

If your current setup does not support SCEP or you prefer not to use it but you still want to benefit of the mutual authentication EAP-TLS offers, it is also possible to manually upload the necessary certificates.

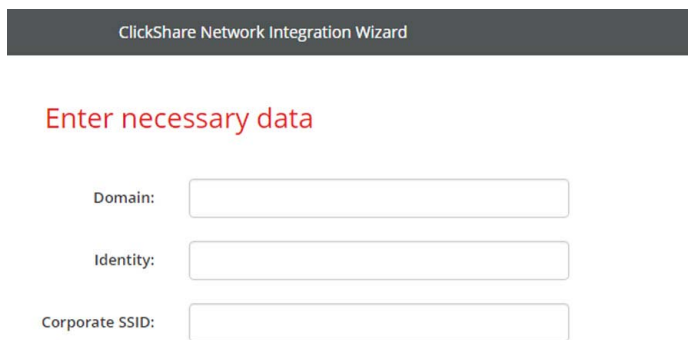


Image 9-25

Necessary Data to continue:

Domain	The company domain for which you are enrolling, should match with the one defined in your Active Directory.
Identity	Identity of the user account in the Active Directory which will be used by the ClickShare Buttons to connect to the corporate network. When using EAP-TLS make sure that the necessary mapping exists between the Client Certificate issued by your CA and this user account.
Corporate SSID	The SSID of your corporate wireless infrastructure to which the ClickShare Buttons will connect.

Click **Next** to continue with the upload of the client certificate.

Click **Upload Client Certificate**.

The client certificate you provide should be signed by the authoritative root CA in your domain and should be linked to the user you specify in the Identity field. Also, make sure that the client certificate you provide contains the private key – this is necessary to set up the TLS connection successfully.

3. NDES White Paper: <http://social.technet.microsoft.com/wiki/contents/articles/9063.network-device-enrollment-service-ndes-in-active-directory-certificate-services-ad-cs-en-us.aspx>

ClickShare supports 2 formats for uploading a client certificate:

- *PKCS#12 (.pfx)* - An archive file format for storing multiple cryptography objects.
- *Privacy Enhanced Mail (.pem)* – A Base64 encoded DER certificate stored between 2 tags:
"-----BEGIN CERTIFICATE-----" and "-----END CERTIFICATE-----".



When the provided PKCS#12 file also contains the necessary CA certificate the Base Unit will extract it and verify the chain of trust to avoid that you have to separately provide the CA certificate.

CA certificate

The CA certificate is the certificate of the authoritative root CA in your domain and will be used in setting up the EAP-TLS connection. During the wizard the Base Unit will ensure that it can validate the chain of trust between the Client and CA certificates you provide.

ClickShare supports the common .crt file extension which can contain a Base64 encoded DER certificate.



When having problems connecting the Button to your corporate network, to get feedback from the Button please have a look at the ClickShare Client log. This log can be pressing the holding Shift key when starting the Client executable. Look for the lines *"EDSUSB DongleConnection::mpParseDongleMessages"*. An error code and a short summary of the issue should be logged.

9.14 Network integration, EAP-TTLS security mode

About EAP-TTLS

EAP-TTLS (Tunneled Transport Layer Security) is an EAP implementation by Juniper networks. It is designed to provide authentication that is as strong as EAP-TLS, but it does not require each user to be issued a certificate. Instead, only the authentication servers are issued certificates. User authentication is performed by password, but the password credentials are transported in a securely encrypted tunnel established based upon the server certificates.

User authentication is performed against the same security database that is already in use on the corporate LAN: for example, SQL or LDAP databases, or token systems. Since EAP-TTLS is usually implemented in corporate environments without a client certificate we have not included support for this. If you prefer using client certificates per user we suggest using EAP-TLS.

How to start up for EAP-TTLS

1. Log in to the *Configurator*.
2. Click *WiFi & Network* → *Network integration*. Click on **Change configuraton**.
3. Select the radio button next to *EAP-TTLS* and click **Next**.

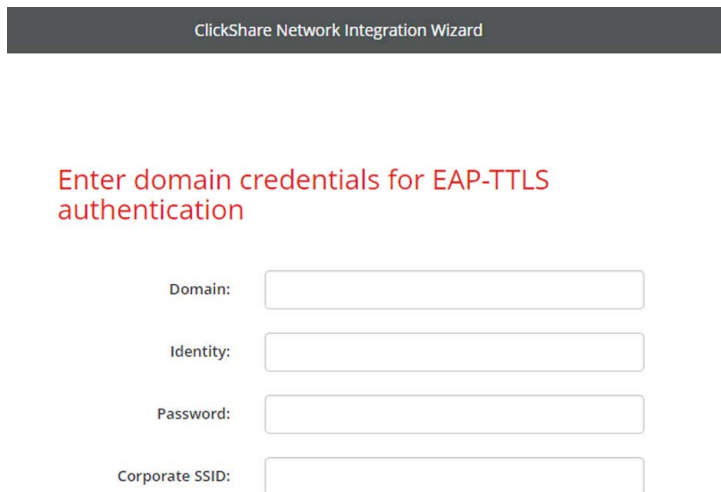


Choose Security Mode

- EAP-TLS
- EAP-TTLS
- PEAP
- WPA2-PSK
- Disable (Use built-in Wi-Fi)

Image 9-26
Network integration, EAP-TTLS selected

The EAP-TTLS mode window opens.



ClickShare Network Integration Wizard

Enter domain credentials for EAP-TTLS authentication

Domain:

Identity:

Password:

Corporate SSID:

Image 9-27

Necessary Data to continue:

Domain	The company domain for which you are enrolling, should match with the one defined in your Active Directory.
Identity	Identity of the user account in the Active Directory which will be used by the ClickShare Buttons to connect to the corporate network.
Password	The corresponding password for the identity that you are using to authenticate on the corporate network. Per Base Unit each Button will use the same identity and password to connect to the corporate network.
Corporate SSID	The SSID of your corporate wireless infrastructure to which the ClickShare Buttons will connect.

Click **Next** to continue.

When having problems connecting the Button to your corporate network, to get feedback from the Button please have a look at the ClickShare Client log. This log can be enabled by holding shift when starting the Client executable. Look for the lines “EDSUSB DongleConnection::mpParseDongleMessages”. An error code and a short summary of the issue should be logged.

9.15 Network integration, PEAP security mode

About PEAP

PEAP (Protected Extensible Authentication Protocol) is an EAP implementation co-developed by Cisco Systems, Microsoft and RSA Security. It sets up a secure TLS tunnel using the servers CA certificate after which actual user authentication takes place within the tunnel. This way of working enables it to use the security of TLS while authenticating the user but without the need for a PKI.

The standard does not mandate which method is to be used to authenticate within the tunnel. But in this application note, with regard to PEAP, we are referring to PEAPv0 with EAP-MSCHAPv2 as the inner authentication method. This is one of the two certified PEAP implementations in the WPA and WPA2 standards – and by far the most common and widespread implementation of PEAP.

How to start up for PEAP

1. Log in to the *Configurator*.
2. Click *WiFi & Network* → *Network integration*. Click on **Change configuraton**.
3. Select the radio button next to *PEAP* and click **Next**.

ClickShare Network Integration Wizard

Choose Security Mode

- EAP-TLS
 EAP-TTLS
 PEAP
 WPA2-PSK
 Disable (Use built-in Wi-Fi)

Image 9-28
Network integration, PEAP selected

The PEAP mode window opens.

ClickShare Network Integration Wizard

Enter domain credentials for PEAP authentication

Domain:
 Identity:
 Password:
 Corporate SSID:

Image 9-29

Necessary Data to continue:

Domain	The company domain for which you are enrolling, should match with the one defined in your Active Directory.
Identity	Identity of the user account in the Active Directory which will be used by the ClickShare Buttons to connect to the corporate network.
Password	The corresponding password for the identity that you are using to authenticate on the corporate network. Per Base Unit each Button will use the same identity and password to connect to the corporate network.
Corporate SSID	The SSID of your corporate wireless infrastructure to which the ClickShare Buttons will connect.

Click **Next** to continue.

When having problems connecting the Button to your corporate network, to get feedback from the Button please have a look at the ClickShare Client log. This log can be pressing the holding Shift key when starting the Client executable. Look for the lines "EDSUSB DongleConnection::mpParseDongleMessages". An error code and a short summary of the issue should be logged.

9.16 Network integration, WPA2-PSK security mode

About WPA2-PSK

WPA2-PSK does not distinguish between individual users, there is 1 password (PSK – Pre-Shared Key) for all clients connecting to the wireless infrastructure. This makes setup very straightforward. Once connected, all data transmitted between client and AP (access point) is encrypted using a 256 bit key.

How to start up for WPA2-PSK

1. Log in to the *Configurator*.
2. Click *WiFi & Network* → *Network integration*. Click on **Change configuraton**.
3. Select the radio button next to *WPA2-PSK* and click **Next**.

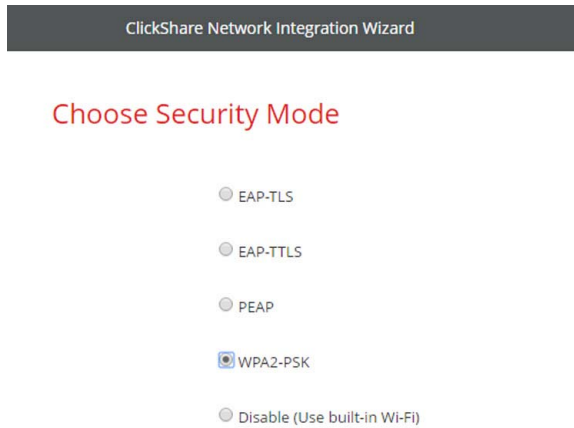


Image 9-30
Network integration, WPA2-PSK selected

The WPA2-PSK mode window opens.

Necessary Data to continue:

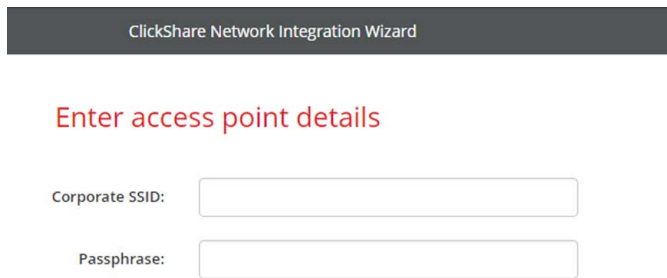


Image 9-31

Corporate SSID	The SSID of your corporate wireless infrastructure to which the ClickShare Buttons will connect.
Passphrase (Pre-shared key)	The key used in WPA2-PSK to authenticate onto the wireless infrastructure. This can be a string of 64 hexadecimal digits or a passphrase of 8 to 63 printable ASCII characters.

Click **Next** to continue.

When having problems connecting the Button to your corporate network, to get feedback from the Button please have a look at the ClickShare Client log. This log can be pressing the holding Shift key when starting the Client executable. Look for the lines *"EDSUSB DongleConnection::mpParseDongleMessages"*. An error code and a short summary of the issue should be logged.

9.17 Services, mobile devices

ClickShare app

This function enables the possibility to connect with a mobile device using the ClickShare app to connect to the Base Unit.

It is enabled by default. When the Base Unit is integrated in the corporate network, it may be required to disable content sharing from the ClickShar app.

About streaming information via AirPlay

Before you can stream information and display it via ClickShare your device must be connected with the wireless network of the Base Unit. Then AirPlay must be activated on your device. For more information about activating AirPlay, consult the user guide of your device.

About streaming via Google Cast

Before you can mirror information and display it via ClickShare your device must be connected with the wireless network of the Base Unit. When activating Google Cast on your device an overview of the access points is given. For more information about using Google Cast, consult the user guide of your device.

Google Cast does not support a passcode.



Google Cast can only be used when the clock of the Base Unit is set correctly. If not Google Cast cannot make a connection with the Base Unit.

How to enable

1. Log in to the *Configurator*.
2. Click *WiFi & Network* → *Services*.

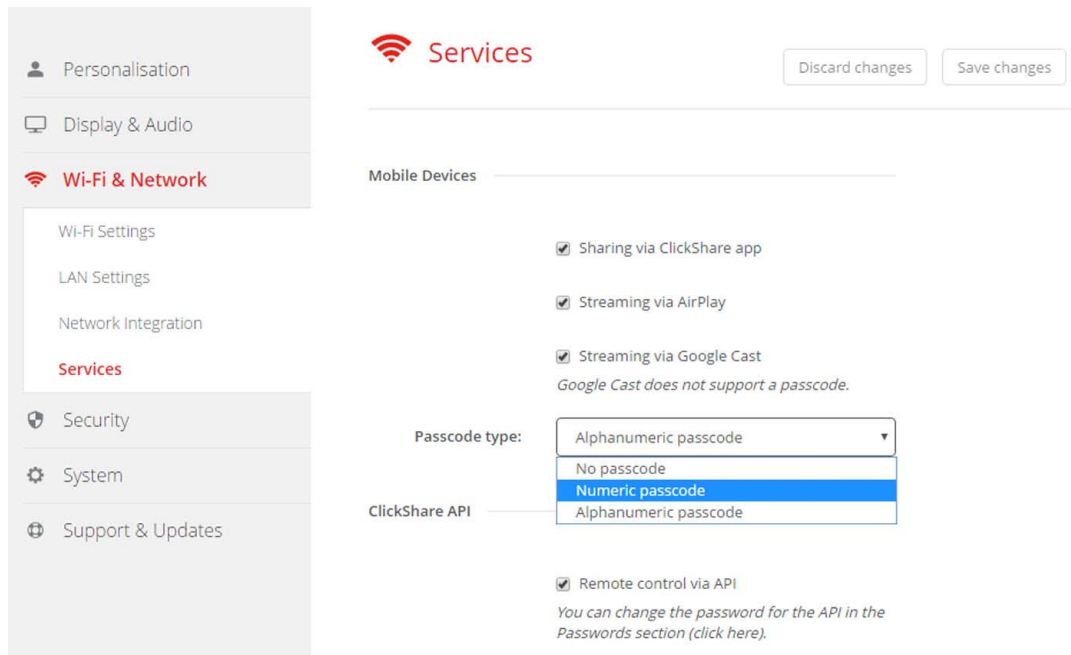


Image 9-32
Services, mobile devices

3. To allow sharing content via ClickShare app, check the check box in front of *Sharing via ClickShare app*.
To allow streaming via AirPlay, check the check box in front of *Streaming via AirPlay*.
To allow streaming (mirroring) via Google Cast, check the check box in front of *Streaming via Google Cast*.
4. To add a passcode, click on the drop down and select the desired passcode (not for Google Cast).
The following options are possible:
 - No passcode
 - Numeric passcode
 - Alphanumeric passcode
5. Click **Save changes** to apply this setting.
Access via mobile devices is activate.

9.18 Service, ClickShare API, remote control via API

About API settings

The API can be enabled or disabled, that means that the access to the unit from an external device can be allowed or can be blocked. This functions in enabled by default.

How to enable

1. Log in to the *Configurator*.
2. Click *WiFi & Network* → *Services*.

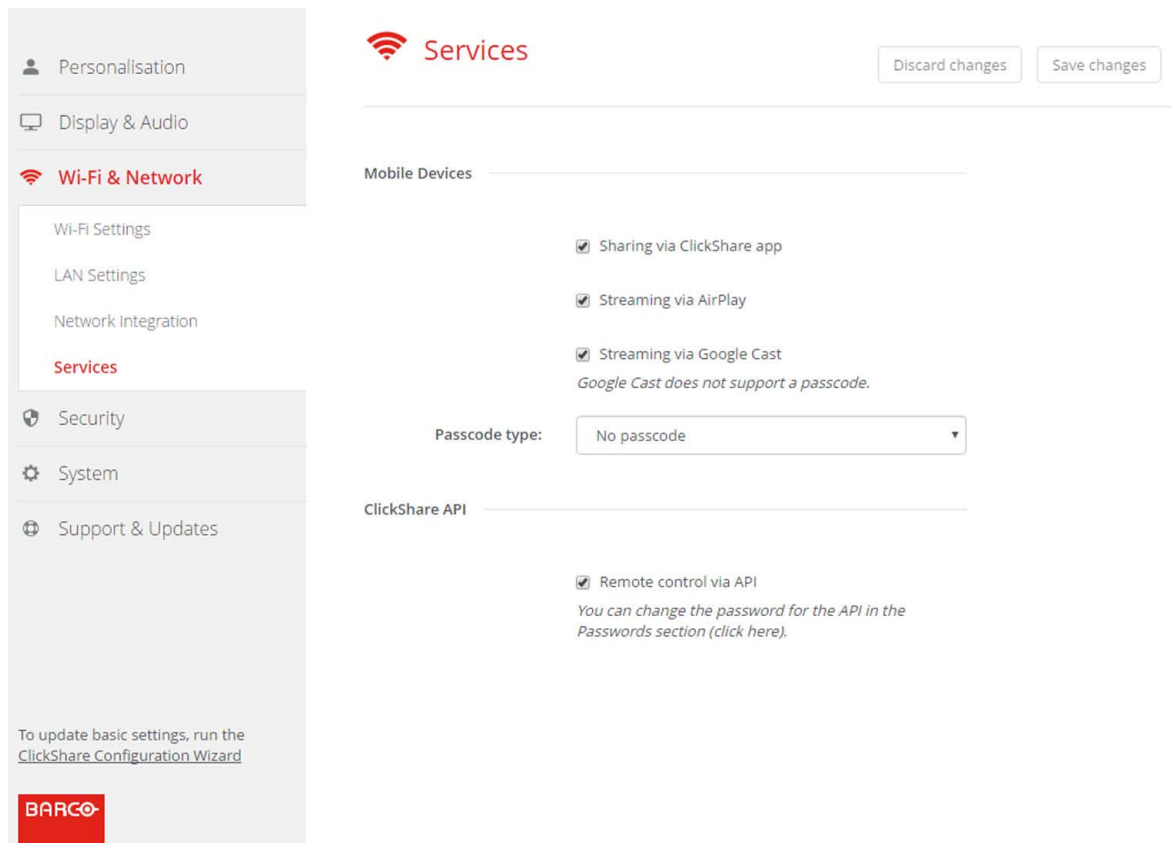


Image 9-33
ClickShare API setting

3. Check the check box in front of *Remote control via API* to enable this function.
Checked: remote control via API is allowed. A password can be used to protect the access.
Not checked: no remote control via API allowed.

9.19 CMGS Server Integration

About the CMGS Server integration

The CSE-200 Base unit can be integrated within the company network and controlled via the CMGS server application depending on the user rights.

How to integrate

1. Log in to the *Configurator*.
2. Click *WiFi & Network* → *Services*.

Image 9-34
CMGS Server integration

3. Click in the CMGS Server input field and enter the IP address or hostname of the CMGS server.
4. Click **Save changes** to apply the settings.

9.20 Security, compatibility

About the compatibility of Buttons

For Buttons with certificate (R9861500D1): this function allows Buttons with certificate to be paired with devices without certificate (CSC-1 and CSM-1).

For Buttons without certificate (R9861006D01): this function allows Buttons without certificate to be paired with Base Units with certificate (CSE-200 and CSE-800).

Consider the following remarks:

- For CSE-200, software release V1.3.0 or higher is required. For CSE-800, software release 1.1 or higher is required.
- These buttons can only be paired when security level 1 is set.
When changing the security level to 2 or 3, a warning message will be display : "This change requires an update of the Button security settings. Please re-pair the Buttons with the Base Unit to transfer the change in security settings."

How to activate

1. Log in to the *Configurator*.
2. Click *Security* → *Compatibility*.

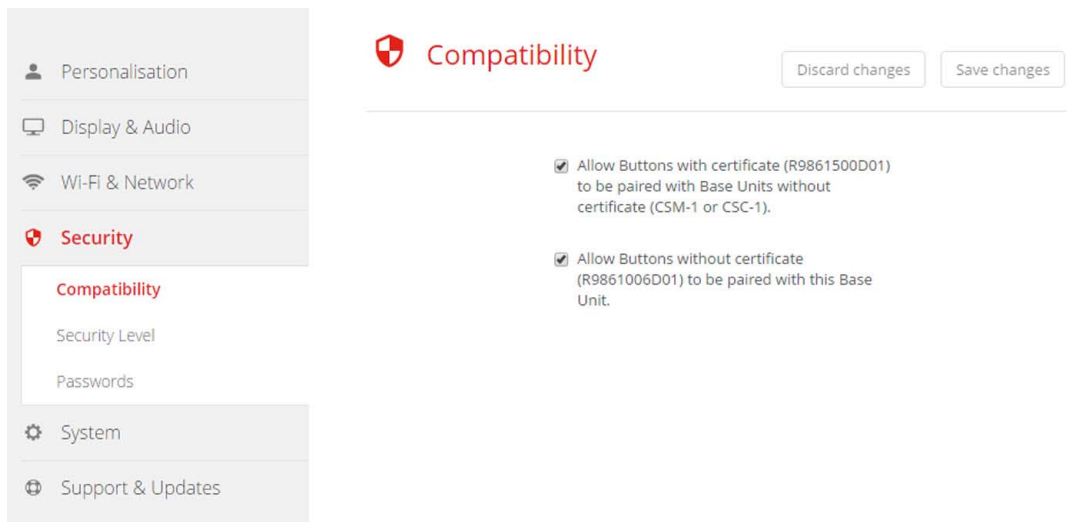


Image 9-35
Compatibility

3. Check the check box next to *Allow Buttons with certificate...* .
 Checked: allowed to pair with devices without certificate.
 Not checked: not allow to pair with devices without certificate.
4. Check the check box next to *Allow Buttons without certificate...*
 Checked: allow to pair with this Base Unit. Pairing can only be done when security level is set to 1. When a higher security level was set when checking the check box a message "Due to your changes the security level is downgraded to level 1".
 Not checked: not allow to pair with this device.
5. Click **Save changes** to apply the setting.



Changing the *Compatibility* setting will require a repairing of the Buttons used with this Base Unit.

9.21 Security, security level

About security levels

For the use of the ClickShare system, a security level can be set. By default, level 1 is activated. A security level is a predefined set of settings which are automatically set when a level is selected.

Level 1 : offers support for normal day-to-day operations in any organization.

Level 1 contains the standard security options and encryption of audio and video data.

The standard security options are:

- PIN code activation for mobile apps and Buttons,
- WebUI access via HTTPS with login management,
- no wireless WebUI access,
- SSID of Wi-Fi network is hidden.

Level 2 : this level offers a higher degree of security, fit for organizations that are more sensitive to security matters.

Level 2 contains the level 1 security and a mandatory PIN code for mobile devices. Alphanumeric PIN codes for mobile apps and Buttons and the Buttons require a certificate for pairing.

Level 3 : this level is used for organizations that have extremely strict requirements with regards to security.

Level 3 contains the level 2 security extended with blocking of mobile apps, downgrading firmware not possible and no wireless access to the configurator (WebUI).

When a security level is set, the individual items included in that security level can be changed using the individual item in the Configurator. When changing an individual item the security level indication will be adapted accordingly, but no other settings will be changed automatically.

E.g. when level 3 is set and you change mobile app blocking to allowed, then the security level indication will change to level 2. But all other items initially in level 3 remains in the level 3 state.



To reset your individual changes, select the desired security level and click **Save changes**.



Changing the security level will require a repairing of the Buttons.

Changing the security level from 1 to a higher level will change the compatibility setting for Buttons with certificate (R9861006D01). They cannot re-pair as long as the security setting is higher than level 1.

How to set the security level

1. Log in to the *Configurator*.
2. Click *Security* → *Security Level*.

	1	2	3
Activate passcode for mobile apps & Buttons	✓	✓	✓
Web UI: HTTPS, Log-in management, disable wireless access	✓	✓	✓
Hide the SSID of the Wi-Fi network	✓	✓	✓
Buttons require a hardware certificate for pairing		✓	✓
Mandatory passcode for mobile apps & services ²		✓	N/A
Alphanumeric passcode for mobile apps & services ²		✓	N/A
Mobile apps & services are blocked			✓
Firmware downgrade not possible			✓
No wireless access to Web UI			✓

Remarks:

¹ Changing the security level will require Button re-pairing.
² Google Cast does not support a passcode. You can disable Google Cast through the Services section ([click here](#)).

Image 9-36
Security levels

3. Select the desired security level icon.
4. Click **Save changes** to apply the setting.

9.22 Security, passwords

About passwords

To access the Configurator (WebUI) a user name and password is needed. That password can be changed at any time to protect the *ClickShare Configuration* settings.

The ClickShare API access is password protected. That password can be changed in the configurator.

Changing the WebUI password

1. Log in to the *Configurator*.
2. Click *Security* → *Passwords*.

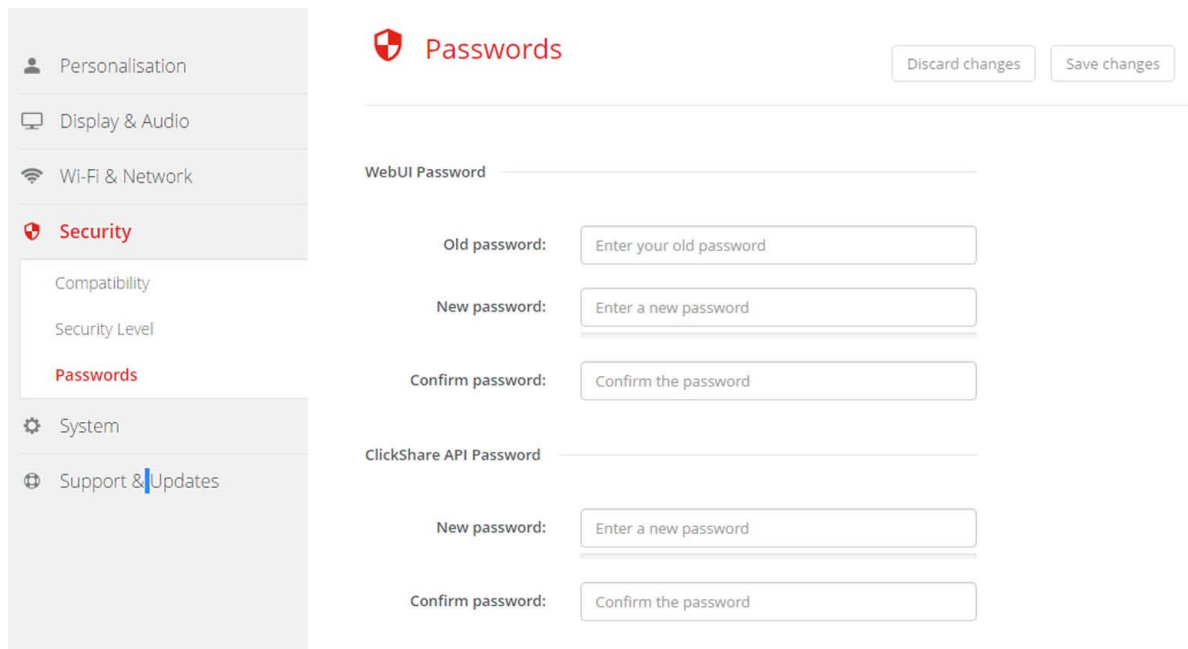


Image 9-37
Passwords

3. Click in the *WebUI Password* pane in the input field next to *Old password* and enter the old password.
4. Click in the input field next to *New password* and enter a new password.
5. Click in the input field next to *Confirm password* and enter the new password again.
6. Click **Save changes** to apply.

Changing the ClickShare API Password

1. Log in to the *Configurator*.
2. Click *Security* → *Passwords*.
3. Click in the *ClickShare API Password* pane in the input field next to *New password* and enter the new password.
4. Click in the input field next to *Confirm password* and enter the new password again.
5. Click **Save changes** to apply.

9.23 Status information Base Unit

Status information

The following information can be found:

- Model information, name and part number
- Serial number
- Firmware version
- First used
- Last used
- Current uptime: time since last startup
- Lifetime uptime: time used since first startup
- Overall status

Base Unit restart

1. Log in to the *Configurator*.
2. Click *Support* → *Base Unit Status*.

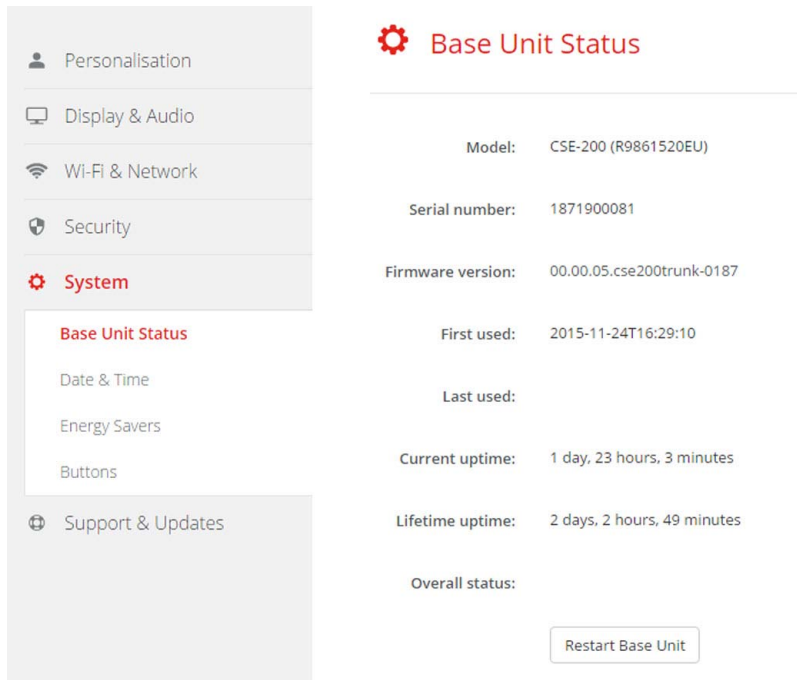


Image 9-38

- To restart the Base Unit, click on **Restart Base Unit**.

A ClickShare system reboot message with progress bar is displayed while rebooting takes place.

When the reboot is finished, a re-login is necessary.

9.24 Date & Time setup, manually

About Date & Time setup

The date and time can be set manually using the time zone indication or using at least one NTP servers.

How to setup

- Log in to the *Configurator*.
- Click *System* → *Date & Time*.

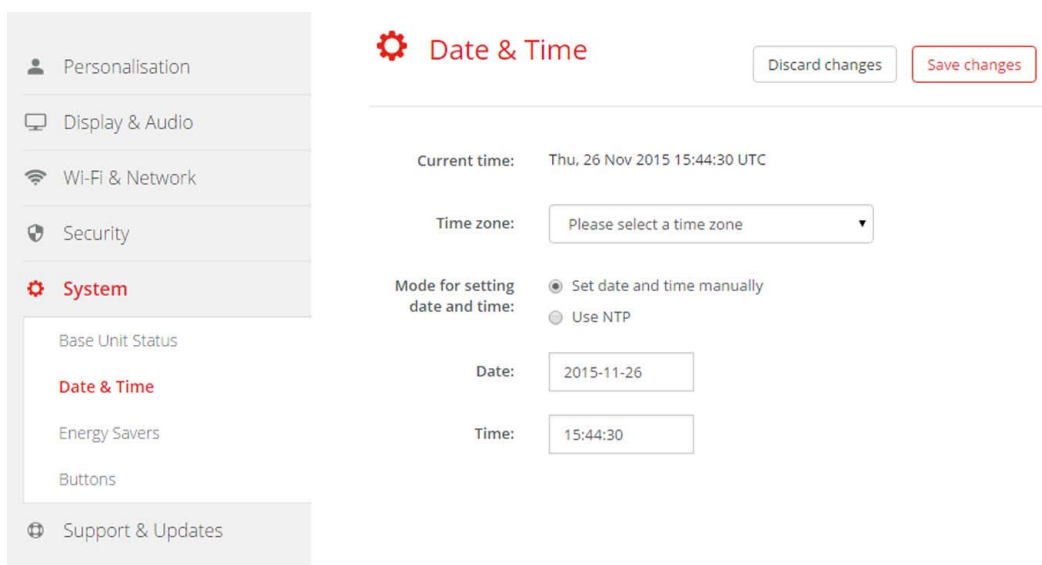


Image 9-39
Manual time & date update

The current time is indicated next to *Current time*.

- Select your time zone. Click on the drop down box next to *Time zone* and select the corresponding time zone.

4. Check the radio button in front of *Set time and date manually*.
5. To change the date, click in the input field next to *Date*.
A calendar window opens. The current date is indicated with a red background.

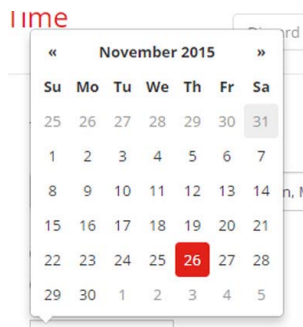


Image 9-40
Date selection

6. To change the month, click on the left or right arrows next the month name until the desired month and year are obtained.
Click on a number in the number field to setup the day.
7. To change the time, click in the time field next to *Time*.
A window with 3 scroll counters open.



Image 9-41
Time setup

8. Click on the up down arrow of each scroll counter until the correct hour, minutes and seconds are obtained.
9. Click **Save changes** to apply.

9.25 Date & Time setup, time server

About using NTP server

The clock is continuously synchronized with an external time server and the deviation is in the order of milliseconds. Extra time servers can be added.

As long as there is no synchronization with a time server the status is indicated as disabled.

How to setup

1. Log in to the *Configurator*.
2. Click *System* → *Date & Time*.

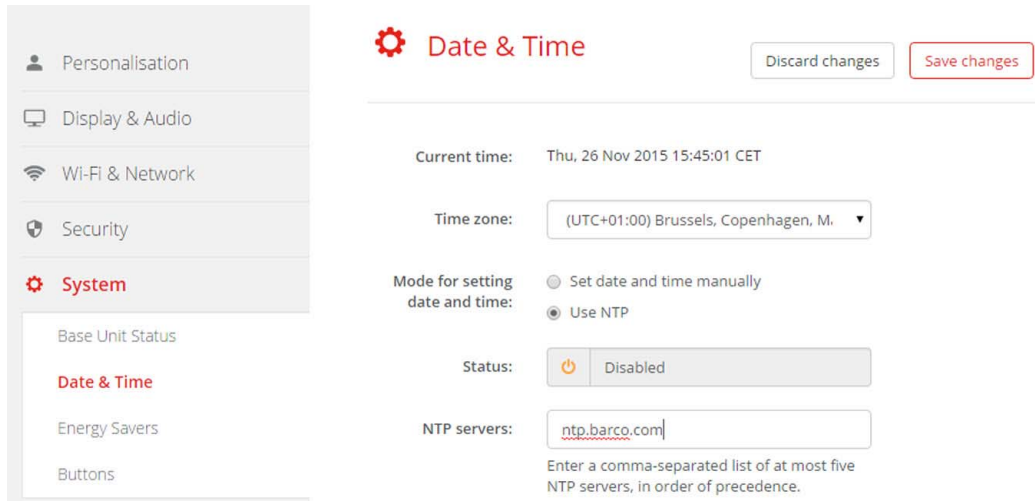


Image 9-42
Time server setup

The current time is indicated next to *Current time*.

3. Check the radio button next *Use NTP*.
4. Enter a NTP server address next to *NTP servers*. Enter the IP address or server name.
Note: *Multiple servers (maximum 5) can be added, separated by a comma.*
5. Click **Save changes** to apply.

A synchronization with the NTP server takes place. The status field indicates the progress.

9.26 Energy savers

About standby

Standby after (minutes): If there is no client connection detected during the standby timeout period, the Base Unit will enter the selected standby mode.

Default setting: Time to standby: 10 min, the Base Unit will enter the Eco standby mode.

Eco standby

When the Base Unit enters ECO standby mode, it will disable the HDMI output signal and go in low power mode. The Base Unit's LEDs will be breathing white to indicate the ECO standby mode.

Power consumption in Eco standby: 2.6W

The Base Unit will wake up with one of the following actions:

- Button or app connecting with the Base Unit
- Press the standby button on the Base Unit
- "Wake up" signal over the network
- Pairing a Button on the Base Unit's USB port
- Detection of display hot plug

Deep standby

When the Base Unit goes in Deep standby mode, it will shut down all processes, including the Wi-Fi access point and the (secondary) LAN connection.

For devices with two LAN interfaces (e.g. CSE-800), when there is an active network connected to the primary LAN connection and Corporate network is enabled, the primary LAN interface will remain active and the Base Unit's LEDs will be breathing white to indicate this standby mode. Otherwise, The Base Unit's LEDs will be dark.

Power consumption in Deep standby: 0.4W

The Base Unit will wake up when the standby button on the Base Unit is pressed, or

when the primary LAN interface remains active, a detection of HDMI input hot plug or button or app connecting with the Base Unit's primary LAN interface.

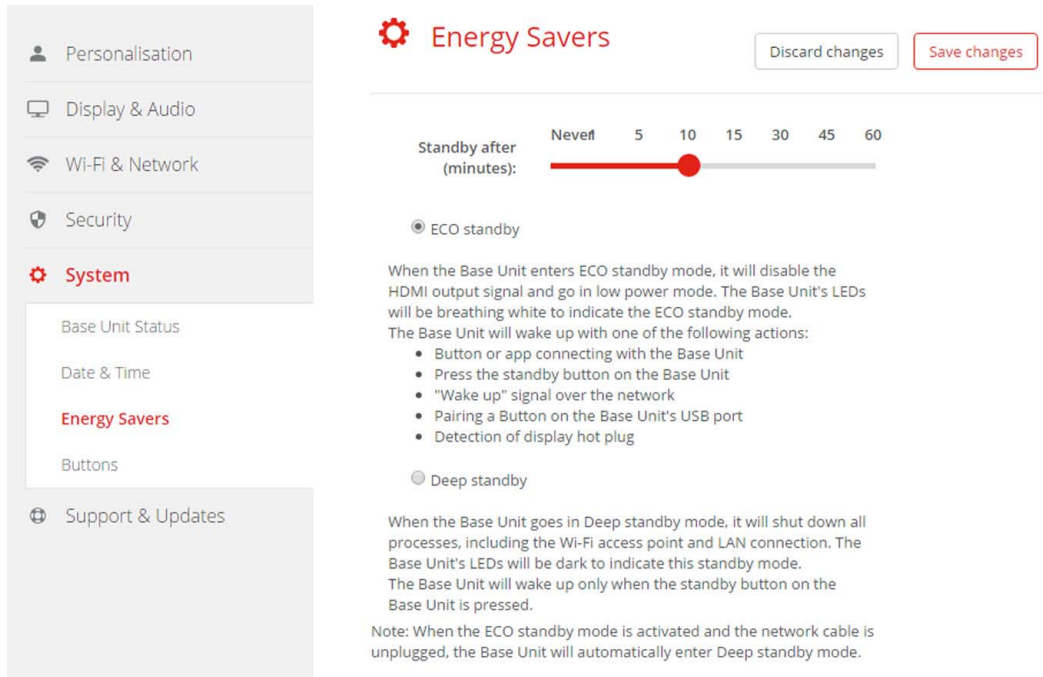


Image 9-43
Energy savers

How to change the display timeout and standby mode

1. Log in to the *Configurator*.
2. Click *System* → *Energy Savers*.
3. To set a display time out, move the slider to the left or to the right until the desired standby timeout is reached.
4. To select a standby mode, select the radio button before *Eco standby* or *Deep standby*.

9.27 Buttons

About Buttons

It is possible to update the software of the Buttons over Wi-Fi. All Buttons used with the Base Unit are indicated in the Buttons List. The list contains the state, the signal strength, the serial number, the firmware version, the number of connections and last connection.

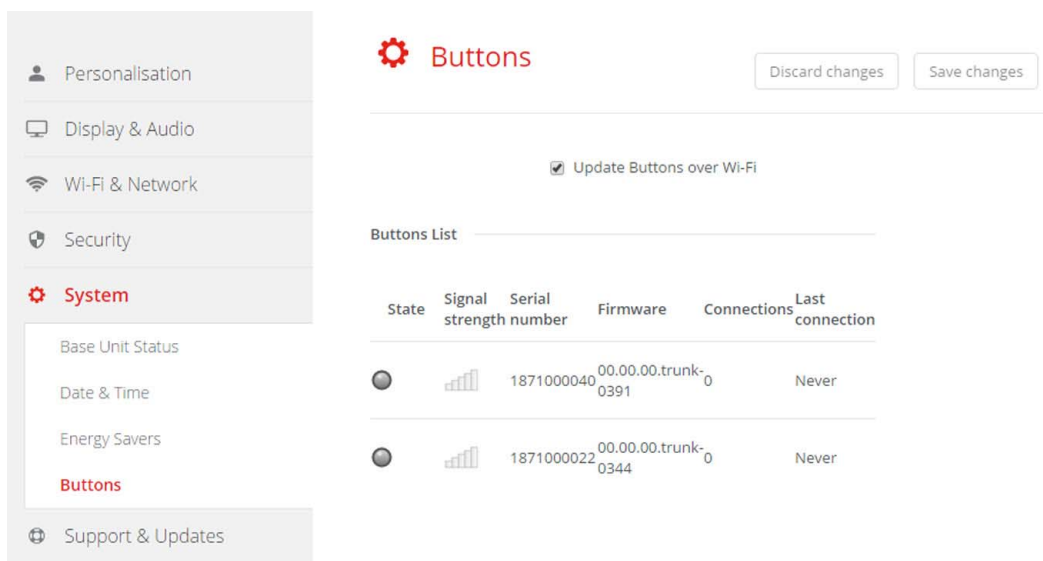


Image 9-44
Buttons

How to enable update over Wi-Fi

1. Log in to the *Configurator*.
2. Click *System* → *Buttons*.
3. Check the check box in front of *Update Buttons over Wi-Fi*.

9.28 Firmware Update

About Software update

The software of the Base Unit can be updated via the web interface. The latest version of the software is available on Barco's website.

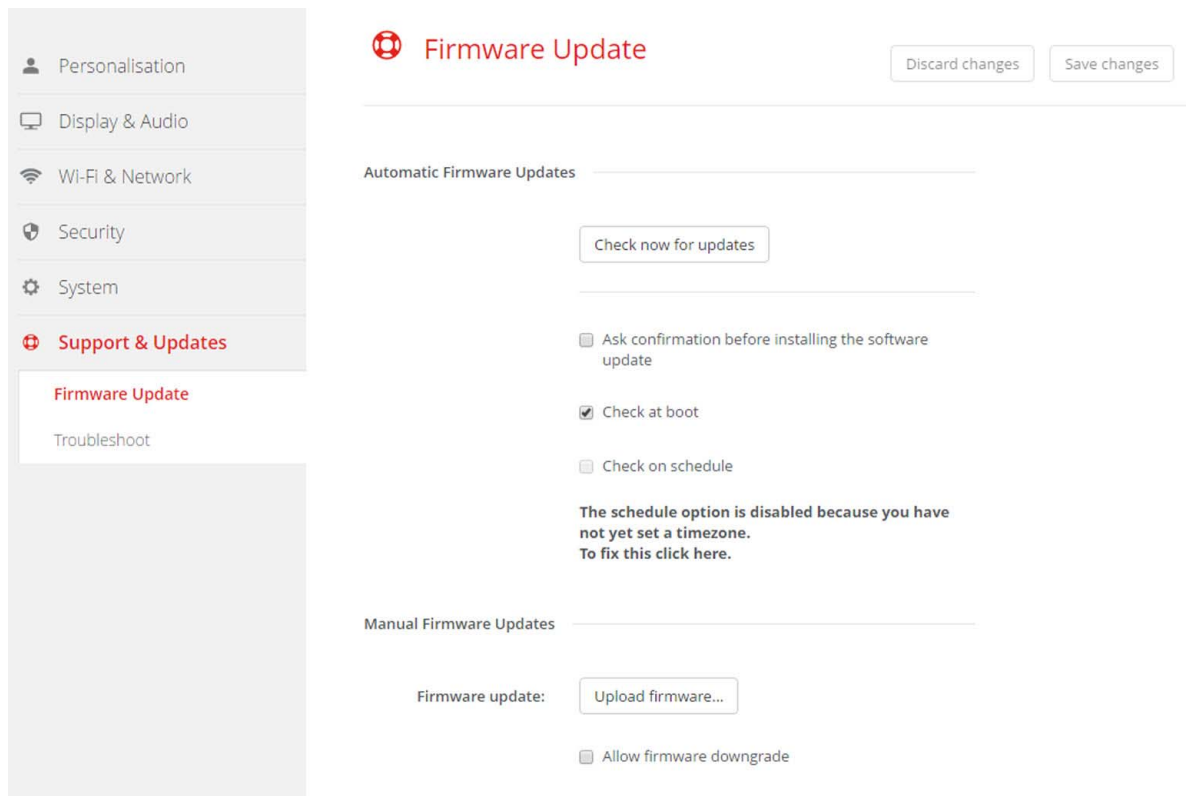


Image 9-45
Firmware update

About automatic firmware updates

Automatic firmware updates can be triggered in 3 ways:

- triggered via a scheduled time
- triggered at boot
- manual trigger

How to start an Automatic firmware update

1. Log in to the *Configurator*.
2. Click *Support & Updates* → *Firmware*.
3. To check immediately if new software versions are available, click on **Check now for updates**.

The system checks if new firmware is available and uploads this automatically to the Base Unit.

4. To ask a confirmation before installing the software update, check the check box in front of *Ask confirmation...*

5. To check for new software at boot, check the check box *Check at boot*.

During booting up, when new firmware is found, this firmware will be loaded and the Base Unit will reboot.

6. To use a schedule, check the check box in front of *Check on schedule*.
Click on the drop down box and select the desired time slot.

Note: Select a time slot where you are sure the Base Unit will not be in use.

When new firmware is available, this firmware will be loaded and the Base Unit will reboot.

Manual firmware update

1. Download the latest version of the software from Barco's website.
2. Log in to the *Configurator*.
3. Click *Support & Updates* → *Firmware*.
4. To upload a firmware version, click on **Upload firmware...**

A browser window opens.

5. Browse to the file with the new software and click **Open** to start the upload.

Note: *This should be an .nad file. You might have to unzip the file downloaded from Barco's website.*

Note: *Updating the software to the Base Unit takes several minutes. Progress can be followed on the meeting room display.*

The Base Unit software is updated.



If a firmware downgrade is allowed on the Base Unit, check the check box in front of *Allow firmware downgrade*.

9.29 Support & Updates, Troubleshoot, log settings

About logging

Both Button and Base Unit log data is saved in log files on the Base Unit. These log files can contain debugging information. They can be downloaded on a local computer and cleared on the Base Unit. Debug logging covers only a few hours before it will be overwritten. Therefore, it is important if you discover a problem with your system to download the logging immediately.

How to use

1. Log in to the *Configurator*.
2. Click *Support & Updates* → *Troubleshoot*.

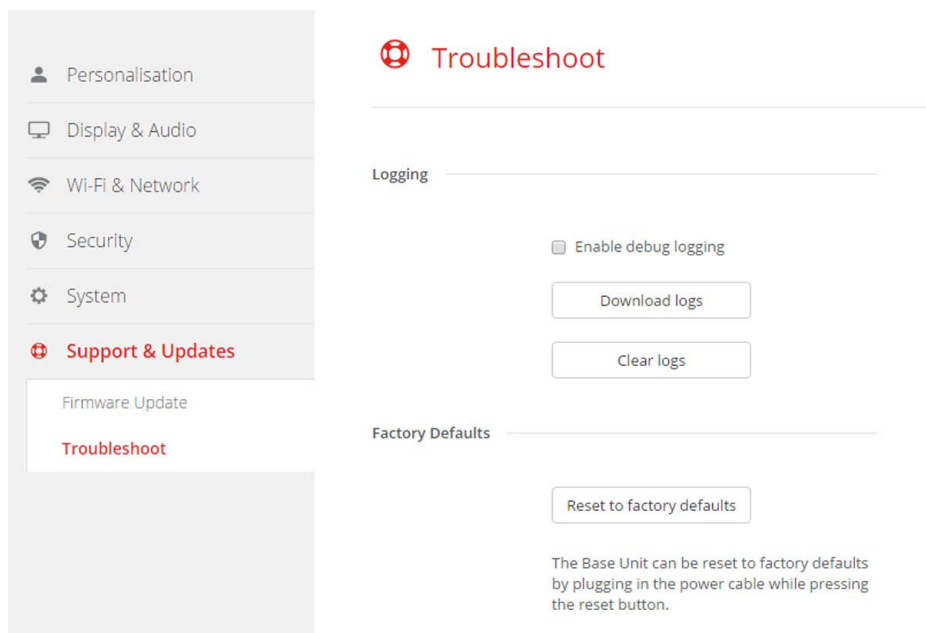


Image 9-46
Troubleshoot, logging

3. To create a debug log, check the check box next to *Enable debug logging*.
4. Reproduce the issue you want to report.
5. To download the current log file, click on **Download logs**.
6. To clear the current log file, click **Clear logs**.
7. To enable logging by the ClickShare client (6):

- If the launcher service is running hold down the shift key while connecting the Button to the PC, until logging is started.
- If the launcher service is not running : hold down the shift key while double clicking the ClickShare application.

The following message appears on the sys tray:

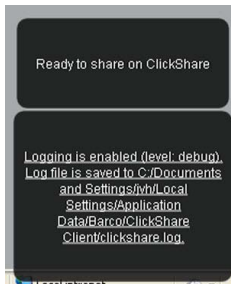


Image 9-47
Client logging

9.30 Factory defaults

About default settings

The ClickShare Base Unit can return to the factory default settings.

The following settings are the defaults:

- Meeting room identification info is cleared.
- Language is set to English.
- Custom wallpapers are removed and the default wallpaper is restored.
- Standby timer is reset to 10 min.
- Hostname and SSID is set to *clickshare-serialnumber*.
- The SSID is broadcasted
- WiFi password is reset to *clickshare*.
- The default WiFi channel is set back to frequency 5 GHz, channel 36.
- The update history is cleared.
- The table with the associated Buttons is cleared.
- The admin password is reset to *admin*.
- Debug logging and remote logging are disabled.



Restoring to factory defaults will require a repairing of the Buttons used with this Base Unit.

How to restore factory defaults

1. Log in to the *Configurator*.
2. Click *Support & Updates* → *Troubleshoot*.

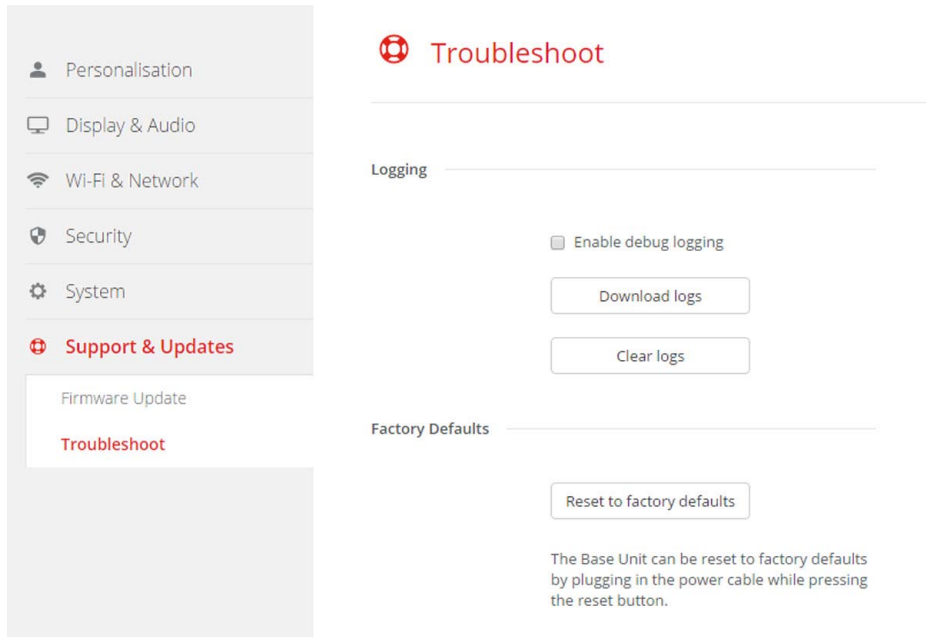


Image 9-48
Troubleshoot, factory defaults

3. Click **Reset to factory defaults**.

The following message is displayed: "This action will remove all settings of the Base Unit and replace them with the default settings. Are you sure you want to continue?"

4. If you want to continue, click **Yes, remove all settings** otherwise click **No, I changed my mind**.

When yes is clicked, the system starts a reboot.



Alternative way: The Base Unit can be reset to factory defaults by plugging in the power cable while pressing the reset button.

10. SOFTWARE UPDATES

10.1 Software update

About Software updates

There are two ways to update the Base Unit software:

- via the Configurator, for more information, see "Firmware Update", page 73.
- by copying the software on a USB stick

To update the Base Unit software by copying the software on a USB stick

1. Download the latest version of the software from Barco's website, , www.barco.com/clickshare. Click on **Visit the ClickShare product page** and go to tab **Downloads**
2. Unzip the zip file.
3. Copy the ENC file to a USB stick.
4. Rename the file to `clickshare_firmware.enc`.
Renaming is necessary as the software will look for that specific filename on the device.
5. Insert the USB stick into the USB port at the front of the Base Unit.
6. Follow the instructions on the meeting room screen.
7. When the on-screen message indicates that the process is finished, remove the USB stick.
The Base Unit reboots.

11. MAINTENANCE OF THE PRODUCT

11.1 Maintenance of your ClickShare

Maintenance

No specific periodic maintenance is needed.

12. TROUBLESHOOTING

12.1 Step by step support procedure

Handle as follow for the Base Unit:

1. Set up the unit in a **stand-alone** environment. Connect a monitor, known as working with ClickShare.
2. Check if the base unit starts up normally.

If the wallpaper does not appear or the LEDs are blinking red. Reset the Base unit by pushing the small recessed button at the bottom of the Base unit.
3. Is it successful?

If yes, update the Base Unit to the latest software version and continue with the button test.

If no, apply the software emergency recovery procedure (only for 2nd line support). Update to the latest software version if recovery stick contains old version). If not successful, Base Unit can be considered as broken.

Handle as follow for the Buttons:

1. Pair each button with the Base unit.
2. Try sharing with each button from a PC or laptop, known as working properly with ClickShare.

If it fails, button can be considered as broken.

When a problem is discovered:

1. Write down the serial numbers of the Base unit and Buttons. Indicate which were not working before and after completing the service procedure.
2. Escalate to the next service level and add log files and a description of the problem together with the list in step 1. If necessary, add also information about the installation environment and other equipment involved.

12.2 Troubleshooting list

Problem solving

Locate the problem you are experiencing in the table below and apply the solution.

Problem	Cause	Solution
Quality of the image on the meeting room display is not satisfactory	The quality or length of the cable between the Base Unit and the display or the connection between these two.	<ul style="list-style-type: none"> • Replace the cable. • Use another cable.
Users have a bad wireless connection. The connection from the Button to the Base Unit keeps falling away.	Wireless congestion	<ul style="list-style-type: none"> • Use a WiFi scanner to find a free wireless channel and select it via the web interface. You can use commercial as well as free online tools such as inSSIDer or Xirrus for this.
	Low signal strength	<ul style="list-style-type: none"> • Put the Base Unit closer to the meeting room table. • Remove or limit as much as possible all obstructions between the Buttons and the Base Unit.
Configurator is not accessible	Browser	<ul style="list-style-type: none"> • Use another browser (version). • Check the browser settings.
	No connection	<ul style="list-style-type: none"> • There are three methods to access the web interface. Refer to the corresponding chapter of the documentation. • Check the proxy settings

12. Troubleshooting

Problem	Cause	Solution
Users do not get a ClickShare drive when inserting the Button in their laptop.	<ul style="list-style-type: none"> No automatic refresh of drives Windows tries to assign the ClickShare drive to an already reserved drive letter 	<ul style="list-style-type: none"> Refresh your view on the laptop. Use Microsoft Windows Disk Management to assign it to a free drive letter.
	Bad connection at USB port on the laptop	<ul style="list-style-type: none"> Reconnect to the USB port. Try another USB port. Reboot the laptop.
	<ul style="list-style-type: none"> Some types of USB devices might be blocked as a company policy. USB port settings on the laptop might limit the usage of high power USB devices when on battery power. 	If possible, change the USB port policy on the laptop.
Low video performance	Laptop performance	<ul style="list-style-type: none"> Lower the screen resolution of the laptop. Disable the hardware acceleration for video. Use only a part of the display to show the video. Right click ClickShare icon in system tray and click on Capture mode to toggle the current setting..
	Wireless connectivity	See "Users have bad connectivity"
Video is not shown on screen	Player uses overlays	Disable the usage of overlays in the preferences of the video player.
Some programs of Windows are not shown on the display	Use of overlays, 3D or hardware acceleration in the GPU	<ul style="list-style-type: none"> Disable overlays or hardware acceleration in the GPU. Disable AeroGlass in Windows 7 Upgrade the Base Unit to the latest software version.
When using Windows 7 the following message about the Windows Aero color scheme appears: "Windows has detected your computer's performance is slow. This could be because there are not enough resources to run the Windows Aero color scheme. To improve...".	ClickShare uses resources from the GPU. In combination with other programs which do so, Windows 7 sometimes shows this message suggesting to disable Aero to improve the performance of your laptop.	It is safe to ignore this message and choose 'Keep the current color scheme'.
Your screen is not shown on the display when pressing the Button	You are the second person that wants to share content. Only one screen can appear simultaneously	Click and hold the button for 2 seconds to use the Show me full screen function.
	The ClickShare software is not running.	Go to the ClickShare drive and run the software.
Your content is removed from the display and the LEDs on the button are blinking white	Connection to the Base Unit is lost.	ClickShare tries to restore the connection automatically. If it fails, the LEDs on the Button start blinking red. Unplug the button from your laptop and try a new button.
Nothing is shown on the displays at all.	The displays are switched off.	Switch on the displays.
	The display cable is not correctly connected	Insert the display cable to the display and the Base Unit.
	The display does not recognize or is not able to display the Base Unit output resolution.	Change the corresponding setting via the web interface.
	The Base Unit is in standby mode	Briefly push the standby button on the Base Unit or insert a button and run the ClickShare software.
Bad WiFi connectivity	Congestion of the wireless channel	Use wireless network scan tools to look for free or the least congested channels.

Problem	Cause	Solution
	Metal cabinets, walls, construction elements, ... can cause reflections deteriorating the wireless signal. Obstructions between Buttons and Base Unit cause lowering of the wireless strength and quality.	Move the Base Unit to another place in the room.
		Avoid placing it inside cabinets, false ceiling, below the table, behind a wall, in another room,
		Check out the ClickShare White paper on WiFi See www.barco.com/clickshare .
Configurator shows error in the processes "WiFi Access Point Daemon" and/or "DHCP Server"	Configuration file is corrupted	In the Configurator, goes to Support & Updates, click on Troubleshoot and press "Reset to factory defaults".
ClickShare Base Unit does not start up correctly	Configuration file is corrupted	In the Configurator, goes to Support & Updates, click on Troubleshoot and press "Reset to factory defaults".
No LAN connection with the Base Unit	Wrong IP address	IP address is not within your LAN range.
		DHCP is not enabled.
No WiFi connection with Base Unit	SSID not correct	Enter the correct SSID

12.3 Frequently asked questions

12.3.1 List of FAQs

Features

For the latest version of this list, please visit www.barco.com/clickshare and login to mybarco.

- Do you support iPad?
Yes
- Does ClickShare have a client software for Mac?
Yes, the client is available on the Button.
- Does ClickShare have a client software for Linux?
No. If you identify a demand for client software for Linux, please inform Product Management so we can reassess the need to support Linux.
- Do you have a master/CEO CSE-200 Button?
No, first the current user must remove his image before a second user can display his screen.
- What video outputs do you support?
The base unit has two video outputs: VGA and HDMI. It is possible to include the audio signal in the HDMI or DVI-I signal.
- Can you trigger display wake-up/stand-by?
After a predefined period (to be configured by the integrator) of inactivity, i.e. no CSE-200 Button is connected to the Base Unit, the base unit mutes the output signal towards the display or projector. Depending on the configuration of the display or projector, this can trigger a standby mode in the display or projector. As soon as a CSE-200 Button is connecting to the Base Unit, the Base Unit restores the signal to the display or projector, showing a welcome message or introduction screen.
Another way to restore the signal to the display or projector is a short press on the standby button of the Base Unit.
- Do you support audio?
Audio is available from a separate audio output from the Base Unit or on the HDMI signal.
- Does ClickShare support dual screen presentation mode in MS PowerPoint?
Yes.
- Do I need admin rights on my laptop to use ClickShare?
No, you do not need admin rights on your laptop to use ClickShare.
- Do I always need to start the application at the start of every meeting?
If you choose the "zero installation" scenario, you indeed have to start the application every time you start using a ClickShare button. For the rest of the meeting, you can simply click the Button to share your content or to remove it from the central screen.
If you want to avoid starting up the application each meeting, you can choose to install a service on your laptop. You can find this starter service installer on the ClickShare drive as well. Once installed, this service runs in the background. Upon detecting a ClickShare Button being plugged in, it starts the ClickShare application automatically. You will need administrator rights on the laptop to install this service.
- Does the ClickShare Button work with USB 3.0 ports?
The ClickShare Button is a USB 2.0 device. It will work on a USB 3.0 port as well.
- How does ClickShare maintain color depth for images?
ClickShare transfers and displays the image data using a 24 bit color depth in an RGB color space.

13. What prevents the shared content from being seen or accessed if the application on the Base Unit is hacked over the network? Is it possible?

There are two levels of security on ClickShare. First of all, the network between the Base Unit and the ClickShare Buttons is protected with WPA2-PSK authentication. In the unlikely case that this would be hacked, we arrive at the second level of encryption: the content itself that is sent over the network is also encrypted. Next to that, it is also interesting to note that we are not sending the file itself over the network, but only snapshots of the laptop's screen.

Performance

1. What frame rate can you guarantee?
Our target is 30 frames per second.
2. What is the maximum supported output resolution for the screen?
 - 1920 x 1080 for VGA
 - Full HD 1920 x 1080 for HDMI.
3. What is the maximum input/source resolution?
The average laptop resolution of 3 Megapixel can be handled by the system. The theoretical limitation on the input resolution is higher. However, video performance and image quality will deteriorate for such high resolutions.
4. Does ClickShare support extended desktop?
Yes
5. Does ClickShare support dual screen presentation mode in MS PowerPoint?
Yes

WiFi & Security

1. What WiFi security do you have?
 - Authentication protocol: WPA2-PSK
 - Encryption algorithms: CCMP

This is currently the best security protocol widely available.
2. Can I detect the ClickShare Base Unit when I scan for wireless networks/access points?
Yes, if not hidden.
3. Can I connect to the Base Unit via my PC Wifi card?
Yes, if broadcasted.
4. What is the maximum distance between Base Unit and ClickShare Button?
4) The typical maximum distance recommended for WiFi connections depends on the used band and environmental parameters. Typical values are 50m in free air for the 2.4 GHz band and 30m in free air for the 5 GHz band. When installed in e.g. a false ceiling or inside a cabinet, this distance will be shorter. The maximum distance depends heavily on the physical material between ClickShare Button and Base Unit. However, the signal is not "cut off" beyond that distance. Instead, the signal gradually decreases.
5. What WiFi do you use? Is it 802.11n or 802.11g?
ClickShare is compatible with 802.11n.
6. What about interference with other WiFi devices?
It is very unlikely that WiFi interference will limit the performance of ClickShare or other devices within its immediate proximity. This is because ClickShare works in both the 2.4 GHz band as well as the 5 GHz band, which leaves you with many options to choose the channel that is used the least in your environment. Moreover, the system only uses limited bandwidth (typically 1Mbit/s, rarely maximum 30Mbit/s), which makes collision with other clients in the same band unlikely. The person who installs the system can manually select the most appropriate band to be used by the system.
7. How many WiFi channels are available?
The available channels depends on the geographical region.
8. Do you install anything on my PC?
No. ClickShare is a zero footprint solution. After plugging out the Button no trace is left on your PC.
9. Do you support Bluetooth?
No, Bluetooth cannot support the bandwidth necessary for video.

Compatibility

1. Can ClickShare work with video conferencing?
Yes, if your video conferencing system supports a data channel. In that case you can use the output of the Base Unit as input for the data port of the Codec.
2. Can you control it via Crestron?
Yes, with software version 1.2 or higher. Crestron control is done via API commands.

Practical

1. What about risk of theft?
CSE-200 Buttons are designed to avoid a sincere confusion with a USB mass storage device. The ClickShare Button is designed in such a way that people will notice it when walking away from the meeting room (weight, size, cable,...). In the rare case that one takes the Button away from a meeting room by mistake, the AV Manager can pair the Button, when returned, with any meeting room. The ClickShare Button has no practical value by itself.
2. Can you fixate the ClickShare Buttons to a table?
There are no provisions to fixate the ClickShare Button on the table.
3. What is the maximum amount of ClickShare Buttons that can be connected to a Base Unit?
There is no limit to the number of ClickShare Buttons that can be paired to the Base Unit. We have done tests with 20 ClickShare Buttons connected to the Base Unit simultaneously (i.e. "Ready to share"). The maximum number of ClickShare Buttons that can share content on the central display is limited to one.
4. How may Base Units can I install within each other's range?
As with other wireless networks based on IEEE 802.11, this depends heavily on the existing environment, meaning infrastructure of the building and other wireless networks and devices that are sharing the spectrum with the ClickShare Base Units. It will also depend on the type of content that is shared, using the ClickShare Buttons. As a reference, 1 ClickShare Button sharing HD Video will consume approximately 8-10 Mbps. The maximum physical rate of the WiFi module of the ClickShare Button is 65 Mbps.

13. ORDER INFORMATION

13.1 List of articles and their order numbers

Order list

Order Number (E-Item)	E-Item Description	Description
R9861520CN	CSE-200 SET CN	Chinese version of the CSE-200 set
R9861520EU	CSE-200 SET EU	European and Japanese version of the CSE-200 set
R9861520NA	CSE-200 SET NA	North American version of the CSE-200 set
R9861006D01	CLICKSHARE BUTTON	Single Button
R9861006D10	CLICKSHARE BUTTON SET 10	Set of 10 Buttons
R9861006T01	CLICKSHARE TRAY	Single Tray
R9861006T06	CLICKSHARE TRAY SET 6	Set of 6 Trays

14. ENVIRONMENTAL INFORMATION

14.1 Disposal information

Disposal Information

Waste Electrical and Electronic Equipment



This symbol on the product indicates that, under the European Directive 2012/19/EU governing waste from electrical and electronic equipment, this product must not be disposed of with other municipal waste. Please dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

For more information about recycling of this product, please contact your local city office or your municipal waste disposal service.

For details, please visit the Barco website at: <http://www.barco.com/en/AboutBarco/weee>

Disposal of batteries in the product



This product contains batteries covered by the Directive 2006/66/EC which must be collected and disposed of separately from municipal waste.

If the battery contains more than the specified values of lead (Pb), mercury (Hg) or cadmium (Cd), these chemical symbols will appear below the crossed-out wheeled bin symbol.

By participating in separate collection of batteries, you will help to ensure proper disposal and to prevent potential negative effects on the environment and human health.

14.2 Rohs compliance

Turkey RoHS compliance



Türkiye Cumhuriyeti: AEEE Yönetmeliğine Uygundur.

[Republic of Turkey: In conformity with the WEEE Regulation]

中国大陆 RoHS – Chinese Mainland RoHS

根据中国大陆《电器电子产品有害物质限制使用管理办法》(也称为中国大陆RoHS), 以下部分列出了Barco产品中可能包含的有毒和/或有害物质的名称和含量。中国大陆RoHS指令包含在中国信息产业部MCV标准:“电子信息产品中有毒物质的限量要求”中。

According to the “Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products” (Also called RoHS of Chinese Mainland), the table below lists the names and contents of toxic and/or hazardous substances that Barco’s product may contain. The RoHS of Chinese Mainland is included in the MCV standard of the Ministry of Information Industry of China, in the section “Limit Requirements of toxic substances in Electronic Information Products”.

零件项目(名称)	有毒有害物质或元素					
Component Name	Hazardous Substances or Elements					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6+)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印制电路配件 Printed Circuit Assemblies	x	0	x	0	0	0
电(线)缆 Cables	x	0	x	0	0	0

14. Environmental information

底架 Chassis	x	0	x	0	0	0
电源供应器 Power Supply Unit	x	0	x	0	0	0
文件说明书 Paper Manuals	0	0	0	0	0	0

本表格依据SJ/T 11364的规定编制
This table is prepared in accordance with the provisions of SJ/T 11364.

O: 表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T 26572 标准规定的限量要求以下。
O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 标准规定的限量要求。
X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572.

在中国大陆销售的相应电子信息产品 (EIP) 都必须遵照中国大陆《电子电气产品有害物质限制使用标识要求》标准贴上环保使用期限 (EFUP) 标签。Barco 产品所采用的 EFUP 标签 (请参阅实例, 徽标内部的编号使用于指定产品) 基于中国大陆的《电子信息产品环保使用期限通则》标准。

All Electronic Information Products (EIP) that are sold within Chinese Mainland must comply with the "Marking for the restriction of the use of hazardous substances in electrical and electronic product" of Chinese Mainland, marked with the Environmental Friendly Use Period (EFUP) logo. The number inside the EFUP logo that Barco uses (please refer to the photo) is based on the "General guidelines of environment-friendly use period of electronic information products" of Chinese Mainland.



Image 14-1

限用物質含有情況標示聲明書 (Declaration of the Presence Condition of the Restricted Substances Marking) — Taiwan RoHS compliance

設備名稱: 無線演示系統, 型號(型式): CSE-200 Equipment name: wireless presentation system, Type designation: CSE-200						
	限用物質及其化學符號 Restricted substances and its chemical symbols					
單元 Unit	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr6+)	多溴聯苯 Poly- brominated biphenylid (PBB)	多溴二苯醚 Poly- brominated diphenyl ethers (PBDE)
印製電路板配件 Printed Circuit Assemblies	—	0	—	0	0	0

設備名稱：無線演示系統，型號(型式)：CSE-200						
Equipment name: wireless presentation system, Type designation: CSE-200						
限用物質及其化學符號						
Restricted substances and its chemical symbols						
單元 Unit	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr6+)	多溴聯苯 Poly- brominated biphenyl (PBB)	多溴二苯醚 Poly- brominated diphenyl ethers (PBDE)
電(線)纜 Cables	—	○	—	○	○	○
機箱 Chassis	—	○	—	○	○	○
電源供應器 Power Supply Unit	—	○	○	○	○	○
備考1. “超出0.1 wt %”及“超出0.01 wt %”係指限用物質之百分比含量超出百分比含量基準值。 Note 1: “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.						
備考2. “○”係指該項限用物質之百分比含量未超出百分比含量基準值。 Note 2: “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.						
備考3. “—”係指該項限用物質為排除項目。 Note 3: The “—” indicates that the restricted substance corresponds to the exemption.						

14.3 Production address

Factory

Barco N.V.

12F, Citychamp Building, No. 12, Tai Yang Gong Zhong Lu, Chaoyang District, Beijing, P.R.C

Made in information

The made in country is indicated on the product ID label on the product itself.

Production date

The month and year of production is indicated on the product ID label on the product itself.

14.4 Importers contact information

Contact

To find your local importer, contact Barco directly or one of Barco's regional offices via the contact information given on Barco's web site, www.barco.com.