

JO system, WIFI/App Troubleshooting Guide

1. Network requirements for the JO-1MDW

Please see below a troubleshooting guide for resolving JO system, WIFI/App related issues:

a. Check your average internet speed for both download and upload.

Ideally, the update speed should be 1.3Mbps upload and 1.3Mbps download.

If the upload speed is around 0.8Mbps, lower the 'video quality' in other settings.

This will enhance data transmission between the JO master and the Aiphone server by reducing the overall upload of data. (Page 35 of User Manual : <http://tinyurl.com/JO1MDW>)

b. Check if your WIFI band is on either IEEE802.11b/g/n.

Ensure the above frequency is enabled in your modem router's WIFI setting.

Frequency bands such as 802.11 ac aren't available for the JO-1MDW.

c. Check if the Wi-Fi frequency is set to 2.4 GHz.

The JO system has 2 antennas that can transmit data in the 2.4GHz frequency.

5.0GHz frequency isn't available. Also, only one of the antennas can be used at a time.

d. Check if you use any access point devices or have the 802.11r (fast roaming) turned on within your house.

Access point devices vary according to the network device's manufacturer.

Some may use technologies that can't be used with the JO-1MDW. Depending on the situation, it's required to turn them off.

e. If you have band steering or mesh WIFI enabled.

Please turn them off or enable a 2.4 GHz WIFI, such as guest WIFI, so the JO-1MDW can only connect to that WIFI and not to the 5 GHz WIFI.

f. If the 'Smart Connect is enabled'.

Smart Connect combines 2.4GHz and 5GHz bands under a single SSID, making it difficult for the JO-1MDW to connect to the wifi or to distinguish which wifi band the smartphone is connected to when registering the app. Please separate the wifi bands connecting the JO-1MDW to wifi or when registering the app to the JO-1MDW.

g. Check if the JO-1MDW is updated to the current firmware version.

More details about the JO system can be found in the URL below:

https://www.aiphone.net/product/single/jo_series/

h. Select a different internal antenna inside the JO-1MDW.

Please refer to the screenshot on the right for details.

(Page 15 of User Manual : <http://tinyurl.com/JO1MDW>)

i. If you are using the TP-link Archer VR1600v modem router.

Please contact your internet service provider and request this modem's most current firmware or if they can provide you with a different modem router. We have encountered cases where the JO-1MDW issue improved when the modem above was replaced with another model modem.

j. If you use a VPN on your mobile phone.

Please turn it off to check if the app works with WIFI and mobile networks.

k. Do you know if your internet service provider uses a Static NAT or Carrier Grade NAT CGNAT?

If all the settings above are perfectly set, and you may also have set a port forwarding shown in the latter part of this document, you are still experiencing App issues. Please contact your internet service provider.

r. If they use a CGNAT, request them to switch your account to a Static NAT.

2. What to do when the App doesn't work.

If you have set up the JO-1MDW as per the WiFi requirements, but it's not functioning as expected, please follow the steps below.

Restoring all settings to the factory default

In some rare cases, the issues with your device may be caused by firmware glitches. The most effective way to resolve these issues is to reset the JO-1MDW to its factory settings. Please keep in mind that resetting the JO-1MDW will erase any data or configuration that you may have set. Additionally, you will need to delete and reinstall the mobile app on your phone. To reset the JO-1MDW, please follow the step-by-step instructions on the right.

- a. Delete the registered Apps (Page 19 of User Manual: <http://tinyurl.com/JO1MDW>)
- b. Restore the settings (Page 39 of User Manual: <http://tinyurl.com/JO1MDW>)
- c. Connect to WIFI (Page 11 of User Manual: <http://tinyurl.com/JO1MDW>)
- d. Register the Apps (Page 17 of User Manual: <http://tinyurl.com/JO1MDW>)

Let's check if the symptom is caused by the JO-1MDW or the network.

To check whether your device is working correctly, you can use a second smartphone with tethering or hotspot functionality. First, enable the hotspot and connect both your JO-1MDW and the smartphone with the Intercom type B App to it. Once connected, verify that the following features are working correctly:

1. Answer a call from a door station
2. Monitor the door station
3. Review a recorded video

Please note that you need a good 4G connection to proceed with this test. If the 4G connection is not strong enough, run a speed test to confirm that you have at least 1.3Mbps upload and download speed.

If all the features are working correctly, it is likely that the problem lies within your internet and WIFI network. On the other hand, if the features are not working, it may indicate a potential fault within the JO-1MDW.

If the issue is caused by a network problem, check the network settings in your modem router.

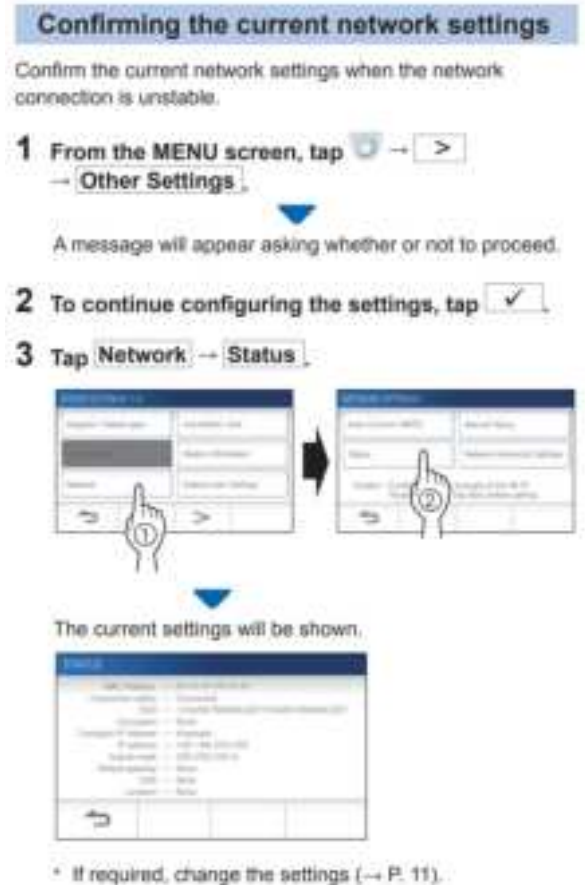


Static IP and Port Forwarding

To set up 'Port Forwarding', you need to assign a static IP address to the JO-1MDW in your router. Most routers have a 'LAN' or 'Local Network' setting, where you can configure the IP addresses. Within this setting, you can find the 'DHCP' option, which allows you to set a static IP address for the JO-1MDW.

To set a static IP, please follow these steps:

1. Check the JO-1MDW's MAC address from the Status section. You can find a screenshot of it on the right-hand side.
2. Login to your router and change the DHCP start address. Make sure to exclude the static IP that you want to give to the JO-1MDW. For instance, if the start address is changed to 192.168.0.5, the IP address 192.168.0.2 ~ 192.168.0.4 can be given a static address.
3. Add a new static lease by entering the Hostname (you can use 'JO-1MDW' for reference), the MAC Address, and the IP address that you want to allocate to the JO-1MDW.ex:



Hostname	Mac address	IP
JO-1MDW	FF:FF:FF:FF:FF:FF	192.168.0.3



Now, the Port-forwarding.

These are the 3 ports that needs to be opened.

HTTPS 443, TCP, for certification server control

Secure MQTT 8883, TCP, for call control server connection

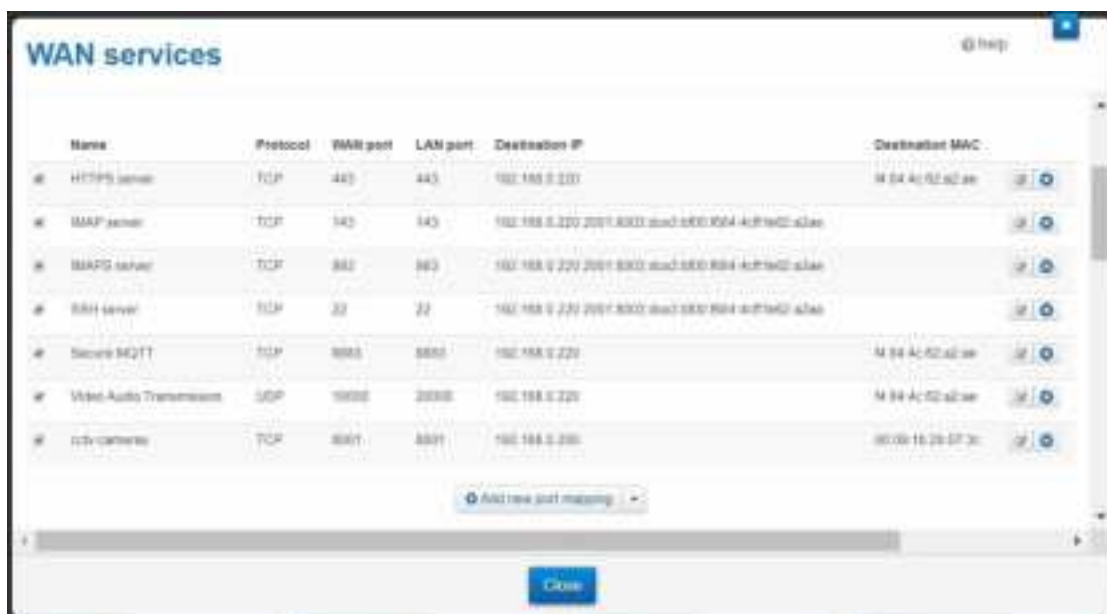
RTP 10000-20000, UDP, for video and audio transmission

Please note that the Port Forwarding method varies depending on the modem router you are using.

I can give you an example using a Telstra modem router, but if you are using a different internet service provider or a modem router that wasn't provided by your provider, I suggest contacting the equipment manufacturer or your internet service provider for assistance.

For Telstra modem routers, you can find the port forwarding setting in the 'WAN Services' section under the advanced setting tab. To forward a port, you need to click the 'Add new port mapping' button and enter the correct values.

In the example above, all three port information has been entered. However, there seems to be an issue with the HTTPS port. It has an IPv6 address but the Mac address is not showing up on the screen. This indicates that the port forwarding setting is incorrect. To fix this issue, you can edit the entered information and remove the IPv6 address. After making this change, the MAC address will show up correctly. Please refer to the screenshot below for clarification.



What to do if the cause seems to be due to hardware, JO-1MDW, fault.

Hardware issues can be classified into two categories: those caused by firmware anomalies and those caused by hardware anomalies. Identifying hardware-related issues is relatively easy as other features controlled by the hardware are also likely to fail. If all the network settings and the results from the previous steps indicate that the issue is hardware-related, please take the JO-1MDW to the point of purchase for screening and potential service.

3. What to do if the cause is unknown or if you require further assistance.

If you require assistance, please contact Aiphone.

Ideally, please make sure that the end-user's computer is connected to the WIFI and has Anydesk installed. (<https://anydesk.com/en-au> for more information)

For modem router related issues, Aiphone technical support will help you with the router's settings and request a few onsite tests over the phone.

To speak with one of our technical support members, please call 02 8036 4507 and press 3 for further assistance.