# MonitorMix v1.1.0 Setup Guide

### Welcome:

Thank-you for downloading Yamaha's MonitorMix app. It is compatible with Yamaha TF, CL & QL series mixing consoles. Up to 10 iPod touch, iPhone and iPad devices can be used with each mixer, to wirelessly control individual Mix or Aux send, pan and output levels. They even allow for personal groups to be created, allowing multiple channels to be adjusted simultaneously by just one gesture.

The musicians get more control, while the sound engineers get more time to focus on other aspects of the sound system.



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### **1.0 System Requirements**

- Apple iPhone 4 or later / iPad 2 or later / iPod touch (5<sup>th</sup> generation or later)
- iOS 7 or later
- Yamaha CL or QL series console version 4.0 or later / TF series console version 1.12 or later.
- Wi-Fi access point or router, with CAT5 cable connection to console

### 2.0 Wi-Fi Setup

Many different types and makes of Wi-Fi router are available to work well with MonitorMix. However, this guide will focus on the Apple AirPort Express (2<sup>nd</sup> generation) because of its ease of use with Apple iOS devices.

#### 2.1 Configure from Default Settings

To start with a new AirPort Express, or one that is reset to its default settings, power it on and use an iOS device within Wi-Fi range to access its "Settings" app.

 Open the "Wi-Fi" menu, and "SET UP NEW AIRPORT BASE STATION..." should be visible near the bottom of the page. Select the AirPort Express, and the app will take a moment to gather information about it.

Settings Wi-Fi		Cancel AirPort Setup Nex	t Back AirPort Setup Next
Wi-Fi		This AirPort Express will create a network.	Not Waiting for an Ethernet cable to be plugged in
YRDL AP F3 CHOOSE A NETWORK		AirPort Express	device or LAN To Internet
YRDL AP F1 YRDL AP F2 Other	∎ ≑ () € ≑ (j)	Create a New Network	WAN port This AirPort Express cannot access the Internet. Plug one end of an Ethernet cable into your broadband device or LAN and the other end into the WAN port of this base station.
SET UP NEW AIRPORT BASE STATION AirPort Express 661780	>	Network Enter Name Device AirPort Express	You may also continue without an Internet connection.
Ask to Join Networks Known networks will be jonal actomatic networks are available, you if if we to n network.	ally. If no known nanually select a	Password Create Password Verify Verify Password Password must be at lease Scharacters.	3

- 2. Enter a name for the Wi-Fi network, and a password, then press "Next".
- 3. The app will wait for an Ethernet cable to be plugged in, for connecting to the internet. But for this case it is not needed, so press "Next" again. Wait a moment, and the AirPort Express will be prepared for use.

4. Back in the Wi-Fi settings of the iOS device, the new Wi-Fi network

should be selected. Press	Settings Wi-Fi		Wi-Fi Mo	nitorMix Wi-Fi				
the "I" in the								
blue circle to	Wi-Fi Forget This Network							
access	✓ MonitorMix Wi-Fi 🔒 🗢 (j) IP ADDRESS							
information	CHOOSE A NETWORK	DHCP	BootP	Static				
about the		<b>ه ه (i)</b>	IP Address		10.0.1.3			
network. It		ê ╤ (j)	Subnet Mask	2	55.255.255.0			
should show an	1000 380 1	<b>a</b> <del>?</del> (i)	Router		10.0.1.1			
IP Address of	4.00.0 XXXX X	<b>≜ ≈ (j</b>	DNS		10.0.1.1			
something like	Other		Search Domains					
10.0.1.3, a			Client ID					
Subnet Mask of Ask to Join Networks								
255.255.255.0,	Known networks will be id ned utom	atically. If no known	Renew Lease	<b>~</b> 7				
a Router setting		5						
of 10.0.1.1 and								
a DNS setting of 1	a DNS setting of 10.0.1.1.							

5. These settings are important when it comes to setting up the CL or QL mixer's Network parameters.

#### 2.2 Modify Existing Settings

If the AirPort Express is already configured for use, then the "AirPort Utility" app can be used to edit the settings. It is free to download from Apple's App Store. Here are the main points to follow:

- 1. After opening the app, it should automatically find the AirPort. Touch the AirPort icon to access the settings.
- 2. A password is probably required. Next, press "Edit".
- 3. Then select the "Advanced" menu.

AirPort Utility	AirPort Utility AirPort	Express Edit	Cancel AirPort	Express Done
	IP Address	169.254.193.24	Base Station	AirPort Express >
Internet	LAN IP Address	10.0.1.1	Maturat	Man South Frank Process
	Version Status Messages	7.6.5 >	Guest Network	MonitorMix Wi-Fi >
	otatos messages			
AirPort Express	Network	MonitorMix Wi-Fi >	AirPlay	AirPort Express >
	Hardware Info	>	Internet Connection	>
			Advanced	>
1	2		[	3

4. The top line shows the Router Mode. "DHCP and NAT" is recommended. Press this line to edit the mode, and to see the DHCP range.

- 5. A range of 10.0 is the default, though the other ranges are also
  - useable. Check that there are at least 15 numbers between the Beginning and Ending of the range, because each device that connects to the network will need to be given a unique number within this range. The default range is from 2 to 200, allowing for 199 devices. Make a note of this range, because it determines which numbers are best to use for devices that need

Cancel	Advanced	Done	Cancel DHCP	and NAT	Dor
OHCP and NAT	ī	×	Router Mode	DHCP a	and NAT
Access Control	Not Ena	abled >	DHCP Range		10.0
Wi-Fi Settings		>	Range Beginning 10	0.0.1.2 🔸	
Pv6		>	Range Ending 10	0.0.1.100 🗲	
Dynamic Globa	al Hostname	>	Reservations		None
			Lease		1 Day
Port Settings Use port settings in network to access	f you want computers outside specific devices on your netw	vork.	Use Network Address Tran public IP address with com network.	Islation (NAT) to s Inputers and device	hare a sing es on your
Allow Setup ov	er WAN		Default Host No hos	st set	
Show Password	ds	>	Enable NAT-PMP		
Add WPS Print	er 4		1	5	

- manual IP address setup, such as Yamaha CL and QL consoles.
- 6. Back in the Advanced menu, "Wi-Fi Settings" can be accessed. They might be set to "Automatic", or configured manually.
- 7. If manual setup is used, then consider the following points:
  - 5GHz "Radio Mode" will allow for faster communication between devices, but is less able to penetrate walls. If possible, keep line-of-sight between the AirPort and the musicians on stage.
  - 2.4GHz 'Radio Mode" will have slower communication, but better range for long distance and getting around obstructions.

Cancel	Advanced	Done	Cancel	Wi-Fi Settings	Done	Cancel	Radio Channel	Done
DHCP and NAT		>	5GHz Name	MonitorMix Wi-Fi		Automatic	Channel	$\bigcirc$
Access Control		Not Enabled >				5GHz Cha	nnel	36 >
Wi-Fi Settings		>.	Country	United	Kingdom >			
IPv6		>				Automatic	Channel	$\bigcirc$
Dynamic Globa	I Hostname	>	Radio Mode	1	Automatic >	2.4GHz Cł	annel	<b>→</b> 6 >
			Radio Chann	el /	Automatic 🗧			
Port Settings	<u> </u>	None >		<u></u>			<b></b>	
Use port settings if network to access	spect 6 compute	rs outside your your network.		7			8	

 The "Radio Channels" can be configured manually to avoid interference with other known Wi-Fi networks covering the same area. Don't operate two Wi-Fi networks in the same space using the same channel, or even adjacent channels. Keep the channel numbers as far apart as possible from neighboring networks.

Press "Done", then "Update" when the settings are completed.

Tip:

Computer software is available to scan Wi-Fi frequencies (such as "Wi-Fi Explorer" for Mac OS or "NetStumbler" for Windows), to find the most suitable channels to use.

## 3.0 Console Setup

Before connecting the Wi-Fi router to the console, check the NETWORK settings. This is found in the SETUP menu of CL & QL consoles, or in the SYSTEM SETUP of TF consoles. TF consoles support "DHCP" mode, which is ideal.



However, CL & QL consoles must be given an IP address manually.



- I. Remember the DHCP range given to the Wi-Fi router in the previous section? Make sure the IP address of the CL or QL console has the same first 3 numbers (10.0.1 for example). But the last number should be outside of the DHCP range. So if the range is 2-200, chose a number such as 201. This will avoid the possibility of two devices having the same IP address, which could cause chaos.
- II. While in the NETWORK menu, set the GATEWAY ADDRESS to be the same as the router's IP address: 10.0.1.1 in this example.
- III. Create a NAME and PIN code for the console, which will be used when connecting the MonitorMix app. The PIN code can be used as security to stop people from accessing the wrong Mix settings.
- IV. After touching the "OK" button, the console may need to be rebooted in order to apply the new network settings.

Connect the Wi-Fi router's LAN port to the console's NETWORK port.





## 4.0 Opening MonitorMix

After launching the MonitorMix app, any CL, QL or TF mixer in the same network will be discovered and listed.

1. Select the required mixer, and touch "Connect".

2. Enter the PIN code as set in the console's NETWORK menu. Keep this as a secret to stop the performers changing to a different Mix.

3. Select the Mix or Matrix bus to control: the channel numbers, names, icons and colors are shown, as configured on the console. Touch "Done" to continue. (Matrix is not available for selection with TF consoles).

Up to 10 devices can run MonitorMix at the same time controlling the same mixer. Though it is possible to have multiple devices controlling the same Mix, it can become problematic if different "Personal Groups" are set, so it is recommended to have just one device controlling each Mix.







## 5.0 Troubleshooting

The most common problems with using MonitorMix are related to Wi-Fi signal and setup.

If your iOS device is connected to Wi-Fi but cannot sync with the console, check the following:

- Is the console firmware and app version compatible? Check here: <u>http://www.yamahaproaudio.com/global/en/products/peripherals/applications/monitormix/index.jsp</u>
- Are 10 devices already synchronized (this is the maximum number possible at any one time)
- Is the Wi-Fi router connected to the correct Network port on the rear of the console?
- Is the IP address of the console in the same range as that of the Wi-Fi router and the iOS device? For example, they all begin with "10.0.1", but have a different last number.
- Check that every device uses an IP address with a different last number. (For example 10.0.1.\*\*\*).
- Does the iOS device have an IP address set for "Router" and "DNS" in its Wi-Fi settings? (These IP addresses normally begin with the same first three numbers as the other addresses, and end with "1", for example "10.0.1.1"). How to check this:
  - o Open the iOS "Settings" app, and select "Wi-Fi.
  - Touch the blue "I" on the right-hand side of the connected Wi-Fi network's name.
  - If the IP ADDRESS mode is set to "DHCP", then the addresses are entered automatically by the Wi-Fi router. If the Router and DNS addresses are blank, then the router needs to be reprogrammed to supply these details.
  - If the IP ADDRESS mode is set to "Static", then the details can be entered manually.

Settings Wi-Fi		Wi-Fi MonitorMix Wi-Fi
Wi-Fi		Forget This Network
<ul> <li>MonitorMix Wi-Fi</li> </ul>	₽ \$()	IP ADDRESS
CHOOSE A NETWORK		DHCP BootP Static
	<b>ه ه (i</b> )	IP Address 10.0.1.3
	ê ╤ (j)	Subnet Mask 255.255.255.0
10011-00011-0	ê ╤ (j)	Router 10.0.1.1
*	<b>a ≎ (i</b> )	DNS 10.0.1.1
Other		Search Domains

If your iOS device frequently loses connection with the console and tries to resync, check the following:

- Are other Wi-Fi routers used in the same location, set to the same Wi-Fi channel, or an adjacent channel? (Use a Wi-Fi scanning tool to check). This would cause interference, so choose a different channel.
- Are you working without line-of-sight to the Wi-Fi router's aerials? This could restrict the useful range of the Wi-Fi signal.
- Are you working too far away from the Wi-Fi router?
- Is the network cable between the Wi-Fi Router and the console damaged or not connected securely? Try a new CAT5e or CAT6 cable.
- Is your iOS device trying to connect to a different Wi-Fi router with a stronger signal?
- Does the iOS device have an IP address set for "Router" and "DNS" in its Wi-Fi settings? (These IP addresses normally begin with the same first three numbers as the other addresses, and end with "1", for example "10.0.1.1"). Without these, there can be connection problems. See the above paragraph for tips about changing these settings.

For updates, user manuals and further information about the devices which are compatible with MonitorMix, visit <u>www.yamahaproaudio.com</u>