ATTENTION:

This is an abbreviated programming manual addressing basic program settings for an IXG 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.net. In North America for additional literature and media, visit www.aiphone.com/IXG.
**GENERAL OVERVIEW**

### Introduction

The IXG Series has six different Unit types: **Entrance, Guard, Residential, Commercial, Inside Area,** and **Outside Area.** Each has their own purpose, available features, communication paths, and station types. There are no limitations to the number of Units a system can have, but each Unit type has station quantity limitations. Within these Units, specific station types and IXG/IX models are used. Each station has unique features and functions available to it.

The chart below shows which Units are able to call in and communicate to other Units by default, which are available but not pre-configured, and those that are unavailable completely.

<table>
<thead>
<tr>
<th>Source</th>
<th>Entrance (IXG-DM7)</th>
<th>Guard (Mobile App)</th>
<th>Residential (IXG-2C7)</th>
<th>Commercial (IX-MV7)</th>
<th>Inside Area (IX-MV7)</th>
<th>Outside Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrance (IXG-DM7)</td>
<td>x</td>
<td>v</td>
<td>v</td>
<td>v</td>
<td>v</td>
<td>x</td>
</tr>
<tr>
<td>Guard (Mobile App)</td>
<td>v</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>Θ</td>
</tr>
<tr>
<td>Residential (IXG-2C7)</td>
<td>v</td>
<td>v</td>
<td>x</td>
<td>Θ</td>
<td>Θ</td>
<td>Θ</td>
</tr>
<tr>
<td>Commercial (IX-MV7)</td>
<td>v</td>
<td>v</td>
<td>Θ</td>
<td>Θ</td>
<td>v</td>
<td>Θ</td>
</tr>
<tr>
<td>Inside Area (IX-MV7)</td>
<td>v</td>
<td>v</td>
<td>v</td>
<td>v</td>
<td>Θ</td>
<td>Θ</td>
</tr>
<tr>
<td>Outside Area</td>
<td>x</td>
<td>v</td>
<td>Θ</td>
<td>Θ</td>
<td>Θ</td>
<td>x</td>
</tr>
</tbody>
</table>

- v: Enabled by Default
- Θ: Available
- x: Unavailable

Door Stations within Guard, Commercial, Residential Units, and Inside Areas can only call stations within its Unit. Outside Areas, which are intended for common entrances and Rescue Assistance locations, can be configured to call any Master or Tenant station.

### Station Types

**Entrance Station (IXG-DM7-*)**

A multi-tenant style Entrance Station which allows selective calling and communication to any number of Units within a system, as well as grant building access.

**Door Station (IX-DV, IX-DVF-*, IX-SSA-*)**

A single call button station used to control access to a specific location, or a dual call button rescue assistance station. A door station can be added to several Unit types and configured to call specific stations within their unit.

**Guard Station (IXG-MK)**

Guard Stations are used as a centralized point of system communication and control for security or concierge services. Place system-wide pages, receive calls from Entrance and Tenant Stations, respond to Common Outside Area calls, and more.

**Tenant Station (IXG-2C7)**

Found in an apartment home or business suite, their primary purpose is to receive calls from an Entrance Station. Tenant stations can also communicate internally with other stations within the Unit, and have up to two door stations to act as private doorbells and allow secured entry to the Unit.

**Master Station (IX-MV7-*)**

IX-MV7* Master Stations can be used in Commercial and Inside Area Units, with more available features when compared to a Tenant Station. They can offer inbound call transfers, programmable speed dial buttons, group calling and paging, and other IX Series exclusive features. This allows these Units more system independence.
Unit Types

Entrance Unit

Entrance Units consist of IXG-DM7-* Entrance Stations. Entrance Stations can call Guard, Commercial, and Tenant Units and their stations, 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, eight IXG Apps, or a combination of both. 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, eight IXG Apps, or a combination of both. These stations can utilize many IX Series 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, as well as other Commercial Units. The two private Door Stations will only call to stations within their Unit.

Guard Unit

Guard Units consist of up to eight IXG-MK Guard Stations (available Q3 2020), up to eight IXG Apps, or a combination of both. 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 and two IX Series Door Stations. These stations can utilize many IX Series functions including internal paging, call transfer, speed dial buttons, and more.

An Inside Area Master Station can communicate with all other Unit types, except for the Guard Unit. The two private Door Stations will only call to stations within their Unit.

Outside Area Unit

Outside Area Units consist of up to 10 Door or Emergency Stations that can call Guard or Commercial units.
The IXG Support Tool is designed to batch configure all stations simultaneously, by finding each station on the network by its MAC address. The IXG Series is designed to function on managed and enterprise-level networks. However, the broadcast method used to find stations during the programming process may require advanced network configuration or routing to function properly in this environment.

It is recommended that the stations and the programming PC are placed on the same, unmanaged network for the initial programming process. Once completed, the stations may be removed from this environment and deployed where needed.

Download and install the IXG Support Tool programming software. The latest version of Support Tool and IXG Series station firmware can always be found here https://www.aiphone.net/support/software-documents/ixg/

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

**Update Button**

The Update button is used to save configured settings within Support Tool. However, clicking the Update button does not push 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**. For the purposes of this guide, login as Administrator. If the ID and Password are at their default settings, use admin/admin.
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, click File and select Create New System.

Enter the required configuration information above and fill in the Site, Installer, and Property Management Company Information. This information is a requirement for system or account recovery when using the IXG App. Click Finish to continue.

Site Settings

From the side menu, expand Site Settings. Starting from the top setting option, Site Information, configure and customize the system.

Site Information

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

Building Information

Name the building (or buildings) that Units and their stations will reside in. Place a check mark in the Enable column to add buildings.

To have more than a single building, the Multiple Buildings option must have been selected when creating a new system. Single-building systems cannot be changed once the system has been created.
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, one Entrance/Door Station, and one Mobile App. Use the drop-downs to select the number of stations the Units will have, then click **Apply**.

Once the number of stations per Unit has been selected, from left to right, select the **Building Number** the Unit will belong to, set the **Unit Number**, and click the **Unit Type** button to select the type of Unit this will be.

When adding Units, start with Entrance Units first, followed by Residential, then Commercial. Other Units can then be added in the order that is most convenient. Once all Units have been added, enter a **Unit Name** for each. At any point during this process, click **Update** to save the configured settings.

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 Mobile Apps. Once every unit has been created and stations added to the system, click **Update**.

When the Update button is clicked, the following popup will open. Clicking **Yes** will automatically enable communication between all appropriate stations and units for new systems, which is the recommended option. Clicking **No** will require manual configuration of these settings, a process that this guide does not cover.

When adding new stations to an existing system, clicking **Yes** here will remove any system partitioning, and automatically re-enable any previously disabled call or communication paths.
If the system contains Mobile Apps, the Gateway (IXGW-GW) is required. To add the Gateway to the system, select Enable, then optionally edit its Station Name, and review the other settings. Once configured, click Update.

Gateway Registration

Use the drop-down menu under Gateway Number to select the Gateway added in the previous step.

Station Information

Identification (Optional)

Edit 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.

ID / Password (Optional)

Edit the Admin ID and Password for each station, as well as optionally create an ONVIF and RTSP ID and Password for each station.

Network Settings

IP Address

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

For systems with the IXGW-GW Gateway Adaptor, a Default Gateway must be added for the adaptor, and optionally for all other stations. Consult the Network Admin for more information if needed.

DNS

For systems with the IXGW-GW Gateway Adaptor, a DNS Address must be added for the adaptor, and optionally for all other stations. Consult the Network Admin for more information if needed.

NTP (Optional)

Enable and configure NTP settings for each station. Note that the IXGW-GW will have NTP enabled by default and populates NTP settings to match that of the IXG Cloud Server. Do not edit or copy these settings for other stations in the system.
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. Clicking **Apply** will assign the Station Name and IP Address to the station, and that station will quickly reboot.

If any stations are missing from the **Station List**, this means the IXG Support Tool software cannot locate them on the network. Confirm any missing station’s connection to the network and click **Station Search**. If a station is still missing, it is possible a network issue has occurred preventing the search from reaching it. Move the station to a switch local to the programming PC and try again.

Scroll down to confirm the stations were successfully associated. 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 station correctly.
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 required for the station to function. To upload the settings to each station, select **Connection** on the top menu and click **Upload Settings**.

Select each station by placing a check mark next to it, or click [Select] to select all stations. Click [Settings] to upload station settings. If Sounds, Images, or Schedules were configured, click their respective buttons.

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.

Mobile App Integration

If IXG Mobile Apps are to be part of the system, the first step is to create an administrative account for the app server.

Create a New Administrator Account

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

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].
App Integration Cont.

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.

To register a mobile device to the system and the IXG Cloud Server created in the previous step, a QR code is generated for each Unit.

Upload Settings to IXG Cloud Server

First, the system settings must be uploaded 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.

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.

To do this, select App Integration from the top menu and select 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.

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. Select App Integration from the top menu and click Export QR Code for App Registration. Place a check mark next to the desired Units and click Export QR Code for App Registration.

Syncing the IXGW-GW with the IXG Cloud Server

The final step once the upload is complete and the QR codes are Exported is to sync the IXGW-GW and the Cloud Server. To do this, return to App Integration on the top menu and select Manual IXG Cloud Server and Gateway Sync. Select the Gateway, and click Sync.
ADVANCED SETTINGS (optional)

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

**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 Unit on a scrollable list, Search by Name allows Units to be directly searched by name.

**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. The custom image should be 480 x 800 in size, 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 100 Units.

**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, set the Building and Entrance Station to set access codes for using the drop-down options under Filter. 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.

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 13.
Lift Control Settings

To configure the Lift Control Adaptor (IXGW-LC), expand Lift Control Settings on the side menu.

Registration

Place a check mark under the Enabled column for up to 16 IXGW-LC Lift Control Adaptors, and optionally give each a name.

Pick Up Floor

Select the appropriate output on the Lift Control Adaptor, which will correspond to the proper input on the elevator or lift control panel. This will be a universal setting for that Entrance Station, regardless of what Unit activates the pick up.

At the top of the screen, set the Building and Lift Control Adaptor to configure using the drop-down options under Filter. Once these are selected, click **Apply**.

Place a check mark under the desired output under Relay Output Terminal.

Arrival Floor

Select the output for the desired input on the access control panel, which will control which arrival floor the visitor can visit. This is set for each station and each Lift Control Adaptor in a building.

At the top of the screen, set the Building and Lift Control Adaptor to configure using the drop-down options under Filter. Once these are selected, click **Apply**.

Place a check mark under the desired output under Relay Output Terminal.
Lift Control Settings Cont.

Building Exit

Select the appropriate output that will be used with the input of the elevator or lift control panel associated with the building exit floor. This is set for each station and each Lift Control Adaptor in a building.

At the top of the screen, set the Building and Lift Control Adaptor to configure using the drop-down options under Filter. Once these are selected, click Apply.

Use the drop-down next to each station to Enable the Lift Control Button, and place a check mark under the desired output under Relay Output Terminal.

Upload Settings

When new settings are enabled or configured in Suport Tool, the settings file will need to be uploaded to each station. To upload, select Connection on the top menu and click Upload Settings.

Select each station by placing a check mark next to it, or click Select to select all stations. Click Settings to upload station settings. If Sounds, Images, or Schedules were configured, click their respective buttons.

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.
Quick Settings

The following are simple feature or function settings that can be quickly adjusted, enabled, or disabled. Each of the following are found under the Advanced View in Support Tool. Click View on the top menu and select Advanced to switch views.

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 9). The stations will not reflect the setting changes without doing this.

Adjusting Audio Volumes

Some stations can adjust their inbound and outbound audio volumes. Adjust these by expanding Station Settings and clicking Volume.

Entrance and Door Station Release Timer

The time the door release relay output is triggered can be adjusted for the Entrance Station and other private door stations on the system. Adjust these times by expanding Option Input / Relay Output Settings and clicking 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 expanding Call Settings and clicking Call Origination.

The Call Timeout duration is set to 60sec by default, for both Entrance and private Door Stations. Adjust this by manually entering a time under Call Timeout (10-600sec). IXG-DM7-* 15-90sec, IX-DV/IX-DVF-* 10-600sec.

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

Entrance Station Communication Start Tone

The Entrance Station can play a "Communication Start Tone" to let the visitor know the call is connected and it is time to speak. Enable this by expanding Station Settings and clicking Communication.

Disable Entrance Station Monitoring

To prevent any station from any Unit from monitoring an Entrance Station, Expand Station Settings and click 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 expanding Station Settings and clicking Communication.

Entrance Station and Tenant Station Recording

The Entrance Station can record audio and video to a local microSD card when a call is placed, or once communication is established with a station. Enable these functions by expanding Function Settings and clicking Recording.

Tenant Station recording can be enabled or disabled in the same settings location.

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 13.
General Network Information

Multicast

By default, IXG stations use unicast when calling to one another, 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 *(Network Settings > Multicast)*. 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.

Ports and Protocols

The table below shows the IXG Series' most commonly used ports and protocols. Some are used only during the programming process, others during general use or optional functions and features.

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Port</th>
<th>Adjustable</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIP</td>
<td>5060 (UDP)</td>
<td>No</td>
<td>Station to station communication. Not for VoIP or SIP Server communication.</td>
</tr>
<tr>
<td>UDP</td>
<td>8740</td>
<td>No</td>
<td>Keepalive requests (during door release)</td>
</tr>
<tr>
<td>SSL</td>
<td>8620</td>
<td>No</td>
<td>Door release command</td>
</tr>
<tr>
<td>TCP</td>
<td>65011</td>
<td>No</td>
<td>Option Relay Output control</td>
</tr>
<tr>
<td>NTP</td>
<td>123</td>
<td>Yes</td>
<td>Network Time</td>
</tr>
<tr>
<td>SMTP</td>
<td>25</td>
<td>Yes</td>
<td>Email notifications</td>
</tr>
<tr>
<td>SFTP</td>
<td>22</td>
<td>No</td>
<td>Setting file upload and download</td>
</tr>
<tr>
<td>DNS</td>
<td>53</td>
<td>No</td>
<td>Domain System Name</td>
</tr>
<tr>
<td>RTP</td>
<td>20000 - 21000</td>
<td>No</td>
<td>Audio and video port ranges for encoder 1</td>
</tr>
<tr>
<td>RTP</td>
<td>22000 - 23000</td>
<td>Yes/No</td>
<td>Audio and video port ranges for encoder 2. The 32000 - 33000 range can be adjusted.</td>
</tr>
<tr>
<td>RTSP</td>
<td>554</td>
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<td>Used for ONVIF streaming</td>
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<td>No</td>
<td>Secure web access</td>
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<td>UDP</td>
<td>65030</td>
<td>No</td>
<td>Lift Control Adaptor control</td>
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<td>UDP</td>
<td>8700</td>
<td>No</td>
<td>All-subnet broadcast for Station Search and Association functions</td>
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<td>UDP</td>
<td>55550</td>
<td>No</td>
<td>Paging Delivery</td>
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<td>TCP</td>
<td>59900</td>
<td>No</td>
<td>Message Page Delivery</td>
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<td>RTP port range used when paging</td>
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<td>UDP</td>
<td>65000</td>
<td>No</td>
<td>Multicast port for Paging Delivery</td>
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<tr>
<td>UDP</td>
<td>65001</td>
<td>No</td>
<td>Multicast port for external Input Paging Delivery</td>
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</tbody>
</table>