

# **BBN Touchscreen Setup - Local Control**

BubblyNet Bluetooth Mesh, Touchscreen Controls System, Gateway

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Touchscreen Setup - Local Control

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## Documentation for System Setup:

This document is an instruction set for installing and customizing a BubblyNet touchscreen with **Local Control** and configuring a control panel for deployment with a **Version 2 Touchscreen**.

The samples used for screenshots in this document are of a 7" screen in landscape mode and the Cloud control system in a browser. *All steps for any size or orientation are the same.* 

Configuration on a Local Control Panel is a three step process.

- 1: Create the control panel on Cloud Services,
- 2: Add connectivity to the touchscreen to publish the control panel.
- 3. Access the control panel to manage the system.

## Step 1: Create the Control Panel on Cloud Services

Warning! For the initial step or changes to the system the touchscreen will need online access for the Cloud Services to deploy a system. Note: We recommend an Ethernet connection for ease of setup.

On BubblyNet's cloud services platform, a control panel can be configured for layout and deployment. Once completed, this control panel will be published to the selected touchscreen for control.

### Login to Cloud Services

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		Login Sign Up Support - Touchscreen Setup
	Account Login	
	If you have an account, login here.	
	Username jgorecki	
	Password	
		۵
	Login or Use Passcode	Forgot Password?
	Don't have an account? Sign up	<u>2 here</u>
Terms and Conditions Priva	acy Policy d733c7f6	© 2023 BubblyNet, LLC. All rights reserved.

- Sign-in to the Cloud services with the username and password for core.bubblynet.com
- If the user does not have an account, they can create one and request access permissions from the network administrator.
- If a user has forgotten their passcode, they can use the Forgot Password function and have a new one sent to their email address. *BubblyNet can not tell you your password.*
- Warning: This must be registered as the owner of the touchscreen/gateway device or they will not be able to access the control panel for the touchscreen.

### Access Network Settings



- Choose the correct network from the drop in the upper top navigation.
- Use the network settings page to access cloud control, scenes control, manage users, or view the network dashboard.
- Select Manage Touchscreens from the Network Settings page.
- Warning: Network Settings can change based on the user's permissions on that network.

### **Touchscreen Search**

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But	oblyNet.										≡		
Home > Ga	teways										Д	(i	)
	Gateways ⑦												
	Gateway Name j <u>oesdesk</u>			Username jgorecki		Machine Id							
Terms and	Terms and Conditions Privacy Policy d733c7f6 © 2023 BubblyNet, LLC. All rights reserv									eserv	ed.		

- Choose the touchscreen or gateway for configuration.
- Filter registered devices by tag name.
- Tag name should be located on the front or back of the device.
- After locating the touchscreen, select the name to access the device's registration page.

### **Touchscreen Registration**

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◎ GPT ₩ GitLab \$ AppCenter △	🖬 fish shell 🛅 Tutorials 🚫 Online JSON Viewer 🚫 WakaTime 🔃 Trello 🖊 Joe's Awesome B »
	Joesdesk Management
	Gateway Detail ③
	Assigned jgorecki To: Machine Id: Assigned JOESDESK1132021 To: Permissions: Manage Users Siblings: Touchscreen100 Joesdesk Network Management ③
	A Network is installed.  Remove Network
	Control Panel Builder ⑦ Control Panel Builder
	Gateway Services ⑦ Check Services

- The touchscreen registration page allows the user to manage their touchscreen.
- Form this screen they can complete the following tasks:
  - Remove / replace the network the touchscreen is associated with.
  - Customize and add a control panel to a touchscreen that is currently online.
  - Run the Config Tester (BETA) to check device messaging with the device's installed network.
  - Request gateway service status to make sure the device is operating to specification.
  - Request network information for the touchscreen's installed network.
- Select the Control Panel Builder button to begin the layout of the control panel.

### **Touchscreen Control Panel Configuration**

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	🛧 Home 🛛	Control - 🏶 Designs - 🏛 Permissions	- 🖀 Touchscreens 👔 - 🤖
Touchscreens > Bbngateway27 > Builder			
Bbngateway27 Builder			7" Preview
Build a limited and fixed control pan	el for your gateway.		
Builder Instructions		Drag and Drop Instructions	
Available Controls	C Update Network	· · · · · · · · · · · · · · · · · · ·	
Touchscreen Name: bbngateway27		bbngateway27	=
POWER: Show Y Large Y	Control Group UX Test Kit (FEFF) Y Add		
LEVEL: Vidget size: Show Normal	Control Group 4 Channel (C000)	ALL ON ALL OFF	GREEN BLUE
Widget size: Normal	Control Group 1 Channel (C002)  Control Group Delete		
Widget size: Normal	Control Group 1 Channel (C002)  Collected	UX Test Kit	ON
Widget size: Normal	Control Group 2 Channel (C001)   Control Group Delete	ON	OFF
HSI - Widget size-	Control Group		

- This screen allows you to create a custom control panel for every touchscreen device you have installed and access to configure.
- Touchscreen control panels can only be updated via a live and functioning internet connection. (See Gateway Network Requirements to get your touchscreen system online)
- Choose Update Network to load network changes into the control panel. This will add new groups, scenes, and update any changes.
- Choose the correct screen size 4" portrait versus 7" landscape.
- Warning: this is an approximation of the screen on the device and may have minor deployment differences.

#### Understanding Group Topology

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Available C	Available Controls							_							-
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POWER: Show		Widget size: Large		Control Group UX Test Kit (FEFF)		Add			ennes 		1777 		ranza		
LEVEL: Show		Widget size: Normal		Control Group 4 Channel (C000)		Add			ALL ON	ALL OFF	GREE	N	BLUE		
		Widget size: Normal		Control Group 1 Channel (C002)		Delete			WARM	COOL					
		Widget size: Normal		Control Group 1 Channel (C002)		Delete			UX Test Kit				ON		
		Widget size: Normal		Control Group 2 Channel (C001)		Delete			(	ON		OF	:		
HSL: Show		Widget size: Normal		Control Group UX Test Kit (FEFF)		Add								_	
		Widget size: Normal		Control Group 4 Channel (C000)		Delete									
CTL: Hide		Widget size: Normal		Control Group UX Test Kit (FEFF)		Add									
CHANNELS: Hide		Widget size: Normal				~			4	Ente character passco	r Pin				
											••				

- A Control panel is configured to support parent-descendent groups or target specific groups. With this setup, a control panel can be configured for precise configurations.
  - Example 1: Power off the whole building. A power button that controls a parent will send the power command to the parent group and all subgroups (children) and the children's subgroups (grandchildren).
  - Example 2: Power off an individual office. A power button that controls a child group will not send the power to the parent.
- A control panel can support multiple group controls.
  - Example 1: A dimmer control for every group allows fine level control.
  - Example 2: A dimmer control for the parent group will set the level control to all the groups in the parent.
  - Example 3: Dimmer controls are mixed and the parent group and child groups are used on the same panel.

Building a Group Control Structure

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Vallable Contro	lS	C Up	date Network			
bbngateway27				UX Test Kit	ON	
POWER:	Widget size: Large	Control Group UX Test Kit (FEFF)	Add			
LEVEL: Show	Widget size: Normal	Control Group 4 Channel (C000)	Add	ON	OFF	
	Widget size: Normal	Control Group 1 Channel (C002)	Delete	4 Channel 50%	UX Test Kit 50%	
	Widget size: Normal	Control Group 1 Channel (C002)	Delete	1 Channel 50%	2 Channel 50%	
	Widget size: Normal	Control Group 2 Channel (C001)	Delete	+	+	
HSL: Show	Widget size: Normal	Control Group UX Test Kit (FEFF)	Add	101 W 1100 IAA		
	Widget size: Normal	Control Group 4 Channel (C000)	Delete			
CTL: Hide	Widget size: Normal	Control Group UX Test Kit (FEFF)	Add			
CHANNELS: Hide	Widget size: Normal		~	Ente 4 character passco	er Pin de	

- Choose the controls, the size, and the group to be controlled.
  - Example 1: A single power control that turns off the entire network.
  - Example 2: Control setup for an admin to control a building with scenes.
  - Example 3: All enabled controls for a single office or physical location.
- Choose the appropriate controls to be used for the control panel.
  - Choose the size of each control group to best fit the needs of the end user.
  - Choose the controls that are required for the groups.
  - Warning: A control can be added to the control panel that is not supported by the devices.
    - Bad: A user adds a HSL control to a group that only has CTL enabled devices.
    - Good: A user adds a HSL control to a group that has all some HSL controls.

#### Selecting Scenes for Recall

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HANNEI Hide	LS: Vidget size: Normal	Control G UX Test	roup Kit (FEFF)		character p		n	
ailable	e Scenes				1	2	3	
	Label	Target	Group		4	5	6	
	ALL OFF	FEFF	UX Test Kit		7	8	9	
1	ALL ON	FEFF	4 Chappel		Delete	0	Clear	
2	BLUE	C000	4 Channel		Delete		Cieai	
	COOL	C001	2 Channel					
	GREEN	C000	4 Channel					
	OFF	C002	1 Channel					
	ON	C002	1 Channel					
	WARM	C001	2 Channel					
ptional	l Features							
ouchsc	creen Colors		C Restore defaults					
	Text		Background					

- A control panel supports scenes to be added to the touchscreen.
- Choose the Scenes to be used for the control panel. Similar to setting up groups, scenes can be selected for individual groups.
  - A scene can be added that is outside the parent group of the control panel.

Color Customization for Touchscreens

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Builder Instructions		×	Drag and Dro	op Instruct	ions						~
Touchscreen Colors		C Restore defaults									
Text		Background									
#bab5b5		#117ae4	ĺ								
			~~~		COOL						
Widget Colors		ී Restore defaults	UX	Test Kit					0	-	
Active	Secondary	Background									
				С	N						
#0daf2e	#9fa1a3	#3f5042									
4 character passcode to unlock	the touchscreen.			4 Channel	50%		ד צו ו	est Kit	50%		
Passcode:			-		<b></b> †		- 🦳				
Background image for the touch	hscreen.										
Choose File No file chos											
Delay in seconds before the scr	reensaver is displayed.										
Screensaver delay: 15 seconds											
					-						
					En	ter F	'n				
Create Panel				4 c	haracter pas	scode					

- Use the Touchscreen Colors to set the palette of the touchscreen.
- This will allow customization of the control panel to match any requested color schemes.

#### **Control Placement**

Builder Instructions									
Touchscreen Colors Text		ී Restore defaults Background	To move a control within the touchscreen preview 1. Click and hold the control you want to move. 2. Drag it to the desired location within the touc 3. Consider cursor position when dropping the	r: hscreen preview. widget:					
			<ul> <li>Top: Places the dragged widget above the Bottom: Places the dragged widget under </li> </ul>	he target. Ar the target.					
			Note: Drop the widget onto another valid widget:	empty spaces are not					
#bab5b5		#11/ae4	allowed.	empty spaces are not					
			Note: Scenes and controls cannot be mixed.						
Nidget Colors		"O Restore defaults							
Active	Secondary	Background							
#0daf2e	#9fa1a3	#3f5042	_ 4 Channel 50% + _ 1 Cha	innel 50%					
character passcode to unlock	the touchscreen.								
Passcode: 1111			UX Test Kit	<u></u>					
ackground image for the touch	screen.		ON	OFF					
Choose File No file chos									
belay in seconds before the scr	eensaver is displayed.								
15 seconds			UX lest Kit 50% 2 Ch	annei 50%					

- Drag and drop the controls to different places on the control panel.
- Move the most important controls to the top of the screen and prevent scrolling.
- Warning: Scenes and controls position can't be mixed. Scenes will alway remain on top of all other controls.

#### Passcode & Screensaver

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$\leftrightarrow$ $\rightarrow$ C () 127.0.0.1:8000/gateway/90/builder/		C	* 0 * 0	000	. *		
👩 GPT 🦊 GitLab ጰ AppCenter 🛆 GCP 👿 fish sl	nell 📄 Tutorials 🚫 Online JSON	N Viewer 🛇 WakaTime 🕻	💶 Trello   🤟 Joe's	Awesome B		>>	E
Power: On	~	-	•		+		
Light Lightness: On	<b>*</b>					-	
HSL: On	•		Enter P	Pin 1	NA		
CTL: On	~	4 ch	aracter passcode				
Available Scenes			1 2	3			
Desk (FEFF)			4 5	6			
Purple (FEFF)			7 8	9	7/1		
Optional Features		De	elete 0	Clear			
Passcode: 1111							
Upload A Screensaver:		/				E	5
Choose File background.jpeg	) /					فا	3
Screensaver delay: 1 hour	<b>~</b>						
Create Panel							

- Choose to add and enable a passcode with lockscreen. This will be a 4-digit minimum (exp: 1111)
  - Warning: 0000 is not a valid passcode and should be avoided as a default.
- Choose to add a screen saver image (with customizable time out)
- Passcode input will fade out after 10 seconds of inactivity.
- A touchscreen with no image will default to an opaque black background.

#### Sending a new Panel

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$\leftrightarrow$ $\rightarrow$ C (O 127.0.0.1:8000/gateway/90/builder/ $\textcircled{1}$ $\textcircled{1}$ $\textcircled{2}$ $\rule{2}$ $\textcircled{2}$ $\rule{2}$ $\rule{2} \\ 0$	<b>C</b> :
🞯 GPT 🦊 GitLab 🗱 AppCenter 🛆 GCP 🔟 fish shell 🗎 Tutorials 🚫 Online JSON Viewer 🞯 WakaTime 🚺 Trello 👹 Joe's Awesome B	30
Power: On · · · · · · · · · · · · · · · · · · ·	
Light Lightness:	
HSL: On Enter Pin	
CTL: On · · · · · · · · · · · · · · · · · · ·	
Available Scenes 1 2 3	
✓ Desk (FEFF)	
Vptezt (FEFF) Purple (FEFF) 7 8 9	
Optional Features Delete 0 Clear	
Passcode: 1111	
Upload A Screensaver:	لم ا
Choose File background.jpeg	ā
Screensaver delay: 1 hour	
Create Panel	

- Pressing Create Panel will publish the selected choices to the Touchscreen.

The first step is now complete and when available the Local Control Panel is built on the local touchscreen and served on 0.0.0.0:5000/control/.



- Example of a 7" Landscape with a local control panel.

## Step 2: Launch and Configure the Local System

Upon startup, the operating system will boot up and launch system services. Services will show the status as Green for passing and Red for not-ready. Press the refresh status button to re-run tests.

For local control click the "Control Locally" button to access the local control panel after configuration.

Warning! While both buttons are enabled and available, the Cloud Services requires internet access and open access to the web portal.

System checks passed. You're all set to control your local network.   Access control panel     Mesh service: OK   Gateway status: OK   Internet access: OK   Internet connection: OK     Change screen brightness	<b>Bubbly</b> Net.	Ξ
<ul> <li>Mesh service: OK</li> <li>Gateway status: OK</li> <li>Internet access: OK</li> <li>Internet connection: OK</li> <li>Refresh system status</li> <li>Setup internet connection</li> <li>Change screen brightness</li> </ul>	System checks passed. You're all	set to control your local network. htrol panel
<ul> <li>Gateway status: OK</li> <li>Internet access: OK</li> <li>Internet connection: OK</li> <li>Setup internet connection</li> </ul>	Mesh service: OK	Refresh system status
<ul> <li>Internet access: OK</li> <li>Internet connection: OK</li> <li>Change screen brightness</li> </ul>	Gateway status: OK	Setup internet connection
Change screen brightness	Internet access: OK	
	Internet connection: OK	Change screen brightness

Note: This screen will return when the system:

- Loses Power and the system reboots.
- Loses network connection for longer than 5 minutes (if cloud configured).

When all services are green and passing, then the system will be ready for usage.

*Warning! If the touchscreen page says 0.0.0.0:5000 can't be found after a reboot, press the refresh page button. If this issue continues, contact support@bubblynet.com.* 

## System Setup

The default touchscreen contains the following setup controls:

<b>Bubbly</b> Net.	
System checks passed. You're all s	set to control your local network. trol panel
Mesh service: OK	Refresh system status
Gateway status: OK	Setup internet connection
Internet access: OK	
Internet connection: OK	Change screen brightness

BubblyNet.	BubblyNet.	×
	Reload page	
System checks passed. You're all	Access control panel	>
Access co	Touchscreen setup	>
	Cature internat connection	
	Setup internet connection	
	Diagnostics	>
Internet connection: OK		
		-

Touchscreen Setup - Local Control

- Setup Checkup Menu
  - $\circ$   $\,$  To access the touchscreen setup, choose the menu icon
  - The setup menu provides a jumping off point to the control panel, setup, internet setup, and Diagnostics.
  - It also provides access to the Reload page and reboot device.

BubblyNet.	
System checks passed. You're all s	set to control your local network. trol panel
Mesh service: OK	Refresh system status
Gateway status: OK	Setup internet connection
Internet access: OK	Change screen brightness
Internet connection: OK	onange ooreen ong niness

- Refresh Status
  - Systems may not come online in required order. Please press Refresh Status
- Change Brightness
  - Touchscreen screen brightness can be modified by changing the display brightness from 1-255.

- Setup internet connection
  - An ethernet connection is preferred where possible.





- A Wifi connection can be added to the machine by adding your Network SSID and Network Password.
  - The Gateway supports 802.11ac Wi-Fi 5.
  - The Gateway supports 2.4 GHz and 5 GHz frequency bands.

Warning! The touchscreen panel does not support Guest networks with authentication screens. An exception will be required for a touchscreen to bypass the Guest authorization capture screen.

#### **Gateway Network Requirements**

Note: This is only required for the Control Panel setup. After setup, the touchscreen will no longer require a network connection unless support is requested or a new control panel is configured for update..

- The following standard protocols are used for the remote control and will need ingress/egress permissions:
  - HTTPS/SSL: The Remote Control panel is available at <u>core.bubblynet.com</u> and requires external webpage access on port 443. No content is served on http.
  - MQTT: Messaging is sent to 127.0.0.1 on port 1883 and port 8883. If an internet connection is available, messages will be sent to mgtt.bubblynet.com.
  - BubblyNet Remote Access: Touchscreens use UDP ports 1194 and 51820 to connect to IP 34.75.157.72.
- Hostname, MAC addresses, and any IP addresses are available in the Diagnostics Menu.

## Step 3: Access Local Control Panel

The local control panel is loaded from the control panel that was selected on Cloud Services. These can be configured and reconfigured as needed.

🛞 Bubb	lyNet.		
S	ystem che <del>cks passed. You're all s</del> Access cont	<del>set to control your lo</del> cal network. rol panel	
	Mesh service: OK	Refresh system status	
	Gateway status: OK	Setup internet connection	
	Internet access: OK		
	Internet connection: OK	Change screen brightness	

For local control, choose the "Control Locally" button to access the local control panel after configuration. This will be a fixed control panel for the selected group.



Sample control panel in light mode. Click the control panel menu screen to change from Light Mode to Dark Mode or return to the Touchscreen setup system for system maintenance.

Lobby			
ALL ON	ALL OFF	GREEN	BLUE
UX Test Kit			50%
UX Test Kit	5000°K ♣	UX Test Kit	180

Touchscreen Setup - Local Control

The Sample control panel with 1 scene selected, and all available controls available.



Sample control panel with a screensaver splash image after a 5 minute delay and a passcode screen.

#### **Diagnostics System**

The touchscreen can be modified on site by using the Diagnostics System. The Diagnostics System has a universal passcode screen blocking general user access. The diagnostics system allows onsite modifications, updates, and system settings.

BubblyNet.	<b>Bubbly</b> Net.	×
	Reload page	
System checks passed. You're all	Access control panel	>
Access co	Touchscreen setup	>
	Setup internet connection	>
Internet access: OK Internet connection: OK	Diagnostics	>
<b>Bubbly</b> Net.		
Diagnostics		
1 2 3 4 5		

## **Bubbly**Net.

## System Information

Current SSID The active SSID: Garden

System IP Addresses

These are the IP's reported: 10.0.0.146 10.0.0.177

Device Name

The device name: jlynngateway

### System Services

**Restart Kiosk** 

Restart the full screen BubblyNet system. This will flash to the desktop.

Reload

#### Restart Mesh Gateway

Restart the Bluetooth Mesh gateway service. This is useful if a bad command has crashed the gateway.

 $\equiv$ 

Reload

#### **Restart Messaging**

Restart the messaging system. This is useful if the connection has been lost to due to long periods of inactivity.

#### Rotate Landscape

Will rotate to a landscape view. Will restore OS task bar, screen coordinates, and will require a manual restart of the unit.

Rotate to Landscape

#### **Rotate Portrait**

Will rotate to a portrait view. Will hide OS task bar, change screen coordinates, and will require a manual restart of the unit.

Rotate to Portrait

#### Cloud Mode

Will set the unit to cloud mode. Local data will be removed from the unit. An error will be displayed until the unit is manually restarted.

Change Mode

### **Experimental Updaters**

#### Install VPN

Danger! Will attempt to install OpenVPN configuration for remote access by BubblyNet. This will require a restart of the unit.

VPN Install

#### Update Touchscreen

Danger! Will attempt to install a new version of the Touchscreen software. This will require a restart of the unit.

Update touchscreen software

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Touchscreen Setup - Local Control