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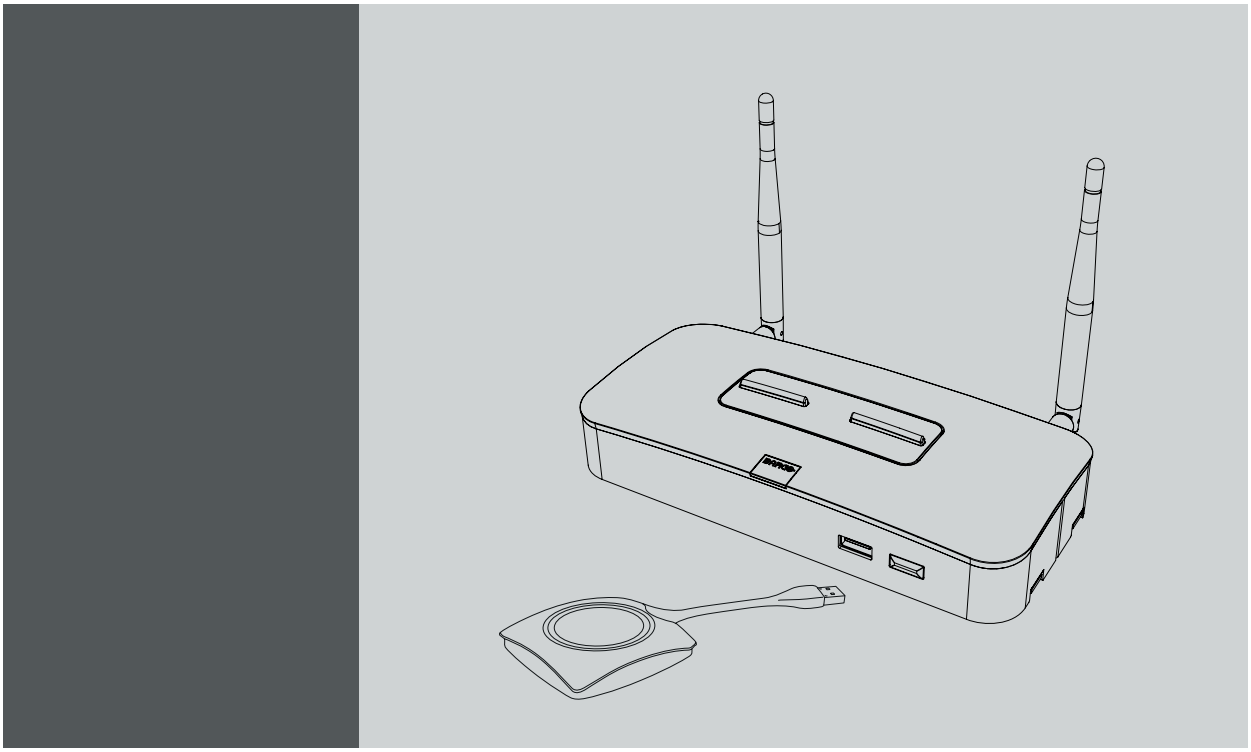

Installation manual

R5900014/05
17/12/2014

BARCO

Visibly yours

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EN55022/CISPR22 Class A ITE (Information Technology Equipment)

Class A ITE is a category of all other ITE which satisfies the class A ITE limits but not the class B ITE limits. Such equipment should not be restricted in its sale but the following warning shall be included in the instructions for use:

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

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 A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial

environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

If this equipment does cause interference with radio communications services, which can be determined by turning the equipment off and on, you are 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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation of the device.

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.

Base Unit FFC ID: RYK-WUBR507N or 2AAED-R9861017

Button FCC ID: XF6-RS9110N1103

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.

Base Unit IC ID: IC: 6158A-WUBR507N or 9393B-R9861017

Button IC ID: 8407A-RS9110N1103

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 6158A-WUBR507N or 9393B-R9861017 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.

IC ID Unité de Base: 6158A-WUBR507N or 9393B-R9861017

IC ID Button : 8407A-RS9110N1103

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 6158A-WUBR507N or 9393B-R9861017 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

TABLE OF CONTENTS

1. Introduction to the Installation Guide 3
1.1 Documentation 3
1.2 Symbols and fonts 3

2. ClickShare Specifications 5
2.1 About the ClickShare product 5
2.2 ClickShare specifications 6
2.3 About the Base Unit 7
2.4 About the Button 9
2.5 Mobile Device Support 10

3. Getting started 11
3.1 Environmental Condition Check 11
3.2 Basic Workflow 11

4. ClickShare installation 13
4.1 Installation methods for the Base unit 13
4.2 Table mounting 13
4.3 Wall mounting 13
4.4 Recommendations about antenna placement and orientation 15
4.5 Video signal connections to the Base unit 15
4.6 Audio connection 16
4.7 LAN connection 16
4.8 Power connection 17
4.9 About Network integration 17

5. Preparing the buttons 21
5.1 Pairing 21
5.2 Pre-install of the Launcher service 22
5.3 ClickShare launcher installer 23
5.4 ClickShare for Linux 24

6. ClickShare Web Interface 27
6.1 Accessing the ClickShare Web Interface 27
6.2 Language setup Web interface 29
6.3 About ClickShare tabs 29
6.4 Basic settings 30
6.5 Wallpaper (background) selection 32
6.6 Personalized wallpapers 33
6.7 Display settings 34
6.8 Display output settings 35
6.9 On-screen text format 36
6.10 Audio settings 38
6.11 Integration, Polycom 39
6.12 Corporate network, activation 41
6.13 Corporate network, using EAP-TLS 41
6.14 Corporate network, using EAP-TTLS 45
6.15 Corporate network, using PEAP 47
6.16 Corporate network, using WPA2-PSK 49
6.17 Security: HTTPS or HTTP access protocol 51
6.18 Security: Web User Interface 53
6.19 Security: access SSH 54
6.20 Security: Block sharing for Apps 55
6.21 Advanced settings: Hostname 55
6.22 Advanced settings: LAN network settings 56
6.23 Advanced settings: WiFi settings 57
6.24 Advanced settings: API configuration Settings 58
6.25 Advanced settings: NTP setup 59
6.26 Maintenance, status check ClickShare 60
6.27 Maintenance, Buttons information 61
6.28 Maintenance, update Buttons over WiFi 63
6.29 Base Unit software update 63
6.30 Downloads from Base Unit (launcher service) 64
6.31 Manage System Configuration 65
6.32 Load Default Settings 66
6.33 Administrator password 68
6.34 Integrator password 68
6.35 Log settings 69
6.36 ClickShare Help, Barco contact data 70
6.37 Barco ClickShare EULA 71

7. Software updates 73
7.1 Software update 73

8. ClickShare Troubleshooting 75
8.1 Troubleshooting list 75

A. Environmental information 79
A.1 Disposal information 79
A.2 Rohs compliance 79
A.3 Production address 80
A.4 Importers contact information 80

Index 81

1. INTRODUCTION TO THE INSTALLATION GUIDE

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

- Documentation
- Symbols and fonts

1.1 Documentation

This guide

Partnumber	Description	Level
R5900014	Installation Guide	Installation engineer

This installation guide explains how to install ClickShare in a meeting room, It explains also how to make everything operational. It provides detailed information on how to configure ClickShare.

Available System documentation

This guide is part of the documentation set describing the ClickShare product.

Guide	Article number
User Guide	R5900013
Installation Guide	R5900014
Safety Guide	R5900015 or R5900019
Service Guide	R5900016
Button Guide	R5900007
Recycling Manual	R5900009
API Guide	R5900018

A printed copy of the Safety Guide and an electronic version of the user and installation guide on USB stick is included in the ClickShare box at purchase.

Always check for the latest version of the manual on www.barco.com/clickshare Click on Visit the ClickShare product page and go to tab Downloads..

Depending on the ClickShare version, some graphics might be different to the ones used in this manual. This however does not have any effect to the functionality.

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. CLICKSHARE SPECIFICATIONS

About this chapter

It gives an overview of the specifications of a ClickShare set. and of the different components in the set.

Overview

- About the ClickShare product
- ClickShare specifications
- About the Base Unit
- About the Button
- Mobile Device Support

2.1 About the ClickShare product

ClickShare sets

ClickShare makes connecting to the meeting room's video system a matter of clicking a Button. This one click wonder 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 4 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.

Components ClickShare set

A standard ClickShare 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.

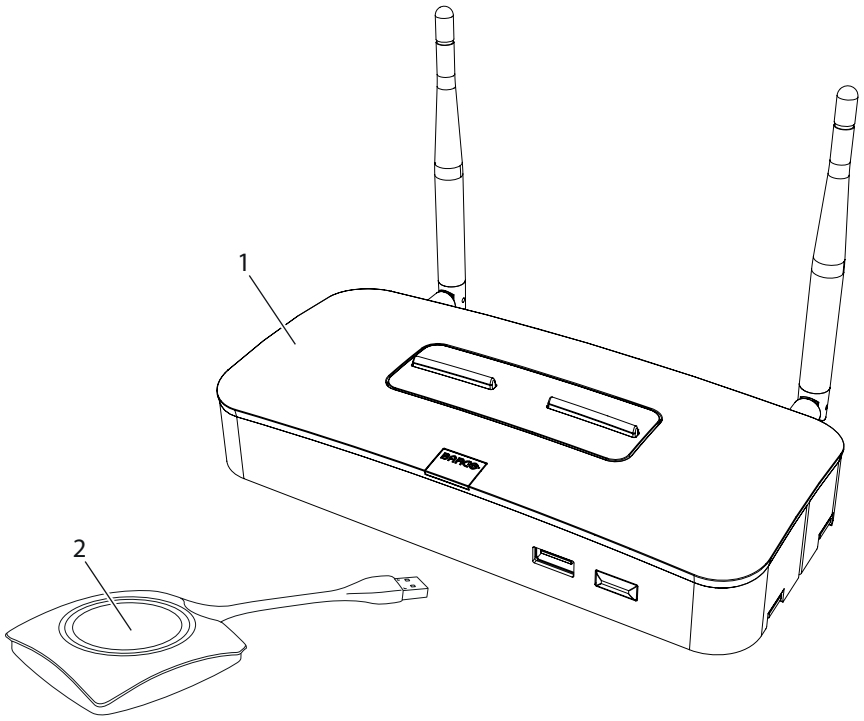

Image 2-1
ClickShare main components

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 ClickShare box.

Regional version	Contains	Accessories included
R9861008xx[1]	• R9861008 • 2x R9861006D01	• DC adapter with AC clips type A, C, G, I • USB stick with user documentation • Printed safety manual • Wall mount bracket • 2 antennas
R9861017xx[1]	• R9861017 • 2x R9861006D01	• DC adapter with AC clips type A, C, G, I • USB stick with user documentation • Printed safety manual • Wall mount bracket • 2 antennas

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

2.2 ClickShare specifications

Overview

Dimensions (HxWxD)	Excl. antennas: 37mm x 186mm x 85mm / 1.457” x 7.323” x 3.346” Incl. antennas: 125mm x 186mm x 121mm x / 4.921” x 7.323” x 4.763”
Weight	530g / 1.17lbs (incl. antennas)
Wall mounts	Included in set
Humidity	Storage: 0 to 90% relative humidity, non-condensing Operation: 0 to 80% relative humidity, non-condensing
Temperature range	Operating: 0°C to +40°C (+32°F to +104°F) Storage: -10°C to +60°C (+14°F to +140°F)
Connections	USB Host x 2 RJ-45 LAN Port Audio analog line out on mini jack socket (3.5mm)
Power	External Power adaptor 5V DC input 2.6A (included in set)
Band	2.4 GHZ and 5 GHz
Reach	Max. 30m (100 ft) between ClickShare Button and ClickShare Base Unit
Data rate wireless	Up to 300Mbps
Wireless transmission protocol	IEEE 802.11 a/b/g/n
Authentication protocol	WPA2-PSK
iPad, iPhone and Android compatibility	Available via ClickShare Presenter app for static content.
Audio	Radio quality 16bits 22KHz (no synchronization) via audio jack or HDMI
Number of simultaneous connections	8
Number of sources simultaneous on screen	2
Input Resolutions	Up to 2880x1800
Output resolution	HDMI: 1280x720 (720P), 1920x1080 (1080p) VGA: SVGA (800x600) / XGA (1024x768) / WXGA(1280x768) / WXGA+(1280x800) / 1360 * 768 / 1440 * 900
Frame rate	Up to 30 fps depending on environment

1. xx=EU, CN, NA, WW

Video outputs	HDMI (video and audio), 15-pin VGA
Operating system	Windows XP/Vista/7/8/8.1 32 & 64 bit Mac OSX 10.6/10.7/10.8/10.9Android 2.2 and later (ClickShare Presenter app) iOS 5.0 and later (ClickShare Presenter app)
Certifications	FCC/CE
Warranty	3 years standard

2.3 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 strips are mounted on the top of the Base unit.

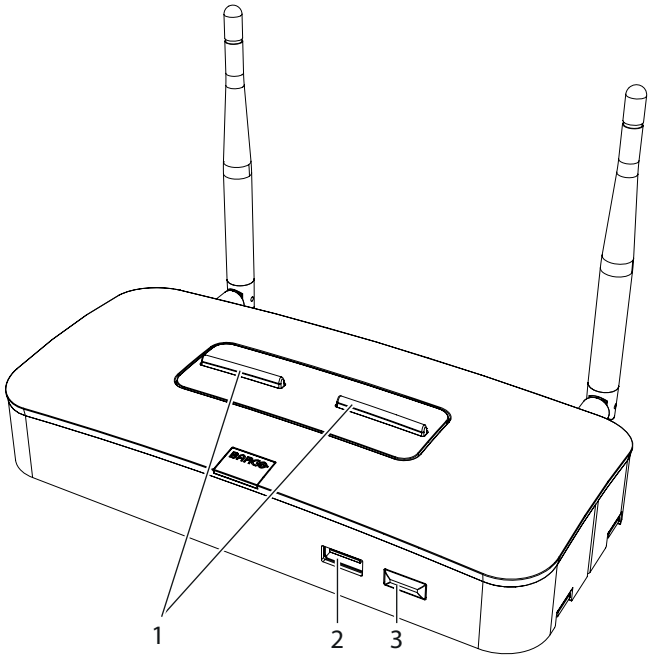

Image 2-2

1	Status LED strips
2	USB port
3	Power Button

Table 2-3

USB port

The USB port is used to update the soft- and firmware of both the Base Unit and the Buttons.

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 strips

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

LEDs behavior	Explanation
static red	• 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	• system is starting up (during the second phase) • Button pairing is in progress • software update of the Base Unit
static white	• awake and ready (i.e. showing the welcome message on the display) • pairing is done
red blinking	• an error occurred

Power button

The button at the front of the Base Unit has a power on/off function once the Base unit is powered

- When the system is powered on, a push makes the system to shut down and power off.
- When the system is shut down, a push triggers the system to start up.

Back layout of the Base Unit

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

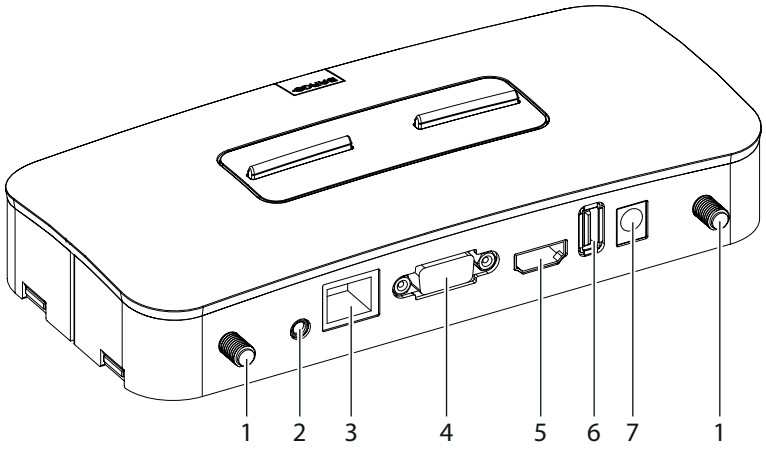

Image 2-3
Backside Base unit

1	Fixture points for the antenna
2	Audio out port
3	LAN Ethernet connection
4	VGA display connector
5	HDMI connector
6	USB port
7	Power connection

Mechanical fixture points

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

Antenna

Two antennas are included in the ClickShare 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 2dBi peak gain in 2.4GHz and 5Ghz band

Bottom layout of the Base Unit

The serial number label with the applicable certification logos is stuck at the bottom of the Base Unit.

The serial number label contains:

- the Barco logo
- the Barco part number
- the serial number
- the revision number
- the production date (week/year)
- markings for applicable standards (CE, CCC, UL, ...)
- markings for waste regulation
- “Made in ...”

2.4 About the Button

Buttom

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.

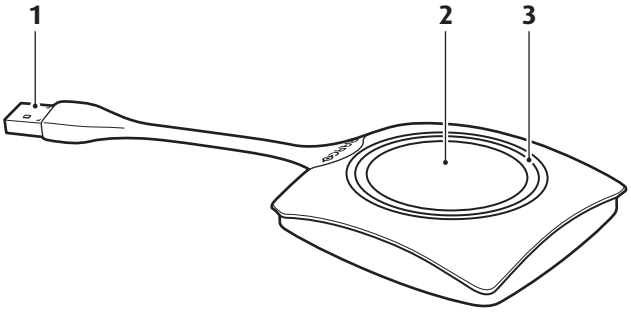

Image 2-4
Button layout

1	USB connector
2	Button
3	LED ring

Table 2-6

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	• 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	• ClickShare is ready to start sharing your screen. • pairing is done. You can now unplug the Button from the Base Unit.
static red	• sharing your screen with the display. • pairing and software update is done. You can now unplug the Button from the Base Unit.
red blinking	• an error occurred.
off (no light)	• 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.

2.5 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 Presenter	iOS Android	
MirrorOp Sender for Galaxy	Galaxy mobile devices	

3. GETTING STARTED

Overview

- Environmental Condition Check
- Basic Workflow

3.1 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 customer'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.

Ambient temperature conditions

Max. ambient temperature : +40°C or 104°F

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

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.

3.2 Basic Workflow

Before using ClickShare

1. Unpack the ClickShare components and accessories from the box.
   For a detailed overview of the content of the ClickShare box,
2. Install the Base Unit in the meeting room using one of the 2 possible installation methods.
   For more information on the installing procedures,
3. Connect the video signal between the Base Unit and the display.
4. Connect the audio from the Base Unit to the meeting room's sound system (only required for audio via jack).
5. If configuration via a network is needed, connect a network cable between the Base Unit and the local network (if not yet done to power the Base unit).
6. Connect the Base unit to the mains power.
   For more information "Power connection", page 17,
7. If desired, configure ClickShare via the Web Interface.
   For more information on the different ways to configure ClickShare,

For more information on using ClickShare, refer to the ClickShare User Guide (R5900014). This manual can be found on Barco's website www.barco.com/clickshare Click on Visit the ClickShare product page and go to tab Downloads..

4. CLICKSHARE INSTALLATION

About this chapter

The installation chapter gives an overview of the different ways to install and connect ClickShare's Base unit.

Overview

- Installation methods for the Base unit
- Table mounting
- Wall mounting
- Recommendations about antenna placement and orientation
- Video signal connections to the Base unit
- Audio connection
- LAN connection
- Power connection
- About Network integration

4.1 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

The articulated antennas are removable. They can rotate for better wireless connection and they can

WARNING: Ceiling mount is not allowed !

4.2 Table mounting

Overview

Put the Base Unit directly on the meeting room table.

The total weight of the Base Unit is 530 g.

4.3 Wall mounting

About wall mounting

Use the mounting brackets, inserted in the ClickShare box, to mount the Base unit on the wall.

The total weight of the Base Unit is 530 g.

Necessary tools

- a drill (type of drill depends on the type of wall)
- Flat screwdriver
- Additional screwdriver that matches the mounting screws (mounting screws not delivered)

Necessary parts

- 4 mounting screws
- 4 plugs
- Mounting bracket (included in the ClickShare box)

How to install

1. Drill four holes in the wall as indicated on the drawing.
   Horizontal distance : 111 mm,
   Vertical distance: 15 mm

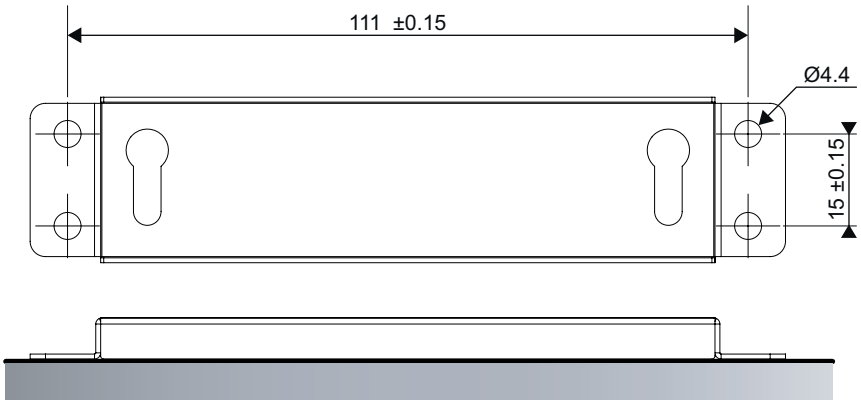

Image 4-1
Mounting bracket

2. Insert a plug in each hole (if needed, depends on the wall type) and drive in 4 screws.
   Note: *Mounting screws and plugs are not included in the ClickShare 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 bracket.*
3. Place the bracket on the wall so that the holes in the fixation flanges matches the holes in the wall and that the flanges are touching the wall. Also, make sure that the big head of the fixation slots is facing upwards.
4. Fixate the bracket with 4 screws (not delivered).
   Note: *Make sure that the head of your screws is bigger than the holes in the plate.*
5. At the bottom side of the Base unit, turn in both delivered fixation screws.

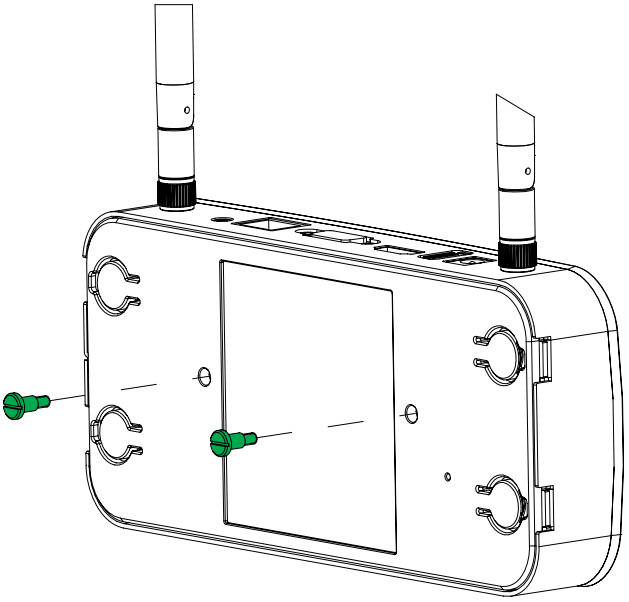

Image 4-2
Base unit fixation screws

6. Hook the Base unit into the mounting bracket and slide the Base unit downwards until it is fixed in the bracket.

CAUTION: It is only allowed to mount the Base Unit front side up or down. Mounting on its side is not allowed!

4.4 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.

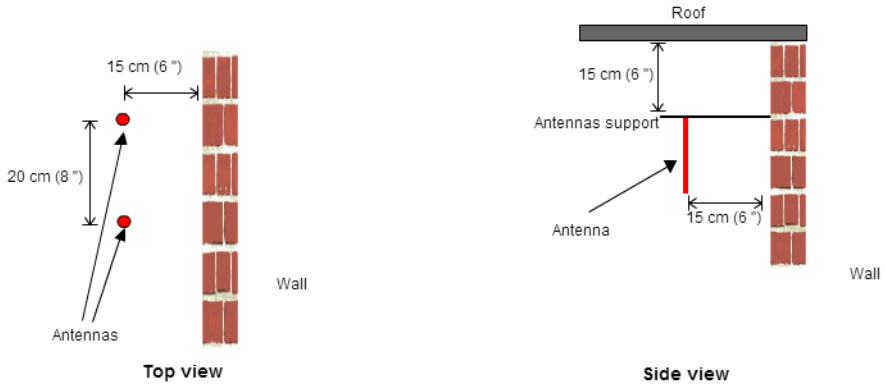

Image 4-3
Closer view of antennas installation in the meeting room

4.5 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, a VGA or 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.*

   Supported types of displays are:
   - VGA
   - HDMI

   When setting up a display configuration, connect the VGA or the HDMI cable to the display.

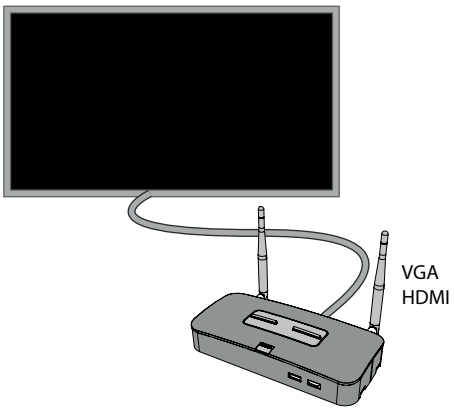

Image 4-4
Display connection

4.6 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) 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).

When 2 images are capture and displayed, only the audio signal of the left image is output.

There will be synchronization between the audio and video signal.

Audio via HDMI

When your display is connected via HDMI and it supports audio than 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. Connect an audio cable with mini jack socket (3.5mm) into the audio out of the Base unit.
2. Connect the other side to the meeting room's sound system.

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**.

4.7 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 ClickShare unit
- to update the software
- for maintenance purposes
- for network integration of your ClickShare 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.

4.8 Power connection

About power

The Base unit can be powered via an external power adapter.

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.

Image 4-5
Type A

Image 4-6
Type C

Image 4-7
Type G

Image 4-8
Type I

3. Connect the power cable to the wall outlet.

4.9 About Network integration

Introduction

The ClickShare network integration option is aimed at deploying ClickShare in larger organizations without interfering with the existing wireless network infrastructure. In a default stand-alone setup, the ClickShare Base Unit will always create it's 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 the ClickShare Network Integration comes in. Once fully configured and enabled the built-in AP of the Base Unit will be disabled and the Button will instead connect to a wireless access point which is part of the corporate network. At this point the Base Unit will need to be connected to the corporate network via the wired Ethernet interface in order for the Buttons to be able to share their content on the Base Unit.

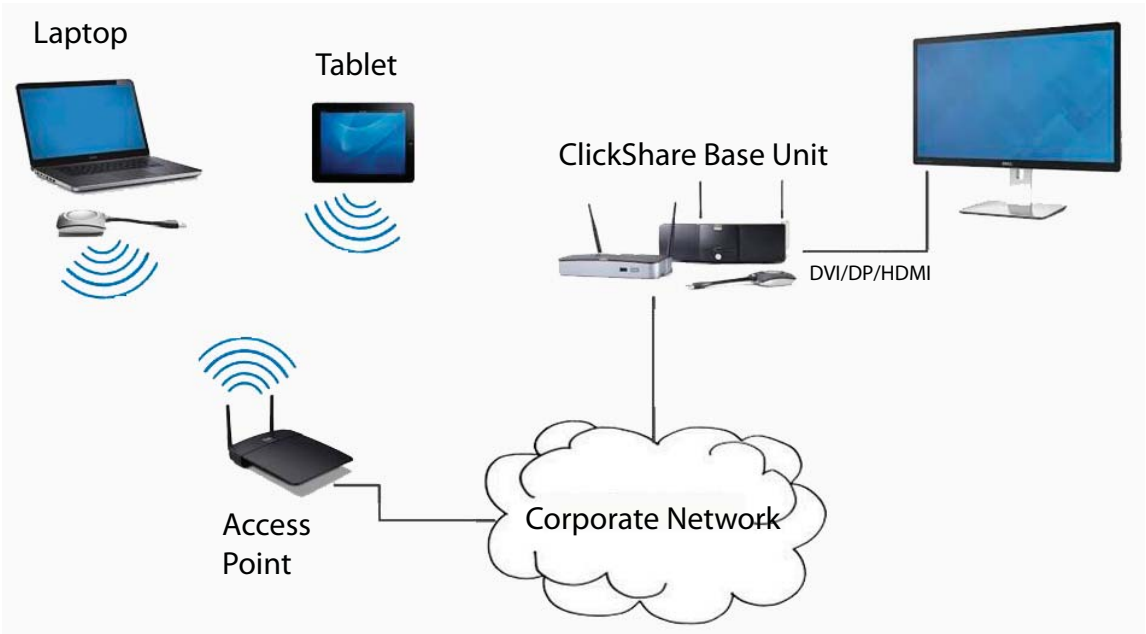

Image 4-9

Security modes

There are 2 security types that are supported by the Button to connect to the corporate network.

- The first and foremost one in case of 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). If we mention WPA2, we are talking about WPA2 as an improved version of the original WPA standard which adds AES encryption to improve security.

About WPA2-Enterprise with 802.1X

WPA2-Enterprise relies on 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 will be routed through the network in order to authenticate the client device on the network. In case of ClickShare, these are the Buttons.

The 802.11i (WPA2) standard defines a number of required EAP methods. 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. The most widely used EAP methods.used in the ClickShare system are:

- EAP-TLS
- PEAP
- EAP-TTLS

More detailed information can be found in the ClickShare Web Interface, corporate network setup.

About WPA2-Personal

Pre-shared key mode (WPA2-PSK) is the default security method used in most consumer and small business Wi-Fi setups which doesn't require the extended complexity and features of 802.1X. PSK mode is also known as "personal" mode. Although less secure than 802.1X, PSK mode with smaller business setups in mind is supported.

Considerations

When deciding to integrate the ClickShare system in to your corporate network there are a few things to consider up-front.

- Make sure that all your Base Units can be connected to your network via the wired Ethernet interface.
- Take into account the amount of bandwidth that each button needs to stream the captured screen content to the Base Unit. Typically this will be somewhere in between 5 and 15 Mbps. So, prevent bottlenecks in your network (eg. 100 Mbps switches) that could potentially degrade your ClickShare experience due to a lack of bandwidth.

Network prerequisite

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 prerequisite

To ensure you can successfully share content via the ClickShare Button, ClickShare iOS App or Android ClickShare Presenter App to the Base Unit make sure following ports are open on your network:

Sender	CSM Base Unit	CSC Base Unit
ClickShare Button	TCP : 1688-1689; 3268; 8080; UDP: 1047-1049	TCP: 9876
ClickShare Presenter (iOS)	TCP/UDP: 9870	TCP/UDP: 9870
ClickShare Presenter (Android)	TCP/UDP: 9870	TCP/UDP: 9870
AirPlay	n/a	TCP: 7000; 47000; 4100-4200; UDP: 4100; 4200

VLAN prerequisite

A lot of corporate networks are being 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, also those devices should be able to reach the Base Units.

DNS prerequisite

In order for the Buttons to be able to stream their content to the Base Unit they have to be able to resolve the Base Unit's hostname within the network.

NTP prerequisite

When using EAP-TLS, you must also configure NTP on the Base Unit. This can be done via the ClickShare Web interface on the Base Unit. It is necessary for the Base Unit to have the correct time to handle the certificates required for EAP-TLS. Preferably you should use a NTP server on the local corporate network with a high availability. Be advised that when using a NTP server on the internet, it's not possible for the Base Unit to connect through a proxy server.

Setup

Due to the variety of options and complexity of the setup we have created a wizard in the ClickShare Web interface. This wizard will guide you through the process based on the security mode you select. For more information about the setup, see chapter "6. ClickShare Web Interface", "Corporate network, activation", page 41.

5. PREPARING THE BUTTONS

Overview

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

5.1 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 two Buttons delivered with the ClickShare 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). When updating the Base Unit software to version 01.03 or higher, the Button software will update automatically over WiFi and does not need manual pairing 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 paired manually to update their software.

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.

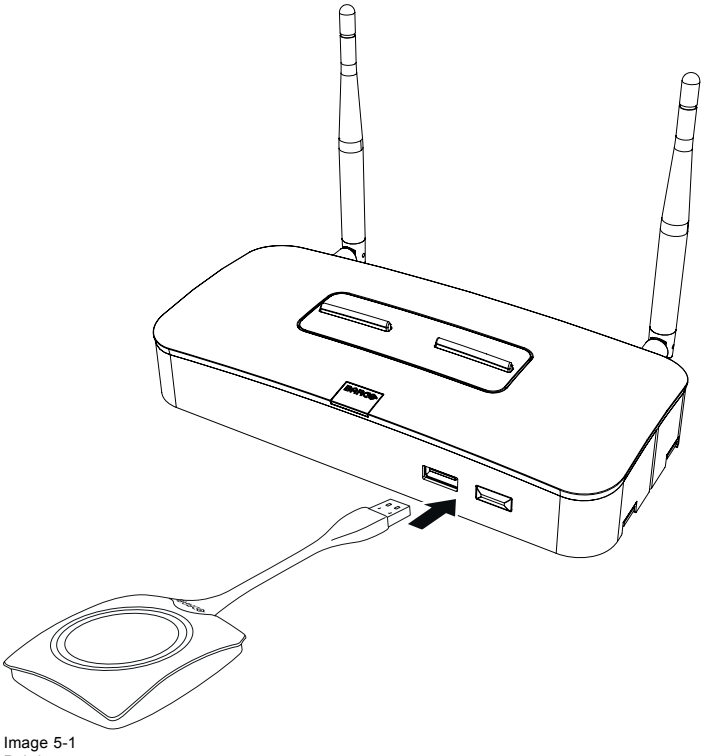

Image 5-1
Pair button

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.

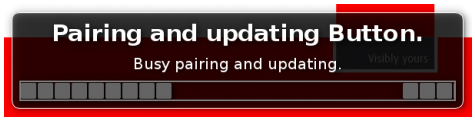

Image 5-2
Pairing message

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.

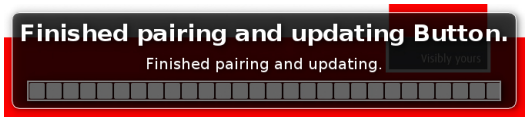

Image 5-3
Pairing finished

2. Unplug the Button from the Base Unit.

   The Button is now ready for use.

5.2 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 web interface and the Barco website.

Where to download the launcher installer?

The launcher service (installer) can be downloaded from the Base Unit when entering the webui. Go to *Maintenance* > *Software* and download the launcher service.

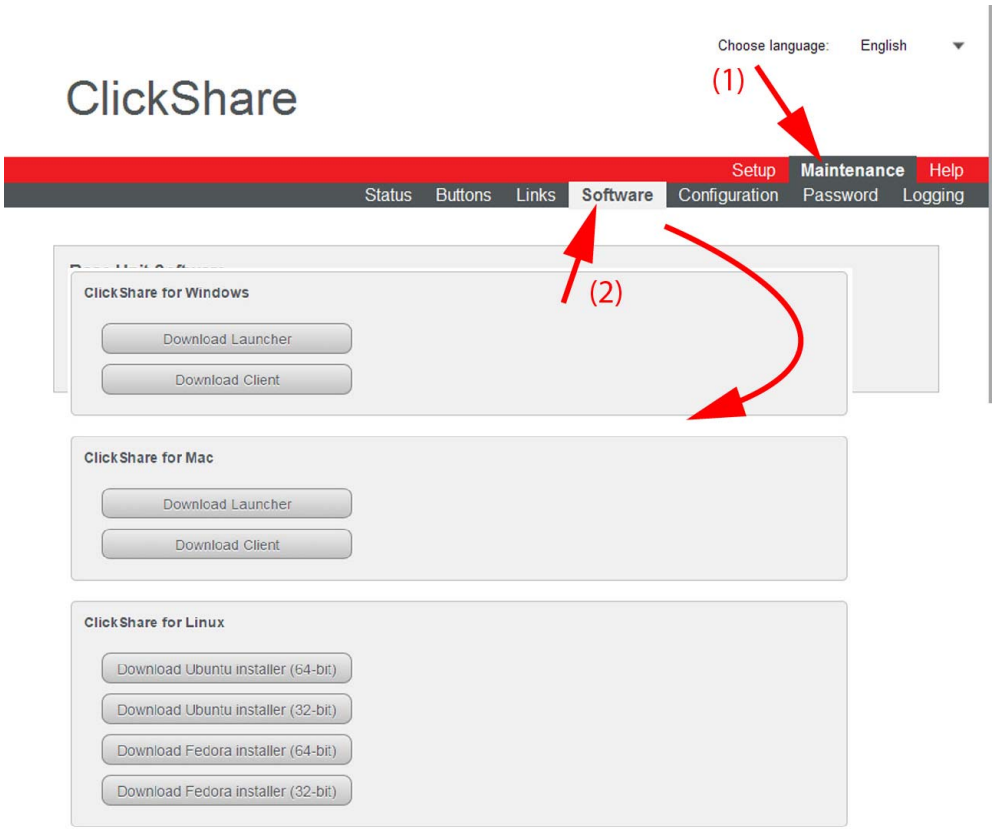

Image 5-4
Downloads software

5.3 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.

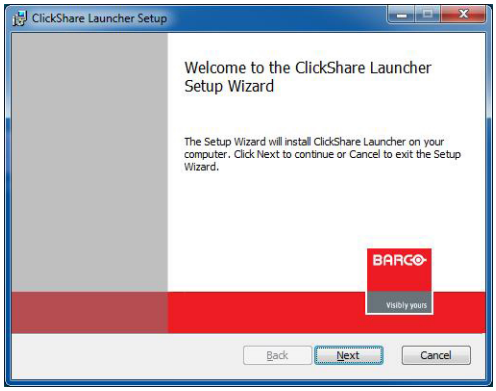

Image 5-5

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:

```
msiexec.exe /i ClickShare_Launcher_01_06_00_0144_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.

Parameter	Description
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_06_00_0144_Setup_Win.msi /qn
```

5.4 ClickShare for Linux

About

The ClickShare Client for Linux consists of two main parts. The first part is the Client itself. The second part is the ClickShare-Launcher. The launcher is installed as a background application that will start the Client from the moment a button is inserted.

The downloaded installer will install both binaries.

Compatibility

ClickShare for Linux is officially supported for Ubuntu 14.04 and Fedora 20 (32 bit and 64 bit version is supported). Other distributions and versions may work depending on library versions.

The user needs administrator rights to run ClickShare. On Ubuntu, the user should be added to the *"plugdev"* group. On Fedora, the user should be added to the *"wheel"* group.

Ubuntu installation

Search the downloaded .deb file and start the installation. Follow the instructions as requested by the installer in the below screens.

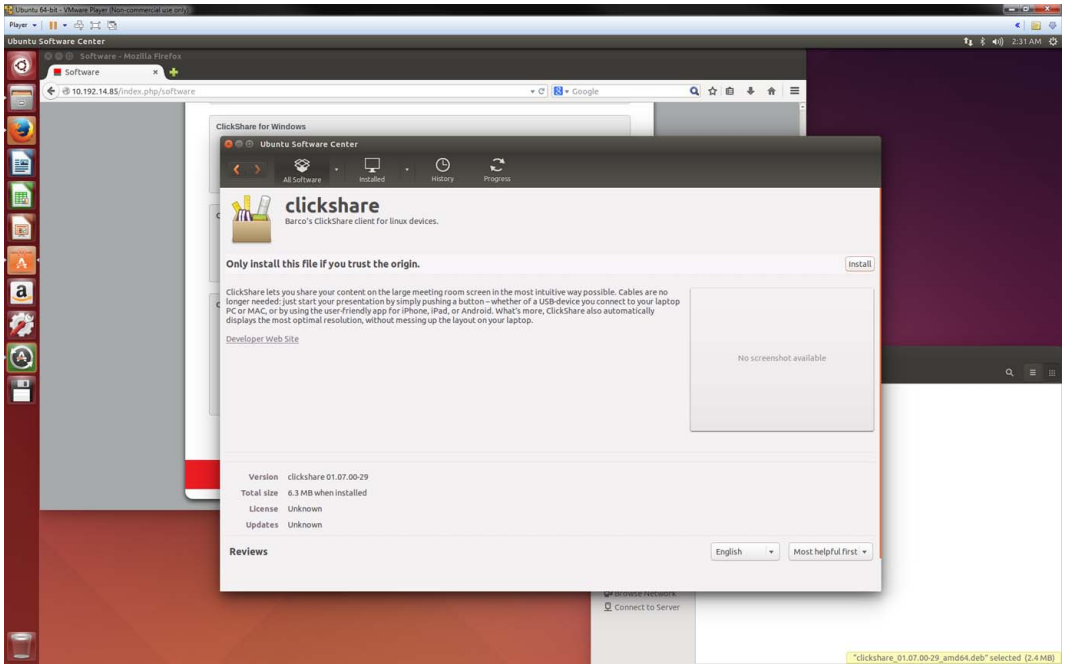

Image 5-6

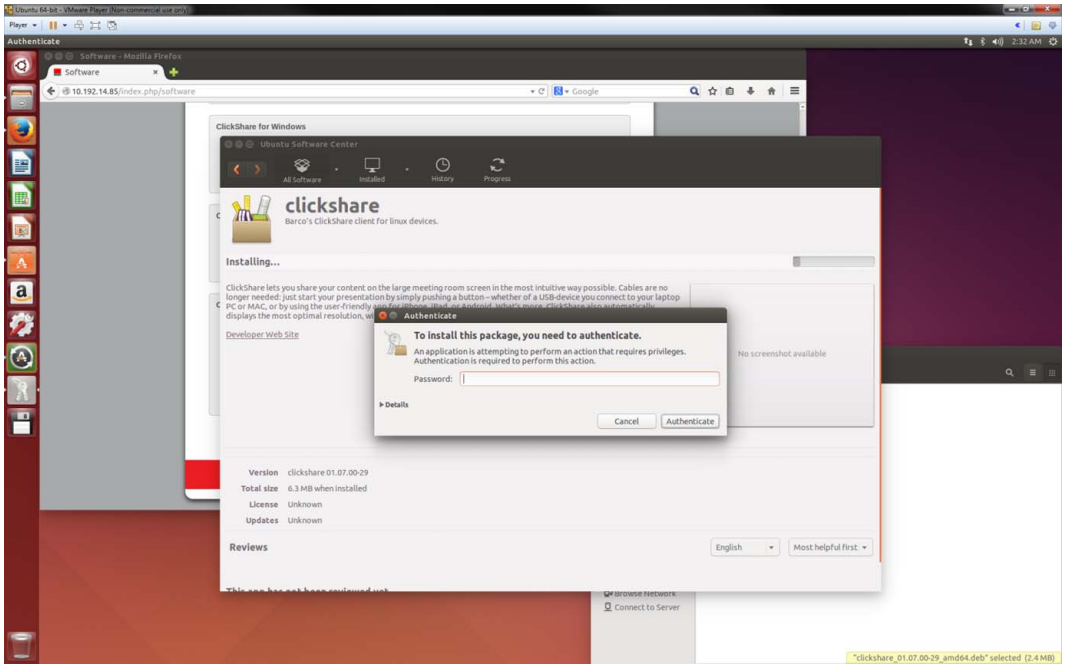

Image 5-7

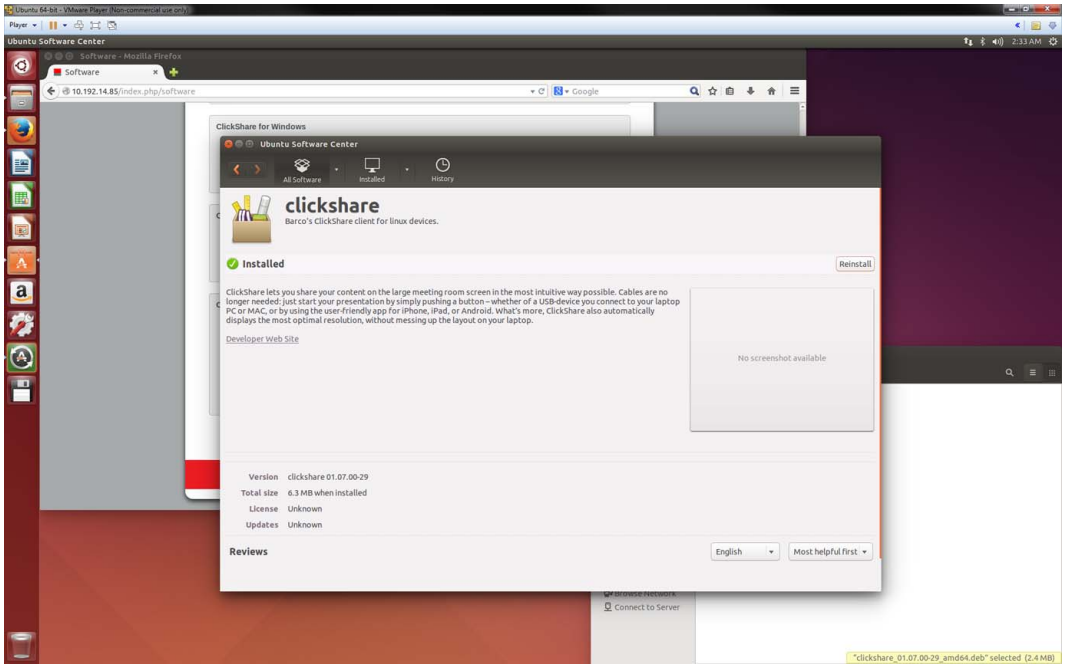

Image 5-8

After installation it is advised to log out and in again to fire up the background process.

Fedora installation

To be able to install ffmpeg, you will need to enable the rpmfusion repository by executing this command:

```
rpm -Uvh http://download1.rpmfusion.org/free/fedora/rpmfusion-free-release-stable.noarch.rpm
http://download1.rpmfusion.org/nonfree/fedora/rpmfusion-nonfree-release-stable.noarch.rpm
```

This command should be executed before you run the installer.

Search the downloaded .rpm file and start the installation. Follow the instructions as requested by te installer in the below screens.

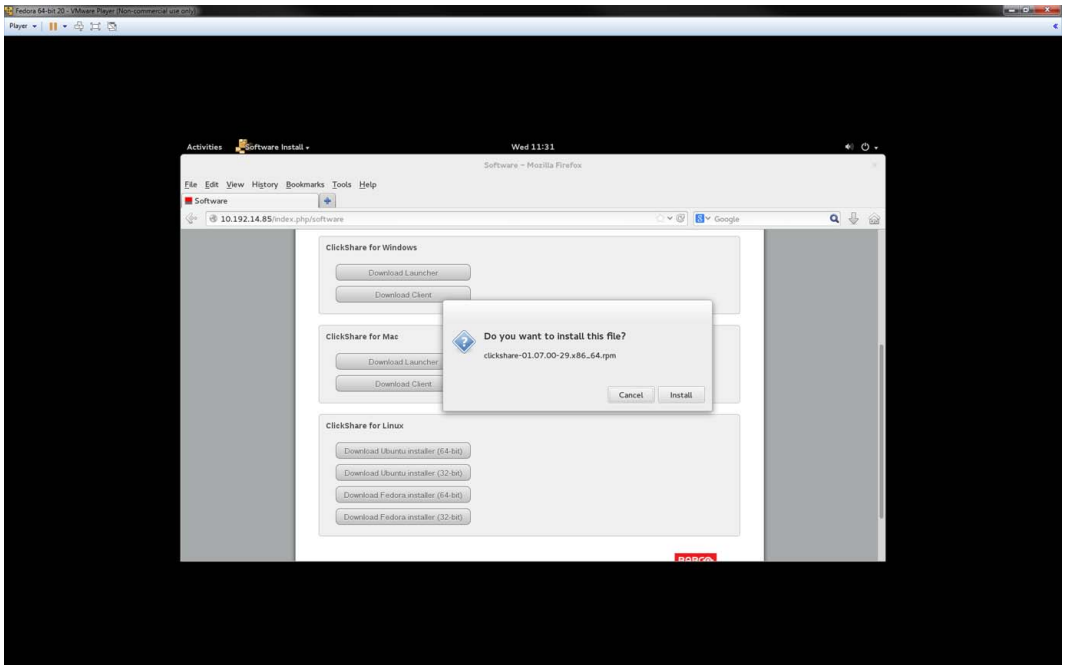

Image 5-9

Click **Install**.

6. CLICKSHARE WEB INTERFACE

Overview

- Accessing the ClickShare Web Interface
- Language setup Web interface
- About ClickShare tabs
- Basic settings
- Wallpaper (background) selection
- Personalized wallpapers
- Display settings
- Display output settings
- On-screen text format
- Audio settings
- Integration, Polycom
- Corporate network, activation
- Corporate network, using EAP-TLS
- Corporate network, using EAP-TTLS
- Corporate network, using PEAP
- Corporate network, using WPA2-PSK
- Security: HTTPS or HTTP access protocol
- Security: Web User Interface
- Security: access SSH
- Security: Block sharing for Apps
- Advanced settings: Hostname
- Advanced settings: LAN network settings
- Advanced settings: WiFi settings
- Advanced settings: API configuration Settings
- Advanced settings: NTP setup
- Maintenance, status check ClickShare
- Maintenance, Buttons information
- Maintenance, update Buttons over WiFi
- Base Unit software update
- Downloads from Base Unit (launcher service)
- Manage System Configuration
- Load Default Settings
- Administrator password
- Integrator password
- Log settings
- ClickShare Help, Barco contact data
- Barco ClickShare EULA

6.1 Accessing the ClickShare Web Interface

Getting access to the Web Interface

There are three ways to access the ClickShare Web Interface:

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

To access the Web Interface via the LAN

1. Open a browser.
   Note: *Supported browsers are Internet Explorer 8 or higher, Firefox, Google Chrome and Safari.*
2. Browse to the IP address you can find in the top left corner of the ClickShare welcome screen.
   Note: *The Wired IP address is only visible when the Base Unit is connected to the LAN.*

A login screen appears.

3. Enter the user name 'admin' and the password and click **OK**.

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

   The web interface opens.

Image 6-1
Web interface, startup screen

The language of the web interface can be changed. It contains also three tabs: **Setup**, **Maintenance** and **Help**.

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 Web Interface via a direct connection.

1. Connect the Base Unit to your laptop using an Ethernet cable. On some older hardware a crossover cable might be needed.
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 and click **OK**.
   By default the password is set to 'admin'.

   The web interface opens.

To access the Web Interface 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 and click **OK**.
   By default the password is set to 'admin'.

   The web interface opens.

Older laptops do 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.

6.2 Language setup Web interface

About languages

The ClickShare web interface can be displayed in different 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

How to change

1. Click on the drop down box next to *Choose language* and select the desired language.

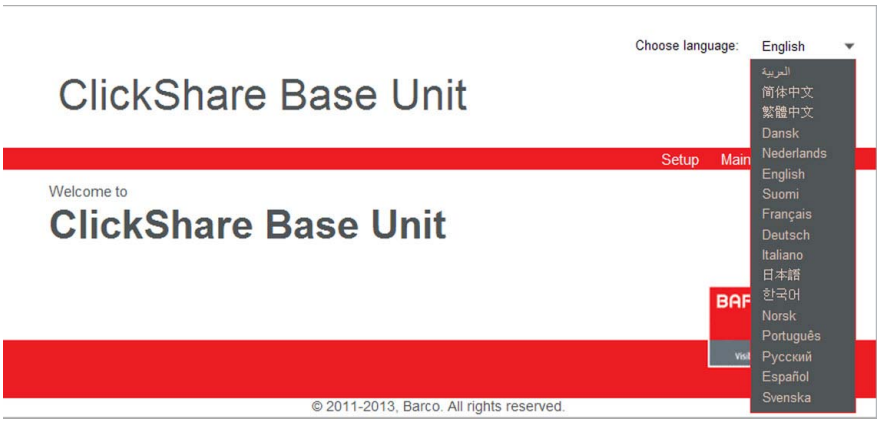

Image 6-2
Language selection

The language of the web interface changes to the selected language.

The language of the web interface can be changed on nearly any page. The ClickShare Web Interface language is independent of the language of the on screen text language which can be set on the Display page.

6.3 About ClickShare tabs

Overview

ClickShare has a main tab bar (red bar with white text) containing 3 tabs, Setup, Maintenance and Help. Each main tab contains sub tabs. The sub tabs are only displayed when a main tab is selected. These sub tabs are displayed in a gray bar. The functionality of these sub tabs is explained in the next topics.

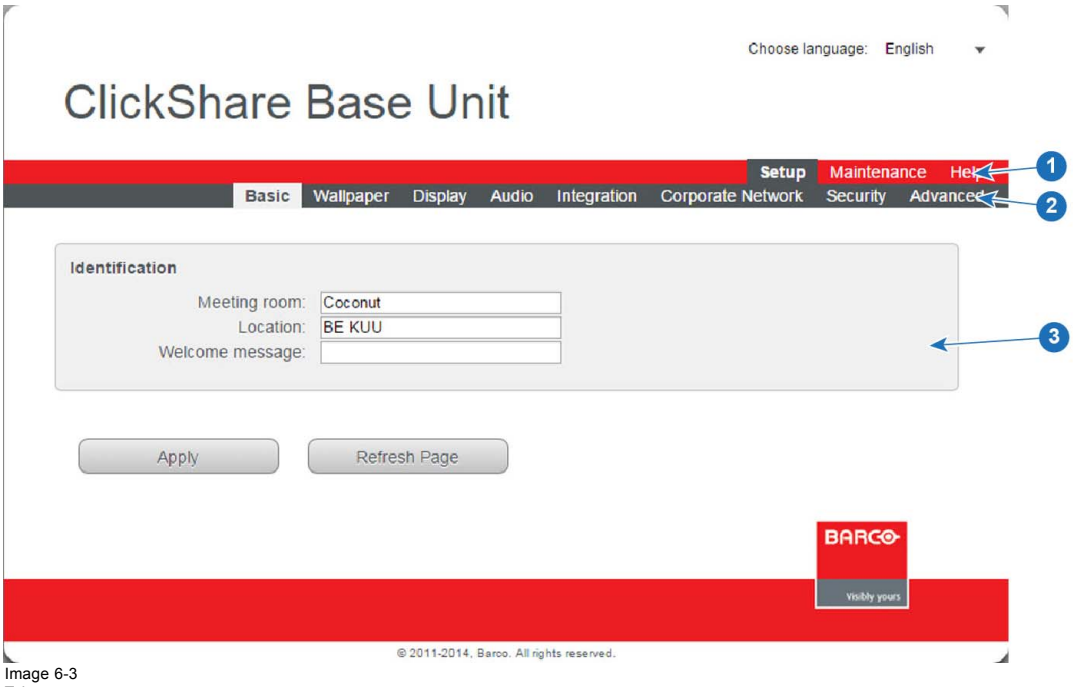

Image 6-3
Tab pages

1	Main tab bar
2	Sub tab bar
3	Information and fill out pane

6.4 Basic settings

About Basic settings

The basic settings contain the following information:

- Meeting room name
- Meeting room location
- Welcome message

To change the basic settings

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab.

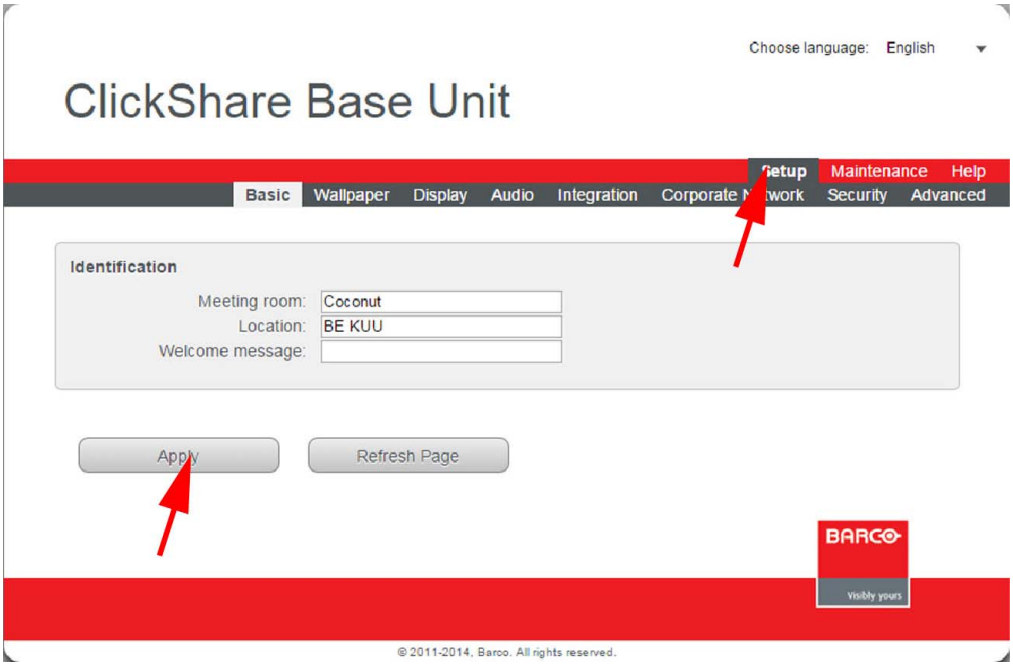

Image 6-4
Setup, basic settings

The **Basic** tab is displayed by default.

3. In the **Identification** section click in an input field and enter
   - the name of the meeting room
   - the location of the meeting room
   - a welcome message which will be displayed below the meeting room name and location.

   Note: *The name of the meeting room is used by the Client software to identify the Base Unit it is connected to.*
4. Click **Apply** to confirm your changes.

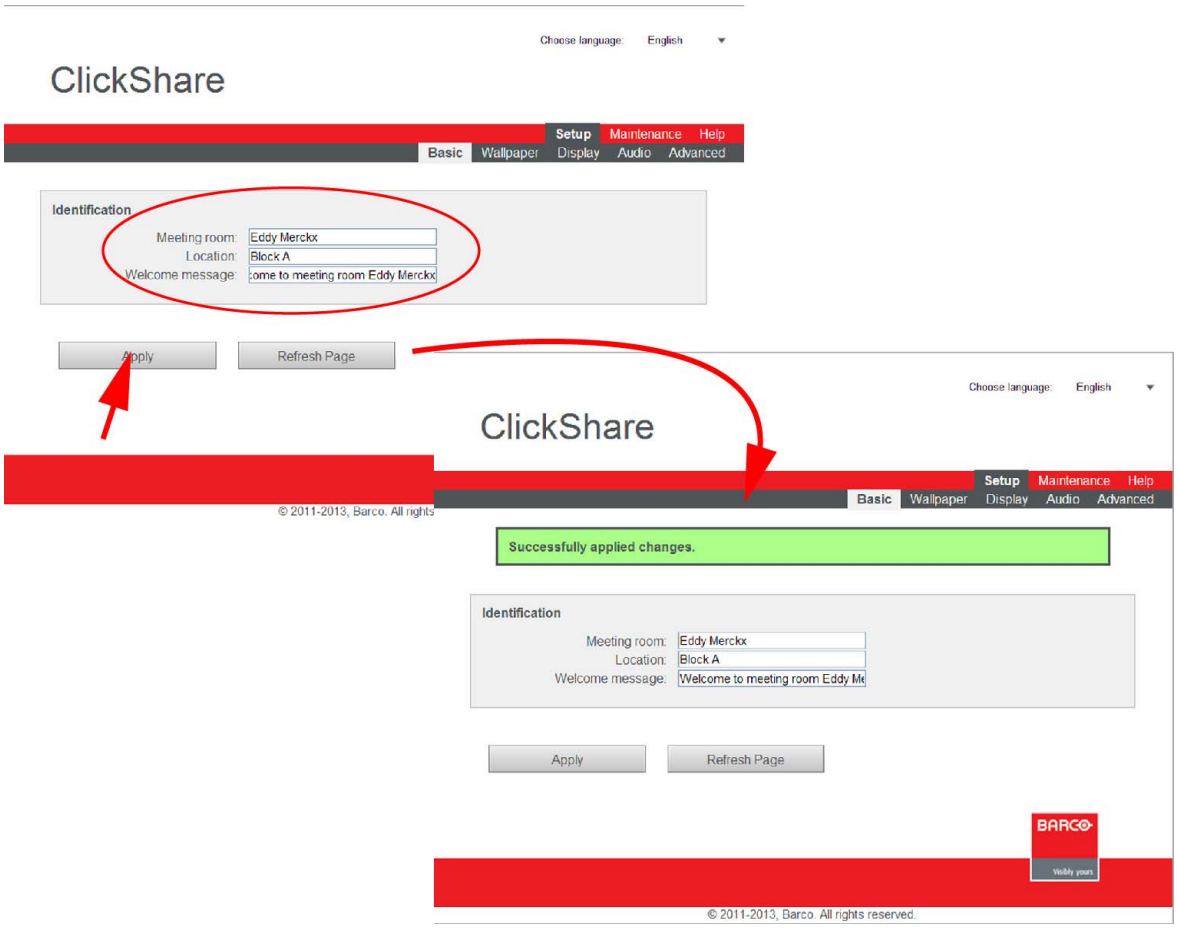

Image 6-5

A message is displayed to indicate that the changes are successful.

The new name, location and welcome message are displayed in the left top corner of the screen.

6.5 Wallpaper (background) selection

About wallpaper

When ClickShare starts up, a background (wallpaper) is displayed. By default a general ClickShare and a quick start wallpaper are available. The possibility exists to upload personal backgrounds (wallpapers). A selected wallpaper is preview in the preview pane before it is applied.

Wallpaper selection

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and then the **Wallpaper** tab (2).

   The content of the **Wallpaper** tab is displayed.

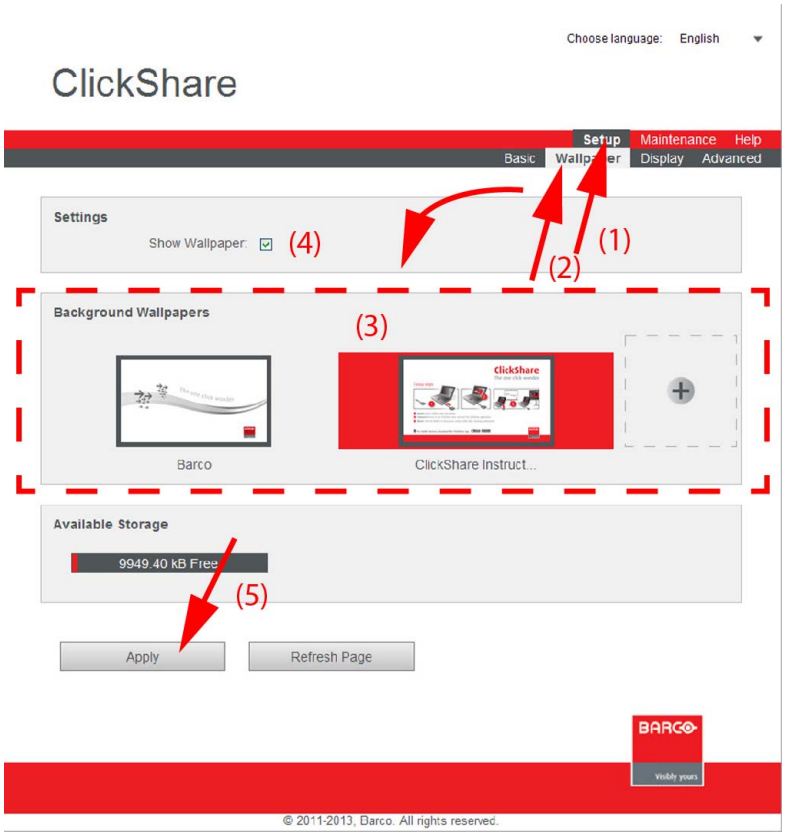

Image 6-6
Wallpaper selection

3. Select one of the available wallpapers (3) and click **Apply** (5)..
   Note: *By default a general Barco ClickShare wallpaper and a ClickShare 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 square around the preview. The preview pane shows the selected wallpaper before it is applied.

   The following message appears on top of the wallpaper selection window.

Image 6-7

   The selected wallpaper is now in use.

4. The wallpaper can be switched on or off by checking or unchecking the check box next to *Show wallpaper* (4).

   When the wallpaper is switched off, the display outputs are shut off wile nobody is sharing.

You can also add a personal wallpaper, e.g. your company logo. For more information on adding a new wallpaper to the list, see Managing background wallpapers.

6.6 Personalized wallpapers

About a personalized wallpaper

Via the web interface it is possible to upload personalized backgrounds or wallpapers. The free space to upload wallpapers is indicated in the *Available storage* pane.

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 one needs to be removed first.

How to upload

1. Log in to the ClickShare web interface.

2. Click the **Setup** tab (1) and then the **Wallpaper** tab (2).

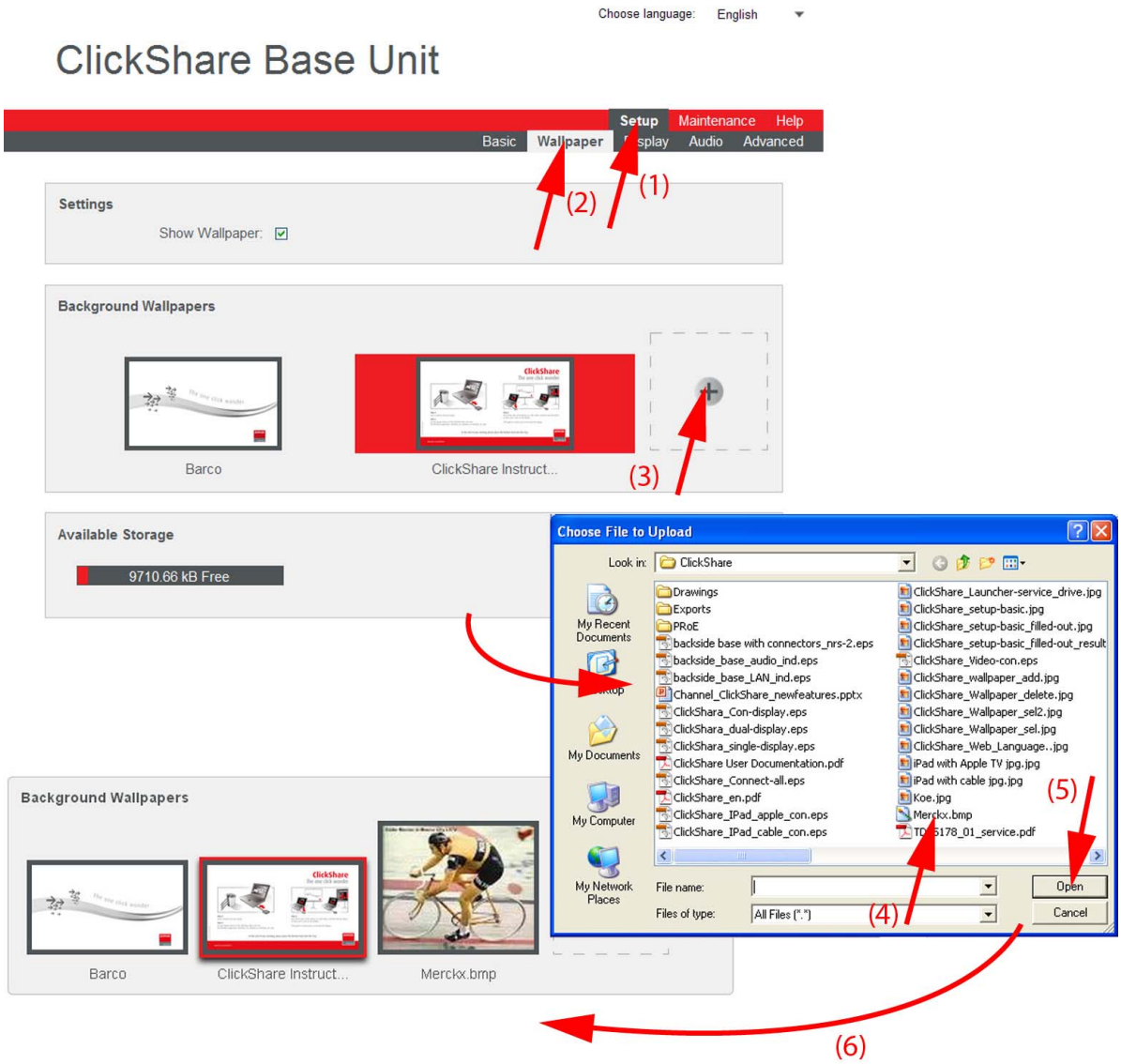

Image 6-8
Add wallpaper

The **Wallpaper** tab page is displayed.

3. In the *Background wallpapers* pane, click on the "**+**" sign (3).

   A browser window opens.

4. Select the desired file (4) and click **Open** (5).

   The content of the file is checked and when valid (format and size), the file is uploaded (6).

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

5. Now follow the wall paper selection procedure to activate the personalized wallpaper.

6.7 Display settings

About display settings

The following settings can be configured for the display(s):

- Meeting room and network information on the startup screen can be displayed or can be hidden.
- Resolution of the display can be set.

To change

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and then the **Display** tab (2).

   The content of the **Display** tab is shown. The first pane shows the *Display Settings*.

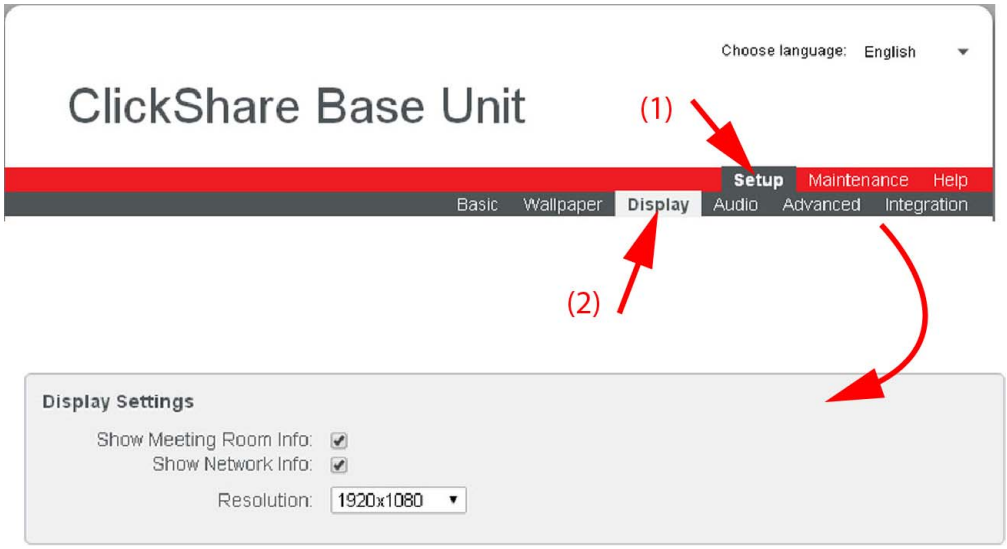

Image 6-9
Display settings

3. To show the meeting room and network info on the meeting room display, check the check box behind the corresponding item.
4. **Resolution** setup. Click on the drop-down list and select the desired resolution.
   Note: *The maximum output resolution supported by ClickShare is 1920 x 1080. This is also the default.*
5. Click **Apply** to confirm your changes.

6.8 Display output settings

About display output settings

A **screen saver** can be activated after a certain time. The delay time to activate the screen saver can be set via the slider bar.

When the slider is set completely to the right, the screen saver will never be activated. Slide the slider to the left until the desired delay time is reached. This delay time can never be larger than the Display Timeout. A warning will be displayed when the delay time is larger than the display timeout after clicking on **Apply**.

Display Timeout : If there is no input signal detected during the display timeout period, both outputs are set to blank.

How to change

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and then the **Display** tab (2).

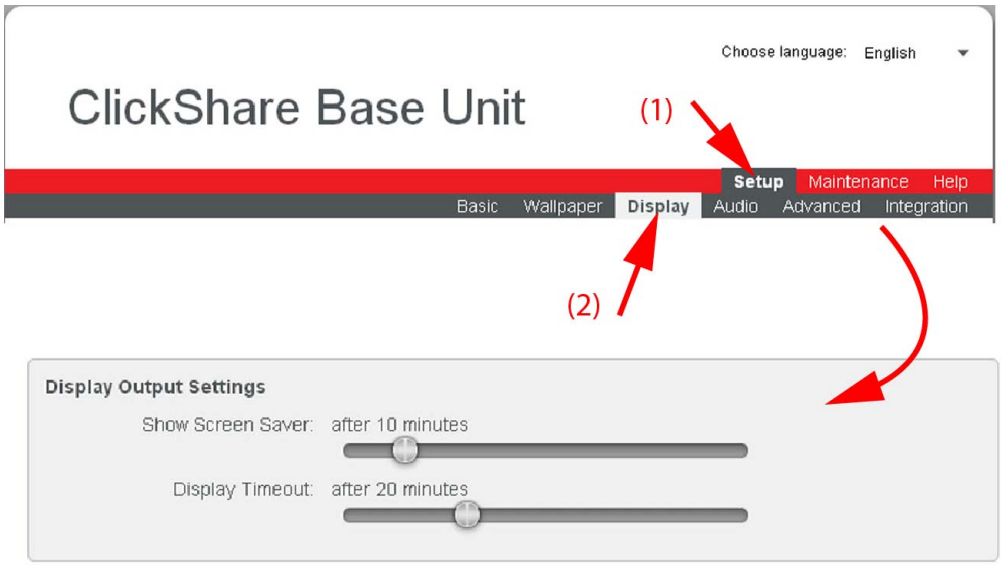

Image 6-10
Display output settings

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.

   The delay time can never be larger than the Display Timeout. A warning will be displayed when the delay time is larger than the display timeout after clicking on **Apply**.

4. To set a display time out, move the slider to the left or to the right until the desired display timeout is reached.

6.9 On-screen text format

About on-screen text

The language of the on-screen messages can be changed. Also the color, size and style of the messages can be updated. The background color and the transparency can be adapted so that they match with the text layout.

How to start

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and then the **Display** tab (2).

   The content of the **Display** tab is shown. The last pane shows the *On-screen Text Format*

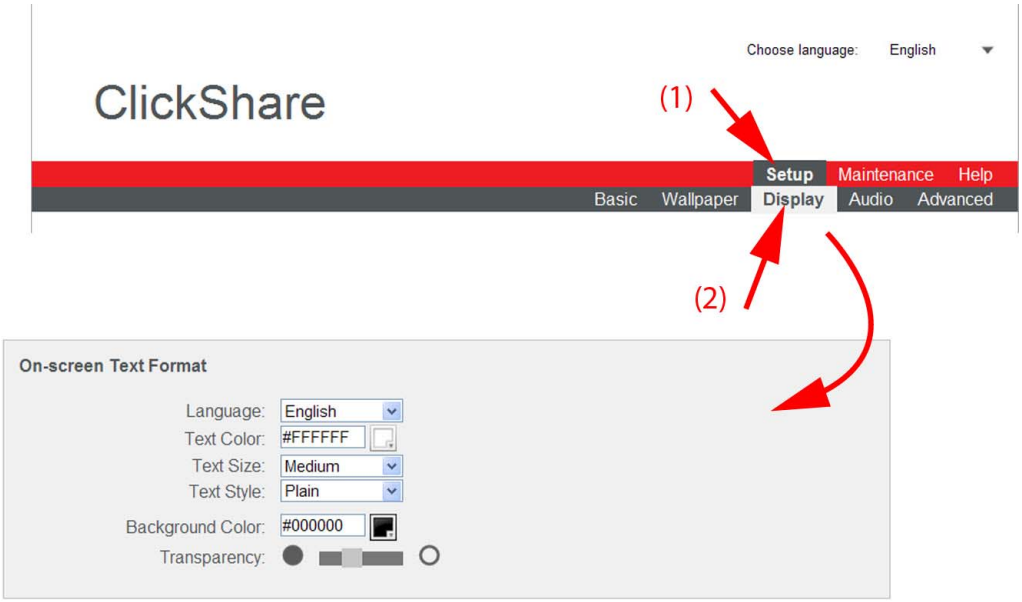

Image 6-11
On-screen text

3. When changes are made, click **Apply** to activate the new settings.
   To cancel the changes, click **Refresh Page**.

Language selection

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

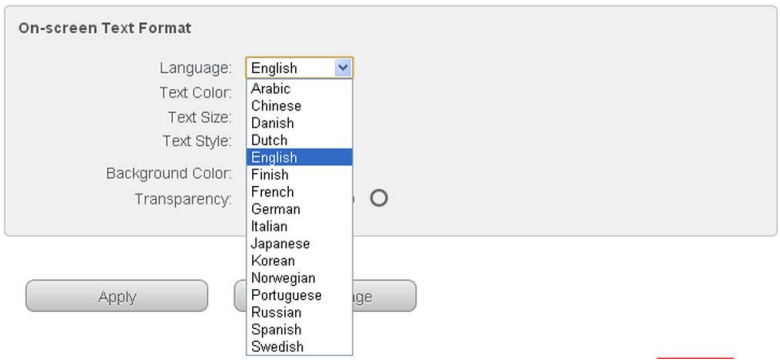

Image 6-12
Language selection

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 color

1. Click in the input field next to *Text color* or click on the color icon (1).

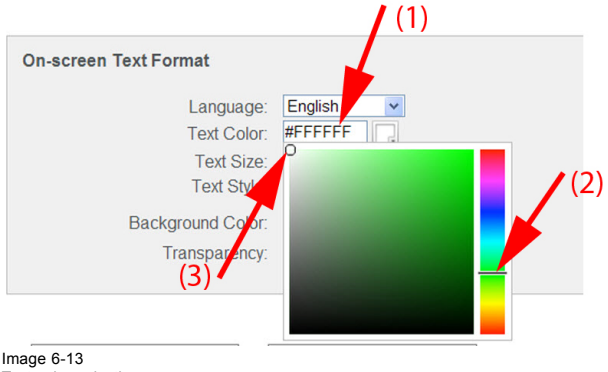

Image 6-13
Text color selection

A color selection window opens.

2. Drag the marker in the color bar up or down until the desired color is obtained (2).
3. To change the tint of the selected color, drag the circler marker in the square until the desired tint is obtained (3).

Text size and style

1. To change the text size, click on the drop down menu and select the desired size.

The following sizes are possible:

- Small
- Medium
- Large

2. To change the text style, click on the drop down menu and select the desired style.

Background color

1. Click in the input field next to *Background Color* or click on the color icon.

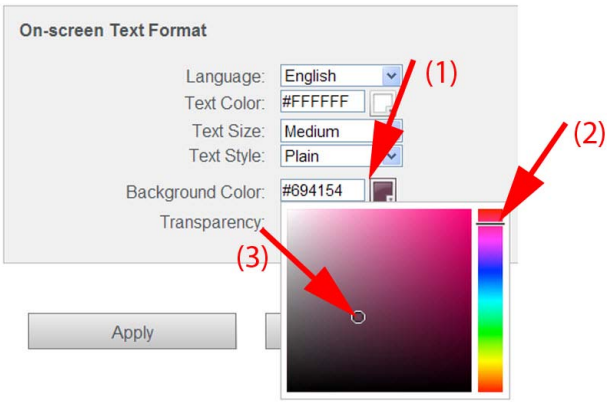

Image 6-14
Background color

2. Drag the marker in the color bar up or down until the desired color is obtained (2).
3. To change the tint of the selected color, drag the circler marker in the square until the desired tint is obtained (3).

Transparency

1. Move the slider to the left or the right to obtain the desired transparency.

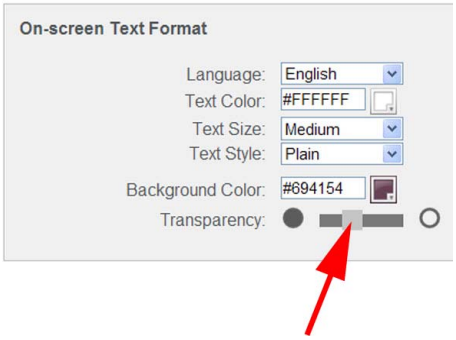

Image 6-15
Transparency

- Slider to the right: more transparency
- Slider to the left: less transparency

6.10 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.

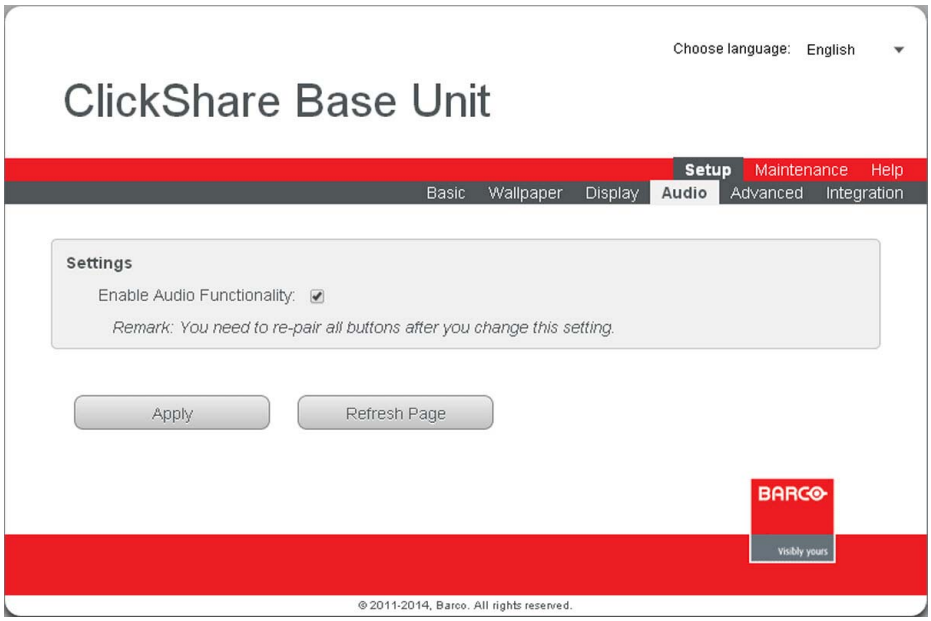

Image 6-16
Audio setting

How to change

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab and then the **Audio** tab.
3. To enable audio on the Base Unit, check the check box next to *Enable Audio Functionality*.
   Note: *Changing the audio setting, requires a re-pairing of the Buttons.*

6.11 Integration, Polycom

About the integration

When both, ClickShare and Polycom systems are installed in a meeting room, typically the video output of the ClickShare Base Unit is connected to the Polycom unit as a source input. In this case, a user can share content using ClickShare, which is then shown on the Polycom system.

Depending on the design and configuration of the Polycom system, the last content that arrives to the Polycom system is considered to be the current content and is shown on the display. Therefore, the ClickShare Polycom integration must overcome that the ClickShare Button keeps sharing while other content is shown.

To setup the integration the ClickShare Base Unit and the Polycom system need to be connected to the same network.

How to enable

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and click **Integration** (2).

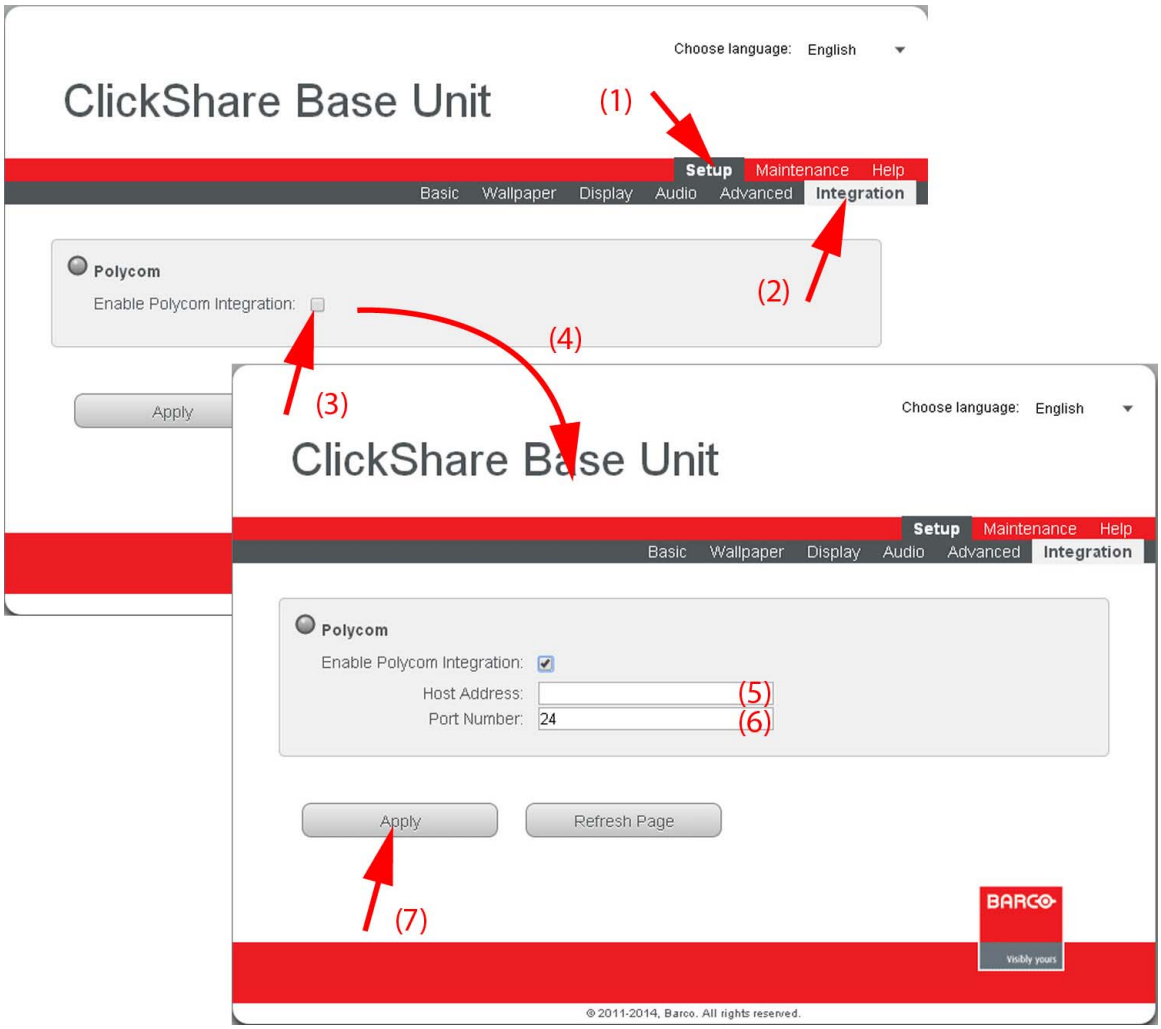

Image 6-17
Integration, Polycom

3. To enable Polycom integration, check the check box next to *Enable Polycom Integration* (3).

   The user is asked to fill in the IP address or hostname (5) of the target Polycom unit together with the Telnet port[2] (6) that allows sending API commands.

4. Click **Apply** (7).

   Once the integration is enabled, the ClickShare Base Unit will enter to the standby mode if there is no sharing ClickShare Button.

   As soon as the connection is established between the two systems[3], the ClickShare Base Unit sends “notify vidsourcechanges” API command to the Polycom unit. From that moment on, if content coming from ClickShare is taken out from the display by the Polycom unit , all ClickShare Buttons that are currently sharing content will go to Ready to Share mode and the ClickShare Base Unit will go to the standby mode. The client can start sharing again by clicking to their buttons and their content will be shown on the display.

   In case of an error, the LED will turn to red and an error string will be shown.

Disable the connection

1. Uncheck the check box next to *Enable Polycom Integration*.
2. Click **Apply**.

   The ClickShare Base Unit will send “nonotify vidsourcechanges” API command to the Polycom unit and the connection will be closed.

2. Telnet port is set to 24 by default.
3. Since establishing the connection may take some time, refreshing the current page may be necessary to see the latest status of the connection.

6.12 Corporate network, activation

Start up

Due to the complexity of the ClickShare Network Integration feature, you must activate it first. To activate, go to the Corporate Network tab and click on the button which brings you to a request page. Enter the details regarding your ClickShare deployment and network configuration. After receiving your request, we check whether or not the feature can be enabled in your environment. If so, you will receive an activation code that should be enter in the Base Unit's WebUI to get access to this feature.

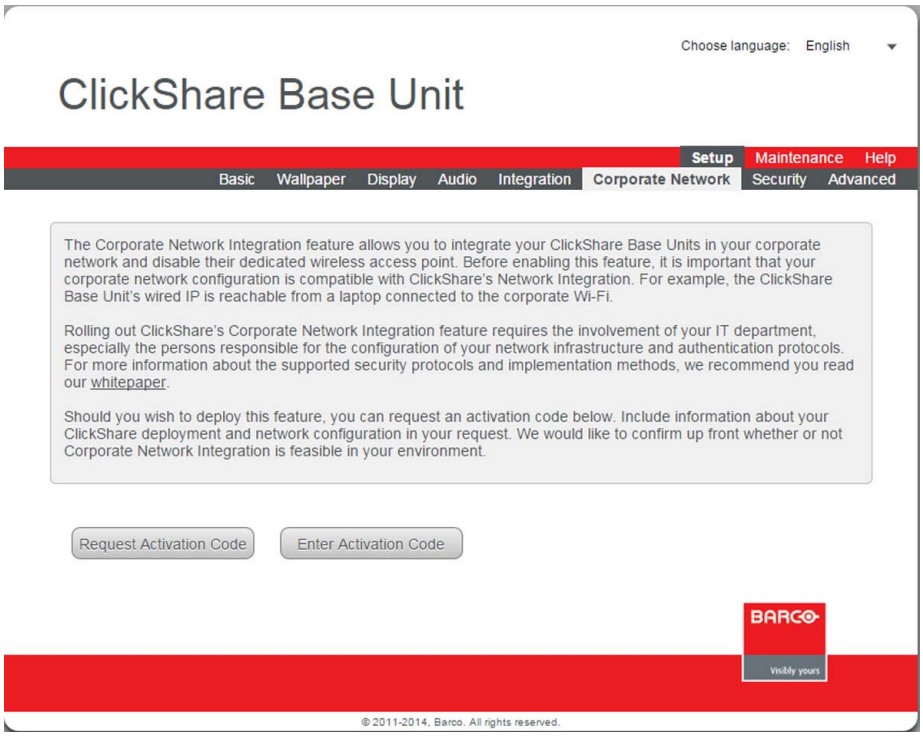

Image 6-18

Click **Request Activation Code** to request a code.

Click **Enter Activation Code** to enter the delivered code.

Request activation code

Your browser opens a static form on the Barco web site.

Fill out the form and send it to Barco.

Enter activation code

An input window opens.

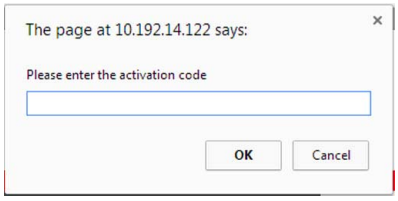

Image 6-19

Click in that input field, enter the delivered code and click **OK**.

The code is checked and the start wizard screen is displayed.

6.13 Corporate network, using EAP-TLS

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 is that the user identity is transmitted in the clear before the actual TLS handshake is performed.

How to start up for EAP-TLS

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and click **Corporate Network** (2).

Image 6-20
Corporate network, EAP-TLS

3. Click **Start Wizard** (3) to start up the configuration process.

   The Security Mode selection window opens (4).
4. Select the radio button next to *EAP-TLS* (5) and click **Next** (6).

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

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

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.

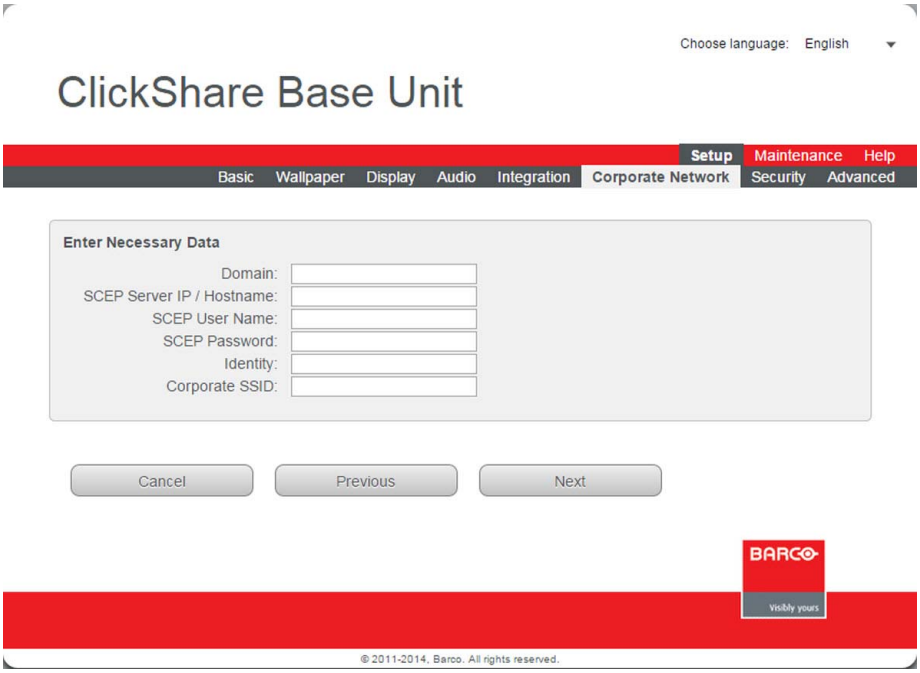

Image 6-21
SCEP protocol

About NDES

The Network Device Enrolment 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 website[4]. SCEP uses a so called *"challenge password"* in order to authenticate the enrollment request. For NDES, this challenge can be retrieved from your server at: http(s)://[your-server-hostname]/CertSrv/mscep_admin.

If 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.
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	This is the password of the User Account used as SCEP User name. The password is never stored on the Base Unit. It is only kept in memory just long enough to request the Challenge Password from the server after which it is removed from memory immediately.

4. 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

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 doesn't 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.

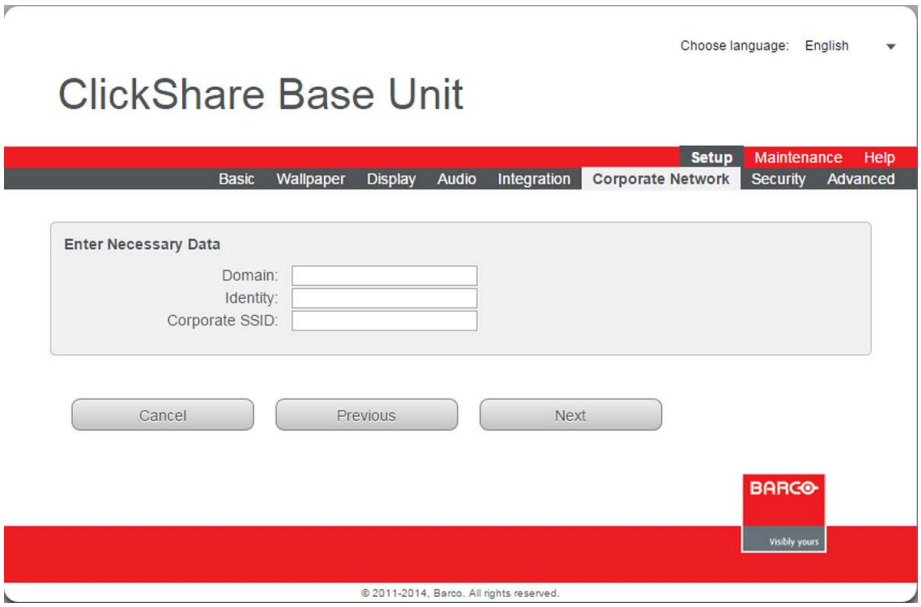

Image 6-22

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.

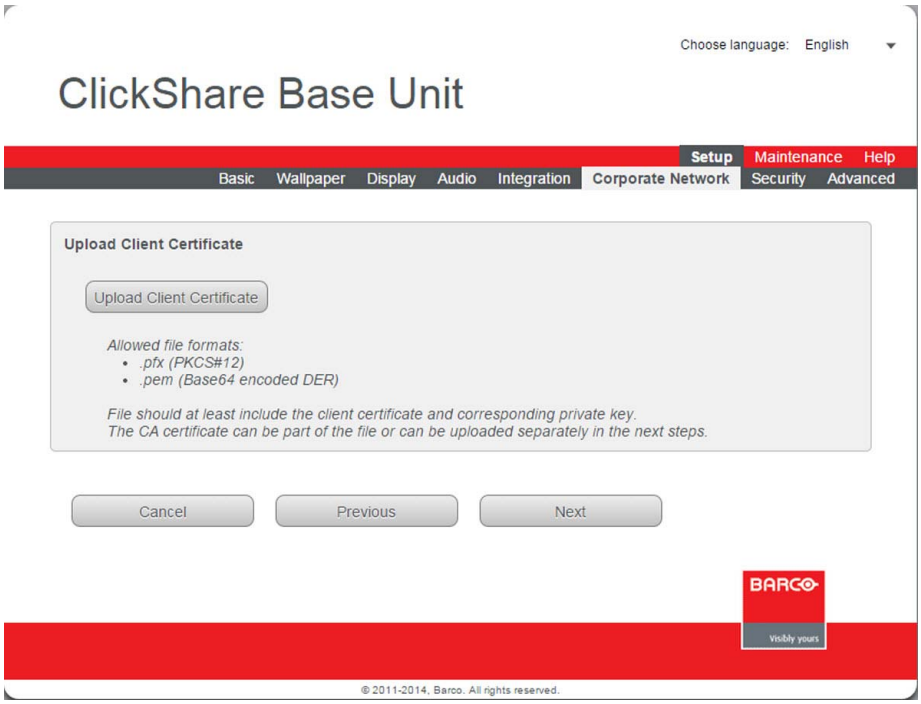

Image 6-23

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.

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 enabled by holding shift when starting the Client executable. Look for the lines *"EDSUSBDongleConnection::mpParseDongleMessages"*. An error code and a short summary of the issue should be logged.

6.14 Corporate network, using EAP-TTLS

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 ClickShare web interface.
2. Click the **Setup** tab (1) and click **Corporate Network** (2).

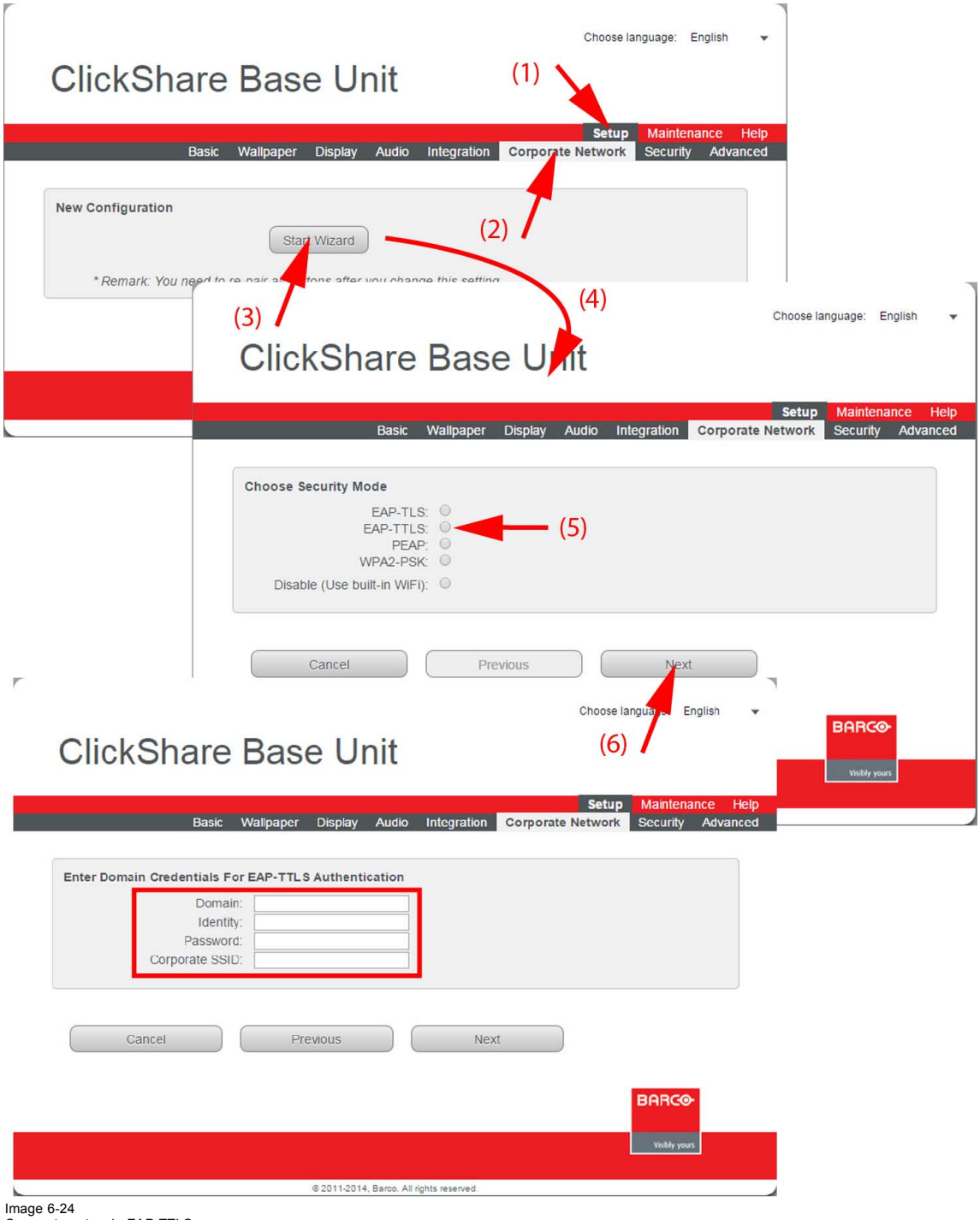

Image 6-24
Corporate network, EAP-TTLS

3. Click **Start Wizard** (3) to start up the configuration process.

   The Security Mode selection window opens (4).
4. Select the radio button next to *EAP-TTLS* (5) and click **Next** (6).

The EAP-TTLS mode window opens.

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 *"EDSUSBDongleConnection::mpParseDongleMessages"*. An error code and a short summary of the issue should be logged.

6.15 Corporate network, using PEAP

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. Which actual method is used to authenticate within the tunnel is not mandated by the standard. But throughout the documentation when talking about 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 ClickShare web interface.
2. Click the **Setup** tab (1) and click **Corporate Network** (2).

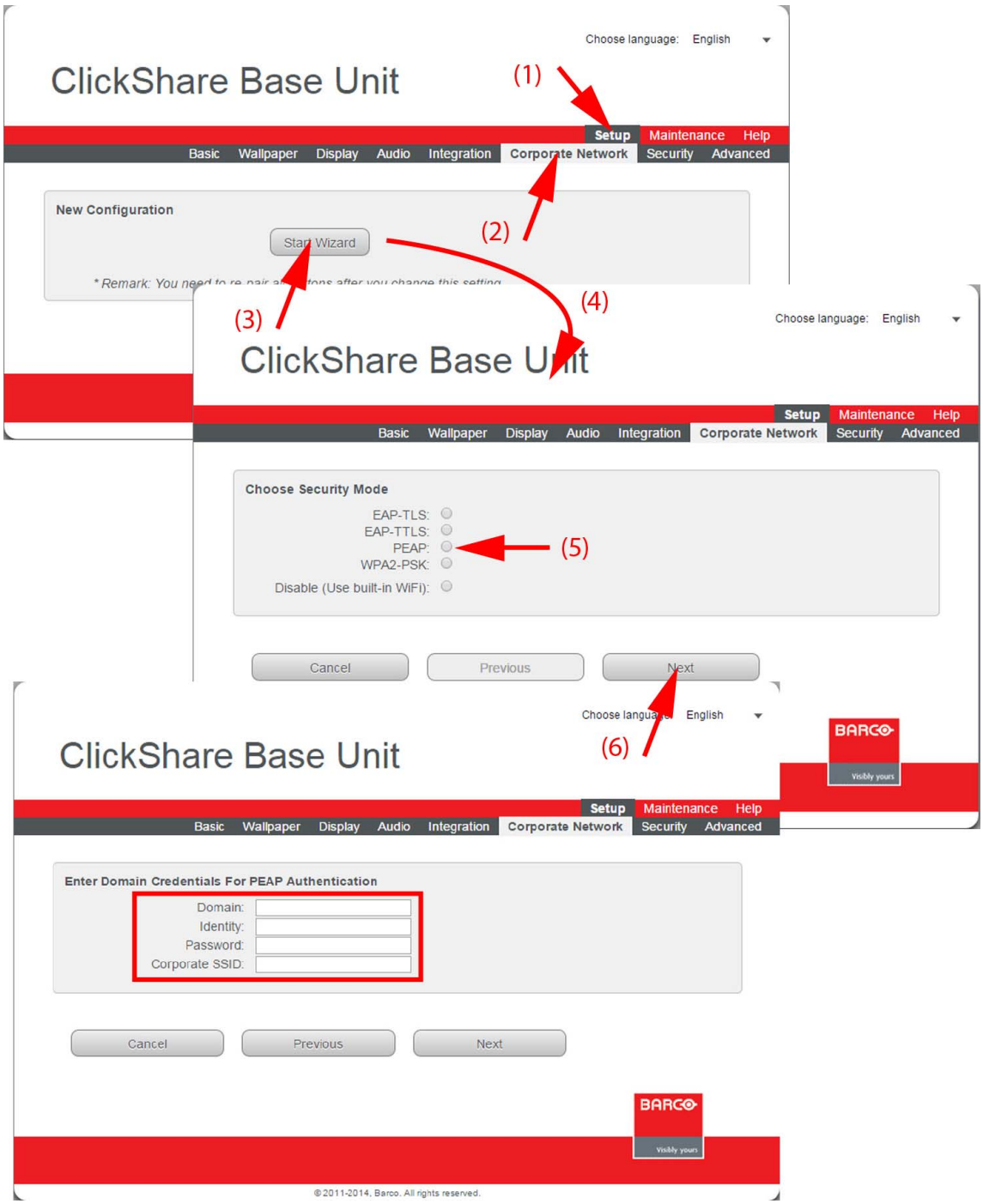

Image 6-25
Corporate network, PEAP

3. Click **Start Wizard** (3) to start up the configuration process.

   The Security Mode selection window opens (4).

4. Select the radio button next to *PEAP* (5) and click **Next** (6).

The PEAP mode window opens.

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 *"EDSUSBDongleConnection::mpParseDongleMessages"*. An error code and a short summary of the issue should be logged.

6.16 Corporate network, using WPA2-PSK

About WPA2-PSK

WPA2-PSK does not distinct between individual users, there is 1 password (PSK – Pre-Shared Key) for all clients connecting to the wireless infrastructure. As such setup is 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 ClickShare web interface.
2. Click the **Setup** tab (1) and click **Corporate Network** (2).

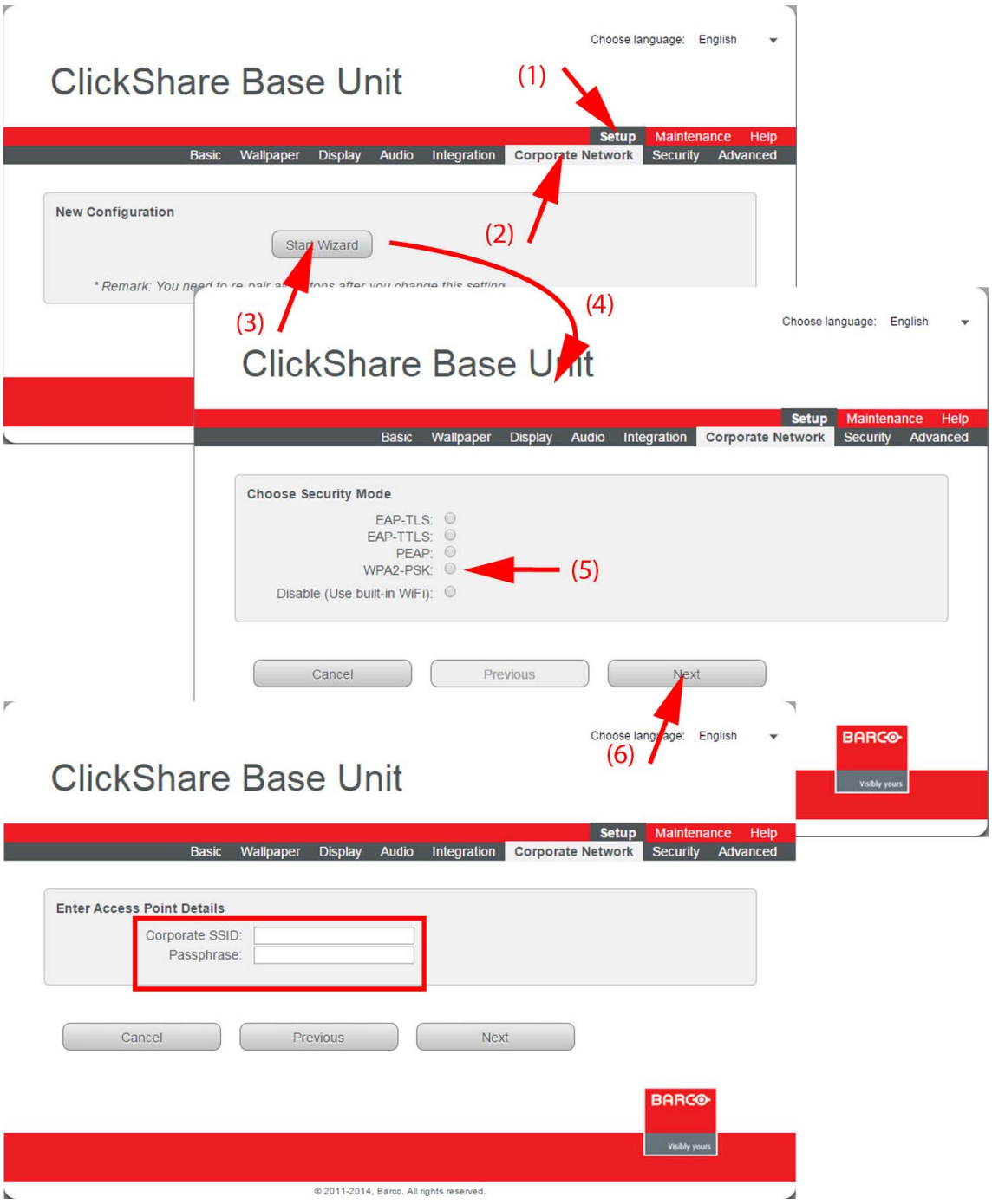

Image 6-26
Corporate network, WPA2-PSK

3. Click **Start Wizard** (3) to start up the configuration process.

   The Security Mode selection window opens (4).

4. Select the radio button next to *WPA2-PSK* (5) and click **Next** (6).

   The WPA2-PSK mode window opens.

   Necessary Data to continue:

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 enabled by holding shift when starting the Client executable. Look for the lines *"EDSUSBDongleConnection::mpParseDongleMessages"*. An error code and a short summary of the issue should be logged.

6.17 Security: HTTPS or HTTP access protocol

About HTTP or HTTPS

Hypertext Transfer Protocol Secure (HTTPS) is a communications protocol for secure communication over the network with the ClickShare Base unit. The security is based on the underlaying security capabilities of SSL/TLS. It uses long-term public and secret keys to exchange a short term session key to encrypt the data flow between the computer and the Base unit.

How to make the selection

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and click **Security** (2).

Image 6-27
HTTP or HTTPS

Within the HTTPS pane, the status is indicated next to *Enabled*.

- When No, no HTTPS is used.
- When Yes, HTTPS is used.

3. Click on **Start Wizard** to change the current status (3).

   The *Choose security* window opens.

4. Select the radio button of your choice (4) and click **Next** (5).

HTTPS via Generate Certificates

Select the radio button next to *Generate certificate* (6) and click **Next** to continue (7).

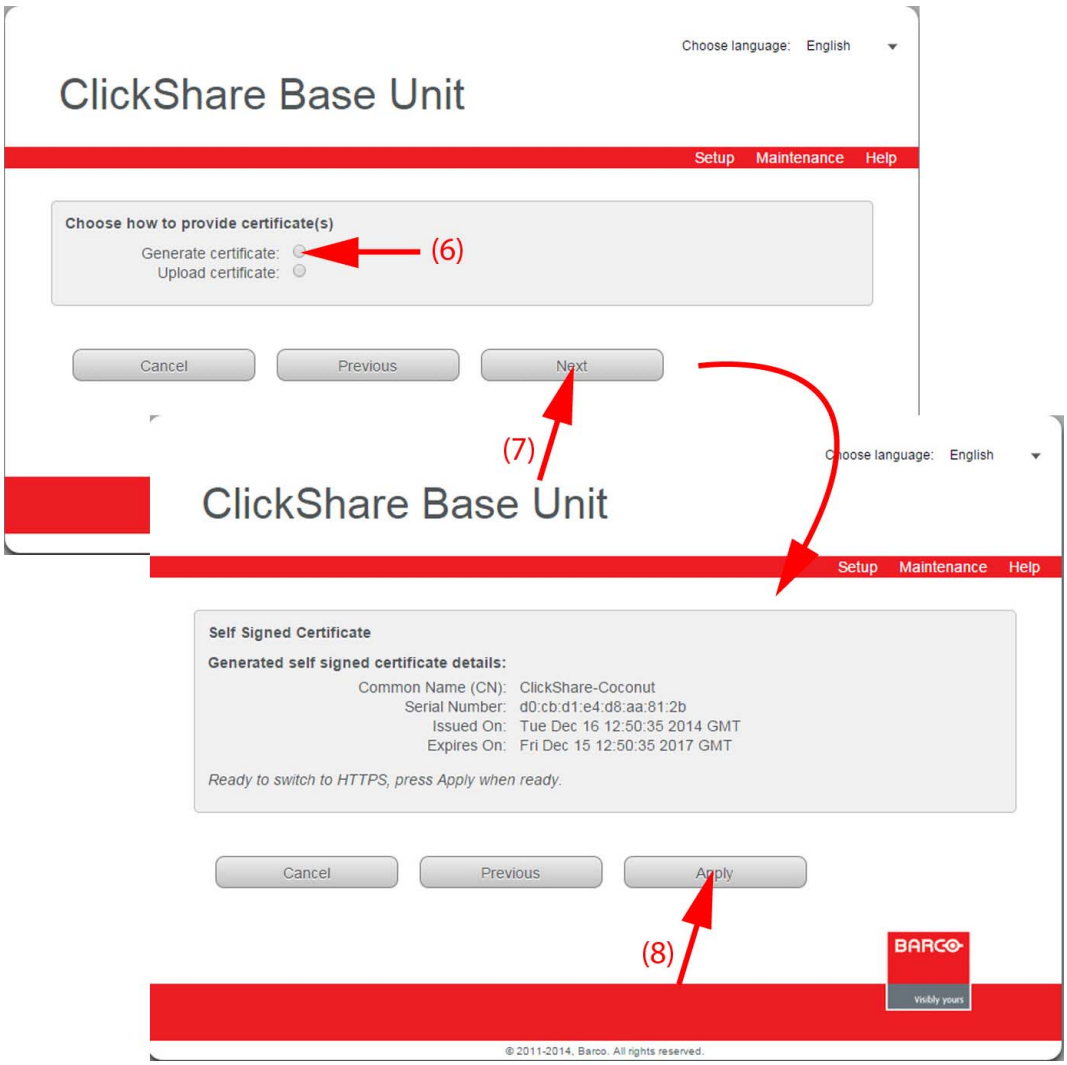

Image 6-28
HTTPS, generate certificate

A self signed certificate is created. This certificate is valid for 3 years.

Click **Apply** to switch to the HTTPS communication (8).

HTTPS via upload certificates

Select the radio button next to *Upload certificate* (6) and click **Next** to continue (7).

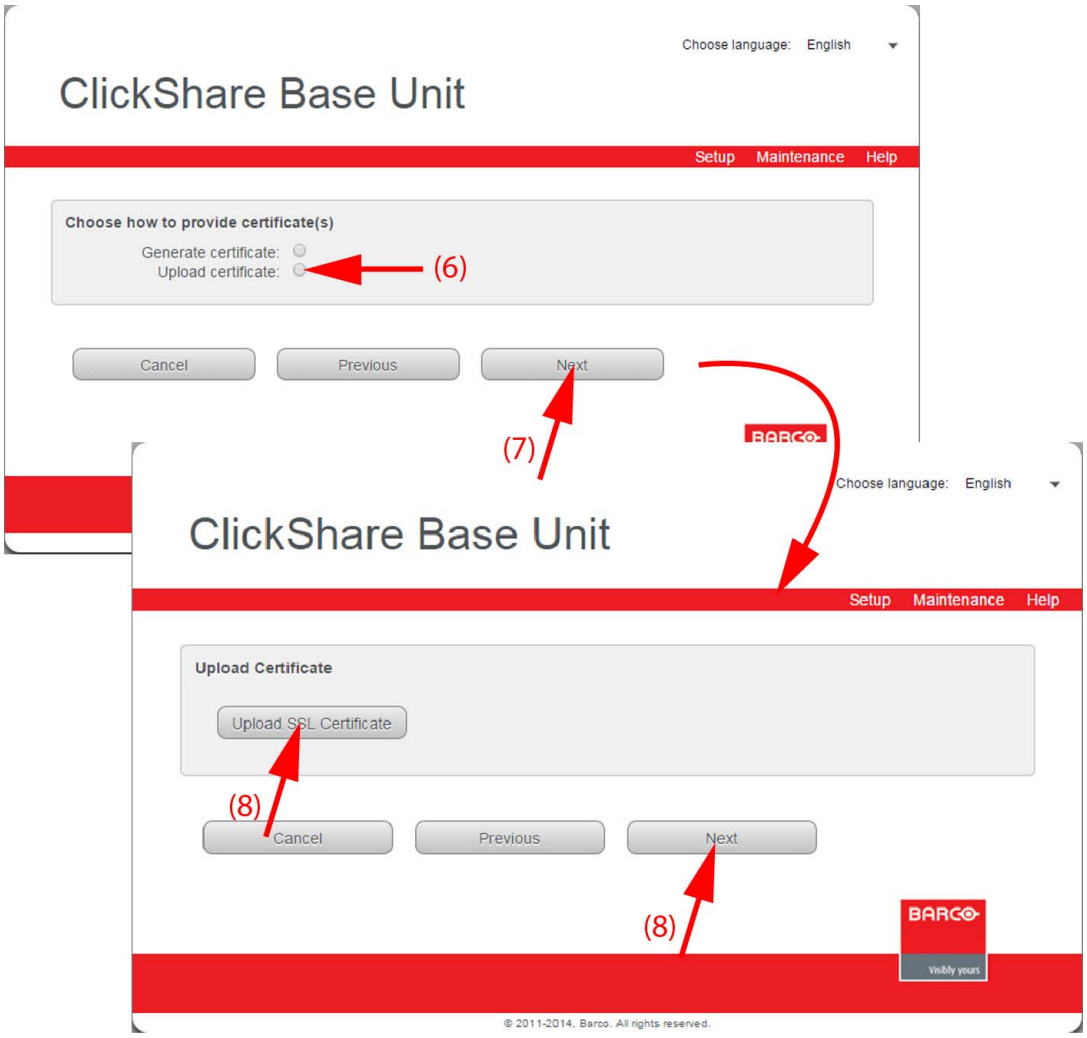

Image 6-29
HTTPS, upload SSL certificate

Click **Upload SSL Certificate** (8) and select the certificate in your browser. Click **open** and then **Next**. The communication is switched to HTTPS.

6.18 Security: Web User Interface

About access

The web interface is always accessible via the Ethernet port. Access via the wireless interface can be enabled or disabled.

How to enable-disable

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and click **Security** (2).
3. To enable access via wireless interface, check the check box next to *Enable access via wireless interface* (3).

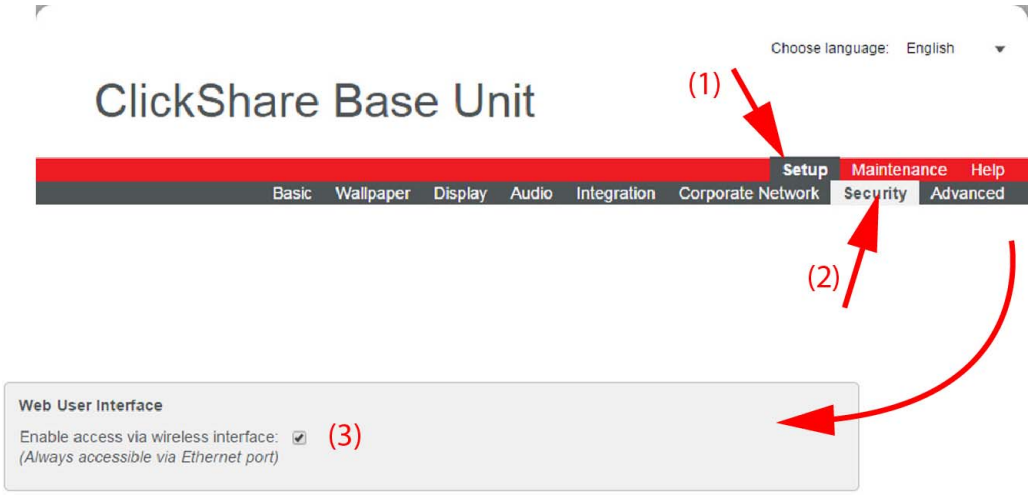

Image 6-30
Access web interface

6.19 Security: access SSH

SSH is only for Barco service purposes.

About SSH access

SSH (Secured Shell) is a network protocol for secure data communication, remote command-line login, remote command execution between networked devices that connects via a secured channel over an insecure network.

A Secured Shell access can be enabled or disabled for the wireless interface and/or for the Ethernet port.

How to enable-disable

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and click **Security** (2).
3. To enable access via wireless interface, check the check box next to *Enable SSH via wireless interface* (3).
   To enable access via Ethernet port, check the check box next to *Enable SSH via Ethernet port* (3).

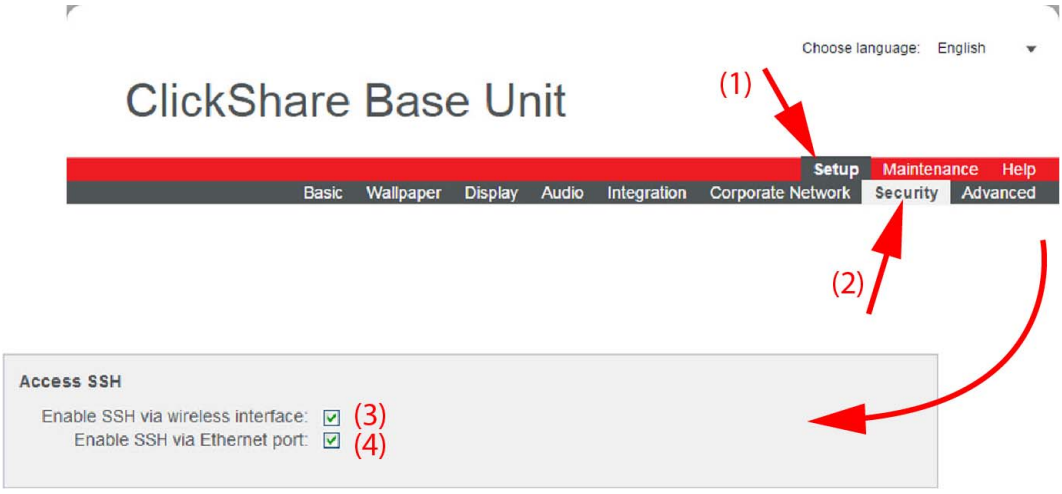

Image 6-31
Access SSH

6.20 Security: Block sharing for Apps

What can be done?

Content sharing with mobile devices can be blocked.

How to block

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and click **Security** (2).

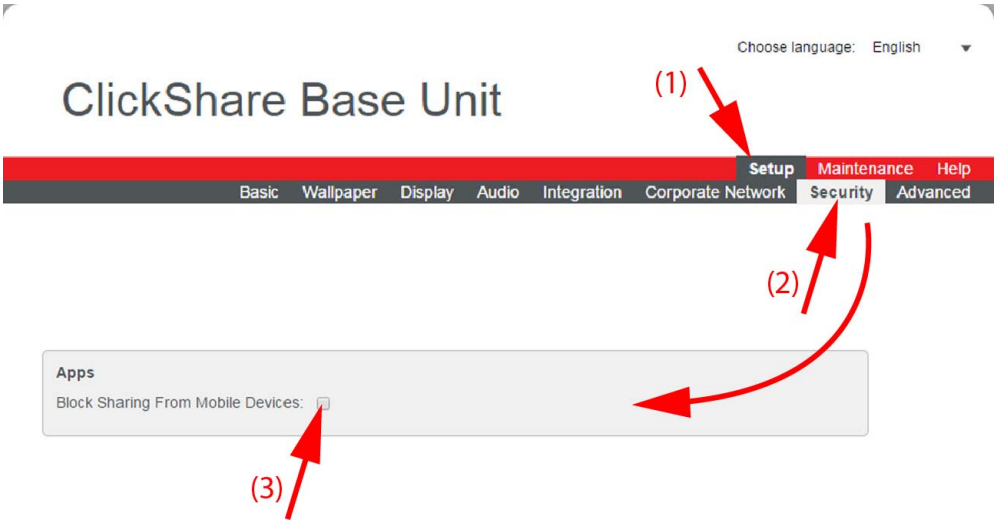

Image 6-32
Block content sharing

3. To block content sharing, check the check box next to *Block Sharing From Mobile Devices* (3).
4. To allow sharing content, uncheck the check box next to *Block Sharing From Mobile Devices* (3).

6.21 Advanced settings: Hostname

Hostname

Hostnames are human-readable nicknames that correspond to the address of a device connected to a network.

How to change

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and click **Advanced** (2).

Image 6-33
Hostname

3. Click in the input field next to *Hostname* (3)

4. Select the current name and enter a new name.
   Note: *The default hostname is "ClickShare-<serial number>".*

6.22 Advanced settings: LAN network 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.

DHCP setup of the LAN network

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and click **Advanced** (2).

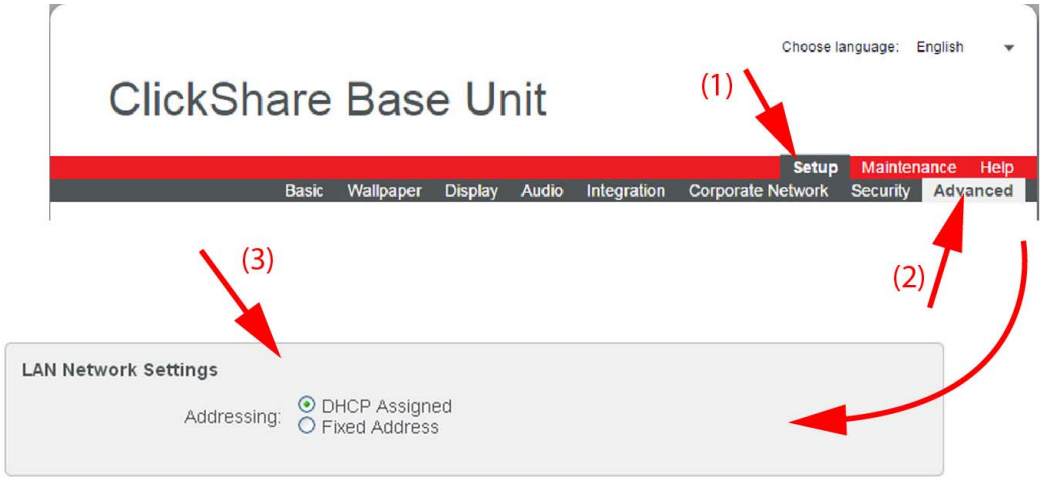

Image 6-34
DHCP setup

The **Advanced** tab is displayed.

3. Check the radio button next to *DHCP Assigned* (3).
4. Click **Apply** to confirm the changes.

Fixed IP address setup

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and click **Advanced** (2).

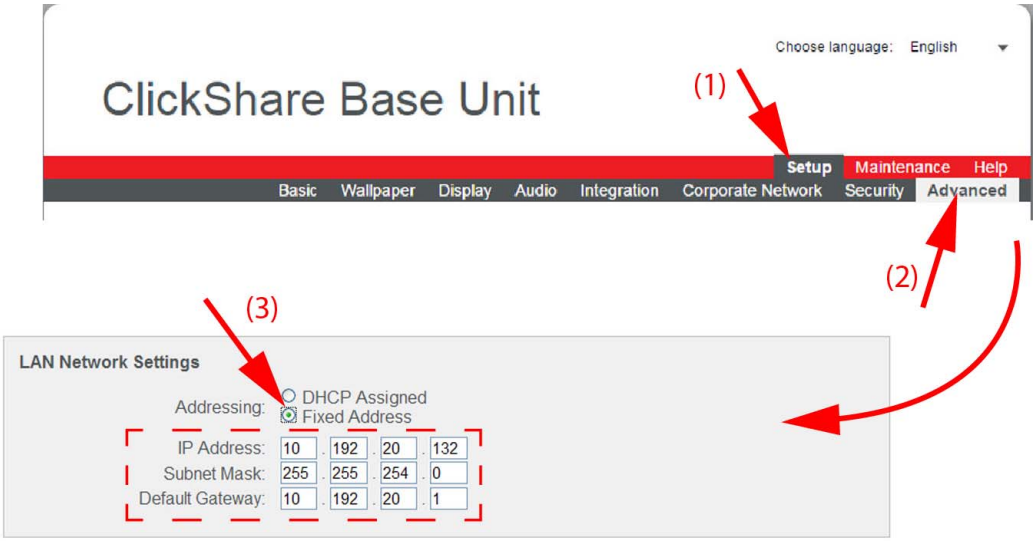

Image 6-35
Fixed IP address

The **Advanced** tab is displayed.

3. Check the radio button next to *Fixed address* (3).

   The IP address, subnet and gateway input opens.

4. Click in the input field of the *IP address* and fill out the 4 fields.
   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

5. Click in the *Subnet mask* input fields and fill out the 4 fields as appropriate for the local subnet.

6. Click in the *Default Gateway* input fields and fill out the 4 fields. 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.

7. Click **Apply** to confirm the changes.

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

6.23 Advanced settings: 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 broadcasted wireless power can be reduced.

How to set up

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and click **Advanced** (2).

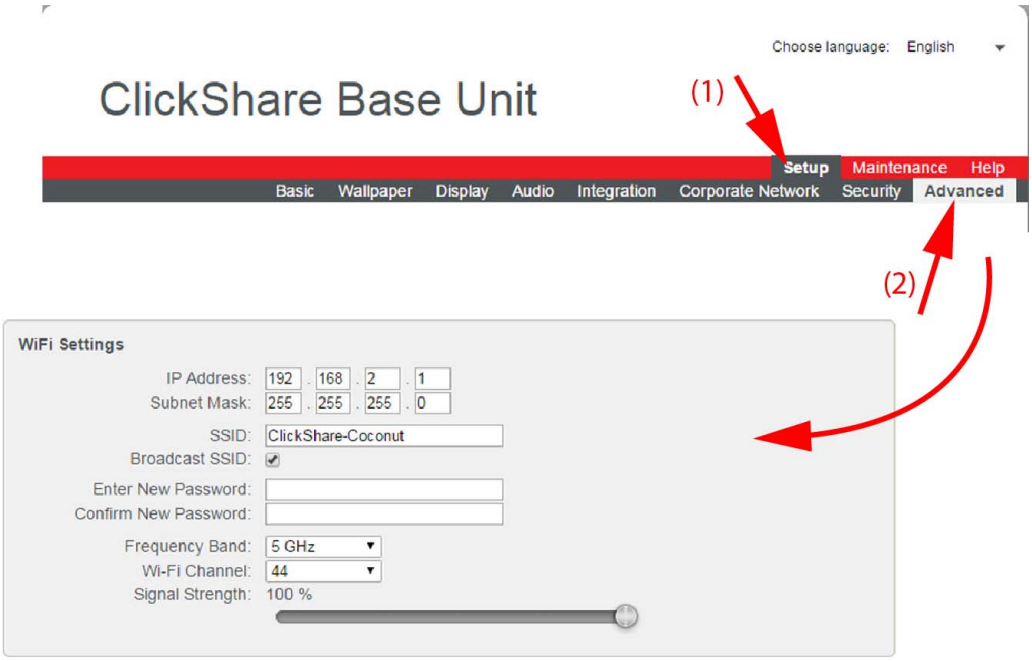

Image 6-36
WiFi settings

3. Enter a public name (SSID) for the wireless network.

   The default SSID is *ClickShare-<serial base number>*.

4. If you want to broadcast this SSID, check the checkbox behind *Broadcast SSID*.

5. Enter a new password and confirm that password.

6. Select the wireless connection frequency band: 2.4 GHz or 5 GHz by clicking on the drop down box and selecting the correct setting
   Note: *Make sure your PC's wireless interface supports the 5 GHz band before selecting it on the Base Unit.*

7. 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.

8. 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%.

9. Click **Apply** to confirm the changes.
   Note: *Changes made to the WiFi settings will require a reboot of the device after applying.*

6.24 Advanced settings: API configuration Settings

About API settings

The API can be enabled or disabled, that means that the access to unit from a external device can be given or can be blocked.

How to enable-disable

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and click **Advanced** (2).
3. To enable access via API, check the check box next to *Enable API* (3).

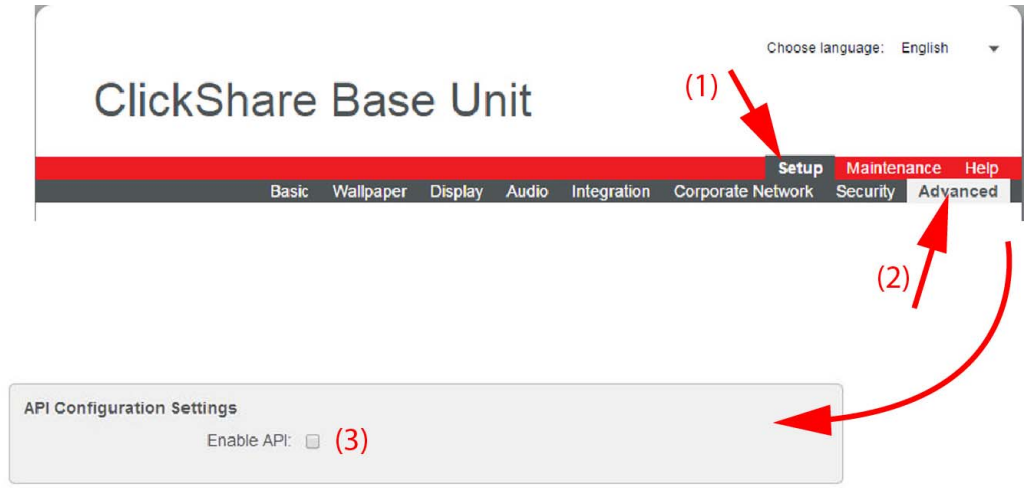

Image 6-37
Enable API

6.25 Advanced settings: NTP setup

About NTP

NTP (network time protocol) allows to synchronize clock on a network. By using NTP, the internal clock of the Base unit can be synchronized with a NTP server on the network. This synchronization is necessary when using HTTPS and corporate network integration.

How to setup

1. Log in to the ClickShare web interface.
2. Click the **Setup** tab (1) and click **Advanced** (2).

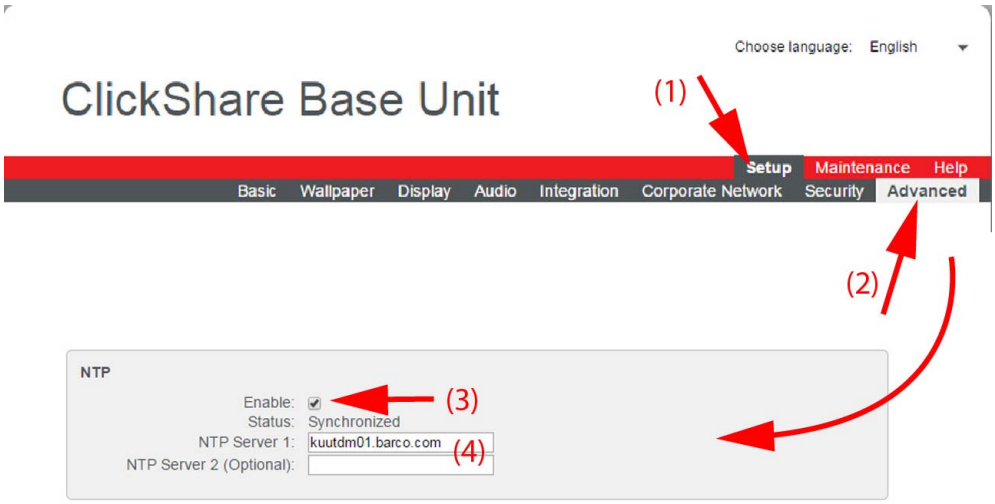

Image 6-38

3. To enable NTP, check the check box next to *Enable* (3).
4. Fill out the host name or IP address of the NTP server on your network.
5. As a backup, you can fill out the address of a second NTP server on the network.
6. Click **Apply** to start the synchronization.

   When synchronized, the status will indicate *Synchronized*.

6.26 Maintenance, status check ClickShare

About status check

The status tab within **Maintenance** gives an overview of

- the LAN interface settings,
- the WiFi settings,
- System identification
- Historical updates
- Subsystem status
- System management

To check the system status

1. Log in to the ClickShare web interface.
2. Click the **Maintenance** tab and click **Status**.

   The **Status** tab page is displayed.

Image 6-39
Status overview

Detailed info for the WiFi network

To see the MAC address of the associated devices, click on the corresponding **detail** button to get an overview.

Image 6-40
Detail associated devices

System Management

Use the **Restart System** button to restart ClickShare.

Use the **Shutdown System** button to shutdown ClickShare.

Image 6-41
System management

6.27 Maintenance, Buttons information

About buttons

The **Buttons** tab gives information on the Buttons that have been paired to the Base Unit.

The following information is given:

- Connected or not
- Serial number
- Last connected
- Status

How to get the information

1. Log in to the ClickShare web interface.
2. Click the **Maintenance** tab (1) and then click **Buttons** (2).

   The content of the **Buttons** tab is displayed.

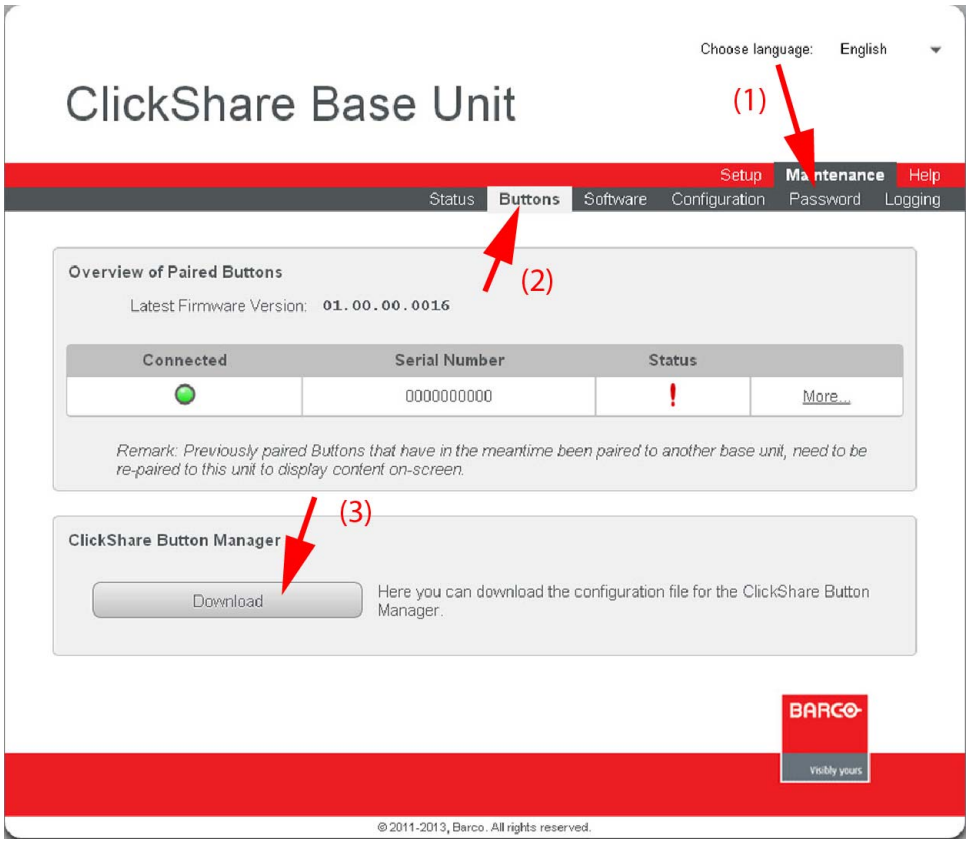

Image 6-42
Paired butons, overview

The list gives an overview of the Buttons that have in the past been paired to this Base Unit. If a Button has in the meantime been paired to another Base Unit, it will still appear in this list. To remove it from the list, at the right of the tab page, click **More** and select **Remove from list**.

In the overview of paired Buttons, for each Button that has been paired to this Base Unit, you will find:
The following items can be seen in the list:

- Connected: indicates whether the button is connected or not at the moment.
- Serial number: the unique serial number of the button.
- Status the firm- and software status of the button.

Status indication	Icon	Explanation
OK	✓	Button firmware and software are up to date. The Button has been paired to the Base Unit.
ERROR	!	The Button needs to be paired to the Base Unit again before using it. The Button firmware version is incompatible with the Base Unit firmware version.

3. To get more information on the Button firmware, the number of connections and the MAC address, click **More...**.

Image 6-43

The Button can be removed from the list by clicking on **Remove From List**.

4. To download the configuration file for the Button manager to pair buttons, click on **Download** (3)

6.28 Maintenance, update Buttons over WiFi

About update Buttons over WiFi

When the Base Unit software is version 01.03 or higher, the Button software will update automatically over WiFi and does not need manual pairing 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 paired manually to update their software.

How to enable/disable

1. Log in to the ClickShare web interface.
2. Click the **Maintenance** tab (1) and then click **Buttons** (2).

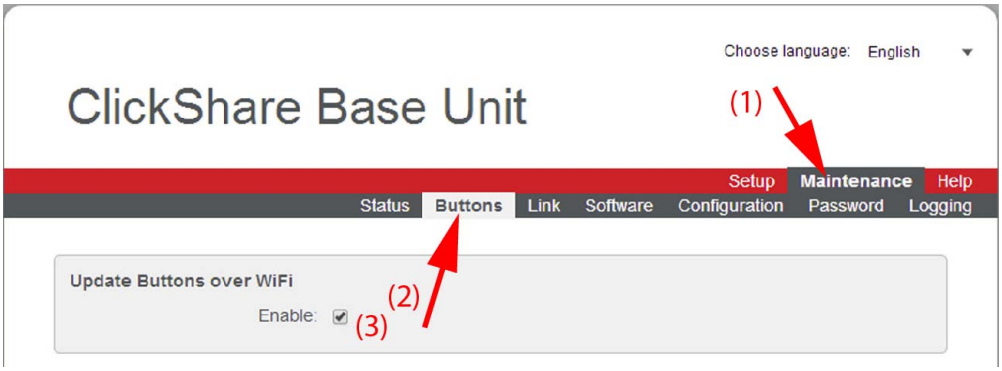

Image 6-44
Update Buttons over WiFi

3. To enable update over WiFi, check the check box next to *Enable* (3) in the *Update Buttons over WiFi* pane.

6.29 Base Unit software 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.

How to update

1. Download the latest version of the software from Barco's website.
2. Log in to the ClickShare web interface.
3. Click the **Maintenance** tab (1) and then click **Software** (2).

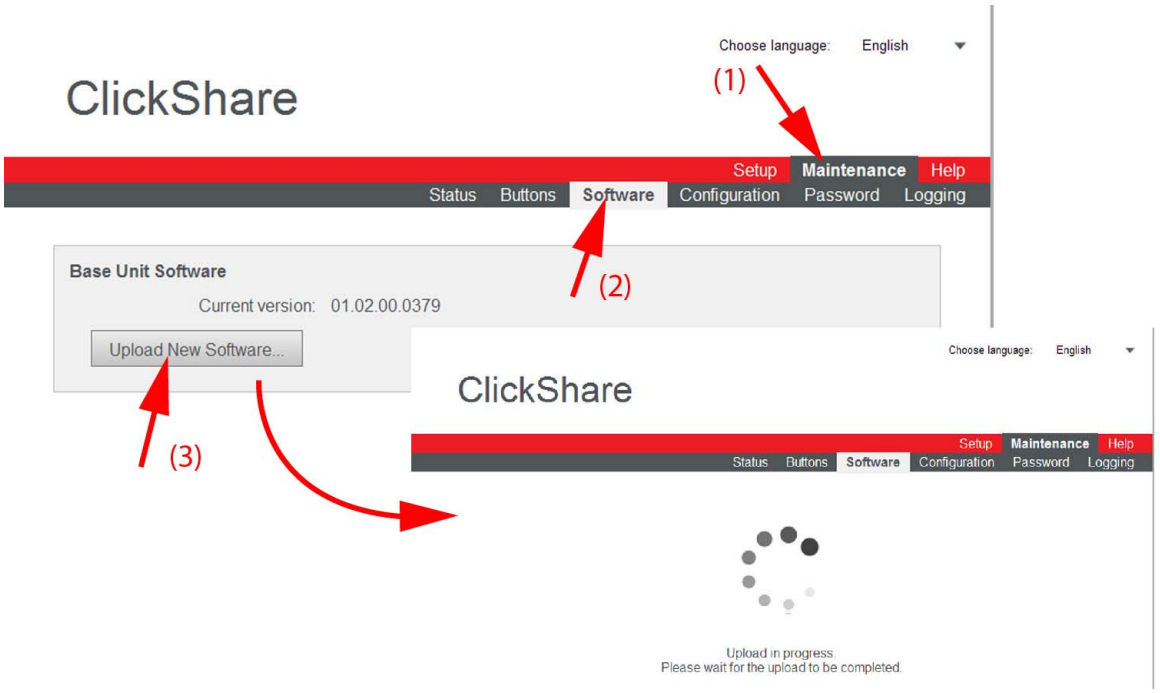

Image 6-45
Update software

The content of the **Software** tab is displayed.

The current version of the Base Unit software is shown in the Base Unit Software pane.

4. To upload a new version of the Base Unit software, click **Upload New Software... .** (3).

   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.

When updating the Base Unit software to version 01.03 or higher, the Button software will update automatically over WiFi and does not need manual pairing 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 paired manually to update their software.

6.30 Downloads from Base Unit (launcher service)

About downloads

The launcher service and the ClickShare client software for PC or MAC are stored on the Base Unit and can be downloaded for installation on the user's PC.

For more information, see "Pre-install of the Launcher service", page 22.

How to download

1. Log in to the ClickShare web interface.
2. Click the **Maintenance** tab (1) and then click **Software** (2).

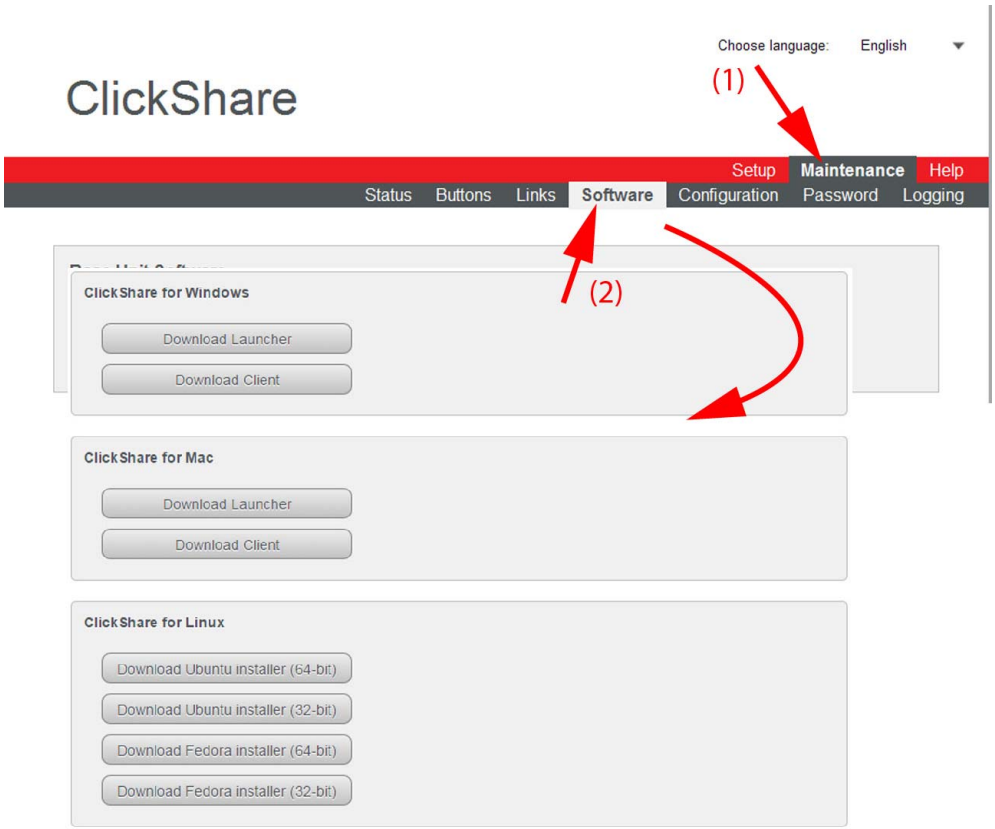

Image 6-46
Downloads software

The content of the **Software** tab is displayed.

3. To download the Launcher Service, for Windows, click on **Download Windows Launcher** or for Mac, click on **Download Mac Launcher**.
4. To download the ClickShare Client, for Windows, click on **Download Windows Client** or for Mac, click on **Download Mac Client**.
5. To download the Linux installer for Ubuntu 32 bit or 64 bit or for Fedora 32 bit or 64 bit.

6.31 Manage System Configuration

About Manage system configuration

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. 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 system configuration

1. Log in to the ClickShare web interface.
2. Click the **Maintenance** tab (1) and then click **Configuration** (2)..

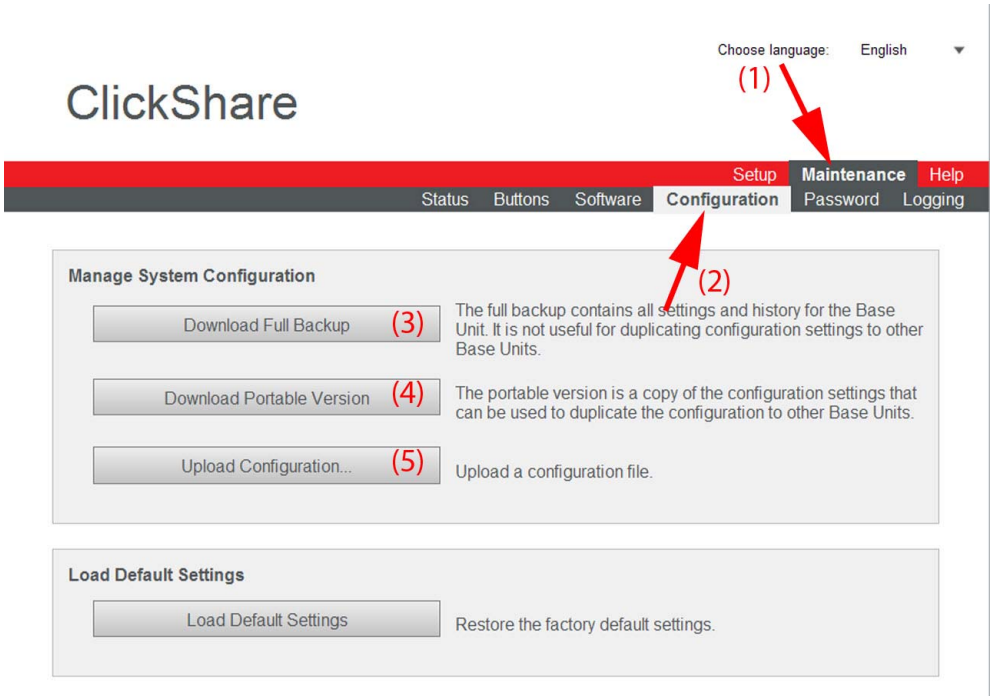

Image 6-47
Manage system configuration

The content of the **Configuration** tab is displayed.

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

   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 **Download Portable Version** (4).

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

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

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

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

6.32 Load Default Settings

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 infinity
- 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 2.4 GHz, channel 6.
- 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.

How to restore factory defaults

1. Log in to the ClickShare web interface.
2. Click the **Maintenance** tab (1) and then click **Configuration** (2)..

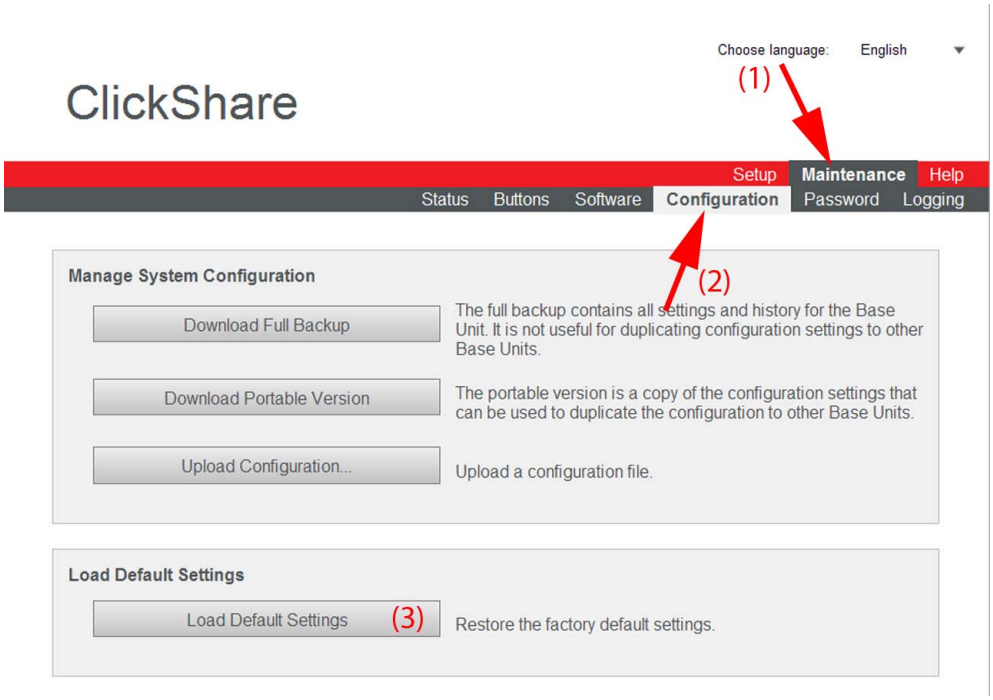

Image 6-48
Factory defaults

3. Click on **Load Default Settings** to return to the factory defaults (3).

   A pop-up confirmation message appears.
4. Confirm the reboot and the unit reboots.

Restore defaults via reset button

1. Start up the Base unit.
2. When Barco logo appears, press the reset button (bottom side of the Base unit) Press this button until the Barco logo disappears and the LEDs are blinking red/white for at least 10 seconds.

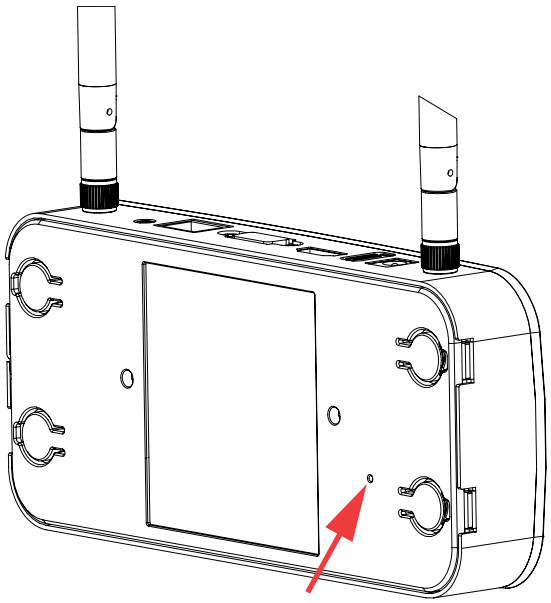

Image 6-49
Reset button

3. Release the button.

   The Base unit will restart with its default configuration.

6.33 Administrator password

About the administrator password

The administrator password to log in in the web interface can be changed at any time.

To change the administrator password

1. Log in to the ClickShare web interface.
2. Click the **Maintenance** tab (1) and then click **Password** (2)..

   The content of the **Password** tab is displayed.

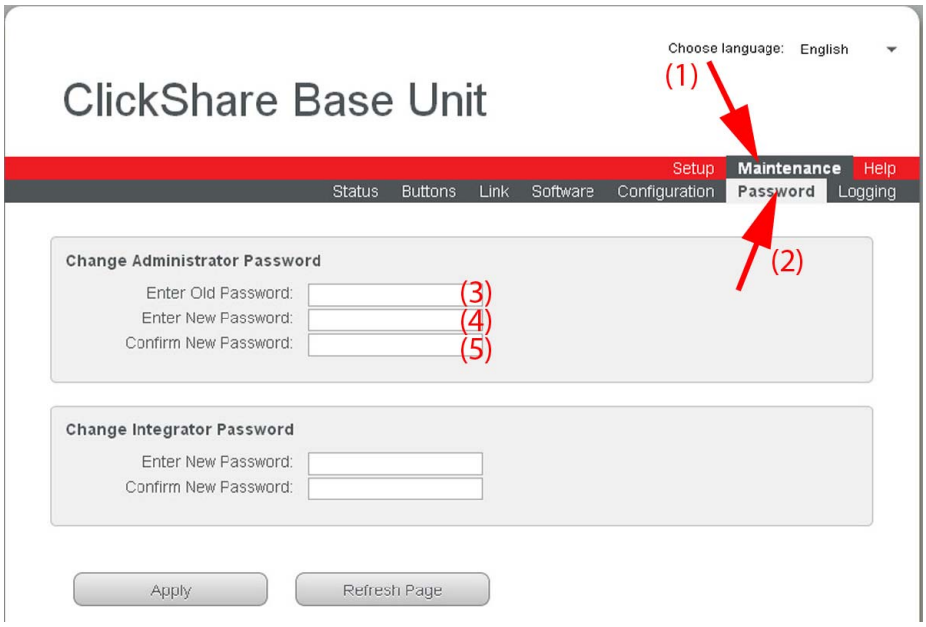

Image 6-50
Password

3. Enter the old password (3).
4. Enter the new password (4).
5. To confirm, enter the new password a second time (5).
6. Click **Apply**.

   The administrator password is changed.

6.34 Integrator password

About the integrator password

When an integrator wants to access the ClickShare Base Unit via API commands a typical password can be required. This password can be changed at any time by the administrator of the ClickShare Base Unit.

To change the integrator password

1. Log in to the ClickShare web interface.
2. Click the **Maintenance** tab (1) and then click **Password** (2)..

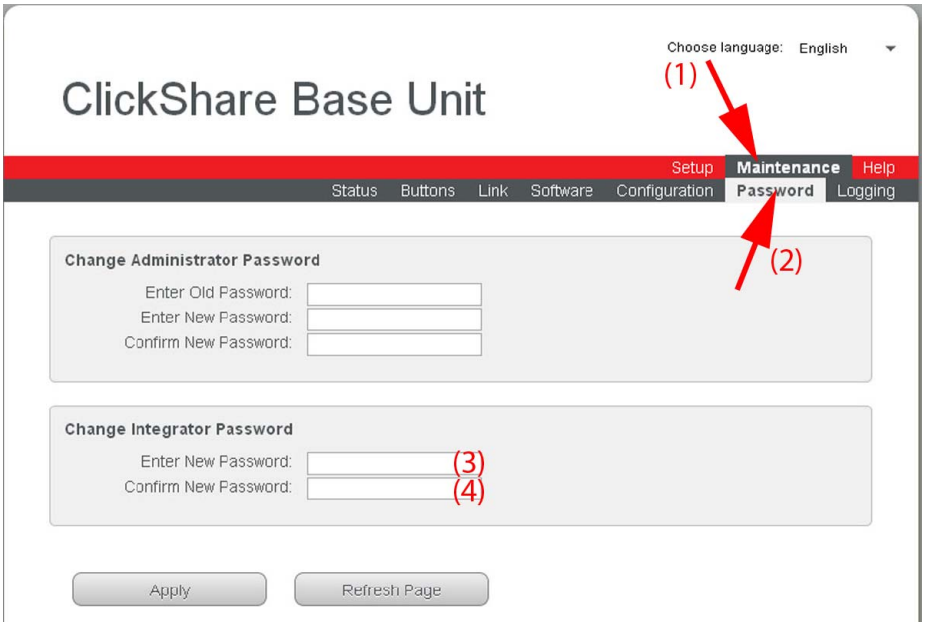

Image 6-51
Integrator password

3. Enter the new password (3).
4. To confirm, enter the new password a second time (4).
5. Click **Apply**.

   The integrator password is changed.

6.35 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 ClickShare web interface.
2. Click the **Maintenance** tab (1) and then click **Logging** (2)..

   The content of the **Logging** tab is displayed.

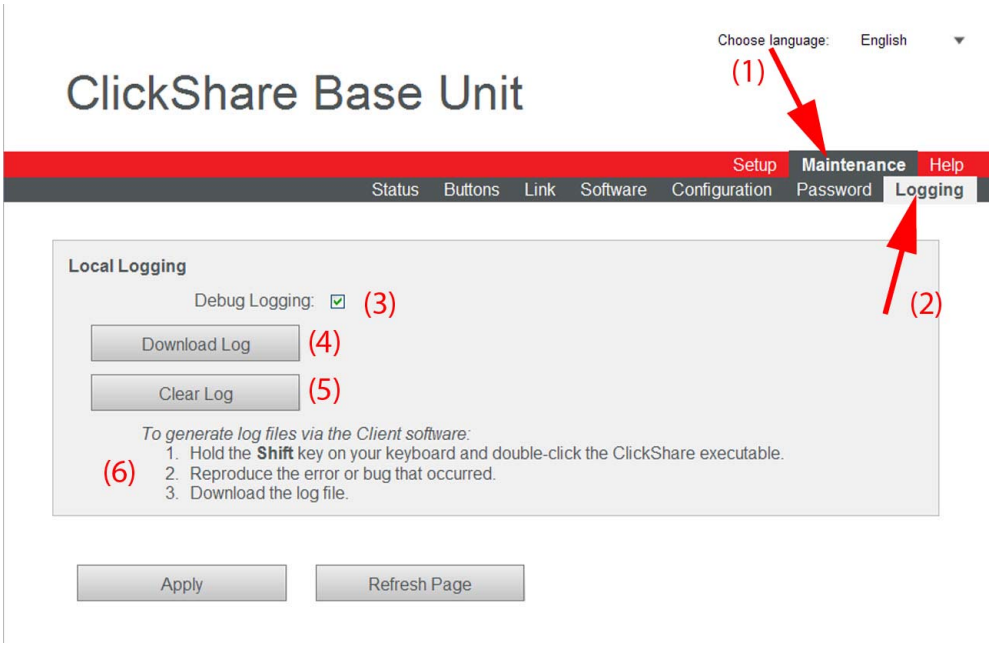

Image 6-52
Logging

3. To create a debug log, check the check box next to *Debug Logging* (3).
4. Reproduce the issue you want to report.
5. To download the current log file, click on **Download Log** (4).
6. To clear the current log file, click **Clear Log** (5).
7. • To enable logging by the ClickShare client (6):
   - If the launcher service is running hold down the shift key while connecting the dongle 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:

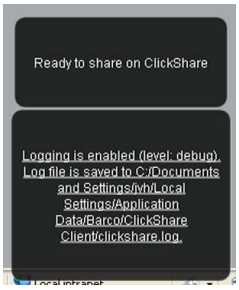

Image 6-53
Client logging

8. Click **Apply**.

6.36 ClickShare Help, Barco contact data

About ClickShare Help

All kind of manuals, firmware and software updates can be found on Barco's website. For technical assistance contact your reseller.

How to consult

1. Log in to the ClickShare web interface.
2. Click the **Help** tab (1) and then click **Contact** (2).

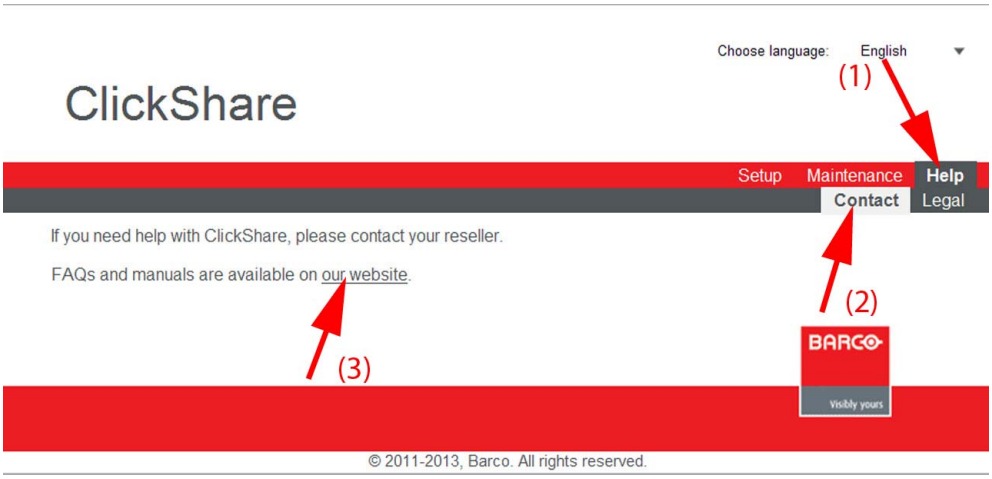

Image 6-54

The content of the **Contact** tab is displayed.

The **Contact** page contains a link to the ClickShare home page on Barco's website (3).

3. Click on the link **Visit the ClickShare product page**.
4. Click **Downloads**

   All kind of manuals, brochures and software updates can be found on that page.

6.37 Barco ClickShare EULA

About the Barco ClickShare EULA

The Barco ClickShare End-User License Agreement (EULA) can be consulted on the **Legal** tab page.

How to consult

1. Log in to the ClickShare web interface.
2. Click the **Help** tab (1)and then click **Legal** (2).

   The End-User license agreement is displayed.

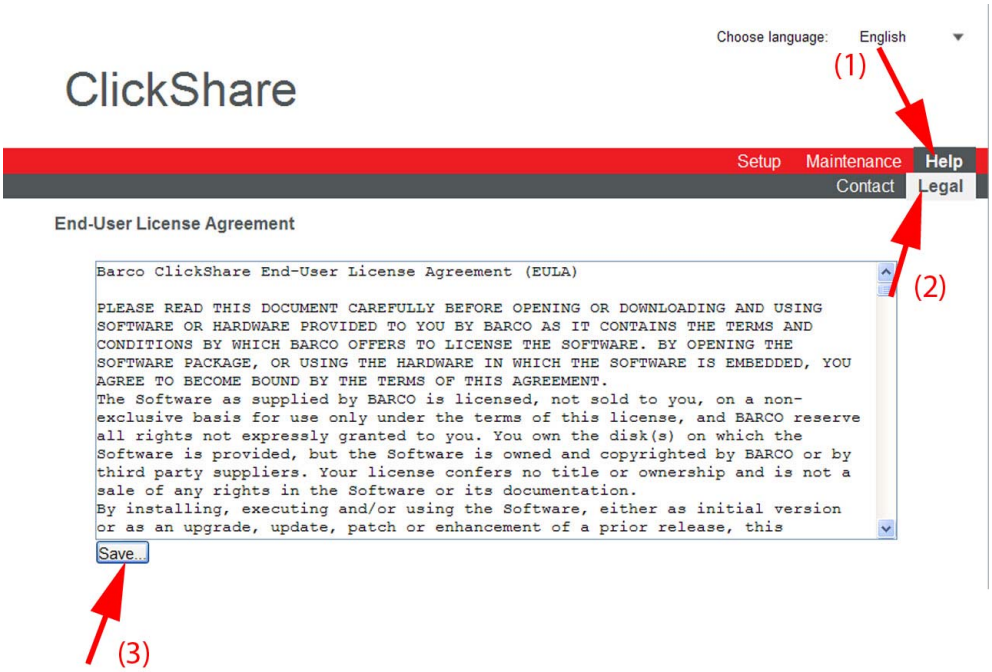

Image 6-55
EULA

3. If desired, click **Save ...** (3) to save a copy of the agreement on your laptop.

4. In the **File Download** window, click **Save**.

   The **Save as** window opens.

5. Browse to the location where to store the EULA file and click **Save**.

   A copy of the Barco ClickShare EULA has been saved to your laptop.

7. SOFTWARE UPDATES

7.1 Software update

About Software updates

There are two ways to update the Base Unit software:

- via the Web Interface, for more information, page 27
- 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. Copy the NAD file to a USB stick.
3. Rename the file to `clickshare_firmware.nad`.

   Renaming is necessary as the software will look for that specific filename on the device.
4. Insert the USB stick into the USB port at the front of the Base Unit.
5. Follow the instructions on the meeting room screen.
6. When the on-screen message indicates that the process is finished, remove the USB stick.

   The Base Unit shuts down.

When updating the Base Unit software to version 01.03 or higher, the Button software will update automatically over WiFi and does not need manual pairing 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 paired manually to update their software.

8. CLICKSHARE TROUBLESHOOTING

8.1 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.	• Replace the cable. • Use another cable.
	Bad resolution of the display The system can handle the average laptop resolution of 3 Megapixel. However, up or down scaling on the meeting room display can cause visible artefacts.	Change the resolution on the web interface and match it to the native resolution of the meeting room display.
Users have a bad wireless connection. The connection from the Button to the Base Unit keeps falling away.	Wireless congestion	• 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. Refer to “Changing advanced ClickShare settings”.
	Low signal strength	• Put the Base Unit closer to the meeting room table. • Change the orientation of the antennas at the back of the Base Unit. • Remove or limit as much as possible all obstructions between the Buttons and the Base Unit.
Web interface is not accessible	Browser	• Use another browser (version). • Check the browser settings.
	No connection	• There are three methods to access the web interface. Refer to the corresponding chapter of the documentation. • Check the proxy settings
Users do not get a ClickShare drive when inserting the Button in their laptop.	• No automatic refresh of drives • Windows tries to assign the ClickShare drive to an already reserved drive letter	• 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	• Reconnect to the USB port. • Try another USB port. • Reboot the laptop.
	• 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.

Problem	Cause	Solution
Low video performance	Laptop performance	• 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.
	The content uses HDCP	ClickShare does not support showing HDCP content (it will be displayed as black)
Some programs of Windows are not shown on the display	Use of overlays, 3D or hardware acceleration in the GPU	• 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.
Noting 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.
	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, ...
		Re-orient he Base Unit antennas
		Check out the ClickShare White paper on WiFi See www.barco.com/clickshare.

Problem	Cause	Solution
In Windows XP, I cannot see the ClickShare drive in the window “My Computer”.	This problem might be caused by a known issue of Windows XP	You can find more details and the appropriate solution via link : http://support.microsoft.com/kb/297694
Web Interface shows error in the processes “WiFi Access Point Daemon” and/or “DHCP Server”	Configuration file is corrupted	Browse to the Configuration tab on the Web Interface and press “Load Default Settings”.
ClickShare Base Unit does not start up correctly	Configuration file is corrupted	Browse to the Configuration tab of the Web Interface and press “Load Default Settings”.
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

A. ENVIRONMENTAL INFORMATION

A.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.

A.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《电子信息产品污染控制管理办法》(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 “China Administration on Control of Pollution Caused by Electronic Information 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) Component Name	有毒有害物质或元素 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

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

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 SJ/T 11363-2006 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 SJ/T11363-2006.

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 SJ/T 11363-2006 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 SJ/T11363 2006.

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《电子信息产品污染控制标识要求》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制定产品)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 “Electronic Information Products Pollution Control Labeling Standard” 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 “Standard of Electronic Information Products Environmental Friendly Use Period” of Chinese Mainland.

Image A-1

A.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.

A.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.

INDEX

A

About 3, 5, 7, 9
  Base Unit 7
  Button 9
  ClickShare product 5
  Guide 3
Access SSH 54
Access web interface 53
Antenna placement 15
  Recommendations 15
API settings 58
Apps blocking 55

B

Barco contact data 70
Base unit 13
  Installation 13
    Methods 13
  Table mounting 13
  Wall mounting 13
Base Unit 7, 15–17
  About 7
  Audio 16
    Connection 16
  Display 15
    Connection 15
  Ethernet 16
    Connection 16
  LAN 16
    Connection 16
  Power 17
    Connection 17
Basic Workflow 11
Button 9, 21
  About 9
  Pairing 21
  Prepare 21
Buttons 63
  Update over WiFi 63

C

Configuration 65–66
  Default settings 66
  Manage system 65
Connecting 15–17
  Base Unit 15–17
    Audio 16
    Display 15
    Ethernet 16
    LAN 16
    Power 17
Coporate network 41, 45, 47, 49
  Activation 41
  EAP-TLS 41
  EAP-TTLS 45
  PEAP 47
  WPA2-PSK 49

D

Display settings 34
Documentation 3

E

Environment condition check 11
Environmental information 79
  Disposal information 79
  Rohs compliance 79
EULA 71

G

Getting started 11

H

Help 70–71
  Barco contact data 70
  EULA 71
Hostname 55
HTTPS access 51

I

Importer 80
Installation 13, 15, 17
  Antenna placement 15
    Recommendations 15
  Base unit 13
    Methods 13
  Network integration 17
  Table mounting 13
    Base unit 13
  Wall mounting 13
    Base Unit 13
Introduction 3
  Fonts 3
  Installation Guide 3
  symbols 3

L

LAN network 56
  Settings 56
Launcher installer 23–24
  Linux 24
Launcher service 22
  Pre-install 22
Logging 69

M

Maintenance 60–61, 63–64
  Buttons 61, 63
    Update over WiFi 63
  Software 63–64
  Status 60
Mobile Device 10
  Support 10

N

NTP setup 59

O

On-screen text format 36

P

Pairing Buttons 21
Password administrator 68
  Change 68
Password integrator 68
  Change 68
Pre-install 22
  Launcher service 22
Prepare 21

Button 21
Product specifications 5
Production address 80

S

Safety 11
Environment condition check 11
Setup 39, 41, 45, 47, 49
Integration 39
Network 41, 45, 47, 49
Activation 41
EAP-TLS 41
EAP-TTLS 45
PEAP 47
WPA2-PSK 49
Software 73
Update 73
Software updates 73
Specifications 5–6
ClickShare 6
Symbols 3

T

Table mounting 13
Base unit 13
Troubleshooting 75
Troubleshooting list 75

U

Update 73
Software 73

W

Wall mounting 13
Base unit 13
Web interface 27, 29–30, 32–36, 38–39, 41, 45, 47, 49, 51, 53–61, 63–66, 68–71
Access SSH 54
Access web interface 53
API settings 58
Apps blocking 55
Audio settings 38
Background 32–33
Personalized 33
Selection 32
Basic settings 30
Configuration 65–66
Default settings 66
Manage system 65
Display settings 34
Help 70–71
Barco contact data 70
EULA 71
Hostname 55
HTTP 51
HTTPS 51
LAN network 56
Settings 56
Language setup 29
Logging 69
Maintenance 60–61, 63–64
Buttons 61
Software 63–64
Status 60
NTP setup 59
On-screen text format 36
Password 68
Change 68
Password administrator 68
Change 68
Setup 39, 41, 45, 47, 49
Integration 39
Network, Activation 41
Network, EAP-TLS 41
Network, EAP-TTLS 45
Network, PEAP 47
Network, WPA2-PSK 49
Tabs 29
Wallpaper 32–33
Personalized 33
Selection 32
WiFi settings 57
Web Interface 27
Access 27
WiFi settings 57