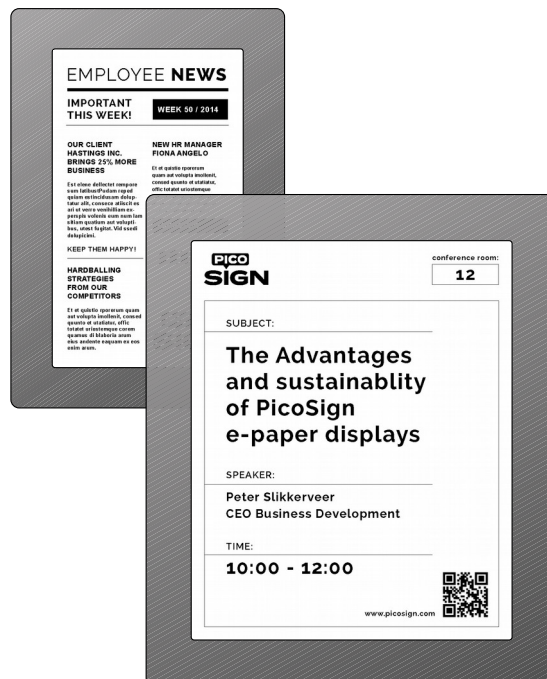


# Quick Start Guide

## PicoSign 7.4 WIFI PicoSign 10.2 WIFI



**Classification: Confidential**

**Document Revision: E**

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# 1 Package Contents

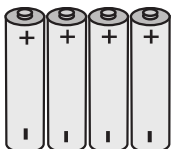
## PicoSign 7.4 WIFI



## PicoSign 10.2 WIFI



4 AA batteries



4 back case hex screws



Hex key



Battery compartment lid screw



# 2 Requirements

- Access to WIFI network:
  - Band: 2.4 GHz or 5 GHz
  - Security: WEP, WPA-Personal (WPA-PSK), or WPA2-Personal (WPA2-PSK.) WPA2-Enterprise is not supported.
  - Internet access
- Computer with WIFI connectivity (Windows, OS X or Linux), iPhone, or iPad – for PicoSign configuration. Android and Windows Mobile devices are not supported.
- *Optional: small Phillips screwdriver*

### 3 Configuring PicoSign

PicoSign needs to be connected to a wireless network with Internet access to be able to operate. The configuration is a two-phase process:

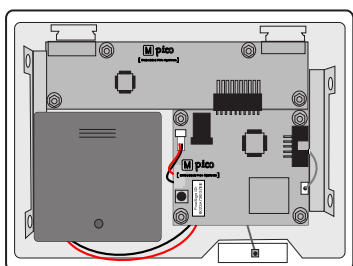
- Powering PicoSign up in configuration mode – in this mode PicoSign broadcasts ad-hoc network;
- Connecting a computer (or a mobile device) to the PicoSign configuration ad-hoc network and configuring the wireless network data in PicoSign Configuration page in the computer's (or mobile device's) web browser.

**NOTE** Please use lithium or alkaline AA batteries only. PicoSign is not optimised for using rechargeable batteries.

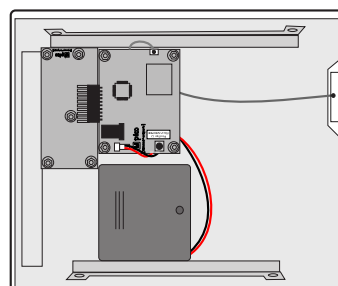
#### Phase 1 – Powering PicoSign Up in Configuration Mode

- 1) Remove the back case

##### PicoSign 7.4 WIFI

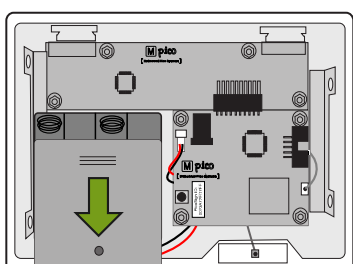


##### PicoSign 10.2 WIFI

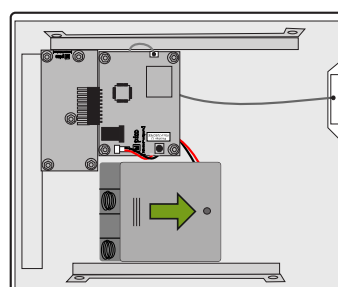


- 2) Remove the battery compartment lid

##### PicoSign 7.4 WIFI

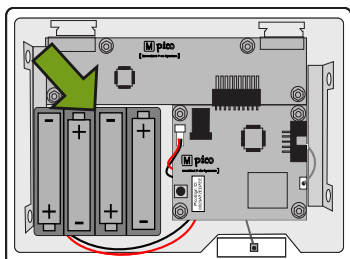


##### PicoSign 10.2 WIFI

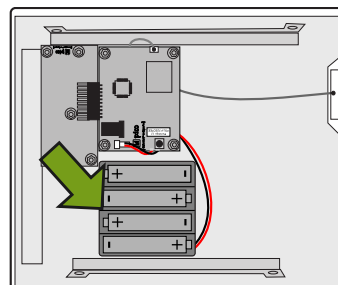


- 3) When you power up your PicoSign for the first time, it will automatically go into the configuration mode. Insert four batteries in the battery compartment to power up your PicoSign. Next, go directly to step 6).

#### PicoSign 7.4 WIFI

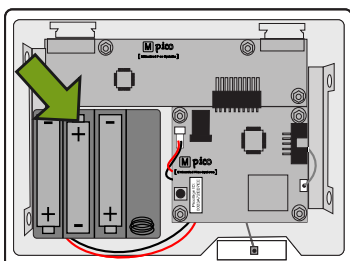


#### PicoSign 10.2 WIFI

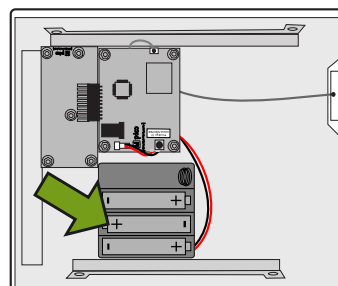


- 4) If you want to enable configuration mode when your PicoSign has already been powered up previously, put **three** batteries in the battery compartment

#### PicoSign 7.4 WIFI

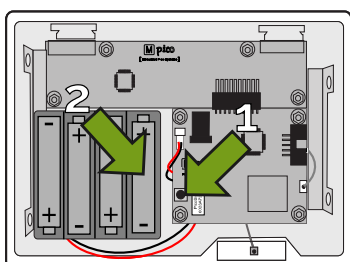


#### PicoSign 10.2 WIFI

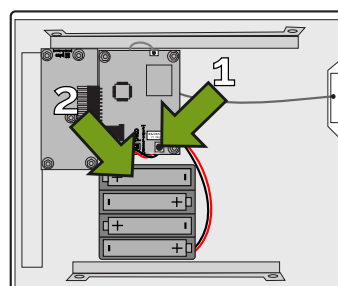


- 5) Press and hold the button (1) while inserting the fourth AA battery (2) in the battery compartment

#### PicoSign 7.4 WIFI



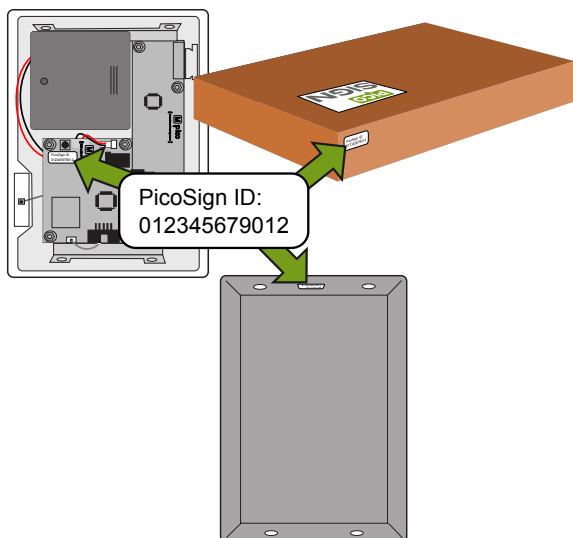
#### PicoSign 10.2 WIFI



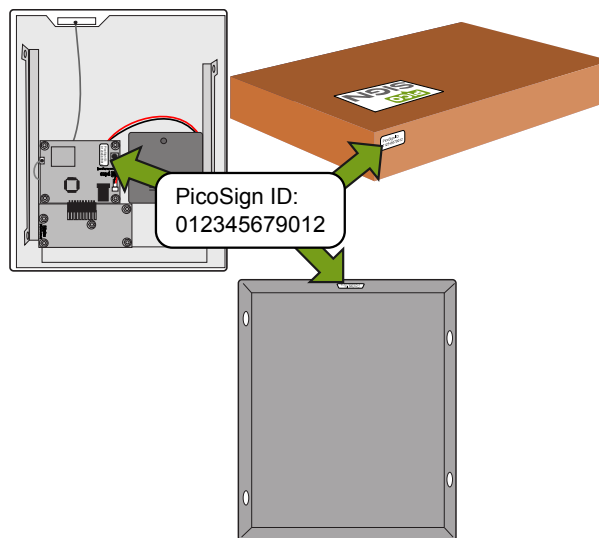
**NOTE** The configuration steps described below need to be finished before 4 minutes and 30 seconds from now. Otherwise PicoSign will enter battery saving mode and the configuration will need to start from the beginning. Please see section 4.6 PicoSign Configuration Page (<http://192.168.0.48>) does not Load and PicoSign Shows “ZZZ” Icon for more information.

- 6) Find your PicoSign ID. It is a 16-character code printed on the labels on your PicoSign (on the printed circuit board, back case, the box), as well as on the PicoSign display. PicoSign ID is at the same time the PicoSign MAC address.

#### PicoSign 7.4 WIFI



#### PicoSign 10.2 WIFI



- 7) PicoSign is now started and is searching for the nearby WIFI networks. This is indicated by the message displayed on the PicoSign display.



Wait until the search is completed.

- 8) Ad-hoc WIFI network is created on the PicoSign. The name of the network is *PicoSign\_Configuration\_XXXXXX* (where XXXXXX are the last 6 characters of the PicoSign ID.) This is indicated by the message displayed on the PicoSign display:



Wait for the message to appear on the PicoSign display.

### Phase 2 – Connecting to PicoSign Configuration Network and Configuring Wireless Network Data

- 9) Connect your computer to *PicoSign\_Configuration\_XXXXXX* network (where XXXXXX are the last 6 characters of the PicoSign ID.)



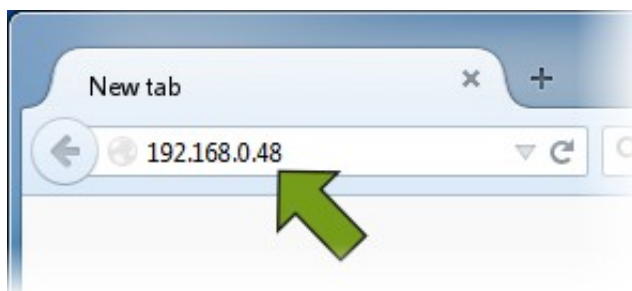
Network connections panel in Windows 7



Network connections panel in OS X

**NOTE** Running **Windows 8** or later, **OS X** or **iOS**? These operating systems need some special actions in order to connect to ad-hoc networks. Please jump to section 4 Troubleshooting for further instructions. Come back here once you have successfully connected to the *PicoSign\_Configuration\_XXXXXX* network.

- 10) In your computer web browser type the following PicoSign IP address: 192.168.0.48



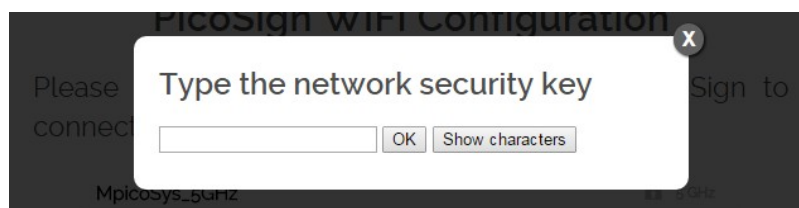
- 11) PicoSign WIFI Configuration page will open:



- 12) Select the name of the network you would like PicoSign to connect to (or select advanced configuration to input network parameters manually. When done, continue at step 14.)



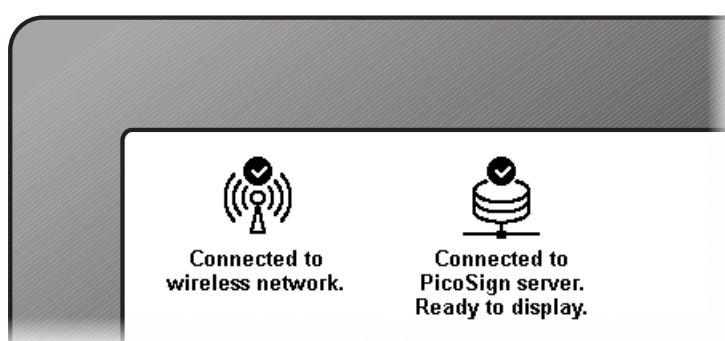
- 13) If your network is protected, type the network security key and click **OK**



- 14) You have now configured your PicoSign, which is confirmed by the message below:



- 15) PicoSign will restart and connect to your wireless network and to the PicoSign remote server; successful connection is indicated by an icon displayed on the PicoSign display:



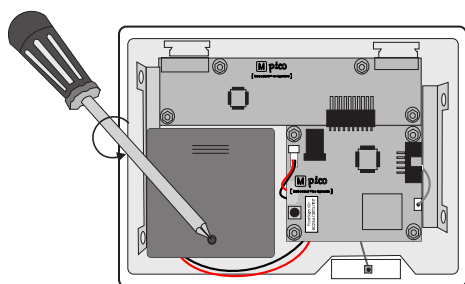
- 16) Connect your computer back to your wireless network

- 17) Go to <http://www.mypicosign.com/> to use your PicoSign. We have created an account for you with the email address you used in communication with us as login. You should have received the activation email. Please activate your account and log in to the website with your email address and the password you set up during the activation.

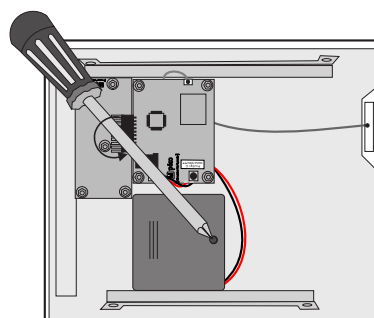
If you cannot find the activation email, please look in your spam folder. If you still can't find it, please contact us at [support@mpicosys.com](mailto:support@mpicosys.com).

- 18) Put the battery lid compartment back. Optionally you can secure it using the screw attached.

#### PicoSign 7.4 WIFI

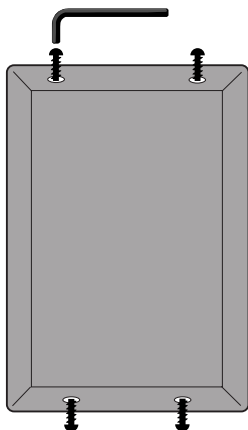


#### PicoSign 10.2 WIFI

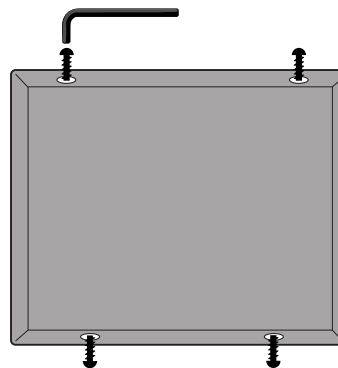


- 19) Close the back case screwing the four screws with the hex key attached, as shown on the pictures below:

#### PicoSign 7.4 WIFI



#### PicoSign 10.2 WIFI



## 4 Troubleshooting

### 4.1 Cannot Connect to PicoSign Configuration Network

In **Windows 8 and later** ad-hoc networks are not listed in the available networks list. Due to this Windows will not show the PicoSign Configuration Network in the network list. However it is possible to connect to PicoSign Configuration Network manually. To connect manually please follow the steps below:

- Go to *Control Panel* → *Network and Internet* → *Network and Sharing Center*
- Select *Set up new connection or network* option
- Select *Manually connect to a wireless network*
- In *Network name* field type in *PicoSign\_Configuration\_XXXXXX* (replace XXXXXX with the last 6 characters of PicoSign ID)
- Uncheck *Start this connection automatically* and click *Next* button and *Close* button in the next window
- Run *Command Prompt* as administrator (right click on the Start Button and choose *Command Prompt(Admin)*)
- Type in the following command:  
`netsh wlan set profileparameter PicoSign_Configuration_XXXXXX connectiontype=ibss`  
replacing XXXXXX with the last 6 characters of PicoSign ID (you can paste it to the *Command Prompt* with right mouse click → *Paste*)
- Type in the next command:  
`netsh wlan connect PicoSign_Configuration_XXXXXX`  
replacing XXXXXX with the last 6 characters of PicoSign ID
- In your web browser type the following PicoSign IP address: 192.168.0.48

After these steps your computer should be connected to PicoSign Configuration Network and you should be able to access the PicoSign WIFI Configuration page at the 192.168.0.48 IP address. Continue the configuration process at step 10) in Section 3 Configuring PicoSign.

### 4.2 Cannot Access PicoSign WIFI Configuration Page

If you are connected to PicoSign Configuration Network and Configuration page does not load in your web browser, it is possible that your computer is unable to resolve IP address in PicoSign Configuration Network. This problem is especially pronounced on machines running OS X or iOS.

It is possible to set your computer IP address manually. To do so follow the instructions below:

#### A) Instructions for Windows:

- Go to *Control Panel* → *Network and Internet* → *Network and Sharing Center*
- Choose *Change adapter settings* from the menu to the left
- Right-click on your wireless card and select *Properties*
- Select *Internet Protocol Version 4 (TCP/IPv4)* item on the list, and click the *Properties* button
- Select *Use the following IP address*
- Type in the following parameters:
  - IP address: 192.168.0.16
  - Subnet mask: 255.255.255.0
  - Default gateway: 192.168.0.48
- Leave the *Preferred DNS server* and *Alternate DNS server* fields blank

- Click *OK*
- In your web browser type the following PicoSign IP address: 192.168.0.48

PicoSign WIFI Configuration page should now load without issues. Continue the configuration process at step 10) in Section 3 Configuring PicoSign.

#### **B) Instructions for OS X:**

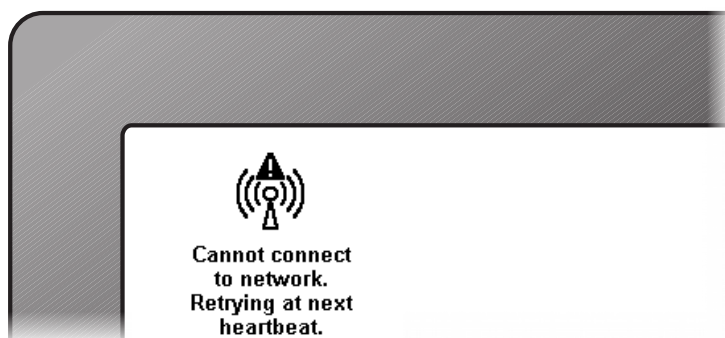
- Connect to *PicoSign\_Configuration\_XXXXXX* network (where *XXXXXX* are the last 6 characters of the PicoSign ID)
- Click on Apple logo on the desktop top-left corner
- Select *System Preferences...* from the drop-down menu
- Select the *Network* icon
- Select the *Wi-Fi*
- Click *Advanced*
- Select *TCP/IP* tab at the top
- **Note the current settings, as you will need to revert to them in order to use Internet connection after the PicoSign configuration is finished.**
- In *Configure IPv4* drop-down menu select *Manual*
- Type in the IP address: 192.168.0.16
- Type in the subnet mask: 255.255.255.0
- Leave other fields unchanged
- Click *OK* and then click *Apply*
- In your web browser type the following PicoSign IP address: 192.168.0.48
- PicoSign WIFI Configuration page should now load without issues. Continue the configuration process at step 9) in Section 3 of this document
- After the configuration is finished, in order to connect back to the Internet, connect to your wireless network
- Revert to your previous settings in Network TCP/IP window
- Click *OK* and then click *Apply*

#### **C) Instructions for iOS:**

- Connect to *PicoSign\_Configuration\_XXXXXX* network (where *XXXXXX* are the last 6 characters of the PicoSign ID)
- If prompted "*PicoSign\_Configuration\_XXXXXX*" Is Not Connected to the Internet select *Join Anyway*
- In *Settings Wi-Fi* select the *PicoSign\_Configuration\_XXXXXX* (where *XXXXXX* are the last 6 characters of the PicoSign ID)
- Select *Static IP address*
- Type in the IP address: 192.168.0.16
- Type in the subnet mask: 255.255.255.0
- Leave other fields unchanged
- In your web browser type the following PicoSign IP address: 192.168.0.48
- PicoSign WIFI Configuration page should now load without issues. Continue the configuration process following step 9) in section 3 Configuring PicoSign

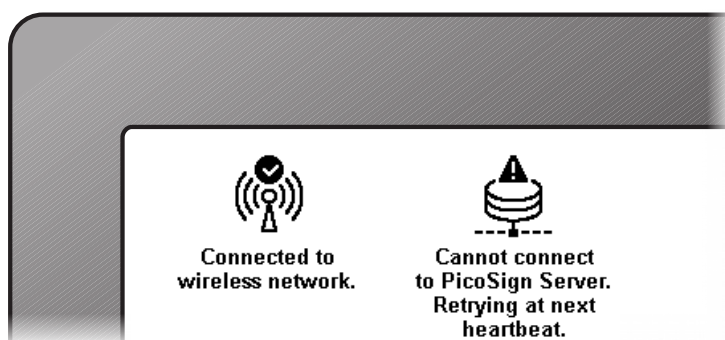
### 4.3 PicoSign Shows “Cannot connect to network. Retrying at next heartbeat.”

PicoSign is unable to connect to the wireless network it has been configured to. It may be temporary – please wait, your PicoSign will automatically retry. If the problem persists, please see the below points:



- Are you sure you provided the correct network password during the configuration? If not, please go back to configuration mode.
- Is it possible that the network signal strength is weak? Try moving PicoSign closer to your wireless access point.
- Are you using wireless network that needs logging in via web browser instead of standard security key? If this is the case, PicoSign will not work with such a network.
- Is it possible that your wireless router has a white-list of allowed devices? Many wireless networks are configured with “MAC address filtering” and are only allowing specific devices to connect to the Internet. Please check your router settings to allow PicoSign MAC address into the network.
- Are you sure your network is up and running? Please check that the network is working properly, e.g. with connecting a computer to it.

### 4.4 PicoSign Shows “Cannot connect to PicoSign Server. Retrying at next heartbeat.”



Your PicoSign has problems communicating to the PicoSign Server. It may be temporary – please wait, your PicoSign will automatically retry the communication. If the problem persists, please see the below points:

- Is it possible that the connection to the Internet is not reliable? It may happen especially with GSM access points, weak signal strength, and heavily-crowded networks, that the data packets exchanged between the PicoSign and the Server are timed out.
- Is it possible that your network configuration does not allow you to connect to the PicoSign Server? To check that, please connect a computer to the same network and navigate to <http://device.picosign.com>. If you see the “You have reached the PicoSign Server” message, it means that your network allows connection to the PicoSign Server, and the problem with PicoSign connection lays somewhere else. If the page does not open, please check your network configuration.
- PicoSign Server may be down. Please contact us at [support@mpicosys.com](mailto:support@mpicosys.com) so we can check that.

## 4.5 PicoSign Does Not Restart After Power Cycle

Sometimes PicoSign does not restart when batteries are removed and inserted again. It happens because PicoSign is a low power device and can still work for some time even when the batteries are taken out utilizing the power stored in internal capacitors.

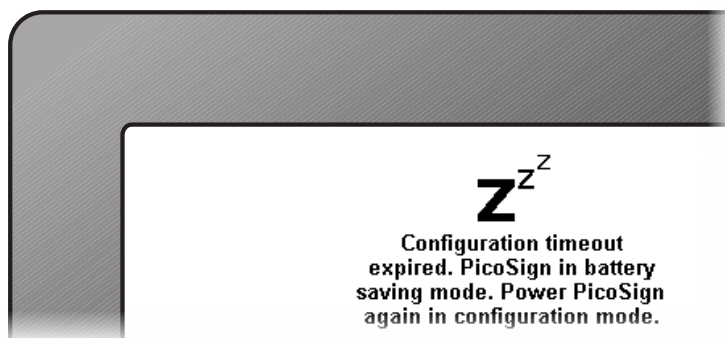
To restart your PicoSign, please make sure that PicoSign has enough time to consume all the power that it has stored by following these steps:

- Take one of the batteries out
- Press and hold the button for 15 seconds (this speeds up the discharge process)
- Put the battery back with button pressed to enter configuration mode; or with button released to start PicoSign in regular operation mode.

Now PicoSign should start up immediately.

## 4.6 PicoSign Configuration Page (<http://192.168.0.48>) does not Load and PicoSign Shows “ZZZ” Icon

If PicoSign configuration is not finished before 4 minutes 30 seconds upon switching it on in configuration mode, PicoSign enters battery saving mode to prevent battery drain, which is indicated by the following icon being shown on the display:



and PicoSign Configuration page at <http://192.168.0.48> does not load in the web browser.

It is a normal behaviour and does not change the current settings of your PicoSign. You can always switch it on again in configuration mode or start it normally to display images.

To do so, please follow the below steps:

- Take one of the batteries out
- Press and hold the button for **15 seconds**
- Put the battery back with button pressed to enter configuration mode; or with button released to start PicoSign in regular operation mode.

Now PicoSign should start up immediately.

## 5 Revision History

Document Revision	Release Date	Document Status	Supersedes
E	2016-05-11	Approved	D
D	2016-05-06	Approved	C
C	2015-11-18	Approved	B
B	2015-09-23	Approved	A
A	2015-09-02	Approved	PicoSign-WIFI- fD_QuickStartGuide_rB.pdf

Table 5.1: Revision history

Document Revision	Change Log
E	3: Distinguished processes for initial and subsequent configurations; added introduction and phases description 3 9): Added screen shots 4.4: Corrected web address 4.6: Added information on page not loading
D	4.2 B): Updated procedures, separated OS X from iOS Minor editorial
C	Corrected typos, minor editorial
B	3-7): Updated icon 4.3, 4.4: Updated paragraph title and icons
A	Initial version

Table 5.2: Change log



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### Draft

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### Data sheet

A document intended to give a full description of the product details that a customer needs to implement the product in their design.

## 6.1 Disclaimers

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