

IXG SERIES

IP Multi-Tenant Video Intercom

Quick Start Programming Guide

IXG Support Tool version **5.0.1.0**

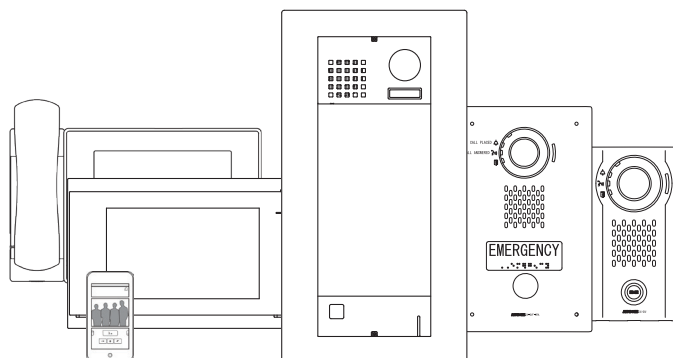


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ATTENTION:

This is an abbreviated programming manual addressing basic program settings for an IXG Series system using the IXG Support Tool. A complete set of instructions (*IXG Operation Manual / IXG Support Tool Setting Manual*) can be found at www.aiphone.com/IXG, along with additional literature and media.

GENERAL OVERVIEW

IXG Support Tool

The IXG Support Tool is designed to batch configure all stations simultaneously. It does so by finding each station on the network by its MAC address. The IXG Series is designed to function on a managed network. However, the broadcast method used to find stations during the programming process requires that stations be in the same broadcast domain. **When possible, it is recommended to place the stations and the programming PC on the same unmanaged network for initial programming.** Once the stations are associated (see **page 9**), the stations can be returned to their final locations for the rest of the programming process.

Once the system configuration has been created, the NIC used by IXG Support Tool can be manually selected in the top menu under **File**, **IXG Support Tool Settings** by using the Select Nic drop down, choosing the proper NIC, and clicking **OK**.

The IXG Support Tool and newest firmware updates can be downloaded here:

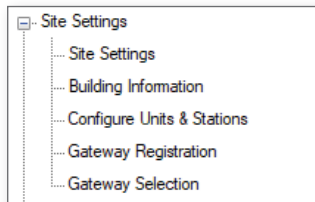
<https://www.aiphone.com/IXG-SupportTool>

Top Menu



This menu is located at the top of Support Tool, featuring quick access to support and integration settings. Use Alt+() to quickly access the menu options.

Side Menu



This accordion menu is where most station settings are located. Click + or - to expand or minimize a category.

Update



The **Update** button (which may be labeled as **Save** in some editions of IXG Support Tool) is used to save configured settings within Support Tool only. Clicking the Update button does not upload setting changes to stations. The process of uploading settings to stations is covered later in this guide.

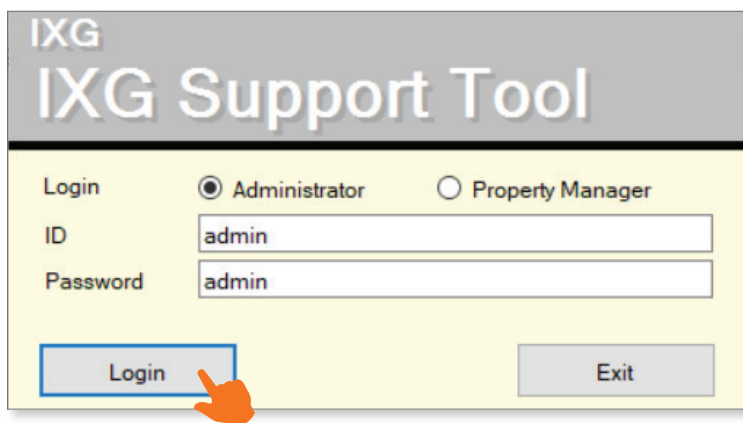
Hand Icon



Look for the Hand Icon to indicate where to click to select or save a setting.

Launching Support Tool

There are two login options for Support Tool: **Administrator** and **Property Manager**. This guide is focused on Administrator mode, so choose Administrator. The default ID and Password is **admin/admin**. Click **Login**. A prompt will appear to change the password. Enter a password on both lines and click **OK**.



The admin ID and Password can be changed later by navigating to **File**, **Account Management**.

CREATING A NEW SYSTEM

Getting Started

If this is the first time launching Support Tool, the Create a New System screen will automatically appear. Otherwise, navigate to **File** and select Create New System.

Create a new system.

◆ Required Settings

Site Name ◆
IXG Quick Start Guide

System Type ◆
☐ Single Building ☒ Multiple Buildings ◆
*Cannot be changed once created.

Number of Buildings ◆
2 Building *1~99

System ID ◆
admin123

System Password ◆

i

All ID and passwords should be recorded and saved in a secure location. Recovery of ID and passwords may be difficult, or impossible, in some situations.

Enter the required configuration information above and fill in the **Site**, **Installer**, and **Property Management Company Information**. This information is required and must be accurate to activate the IXG Mobile app. Click **Finish** to continue.

Site Information

Country / Region *
United States

Street address *
Street

Apt., suite, bldg

City *
Redmond

State *
Washington

Zip Code / Postal Code *
98052

Installer Information

Company Name *
Aiphone

Representative Name
PL

Email *
aiphone@aiphone.co

Phone Number *
1111111111

Property Management Information

Company Name *
Aiphone PM

Representative Name *
AG

Email *
aiphonepm@aiphonepm.com

Phone Number *
2222222222

Finish

Site Settings

From the side menu, expand **Site Settings**. Starting from the top setting option, Site Information, use these submenus to configure and customize the system.

Site Information

Site, Installer and End User information that is set when creating a new system can be found and edited here.

Building Information

Name the building (or buildings) in which the units and their stations will reside. Place a check mark in the Enable column to add buildings. This is typically only needed in multi-building systems.

Building Number	Enable	Building Name
01	☒	North Building
02	☒	South Building

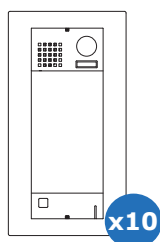


The option to enable additional buildings will only be available when **Multiple Buildings** is selected on the Create a new system window.

Site Settings (continued)

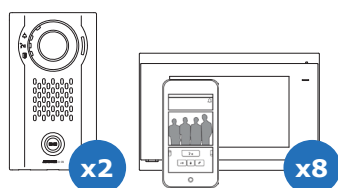
Units / Stations - Unit Types

Units and their stations will be added to the system in this section. The IXG Series has six different unit types: **Entrance**, **Residential**, **Commercial**, **Guard**, **Inside Area**, and **Outside Area**. Each has their own purpose, available features, communication paths, and station types. There is no limit to the number of units in a system, but each unit type can only support a set number of stations.



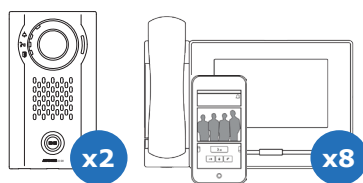
Entrance Unit

Entrance units consist of up to ten IXG-DM7-* entrance stations. Entrance stations can call guard, commercial, residential, and inside area units, as well as grant entry to residents by keypad or card reader.



Residential Unit

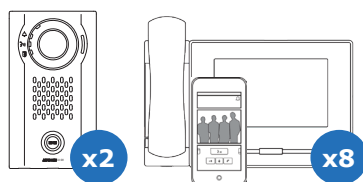
Residential units may consist of up to eight IXG-2C7 tenant stations, IX-RS-* handset sub stations, or a combination of these, along with up to eight IXG mobile apps and a telephone number. Tenant stations can communicate internally within the unit, receive incoming calls from entrance and guard units, and monitor entrance stations. The two private door stations will only call to stations within their unit.



Commercial Unit

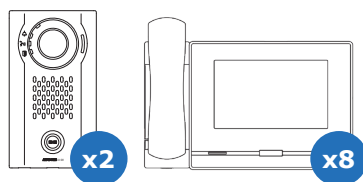
Commercial Units consist of up to eight IX-MV7-* master stations, IX-SOFT PC master stations, IX-RS-* handset sub stations, one VoIP extension, or a combination of these, along with eight IXG mobile apps and a telephone number. Master stations and PC master stations provide advanced functions including internal paging, call transfer, speed dial buttons, and more.

Stations within a commercial unit can communicate with inside and outside area units, guard and entry units, and other commercial units. The two private door stations will only call stations within their unit.



Guard Unit

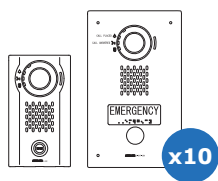
Guard units consist of up to eight IXG-MK guard stations, IX-RS-* handset sub stations, one VoIP extension, or a combination of these, along with up to eight IXG mobile apps and a telephone number. Guard stations provide advanced functions including internal paging, call transfer, speed dial buttons, and more. The two private door stations will only call to stations within their unit.



Inside Area Unit

Inside area units consist of up to eight IX-MV7-* master stations, IXG-MK guard stations, IX-SOFT PC master stations, IX-RS-* handset sub stations, or a combination of these, along with two IX Series door stations. Master stations, guard stations and PC master stations provide advanced functions including internal paging, call transfer, speed dial buttons, and more.

An inside area master station can communicate with all other unit types. The two private door stations will only call stations within their unit. **Inside area units cannot contain mobile apps.**



Outside Area Unit

Outside area units consist of up to ten door or emergency stations that can call residential, guard, commercial, and inside area units.

Site Settings (continued)

Units/Stations - Adding Units

Units and their stations will be added to the system here. First, look to the top of the screen for the Display Settings section. By default, each unit is set to have one Master/Tenant Station and one Entrance/Door Station. Use the drop-downs to select the number of stations the units will have, then click **Apply**.



This setting is applied to all units. Select quantities that reflect your largest unit.

From left to right, select the Building Number the unit will belong to, set the Unit Number, and click **Select** to choose a Unit Type.

Site Settings			
Units / Stations			
Building Nu	Unit Numbe	Unit Type	
01	1000	Entrance	Select
			Main Entrance

Once all units have been added, enter a Unit Name for each. A **First Name** and **Last Name** can be optionally added to Residential units. At any point during this process, click **Update** to save the configured settings.

Site Settings			
Units / Stations			
Building Nu	Unit Numbe	Unit Type	
01	1000	Entrance	Select
01	1001	Residential	Select
01	1002	Guard	Select
01	1003	Commercial	Select
01	1004	Outside Area	Select
			Unit Name
			First Name
			Last Name
			Main Entrance
			Apartment 101
			Jane Doe
			Security
			Main Office
			Interior Doors



When adding multiple of the same Unit Type, select a completed Unit Number field and press the Enter key. This will auto-populate the next field.

Continue by selecting the stations for each unit, including setting the maximum number of Mobile Apps each unit will require. Click **Update** once every unit has been created and stations have been added.

Site Settings									
Units / Stations									
Unit Type		Phone Registrati	Master / Tenant S		Door / Entrance S		Door / Entrance S		Number of available Mobile Apps
Entrance	Select			Select		Select		Select	
Residential	Select	Disable	IXG-2C7(-*)	Select		Select		Select	8
Guard	Select	Disable	IXG-MK	Select		Select		Select	0
Commercial	Select	Disable	IX-MV7-*	Select	IX-EA,IX-EAU	Select		Select	0

Once all of the previous changes have been updated, find the Default Call Settings section at the top of the screen. Click on **Group** to automatically configure a default paging group for all master stations. Click on **Called Stations (Door/Sub Stations)** to set up default calling assignments for door stations.



Clicking **Called Stations (Door/Sub Stations)** will automatically set up calling assignments for any door stations in the system. To set these up manually, or customize settings beyond the defaults, refer to the Call Partitioning section found on page 14.

Site Settings (continued)

Sample Unit Layouts

The IXG Series can use different unit types to support a variety of applications. Here are some common use cases and solutions to achieve those goals.

Single Office (1 Door Station, 1 Master Station, 8 Mobile Apps)

For this size of office, everything can be placed in a single commercial unit.

Building Number	Unit Number	Unit Type	Select	Site Settings Required settings.						
				Units / Stations						
				Unit Name	Phone Registration	Master / Tenant Station	Door / Entrance Station			Number of available Mobile Apps
01	100	Commercial	Select		Disable	IX-MV7-*	Select	IX-DV,IX-DVF(-*)	Select	8

Single Office (3 Door Stations, 1 Master Station, 8 Mobile Apps)

To accommodate more than two doors calling to a single office, place the master station and mobile apps in a commercial unit, and the three door stations in an outside area.

Building Number	Unit Number	Unit Type	Select	Site Settings Required settings.						
				Units / Stations						
				Unit Name	First Name	Last Name	Phone Registration	Master / Tenant Station		
01	100	Commercial	Select	Commercial100			Disable	IX-MV7-*	Select	
01	101	Outside Area	Select	Outside Area 101					Select	



To finish configuring the stations in the Outside Area and Commercial Unit for calling, see **Station Partitioning** on page 14.

Site Settings Required settings.										
Units / Stations										
Door / Entrance Station		Door / Entrance Station		Door / Entrance Station						Number of available Mobile Apps
IX-DV,IX-DVF(-*)	Select	IX-DV,IX-DVF(-*)	Select	IX-DV,IX-DVF(-*)	Select					8

Multi-Tenant (1 Entrance Station, 4 Tenants, 1 Tenant Station and 4 Mobile Apps per Tenant)

For apartment buildings, place IXG-DM7-HID* entrance station in an entrance unit, and place the master station and mobile apps for each apartment in separate residential units.

Building Number	Unit Number	Unit Type	Select	Site Settings Required settings.						
				Units / Stations						
				Unit Name	Phone Registration	Master / Tenant Station	Door / Entrance Station			Number of available Mobile Apps
01	100	Entrance	Select				IXG-DM7(-*)	Select		
01	101	Residential	Select		Disable	IXG-2C7(-*)	Select			4
01	102	Residential	Select		Disable	IXG-2C7(-*)	Select			4
01	103	Residential	Select		Disable	IXG-2C7(-*)	Select			4
01	104	Residential	Select		Disable	IXG-2C7(-*)	Select			4

Multi-Tenant, App Only (2 Entrance Stations, 4 Tenants, 8 Mobile Apps per Tenant)

For apartment buildings where the tenants only have mobile apps, place IXG-DM7-HID* entrance stations in an entrance unit, and make a separate residential unit with mobile apps for each apartment.

Building Number	Unit Number	Unit Type	Select	Site Settings Required settings.						
				Units / Stations						
				Unit Name	Phone Registration	Master / Tenant Station	Door / Entrance Station	Door / Entrance Station		Number of available Mobile Apps
01	100	Entrance	Select				IXG-DM7(-*)	IXG-DM7(-*)	Select	
01	101	Residential	Select						Select	8
01	102	Residential	Select						Select	8
01	103	Residential	Select						Select	8
01	104	Residential	Select						Select	8

Station Information

Identification

From the side menu, navigate to **Station Information**, Identification. This menu can be used to customize the Station Number and Name for each station in the system. The Station Name and Number are typically only seen by stations within the same Unit for internal communication, but it is recommended to give custom names to any entrance or door stations so that users can distinguish them more easily. Once everything is configured, click **Update**.

ID / Password (Optional)

From the side menu, navigate to **Station Information**, ID / Password. This menu can be used to edit the Admin ID and Password for each station, though this is not normally recommended. This menu can also be used to give stations an ONVIF and RTSP ID and Password, which is needed for entrance or door stations that will be tied to an NVR.

Gateway Settings

If the system contains Mobile Apps, a Gateway (IXGW-(T)GW) will need to be added.

Gateway Registration

To add the Gateway to the system, navigate to **Gateway Settings**, Gateway Registration. For each Gateway, select Enable, then optionally edit its Station Name, and review the other settings. Up to 99 Gateways can be configured per system. Once everything is configured, click **Update**.

Gateway Settings		Gateway Settings			
Gateway Registration		Gateway Registration			
Gateway Number	Station Type	Enable	Station Name	Cancel Priority Rule	Maximum Simultaneous Calls
1	IXGW-(T)GW	☒	Gateway Adaptor1	Enable	8
2	IXGW-(T)GW	☐		Enable	8

Gateway Selection

Navigate to **Gateway Settings**, Gateway Selection. For each unit, choose a primary gateway that will be used to call IXG mobile apps. An optional secondary gateway can also be designated that will be utilized if the primary gateway goes offline. Click **Update**.

Building Nu	Unit Number	Unit Name	Gateway Settings			
			Gateway Selection			
			Primary		Secondary	
			Gateway Number	Station Name	Gateway Number	Station Name
01	1000	Main Entrance	1	Gateway Adaptor		
01	1001	Apartment 101	1	Gateway Adaptor		
01	1002	Security	1	Gateway Adaptor		
01	1003	Main Office	1	Gateway Adaptor		
01	1004	Interior Doors	1	Gateway Adaptor		



Gateway Selection cannot be completed until the gateway and stations receive their network information. See **page 8**.

Network Settings

IP Address

From the side menu, navigate to **Network Settings**, IP Address. Each station can be manually assigned an IP address, or click near the top of the screen to enter an IP address range to automatically assign all stations.

Batch IP Address Configuration

Enter starting IP address (IPv4 or IPv6) and subnet mask.
IPv4 Address

192168110

IPv6 Address
Subnet Mask

2552552550

Select stations for batch IP address assignment.

Station List

Select	Building Number	Unit Number	Station Name	Station Type	IP Address (IPv4)	IP Address (IPv6)
☒	01	001	Entrance Station	IXG-DM7(-*)		
☒	01	101	Master Station1	IX-MV7-*		
☒	01	201	Tenant Station1	IXG-2C7(-*)		
☒	01	202	Tenant Station1	IXG-2C7(-*)		
☒	01	203	Tenant Station1	IXG-2C7(-*)		
☒			Gateway 1	IXGW-GW		

Select Station by Type.
All

Select

Unselect

OK

Cancel

Typically, stations deployed across a managed network cannot be found by Support Tool unless the network is configured to allow this broadcast search. In this case, it may be easier to move the stations to a switch local to the programming PC than it would be to configure the network to allow a network-wide broadcast.

More network settings can be seen by scrolling right. **For systems with the IXGW-(T)GW Gateway Adaptor, a Default Gateway and a Primary DNS Server must be added for the adaptor**, and optionally for all other stations. A **Secondary DNS Server** can also be optionally added. Consult the Network Administrator for more information if needed. Once everything is configured, click **Update**.

Building Nu	Unit Number	Station Name	Network Settings																		
			IP Address																		
			Hostname	IP Version	Static / DHCP	IPv4 Address															
						IP Address				Subnet Mask				Default Gateway				Primary DNS Server			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
01	1001	Tenant Station1		IPv4	Static	192	168	1	10	255	255	255	0								
01	1002	Guard Station1		IPv4	Static	192	168	1	11	255	255	255	0								
01	1003	Master Station1		IPv4	Static	192	168	1	12	255	255	255	0								
01	1003	Video Door Station1		IPv4	Static	192	168	1	13	255	255	255	0								
01	1004	Video Door Station1		IPv4	Static	192	168	1	14	255	255	255	0								
01	1004	Video Door Station2		IPv4	Static	192	168	1	15	255	255	255	0								
		Gateway Adaptor1		IPv4	Static	192	168	1	30	255	255	255	0	192	168	1	200	8	8	8	8
		I/O Adaptor1		IPv4	Static	192	168	1	16	255	255	255	0								

NTP

Navigate to **Network Settings**, NTP. It is recommended to Enable and configure NTP settings for each station when possible. **For systems with the IXGW-GW Gateway Adaptor**, it will have NTP enabled and an Aiphone NTP server address set by default. Adjusting this default server address is possible, and recommended for sites with their own server. Click **Update**.

Association Settings

Station Settings List and Station List

From the top menu, select **Connection** and click Association Settings. Here, stations created in the previous steps will be associated to stations found on the network. Select a station from the Station Settings List and one from the Station List below. Confirm that the IP address and subnet mask listed in the Station Settings List are correct, then click **Apply**. This will assign the Station Name and IP Address to the station and reboot the station. A station reboot usually takes several minutes.

Association Settings

1. Select the setting file to be linked with the chosen station.

Select	Building Nu	Unit Number	Station Name	Station Type	Hostname	IP Address	Subnet Mask	Associated
☒	01	1000	Entrance Station1	IXG-DM7(-*)		192.168.1.9	255.255.255.0	-
☐	01	1001	Tenant Station1	IXG-2C7(-*)		192.168.1.10	255.255.255.0	-
☐	01	1002	Guard Station1	IXG-MK		192.168.1.11	255.255.255.0	-
☐	01	1003	Master Station1	IX-MV7-*		192.168.1.12	255.255.255.0	-
☐	01	1003	Video Door Station1	IX-EA,IX-EAU		192.168.1.13	255.255.255.0	-
☐	01	1004	Video Door Station1	IX-DVM		192.168.1.14	255.255.255.0	-
☐	01	1004	Video Door Station2	IX-DV,IX-DVF(-*)		192.168.1.15	255.255.255.0	-
☐			Gateway Adaptor1	IXGW-(T)GW		192.168.1.30	255.255.255.0	-

2. Select the station to associate with the setting file.

☐ Enter station MAC address:

☐ Enter Station ID and Station Password.

☒ Search and select station within local network:

Select	Building Nu	Unit Number	Station Name	Station Type	IP Address	Subnet Mask	MAC Address	Associated
☐			Master Station1	IX-MV7-*	192.168.1.12	255.255.255.0	00:0B:AA:2F:45:6C	-
☐			Guard Station1	IXG-MK	192.168.1.11	255.255.255.0	00:0B:AA:42:00:47	-
☐			Gateway Adaptor1	IXGW-(T)GW	192.168.1.30	255.255.255.0	00:0B:AA:4C:02:8E	-
☐			Video Door Station1	IX-EA,IX-EAU	192.168.1.13	255.255.255.0	00:0B:AA:2A:0A:97	-
☐			Video Door Station2	IX-DV,IX-DVF(-*)	192.168.1.15	255.255.255.0	00:0B:AA:27:0B:E7	-
☐			Tenant Station1	IXG-2C7(-*)	192.168.1.10	255.255.255.0	00:0B:AA:3E:07:CB	-
☐			I/O Adaptor1	IXW-MA	192.168.1.16	255.255.255.0	00:0B:AA:2E:03:58	-
☒			Entrance Station1	IXG-DM7(-*)	192.168.1.9	255.255.255.0	00:0B:AA:41:04:6F	-

If multiple NICs are active on this PC, designate the NIC that IXG Support Tool will use in "IXG Support Tool Settings" in the File menu.

Apply

Station Search



Typically, stations deployed across a managed network cannot be found by Support Tool unless the network is configured to allow this broadcast search. In this case, it may be easier to move the stations to a switch local to the programming PC than it would be to configure the network to allow a network-wide broadcast.

If a Station Search fails immediately, go to **File** from the top menu and select IXG Support Tool Settings. Find the Select NIC drop-down and select the correct NIC that Support Tool should use, then click **OK**. Return to Association Settings to try again. If the Station Search continues to fail immediately, a local antivirus or firewall may be preventing this action. Disabling one or both of these may be a simple solution in quickly finishing the initial system configuration.

Associated Station List

Scroll down to confirm the stations were successfully associated. The IP and MAC addresses of the stations will be listed. If the wrong station information was associated to a station, select that station on this list and click **Remove Association**. Once removed, scroll up and associate the correct station.

Station(s) that have been associated with a setting file are listed below.

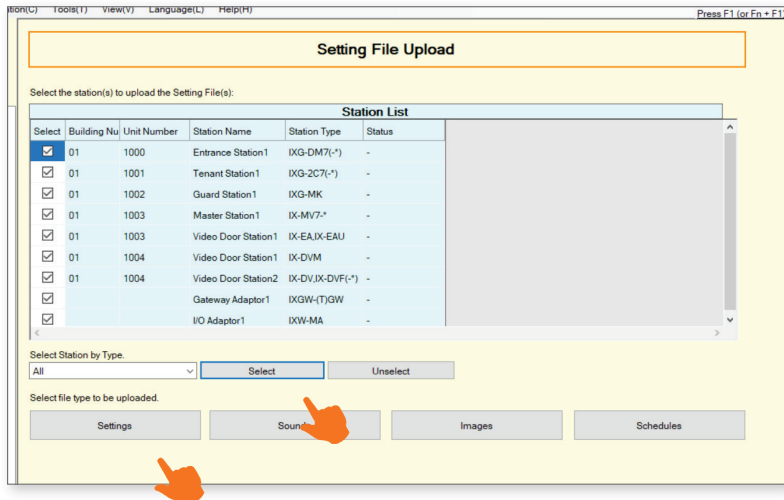
Select	Building Nu	Unit Number	Station Name	Station Type	IP Address	Subnet Mask	MAC Address	Status
☐	01	1002	Guard Station1	IXG-MK	192.168.1.11	255.255.255.0	00:0B:AA:42:00:47	Success
☐	01	1003	Master Station1	IX-MV7-*	192.168.1.12	255.255.255.0	00:0B:AA:2F:45:6C	Success
☐	01	1003	Video Door Station1	IX-EA,IX-EAU	192.168.1.13	255.255.255.0	00:0B:AA:2A:0A:97	Success
☐			Gateway Adaptor1	IXGW-(T)GW	192.168.1.30	255.255.255.0	00:0B:AA:4C:02:8E	Success
☐	01	1004	Video Door Station1	IX-DVM	192.168.1.14	255.255.255.0	00:0B:AA:57:00:40	Success
☐	01	1004	Video Door Station2	IX-DV,IX-DVF(-*)	192.168.1.15	255.255.255.0	00:0B:AA:27:0B:E7	Success
☐			I/O Adaptor1	IXW-MA	192.168.1.16	255.255.255.0	00:0B:AA:2E:03:58	Success

Remove Association

Retry Association

Upload Settings

Once associated, each station will need to have its setting file uploaded to it. This setting file contains all other system information and is required for the station to function. To upload the settings to each station, select **Connection** on the top menu and select Upload Settings. Select each station by placing a check mark next to it, or click **Select** to select all stations at once. Click **Settings** to upload station settings. If Sounds, Images, or Schedules were also configured, click their respective buttons.



If any stations fail, they may still be booting up from the Association Settings step. It is also important to ensure that the programming PC is in the same subnet range as the stations. For example, if the stations are set to 192.168.1.xx, the PC should also be set to this.

Exporting System Configuration

Once the Upload is complete, select **File** from the top menu and click Export System Configuration. Export this system's configuration to save as a backup if the settings are lost, or if they need to be moved to a new PC and Support Tool. If the configuration file is going to be emailed, it will need to be compressed first.

Mobile App Integration

If IXC Mobile Apps are to be part of the system, the first step in many situations is to create an administrative account for the site.

However, **if this is one of multiple sites the installing company is responsible for**, skip the "Create a New Administrator Account" step. Use existing IXC cloud server account credentials in the step "Upload Settings to IXC Cloud Server" to add this site to the installation company IXC Cloud Server account.

Create a New Administrator Account

Select App Integration from the top menu and click Create a New Administrator ID. Enter an ID, Password, and Email Address. Click **Create** to continue.

Administrator ID

(Unique ID)

Password

(Unique Password)

The password must be at least 8 characters and include uppercase letters, lowercase letters, and numbers.

Confirm Password

Email Address

installername@companyemail.com

Create Cancel

A verification code will be sent to the registered email. To enter this verification code, select **App Integration** from the top menu and click Activate. Enter the previously created Administrator ID and Verification Code and click **Activate**.

Mobile App Integration (continued)

Upload Settings to IXG Cloud Server

The system settings must be uploaded to the IXG Cloud Server. To do this, select **App Integration** from the top menu and select Upload Settings to IXG Cloud Server. From there, follow the prompts.

The first screenshot shows the 'IXG Cloud Server Login' screen with fields for 'IXG Cloud Server ID (Unique ID)' and 'Password (Unique Password)', a 'Forgot password?' link, and 'Login' and 'Cancel' buttons. An 'Upload Settings to IXG Cloud Server' dialog box is overlaid, showing a 'Select Country' dropdown menu with 'United States' selected, and 'Upload' and 'Cancel' buttons. The second screenshot shows the 'License Agreement' screen with two sections: '1. Instructions for Residents' and '2. ID verification for issuing a QR code'. It includes an 'Agree' button and a 'Disagree' button.

Downloading the IXG Mobile App

Before registering the IXG Mobile App to a unit, it will need to be downloaded to the mobile device. Search for "Aiphone IXG" in the Apple App Store™ for iOS® devices, or Google Play™ store for Android® devices. Once installed, and the privacy policy is agreed to, it will ask to scan a QR code for registration.

Upload App Registration QR Code to IXG-2C7 Tenant Station

To register mobile devices to the IXG system, a QR Code is generated for each specific Residential Unit. For **Residential Units**, the app registration QR code can be sent directly to the IXG-2C7 Tenant Station in the Unit.

Select **App Integration** from the top menu and click Upload QR Code to the station for App Registration.

To display the QR code, tap the **Settings** icon on the IXG-2C7 and tap **App Registration**. IXG Mobile App will guide the user through scanning the code and setting up the app.

Upload to station(s)								
Select	Building Nu	Unit Number	Unit Name	Station Number	Station Name	Status	Available App(s)	Status
☒	01	201	201	012010	Tenant Station1	Upload Required	1	
☒	01	202	202	012020	Tenant Station1	Upload Required	1	
☒	01	203	203	012030	Tenant Station1	Upload Required	1	

Export App Registration QR Code as a PDF for Non-Residential Units

To register mobile devices to the IXG system, a QR Code is generated for each specific Unit. Navigate to **App Integration**, Export QR Code for App Registration. Place a check mark next to the desired units and click **Export QR Code for App Registration**.

Export QR Code for App Registration					
Select	Building Nu	Unit Number	Unit Name	Registered Master Station	Available App(s)
☐	01	001	North Entrance	0	0
☒	01	101	Cobalt Inc	0	1
☒	01	201	201	1	1

Syncing the IXGW-(T)GW with the IXG Cloud Server

Once the upload to the cloud server is complete, the status LED on the IXGW-(T)GW Gateway will change to a solid green once it is synced with the IXG cloud server. If the status LED continues flashing orange for more than 5 minutes, it may require a manual reboot. Simply disconnect its PoE connection and reconnect it after 5 seconds.



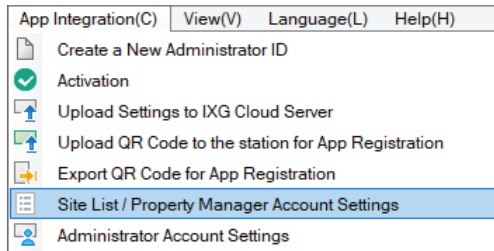
If the sync fails, or the status LED never turns green, confirm both the programming PC and the IXGW-(T)GW have an internet connection. This may require adjusting the network firewall to allow the IXGW-(T)GW access. Also, confirm that the Default Gateway and DNS settings configured under Network Settings are set correctly.

Property Manager Account Creation

For post-installation system management for residential applications, a Property Manager Account must be created. This account will allow a Property Manager access to the Property Manager View in Support Tool.

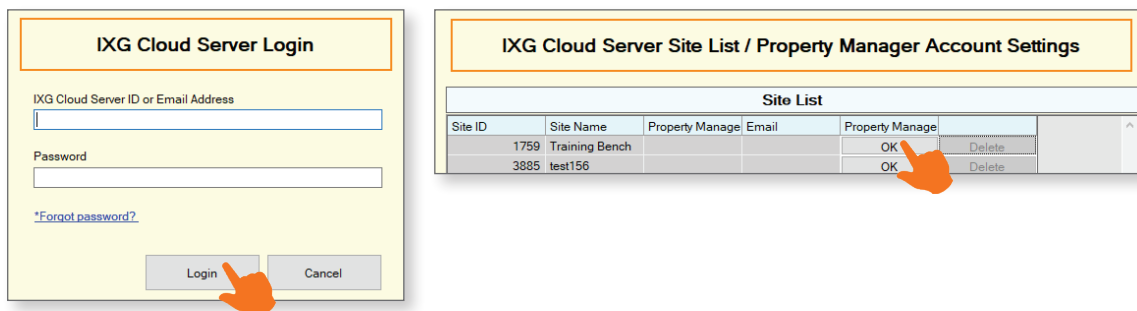
Creating the Property Manager Account

From the top menu, click **App Integration** and choose Site List/Property Manager Account Settings

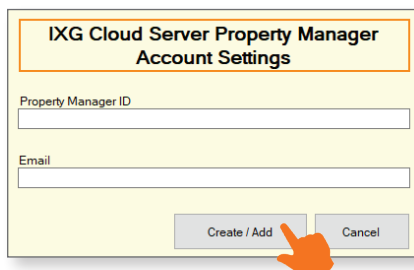


Log into the IXG Cloud Server Account

Enter the cloud server credentials created on **page 10** and click **Login**. Once logged in, it will show all sites linked to that IXG Cloud server account. Find the site to create the property manager account for and click **OK**.



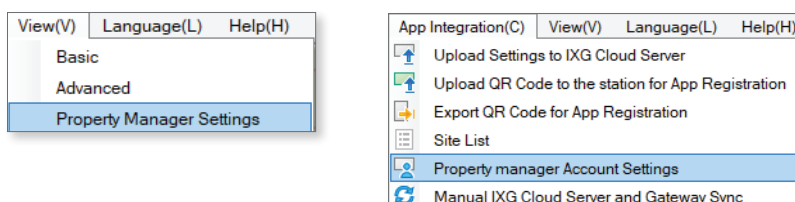
On the next screen, create a new Property Manager ID and enter an email address to be attached to this account. **This email cannot be the same as the email associated to the IXG Cloud server account.** When finished, click **Create/Add**. This will send a temporary password to the designated email. The initial password can be changed from the Property Manager View.



Property Management Settings

In order to access the property management account, select **view** from the top menu and click Property Manager Settings. This will return to the support tool login screen. Select Property Manager, then enter the Support Tool login credentials and click **Login**.

At the top menu, choose **App Integration** and click Property Manager Account Settings. Use the Property Manager ID and the password that was sent to the email provided and click **Login**. When prompted to change your Password, enter new credentials and click **Change**.



i For more information about how to use the property management account, refer to the [Property Manager Guide](#)

ADVANCED SETTINGS

The IXG Support Tool has a collection of optional features accessed by changing the top menu option **View** from the Basic to Advanced.

Entrance Station Settings

On the left-hand side menu, expand **Entrance Station Settings**. These settings are used to customize the layout, background image, access codes, and other Entrance Station (IXG-DM7-*) features. Click **Update** to save any changed settings.

Display

Edit what unit search and call methods are displayed on the entrance station home screen when used by a visitor. By default, **Call by Unit Number** is enabled and is the only option displayed. Several other methods may be enabled, and a drop-down selection under Default Display Screen sets which will be shown first. Call by List will display all units on a scrollable list, Search by Name allows units to be directly searched by name.

The Building Selection Button can be enabled if an Entrance Station at one building should give the option to call units in other buildings.

Language Selection and Available Languages can be enabled here to allow a visitor to choose between multiple language options during normal operations.

Welcome Screen

The Welcome Screen is what is shown to a visitor as they approach and initially interact with the entrance station. This screen can be enabled or disabled, and a custom image may be added. Custom images must be 480 x 800 and in .png format.

Thumbnail Image

Register up to 500 custom thumbnail images for use in the Direct Call List, Call Directory, and Call Limitation screens. Custom images must be 80 x 60 and in .png format.

Direct Call List

The Direct Call List allows for the creation of individual call buttons for each Unit, with a maximum 500 Units.

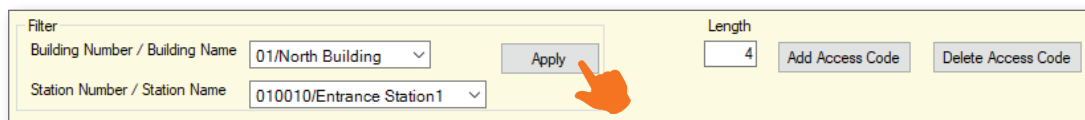
Call Directory

The Call Directory allows for the creation of directories and sub directories that individual units can be organized under, up to a maximum of 500 entries. Cannot be used when a Direct Call List is also enabled.

Access Codes

Create Access Codes to allow residents or known visitors to enter the building by entering a code at the entrance station. Up to 9,999 codes can be created.

At the top of the screen, use the drop-down options to select the Building number and entrance station to create access codes for. Once these are selected, click **Apply**.



At the top of the screen, under Length, enter the common length of every code that will be added. Once a length is decided, click **Add Access Code** to add codes to specific stations, or manually add codes to the list below. Codes can be copy and pasted for convenience.

01	101	Cobalt Inc	9999	A9999
01	201	201	9999	A9999
01	202	202	9999	A9999

Once the code is set, and the setting file is uploaded, the code may be used to enter the building. To use the code, tap A then enter the code. *Ex. A9999*

Upload Settings to Stations

The final step is to upload these setting changes to the IXG stations. To upload the settings to each station, select **Connection** on the top menu and click Upload Settings. Find more information on **page 10**.

Station Partitioning

Stations placed in different units are not automatically configured to call one another. These settings control which stations can see and communicate with each other.

System Information - Station List

To configure which stations are in an answering station's address book, expand **System Information** from the side menu and select Station List.

A row of all of stations will be listed, as well as a column for each. Find the cross section where the desired stations meet and place a check mark in the drop down menu to place those stations in each others address book. To take them out of the address book, make that cell blank. The door release button can be enabled when adding the specified station or mobile app to a station's address book. By default, when adding a station with the check mark it will show the door release button.

Building Nu	Unit Number	Station Name	System Info				
			01 / 1003 / 10031		01 / 1004 / 10040		
			Video Door Station1 / IX-EA,IX-EAU		Video Door Station1 / IX-DVM		
			Network Camera	or Release But	Select	Network Camera	or Release But
01	1000	Entrance Station1					
01	1001	Tenant Station1			✓		
01	1001	Intercom App1			✓		Display 1 On
01	1001	Intercom App2					Display 1 On



If a mobile app needs to interact with an IXG-DM7 entrance station that is using both relays, set the value to display 2 in order to have both door release sliders show up on the mobile app.

Call Settings - Called Stations (Door/Sub Stations)

Navigate to **Call Settings**, Called Stations (Door/Sub Stations) from the side menu.

The page will display a row of all stations along the top, as well as a list of stations to the left. To configure the stations a door will call, scroll right to find the cell where the calling door station and the master station intersect. Use the drop-down menu to add a **U** to add that station to the door's call list. Remove a **U** to prevent the door from calling that master.

Building Nu	Unit Number	Station Name	Total	Call Settings		
				Called Stations (Door/Sub Stations)		
				Group 01		
				Select Unit	Building Number / Unit Number / Station Number / Station Name / Station Type	
1	1003	Video Door Station1	0	Select	01 / 1000 / 10000 / Entrance Station1 / IXG-D	01 / 1001 / 10010 / Tenant Station1 / IXG-2C7
1	1004	Video Door Station1	1	Select		01 / 1002 / 10020 / Guard Station1 / IXG-MK
1	1004	Video Door Station2	0	Select		

The door stations can only be set to ring one unit of mobile apps per group. To select the desired unit's mobile apps, scroll to the right and click **Select**. Place a check mark next to the desired mobile app unit and click **OK**.

Mobile Apps and Phone			
Building Nu	Unit Number	Unit Name	Select Unit
			Select
			Select
			Select

Select Unit

Select a Destination Unit

Select	Building Number	Unit Number	Unit Name
☒	01	1001	Apartment 101

OK
Cancel

Upload Settings to Stations

The final step is to upload these setting changes to the IXG stations. To upload the settings to each station, select **Connection** on the top menu and click Upload Settings. Find more information on **page 10**.

Additional Settings

The following are simple feature or function settings that can be quickly adjusted, enabled, or disabled.

Always click the **Update** button in the top left corner to save the setting changes in Support Tool, and Upload Settings to each station once all changes have been made (**page 10**). **The stations will not reflect the setting changes until this is done.**

Adjusting Audio Volumes

Some stations can adjust their inbound and outbound audio volumes. Adjust these by navigating to **Station Settings**, Volume.

Adjusting Ring Tones

IX-MV7 master stations can set custom ringtones for incoming calls from different door and entrance stations. Navigate to **Call Settings**, Incoming Calls. Scroll right to find where the master station's row intersects the column for the desired station and set a new call pattern. These can be individually set for calls made by a call button or an option input, and for different call priority levels.

Entrance and Door Station Release Timer

The time the door release relay output is triggered can be adjusted for the entrance station and door stations on the system. Adjust these times by navigating to **Option Input / Relay Output Settings**, Relay Output.

By default, the output timers are set to 400msec. Use the drop-down under Output Time Range to select a time range of either **200-2000msec** or **3-600sec**. Then, manually enter the amount of time the relay should trigger.

Entrance and Door Station Call Timeout and Ringback Tone

Adjust the amount of time an entrance or door station calls in for, as well as select the ringback tone (which includes audio guidance), by navigating to **Call Settings**, Call Origination.

The call timeout duration is set to 60 sec by default, for both Entrance and private door stations. Adjust this by manually entering a time under Call Timeout (10-600sec).

Use the drop-down under Ringback Tone to select a pre-loaded or custom ringback tone, or audio guidance.

Entrance and Door Station Communication Start Tone

Entrance and Door Stations can play a "Communication Start Tone" to let the visitor know the call is connected and it is time to speak. Enable this by navigating to **Station Settings**, Communication.

Disable Entrance and Door Station Monitoring

To prevent any station in any Unit from monitoring an Entrance or Door Station, Navigate to **Station Settings**, Monitoring.

Entrance Station Backlight Adjustment

Adjust the backlighting of the entrance station's LCD screen when in bright or dim areas as needed. Enable this by navigating to **Station Settings**, Communication.

Station Recording

Stations with an appropriate microSD card slot can record audio and/or video to a local microSD card when a call is placed or received. Recording begins once communication is established with a station. Enable these functions by navigating to **Function Settings**, Recording.

Recording settings for other station types can be enabled or disabled in the same location.

IXW-MA(A) Programming

IXG and IX Series Stations use SIF signaling to trigger outputs on IXW-MA(A) Multi-Purpose Adaptors. This can be used to mirror outputs on the stations for door release or external signaling.

Adding IXW-MA(A) to a System

Navigate to **Site Settings**, **I/O Adaptor Registration**. There will be a list of up to 99 adaptors. Place a check in the **Enable** column for each adaptor to be added. Click **Update**.

I/O Adaptor Number	Site Settings	
	I/O Adaptor Registration	
	Enable	Station Name
1	☒	I/O Adaptor1
2	☐	

Navigate to **Network Settings**, **IP Address**. Enter an IP address, subnet mask, and (optionally) a default gateway for the newly added adaptors. Click **Update**.

01	1004	Video Door Station2	IPv4	Static	192	168	1	15	255	255	255	0
		I/O Adaptor1	IPv4	Static	192	168	1	16	255	255	255	0

Configuring Stations for SIF Signaling

Navigate to **Function Settings**, **SIF**. For each station that will signal the IXW-MA(A), set **SIF Functionality** to **Enable**. Under the **SIF Settings** column, set the **Program Type** to 0100, enter the IP address of the IXW-MA(A) under **IPv4**, set the **Destination Port** to 65014, set **SSL** to Enabled, and **Connection** to Socket.

Station Name	Function Settings							
	SIF							
	SIF Functionality	SIP URI Format	No.01					
			SIF Settings					
			Program Type	IPv4	IPv6	Destination P	SSL	Connectio
Guard Station1	Disable	Disable						
Master Station1	Disable	Disable						
Video Door Station1	Enable	Disable	0100	192.168.1.16		65014	Enable	Socket
Video Door Station1	Enable	Disable	0100	192.168.1.16		65014	Enable	Socket
Video Door Station2	Enable	Disable	0100	192.168.1.16		65014	Enable	Socket
I/O Adaptor1	Disable	Disable						



The IXW-MA(A) itself does not need any programming in this section.

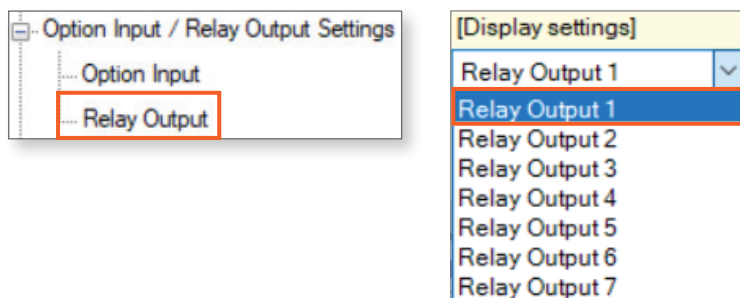
Scroll right to the **Transmission Trigger** section. For each station signaling the IXW-MA(A), check off **Change Contact**. Once these settings are configured, click **Update**.

Unit Number	Station Name	Function Settings							
		SIF							
		No.01							
		Transmission Trigger							
		Begin Out	Begin Cor	Door Rele	End Comr	Change c	Unit error	Begin Bro	
1002	Guard Station1	☐	☐	☐	☐	☐	☐	☐	
1003	Master Station1	☐	☐	☐	☐	☐	☐	☐	
1003	Video Door Station1	☐	☐	☐	☐	☒	☐	☐	
1004	Video Door Station1	☐	☐	☐	☐	☒	☐	☐	
1004	Video Door Station2	☐	☐	☐	☐	☒	☐	☐	
	I/O Adaptor1	☐	☐	☐	☐	☐	☐	☐	

IXW-MA(A) Programming (continued)

Configuring Stations for SIF Signaling

Navigate to **Option Input / Relay Output Settings**, Relay Output. Relay Output 1 will be displayed by default. The **Display settings** menu can be used to switch to other relay outputs.

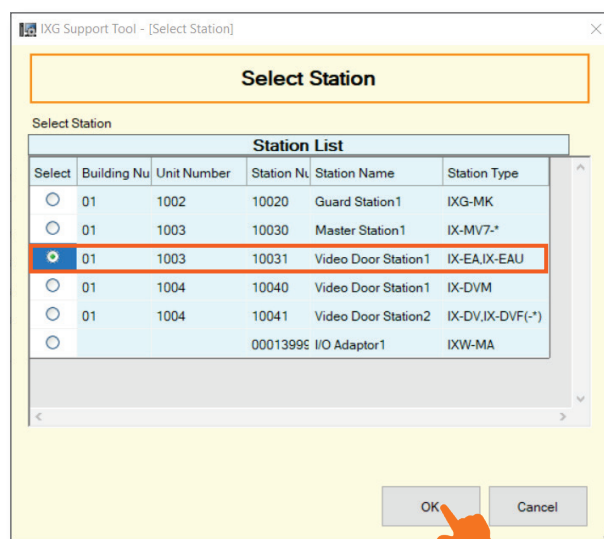


For each programmed output, set the **Function** on the IXW-MA(A) to Contact Change SIF Event. Each output can only be assigned to a single station.

Building Nu	Unit Number	Station Name	Option Input / Relay Output Settings	
			Relay Output	
			Relay Output 1	
			Name	Function
01	1001	Tenant Station1		No Function
01	1002	Guard Station1		Door Release
01	1003	Master Station1		Door Release
01	1003	Video Door Station1		Door Release
01	1004	Video Door Station1		Door Release
01	1004	Video Door Station2		Door Release
		I/O Adaptor1		Contact Change SIF Event

Scroll right to the **Contact Change SIF Event** column. Click **Select Station** to display a list of stations. Select the signaling station and click **OK**. Click **Update**.

Relay Output 1	
Contact Change SIF Event	
Station Nu	Select Station
	Select Station
	Select Station
	Select Station
	Select Station
	Select Station
	Select Station
	Select Station



Only one station can be assigned to each IXW-MA(A) output.

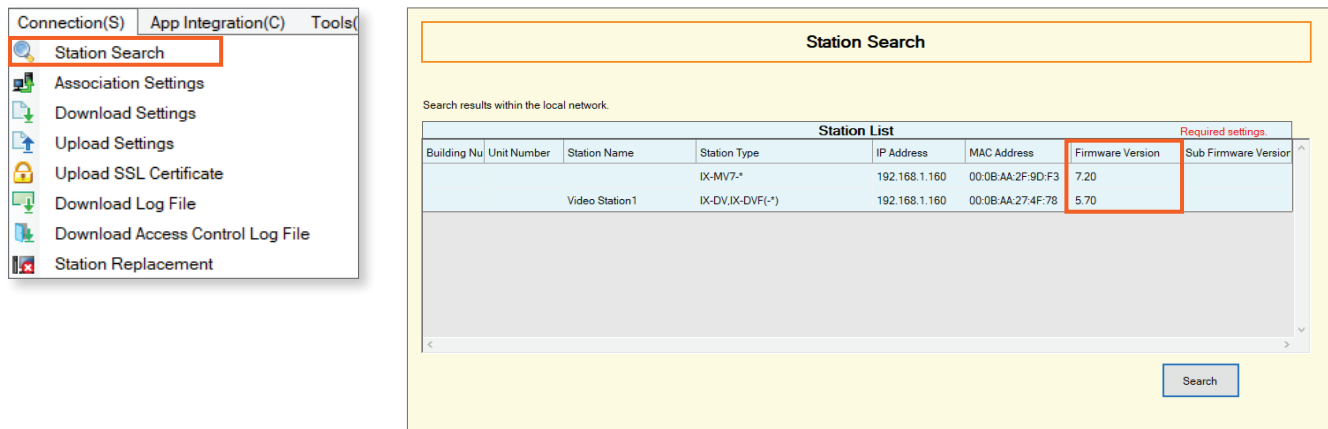
Repeat these steps for each output to be programmed. Then, upload settings to all stations to complete the process (see **page 10** for more information).

Updating Station Firmware

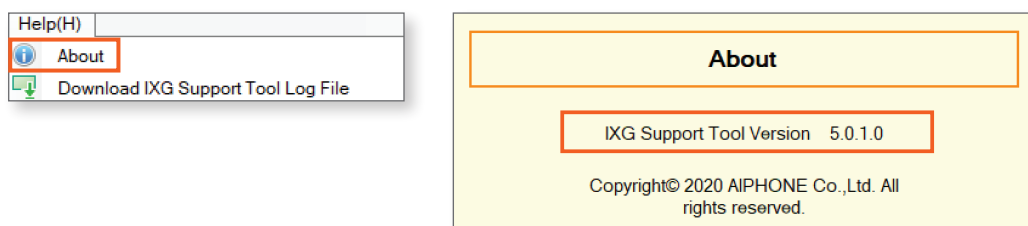
IXG Support Tool can be used to update the firmware on both IXG Series and compatible IX Series stations. Firmware updates are recommended, since they contain valuable security and feature improvements. There are a few steps to take to make sure that firmware updates are necessary, and some stations may require additional resources.

Checking Firmware and Support Tool Versions

To see if IXG Support Tool and the stations' firmware are up to date, first navigate to **Connection(S)**, **Station Search**. The station search will begin automatically. The search will last for sixty seconds, but the stations will normally appear after a few seconds. Click **Cancel** to end the search early. The firmware version for the stations will be listed to the right. IXG Series Stations should be at version 3.0 or higher. For most IX Series stations, they should be at version 7.2 or higher. IXW-MA(A) stations should be at version 9.25 or higher.



To see what version of IXG Support Tool is installed on the PC, navigate to **Help**, **About**. The software version will be listed on the popup screen. The IXG Support Tool should be at version 5.0.1.0 or higher.



If needed, the most current versions of IX and IXG Series Station Firmware and IXG Support Tool can be downloaded at the links below.

IXG Support Tool: <https://www.aiphone.com/IXG-SupportTool>

IX and IXG Firmware Updates: <https://www.aiphone.com/kbtopic/firmware-ix-ixg>

To update IXG Support Tool, download the current version from the link, extract the compressed file, and run the setup file to install the new version of IXG Support Tool. This will not delete your existing system information.

If any of the IX Series stations have a firmware version lower than 5.00, the firmware is too old to be updated through IXG Support Tool. They will need to be updated through the dedicated IX Firmware Upgrade Tool. Instructions and a software download link are below. **This is not a concern for IXG Series stations** since their firmware numbering scheme is different. These can always be updated through IXG Support Tool.

IX Firmware Upgrade Tool: <https://www.aiphone.com/IXFirmwareUpgradeTool>

IX Firmware Upgrade Tool Guide: <https://www.aiphone.com/wp-content/uploads/Firmware-Update-Tool-Guide.pdf>

Updating Firmware Through IXG Support Tool

This method will work for both IXG and IX Series stations. Use the links on the **page 18** to download the required firmware updates. These will be downloaded in a compressed folder. Use the programming PC's built-in methods to extract the firmware update, which is stored as a .bin file.

Navigate to **Maintenance**, **Firmware Update**. The page will display a menu showing different station types. Use the **Browse** buttons to navigate to where the appropriate firmware .bin file is located. Multiple station types can have a firmware update selected at a time.

The screenshot shows the 'Maintenance' menu on the left with 'Firmware Update' highlighted. The main window is titled 'Update Firmware'. It contains instructions: 'Download the log file before updating IXG-2C7(-), IXG-DM7(-), and IXGW-(T)GW with version 1.02 or older. To download the log file, go to "Connection -> Download Log File".' and 'To check the current firmware version, go to "Connection -> Station Search".' Below this is a section 'Select Firmware files:' with a list of station types and their corresponding 'Browse' buttons. An orange arrow points to the 'Browse' button for 'IX-MV7-*'.

Station Type	Browse Button
IXG-2C7(-)	Browse
IXG-DM7(-)(Main)	Browse
IXG-DM7(-)(Sub)	Browse
IXG-MK	Browse
IXGW-(T)GW	Browse
IXGW-LC	Browse
IX-MV7-*	Browse

Select all of the stations to be updated and click **Update**. This process will take several minutes, and the stations will reboot during this time. Stations with a screen will display a status bar during the update. All stations will show a solid status light once the process is complete.

The screenshot shows the 'Station List' table with columns: Select, Building Nu, Unit Number, Station Name, Station Type, and Status. The row for 'Master Station1' (IX-MV7-*) is selected. Below the table is a 'Select Station by Type.' dropdown menu set to 'All', with 'Select' and 'Unselect' buttons. An orange arrow points to the 'Update' button at the bottom right.

Select	Building Nu	Unit Number	Station Name	Station Type	Status
☐	01	1111	Tenant Station1	IXG-2C7(-)	-
☐	01	1111	Video Door Station1	IX-DV,IX-DVF(-)	-
☒	01	1112	Master Station1	IX-MV7-*	-
☐	01	1112	Video Door Station1	IX-DVM	-
☐	01	1113	Entrance Station1(Main)	IXG-DM7(-)	-

i Do not interrupt a firmware update once it has started, including unplugging the station. Doing so can damage the station.

i In order to update the Sub Firmware on an IXG-DM7-*, the Wiegand connection on the card reader needs to be connected to an access control system for power.

NETWORK SECURITY SUMMARY

These pages cover the different ports, protocols, and connections required for the IXG Series to function. This information can help troubleshoot issues and ensure a proper network environment is in place.

Stations and Devices

IX and IXG Series stations require a PoE connection for communication and power.

Entrance Station:	IXG-DM7-HID(A)
Answering Stations:	IXG-2C7, IX-MV7-*, IX-RS-*, IXG-MK
Door Stations:	IX-EA, IX-DV, IX-DVF-*, IX-DVM, IX-SSA-*, IX-SS-2G
Adaptors:	IXGW-(T)GW, IXGW-LC, IXW-MA(A)
Mobile App:	"Aiphone IXG"

Support Tool Software Information

Download and install the IXG Support Tool programming software. The latest version of Support Tool and IXG Series station firmware can be found at the links below.

IXG Support Tool: <https://www.aiphone.com/IXG-SupportTool>

Firmware Upgrades: <https://www.aiphone.com/kbtopic/firmware>

Support Tool and Line Supervision Software Minimum System Requirements

OS: Windows 7 (Professional, Enterprise, Ultimate), Windows 8 (Pro, Enterprise), Windows 8.1 (Pro, Enterprise), Windows 10 (Home, Pro, Enterprise), Windows 11 (Home, Pro, Enterprise)

CPU: 32 bit (x86) or 64 bit (x64), 1 GHz

RAM: 4GB or more

Screen Resolution: 1280 x 768

Support Tool and Line Supervision Software Default ID and Passwords

Administrator ID: admin (*max. 32 alphanumeric characters*)

Administrator Password: admin (*must be changed after first use, max. 32 alphanumeric characters*)

Property Management ID: admin (*max. 32 alphanumeric characters*)

Property Management Password: admin (*must be changed after first use, max. 32 alphanumeric characters*)

Security and Communication

The IXG Series supports the use of **HTTPS** and **TLS (v1.2)**, providing the ability to upload signed certificates to encrypt and secure authentication. Support Tool allows centralized certificate management, with the ability to upload **CA certificates** to stations.

SSH (*SFTP over SSH*) is used when uploading a setting file to stations using the IXG Support Tool, but not during typical operation. This is a critical function, therefore SSH cannot be disabled.

HTTPS is used when uploading from IXG Support Tool to the IXG Cloud server. This may require whitelisting the following URL: ***.ap-northeast-1.amazonaws.com** (this * is a wildcard representing multiple subdomains).

IEEE 802.1X authentication is supported.

Hash Algorithms: MD5, SHA1, SHA256

Security and Communication (continued)

Communication

SIP Connection Port: 5060

Audio codec: G.711 (μ -law, A-law)

Video codec: H.264/AVC, Motion JPEG

Video Encoder 1 (Intercom Communication)

RTP Video: Start 30000 - End 31000

RTP Audio: Start 20000 - End 21000

Video Encoder 2 (Secondary HD Streaming)

RTP Video: Start 32000 (1-65534) - End 33000 (1-65535)

RTP Audio: Start 22000 - End 33000

Minimum / Maximum Frame Rate (FPS): 1 / 30

Minimum / Maximum Bitrate: 32 / 2048

Minimum / Maximum Resolution (Encoder 2): 320x240 / 1280x960

IXGW-GW Cloud Communication: TLS 1.2 is used to setup encrypted connections with allowed cipher suites ECDHE-ECDSA-AES128-GCM-SHA256 and ECDHE-RSA-AES128-GCM-SHA256. Certificates are set to automatically renew with AWS Certificate Manager.

By default, **IXG stations use Unicast when placing outbound calls to other stations**, but may utilize Multicast in network environments that would benefit from the method. When Paging to more than 50 stations Multicast is required, and a Multicast address must be set in Support Tool. If Multicast is used, either for calling or when required for large paging groups, any address in the 224.0.0.0 to 239.255.255.255 range may be used.

Addressing

The IXG Series offers Batch IP addressing or can be manually set for each device using IXG Support Tool. Most IXG stations are set to the same default static IP address, 192.168.1.160. The IXGW-TGW uses 192.168.1.161. These can be manually changed or set to DHCP during the programming process.

IPv4 (most stations): 192.168.1.160 (1.0.0.0-223.255.255.254)

IPv4 (IXGW-TGW): 192.168.1.161 (1.0.0.0-223.255.255.254)

Subnet Mask: 255.255.255.0 (128.0.0.0-255.255.255.254)

Default Gateway: - (1.0.0.0-223.255.255.254)

IPv6: - (2000::0-3FFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF or FD0::0-FDFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF)

IPv6 Default Gateway: - (::FF:0-FEFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF)

DNS Primary Server IPv4: - (1.0.0.1-233.255.255.254)

IPv6: - (::FF:0-FEFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF)

Secondary Server IPv4: - (1.0.0.1-233.255.255.254)

IPv6: - (::FF:0-FEFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF)

NTP IPv4: ntp.jo.iphone-app.net (1.0.0.0-223.255.255.255 or Hostname)

IPv6: - (::FF:0-FEFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF or Hostname)

LTE Connection

The IXGW-TGW Mobile App Gateway can be used to connect the IXG system to a 4G LTE mobile network, using the included SIM card. This connection can be used as a primary network connection for the system, or as a backup to the ethernet connection. The SIM card also allows for calls to a single phone number on each call from an entrance station or door station.

Supported Networks: AT&T® (requires activation of included AT&T SIM card). Third party SIM cards are not supported.

Ports and Protocols

The information below contains the most common and critical ports and protocols for the IXG Series. Some are used only during the initial programming process, others during general use and optional features.

Port	Type	Service or Protocol	Notes
5060	UDP	SIP	Session Initiation Protocol
8740	UDP	Keep-alive during door release	
8620	SSL	Door release command	Encrypted Door Release
65011	TCP	Option Relay Output control	
65030	UDP	Lift Control Adaptor control	
123**	UDP	NTP	IXGW-(T)GW Gateway must have an assigned NTP server address to function
53**	UDP	DNS	IXGW-(T)GW Gateway must have an assigned DNS server address to function
25	TCP	SMTP	Email notifications
443	TCP	HTTPS (TLS 1.2)	Secure Web Access for certification server control
22*	TCP	SFTP over an SSH session	Setting File Upload for Support Tool
8883**	TCP	Secure MQTT	Call control server connection to Cloud Server
8700*	UDP	Broadcast	Station Search and Association functions with Support Tool
55550	UDP	Paging Delivery	
59900	TCP	Message Page Delivery	
65000	UDP	Multicast Paging Delivery	
55552 - 56552	UDP	RTP Range used when paging	
10000-20000**	UDP	SRTP/SRTCP, DTLS, ICE(STUN)	IXGW-(T)GW and IXG Mobile App cloud server communication
20000 - 21000 30000 - 31000	UDP	RTP Audio and Video ranges for Encoder 1	Intercom to Intercom communication
22000 - 23000 32000 - 33000	UDP	RTP Audio and Video ranges for Encoder 2	Intercom to 3rd Party Streaming

* IXG Support Tool function / ** IXG App functionality

Additional IXG App Information

A reachable DNS and NTP server must be assigned to the IXGW-(T)GW Mobile App Gateway. A public DNS server, such as 8.8.8.8, may be used. Note that the IXG Support Tool has a preset NTP server for the IXGW(T)-GW Gateway. However, this NTP server is based in Japan, so using a local NTP server is suggested.

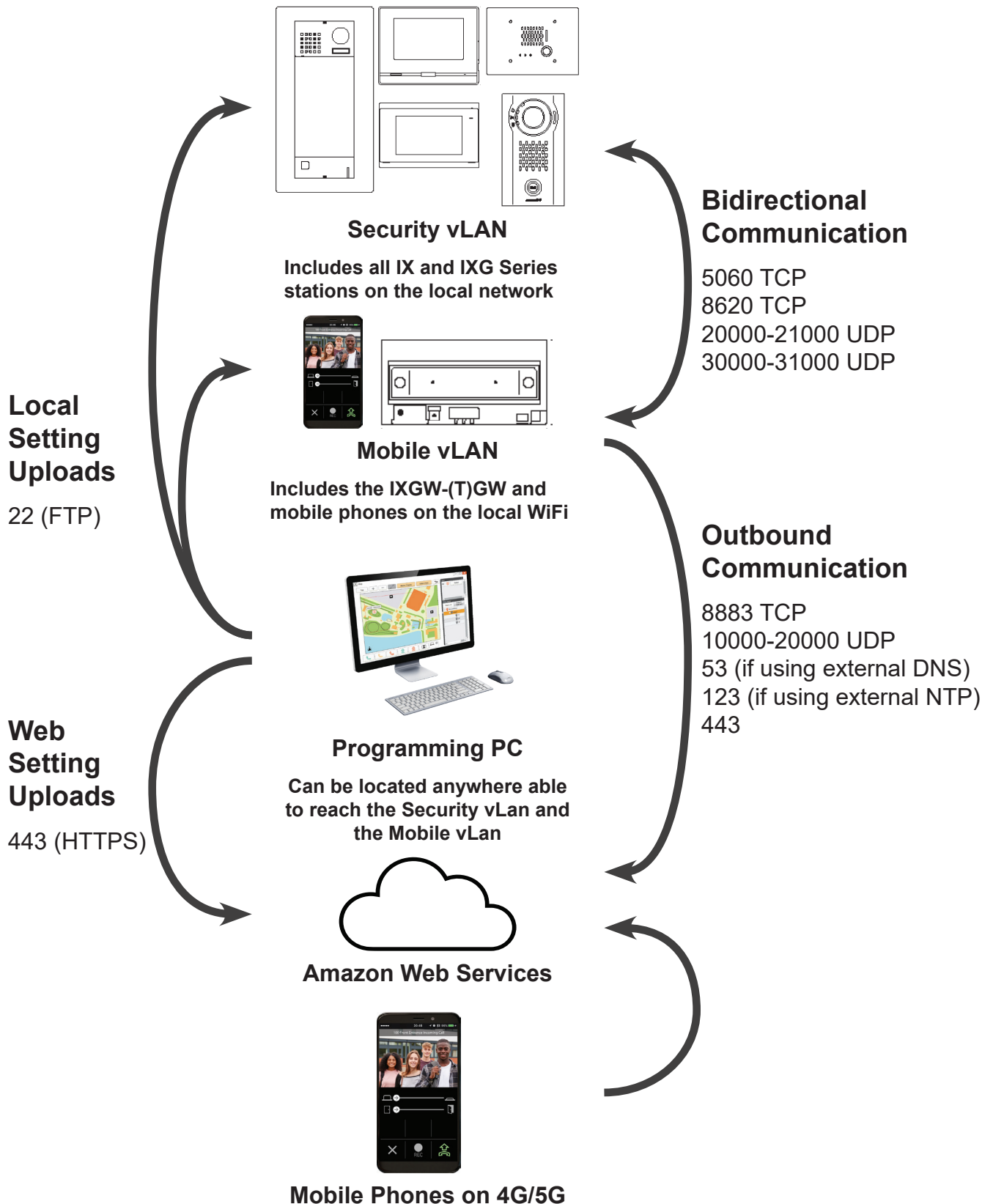
Outbound communication is required for the IXG Mobile app to function.

***.ixg.iphone-app.net : 443**
iot.us-east-1.amazonaws.com : 8883
***.compute-1.amazonaws.com : 10000-20000**
If using an external DNS server: 53
If using an external NTP server: 123

*: wildcard representing multiple subdomains

IXGW-(T)GW Network Flow Chart

This flow chart shows the expected communication for an IXGW-(T)GW when calling from a door or entrance station to an off site mobile app. The Amazon Web Services servers used to make this connection can vary based on physical location, time of day, and server load.



Dotted lines for note-taking.