

Aiphone GT Video Intercom System Guide

This guide may make it easier to understand the capabilities of the Aiphone GT video intercom system, by providing:

- More detail than is presented in the Aiphone GT brochures.
- A broader overview than provided in the Aiphone GT module data-sheets.
- More accessible presentation of some of the information that is provided in the Aiphone GT installation manuals.

This guide is brought to you by [Clever Home](#), and is intended to supplement (and not replace) the above Aiphone documents, to which links are provided on the last page below.

Suitable Applications for the Aiphone GT video-intercom

Multi-tenant dwelling apartments, units, or offices, where outside visitors need to be able to selectively call two or more dwellings from the site or building entrance. For single residences or offices, consider using the beautiful Aiphone JK video intercom instead.

Aiphone GT System Capacity

- **1-16 entrances**, each with their own video intercom, or audio intercom, and access control entrance station.
- **2-500 tenants**, each individually callable from entrance stations.
- **0-500 access codes**, with each tenant having a unique code.
- **5-6 digit access codes.**
- **1-4 video intercom stations per apartment**, with audio broadcast communications between internal stations.
- **0-1 video intercom door stations** per tenant, if the GT-2C master monitor station is used, where each door station is located immediately outside each tenant's door. (No more peep holes.)
- **0-1 door bell buttons** per tenant, located immediately outside each tenant's door, when any GT master monitor station is used.
- **0-4 Concierge stations** that may individually call other Concierge stations, individual tenants, receive manual calls from tenants, receive automatically diverted calls from entrance station to individual tenants (after hours for example), and receive Aiphone Security Suite alarms.



GT Entrance Stations

Two types of entrance stations are available for the Aiphone GT video intercom system, Integrated and Combined:

Integrated Entrance Stations on a single flush-mount stainless steel plate (i.e. the GT-DM), which includes a 170° wide (and 100° high) angle digital PTZ video intercom camera, 10 key keypad, 3.5" colour LCD display (for a greeting message, tenant names and numbers, and system status), motion sensor, and voice announcement.

Combined Entrance Stations with semi-flush mount interchangeable steel faceplate modules, that mount within different size and shape steel frames. The modules available for Combined type entrance stations include the:

- **Camera** module (GT-VA) with 170° wide (and 100° high) angle digital PTZ .
- **Audio** Speech module (GT-DA) that supports voice announcement, and which can be used with or without the GT-VA camera module,
- **10 key** module (GT-10K),
- **Switch** module (GT-SW) with 4 directory cards and 4 **direct call buttons**, and call button panels with 1, 2, 3 or 4 buttons as an alternative to the GT-10K when there are less than 4-8 tenants, and
- **Name Scrolling** module (GT-NS) with VFD display for a greeting message, tenant names and numbers, and system status.
- **Prox card reader** modules that may be used with the Combined Type GT entrance stations (GF-HID, GF-HID-I, GH-XP).



Aiphone GT-DM



Aiphone GTV-DES202



Aiphone GTA-DES



Aiphone GTV-DES104

GT Door Stations

Are GT Door Stations different to GT Entrance Stations?

Yes. While GT entrance stations are located at the entrance to a building, set of units, or office complex, and allow a visitor to contact any one of the many tenants, GT door stations:

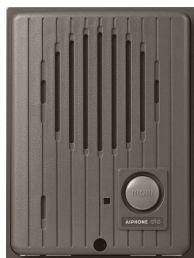
- Are located immediately outside the tenant's door.
- Allow a visitor standing outside a tenant's door to contact that tenant only.
- Use different video intercom modules than entrance stations.
- Can replace old-style tenant door peep holes.
- Only work with Aiphone GT-2C master monitor stations.

A GT door station may only be used outside an apartment, unit, or office, if the GT master monitor station used by that tenant is an Aiphone GT-2C. Other GT master monitor stations do still however support a **door bell button** located immediately outside the tenant's door (as does the GT-2C as well).

There are **four different door stations** that may be used with the GT video intercom system.

Video intercom camera door stations from the single residence Aiphone JK Series may be used with the GT-2C master monitor station, when placed immediately outside the tenant's door. Choose from the flush mount stainless steel plate JK-DVF door station, the JK-DV surface mount zinc die-cast (left) door station, or the plastic surface mount JK-DA. All of these JK door stations feature a 170° wide angle digital PTZ camera, similar to that used in the GT video intercom entrance stations.

If the tenant requires an audio-only door station, then the Aiphone GT-D door station may be used.



Aiphone GT-D
Audio-only
Door Station



Aiphone
JK-DA Door
Station



Aiphone
JK-DV Door
Station



Aiphone JK-DVF
Door Station

Internal Tenant Stations

Master monitor stations have the capability to support up to three additional sub-master monitor stations, or monitor stations, within the same tenant's apartment, unit, or office.

Sub-master monitor stations must work in conjunction with a master monitor station.

Monitor stations may be used on their own if the tenant only requires only one station inside, or as more economical (but less capable) master and sub-master monitor stations if the tenant requires more than one station.

There are two Aiphone GT master monitor stations, the GT-2C and the GT-1C.

The **GT-2C** master monitor station would be most tenant's first choice. The GT-2C features include (**blue-highlighted** features are unique to this monitor):

- Up to **4 video-intercom** monitor stations per tenant; one GT-2C plus up to three **GT-2H** sub-master monitor stations.
- All four monitor stations are powered by a local **power supply** in the apartment. (One 24VDC 2A power supply may power 4 adjacent tenants with GT-2Cs and no sub-master stations, or two adjacent tenants with sub-master monitors.)
- Support for a tenant **door station** for better security and elimination of the old-style peep hole.
- Support for a tenant **door bell** button.
- **Digital PTZ** (Pan-Tilt-Zoom) viewing of 170° wide angle camera views from entrance stations or a local **door station**.
- **Audio** communication between **internal** tenant stations, entrance stations, **door station**, or concierge/guard stations.
- Optional **GT-HS handset** may be added for private conversations.
- **Video** identification of visitors at door or entrance stations.
- **Recording** visitor images automatically, so you may see who stopped by upon return, or also at any time you like manually.
- Supports Aiphone **Suite Security**.
- **Unlock doors**.
- Local NTSC video output for **CCTV integration**.



Aiphone GT-2C Master



Aiphone GT-2H
Sub-Master

The **GT-1C** master monitor station features include:

- Up to **2 video-intercom** monitor stations plus **2 audio-intercom** stations per tenant; one GT-1C plus up to one video-intercom monitor station, and up to two audio-intercom monitors.
- Powered from GT-VBC and GT-BC.
- Support for a tenant **door bell** button.
- **Digital PTZ** (Pan-Tilt-Zoom) viewing of 170° wide angle camera views from entrance stations.
- **Audio** communication to entrance stations, or concierge/guard stations.
- Optional **GT-HS handset** may be added for private conversations.
- **Video** identification of visitors at entrance stations.
- **Unlock doors.**



Aiphone GT-1C Master

The **GT-1M-L** monitor station may serve as a master monitor, or as a sub-master monitor, and its features include:

- Up to **2 video-intercom** monitor stations plus **2 audio-intercom** stations per tenant; one GT-1M-L plus up to one video-intercom monitor station, plus up to two audio-intercom monitors.
- Powered from GT-VBC and GT-BC.
- Support for a tenant **door bell** button.
- **Audio** communication between entrance stations, or concierge/guard stations.
- **Video** identification from entrance stations.
- **Unlock doors.**



Aiphone GT-1M-L Monitor

The **GT-1A** hands-free and **GT-1D** handset audio monitor stations may serve as master monitor, or as sub-master monitors, and their features include:

- Up to **4 audio-intercom** stations per tenant.
- Powered from GT-BC.
- Support for a tenant **door bell** button.
- **Audio** communication between entrance stations, or concierge/guard stations.
- **Unlock doors.**



Aiphone GT-1A Audio Monitor



Aiphone GT-1D Audio Monitor

The **GT-MK** concierge or security guard monitor station features include:

- Up to **4 concierge/guard** stations per GT video intercom system in expanded configuration, or up to 2 stations in standard configuration.
- Powered from **local 24VDC power supply**.
- Support for optional local **door bell** button.
- **Audio** communication with entrance stations, tenant stations, or other concierge/guard stations – call and answer calls.
- **Handset** for conversation privacy.
- **Visitor screening** from entrance stations.
- **Unlock doors**.
- **Caller ID** with call-back.
- Supports and uses call tone and display to clearly distinguish between incoming standard calls, and **emergency calls** made via the GFK-PS water-proof emergency help module.
- Able to be manually **programmed** using the GT-MK itself, or by Windows PC using Free Aiphone GT setup software (see below) connected via a USB socket on the GT-MK.



Aiphone
GT-MK
Monitor

Aiphone GT Setup Software

Free setup software for Windows PCs is available to make creating and modifying tenant names, locations, and access codes for your Aiphone GT multi-tenant video intercom system easier. This free software may be downloaded from:

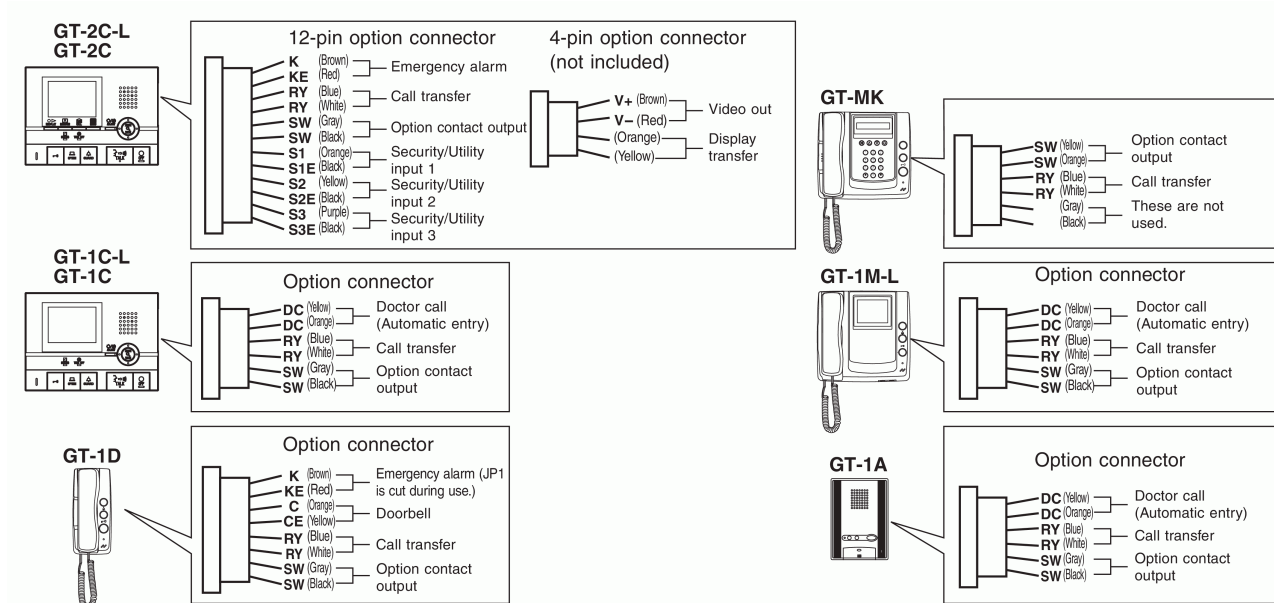
<http://www.cleverhome.com.au/software/Aiphone-GT-video-intercom-setup-software.zip>

Your Windows PC connects to your Aiphone GT multi-tenant video intercom by USB cable to the GT-NS-V/GT-NS Name Scrolling entrance display module, the GT-DMV/GT-DM integrated entrance station, or the GT-MK concierge/guard station.

Alternatively, all of the above stations may be programmed manually directly at the stations – the PC software simply provides a more productive way of managing tenant information for your GF video intercom system.

GT Monitor Station Option Connectors

GT monitor stations have one or two Options connectors on their back, which have the pin-outs and functions identified below.



Door Bell input allows a door bell button located immediately outside the tenant's door to be connected to the tenant's master monitor station. The door bell should have contacts that are normally open, and be non-latching (momentary action).

Emergency Alarm Input allows connection of a switch to generate a security alarm. Switch contacts should be normally closed, and be latching.

Security/Utility inputs 1 to 3 allow connection of security sensors or switches for Aiphone Security Suite support, or other utility functions.

Doctor Call Input allows connection to a switch to automatically allow entry of a doctor or other emergency service. generate a security alarm. Switch contacts should be normally closed, and be latching.

Option Contact output may be used to activate lights or an external call buzzer, using the GT-RY relay to buffer the Option Contact output.

Video Out output provides an NTSC direct video signal for displays <3m away. Only live video is sent to the Video Output, there is no video output when viewing previously recorded pictures, or menu pages. **CCTV integration** support is provided by via this NTSC video output, and **Display Transfer** output relay contacts that may be used to activate external monitors via an optional GT-RY external signalling relay. Both of these outputs are accessed using the 4 pin option connector on the back of the GT-2C master stations. This connector is not provided with the GT-2C, even though the 12 pin option connector is.

GT Video-intercom System Configurations

There are two different system configurations, the Standard Configuration for smaller systems, and the Expanded Configuration for larger systems. The maximum capacities for each type of GT video intercom system configuration are compared in the table below.

Maximum Supported	Standard Configuration	Expanded Configuration
Entrance Stations	5 (3 per trunk) 3 if a door release button is connected to a direct select type entrance station.	16 (8 per trunk)
Tenant Stations per Sub Trunk Line	N/A	125 (25 per trunk)
Concierge/Security Guard Stations	2	4
Tenant Stations	48 (25 per trunk) 100 if only the GT-1D and GT-1M-L monitor stations are used. (50 per trunk for GT-1D) (25 per trunk for GT-1M-L)	500
Stations per Tenant (other than GT-2C)	4 (2 monitor stations)	4 (2 monitor stations)
4-way Video Junction Units	6 per trunk	N/A
Bus Control Units	1	1 per common trunk line 1 per sub trunk line
GT-2C Master Stations per Tenant	1	1
Sub-master Stations	3	3

Maximum Supported Modules Table.

PolyEthylene 2 core cable

Two core [PolyEthylene \(PE\) cable](#) that is unshielded, untwisted, and has a PVC outer protective jacket, a **must be used** for audio and video distribution wiring for any GT installation. The most readily obtainable PE cable is **0.9mm**. There is a table in the GT video-intercom installation manual indicating the maximum cable distances between all GT modules – you should refer to the 0.8mm column in this table if 0.9mm PE cable is being used in the installation.

GT Standard Configuration

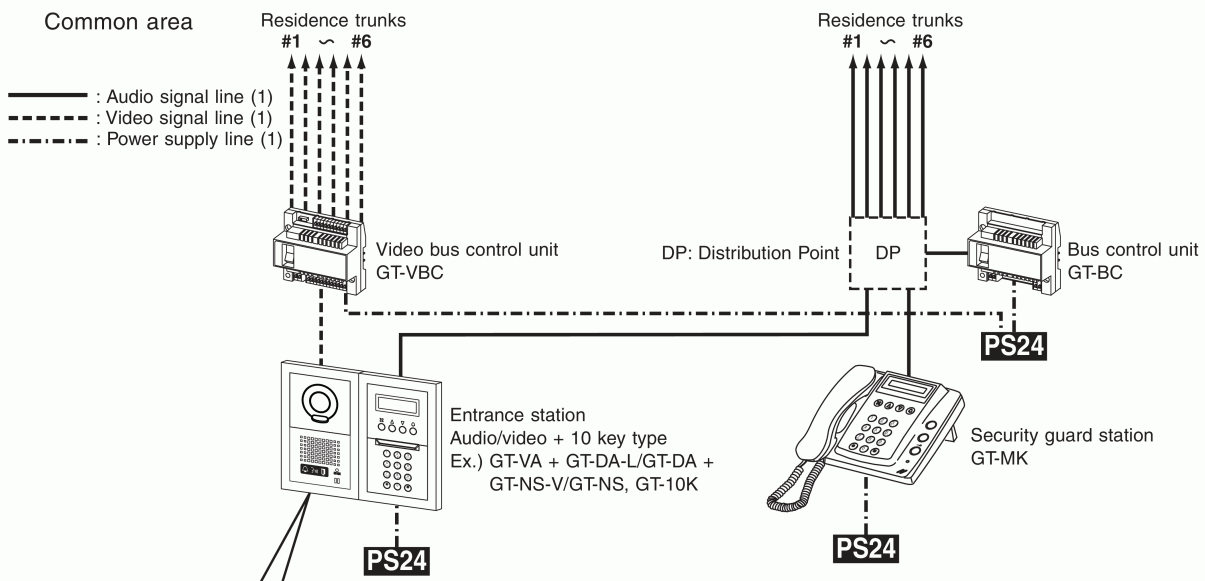
The Standard Configuration for a GT video-intercom system is illustrated below. The configuration from the residence (or tenant) trunk lines to the tenant monitor stations is the same for the Standard and the Expanded Configurations, and is illustrated in a subsequent section.

The video output from the video entrance station is connected to the GT-VBC Video Bus Control Unit, which has 6 trunk line outputs.

The audio and control output from the entrance station is connected to the GT-RC Bus Control Unit, and then out to 6 trunk lines from a Distribution Point (that must be provided by the installer).

The separation of the video and audio/control distribution allows an audio intercom-only system to be implemented by omitting the video component of the modular entrance station, the GT-VBC, and all of the video distribution cabling.

This system is constructed with a 2-line communication system and a 2-line video system and requires minimal work for installation. The system is constructed with video trunk lines consisting of a maximum of 6 trunks from the video bus control system and communication trunk lines that use a distribution point from a bus control unit. In addition, systems with audio only can be configured.



There is a table in the GT video-intercom installation manual indicating the maximum cable distances between all GT modules, depending upon the gauge of PE cable used. The 0.8mm column should be used from this table if 0.9mm PE cable is being used in the installation.

While only one modular entrance station is shown above, any of the modular entrance stations, or the integrated entrance station may be used. Also, multiple entrance and concierge stations are supported, as indicated in the “Maximum Supported Modules” table above.

GT Expanded Configuration

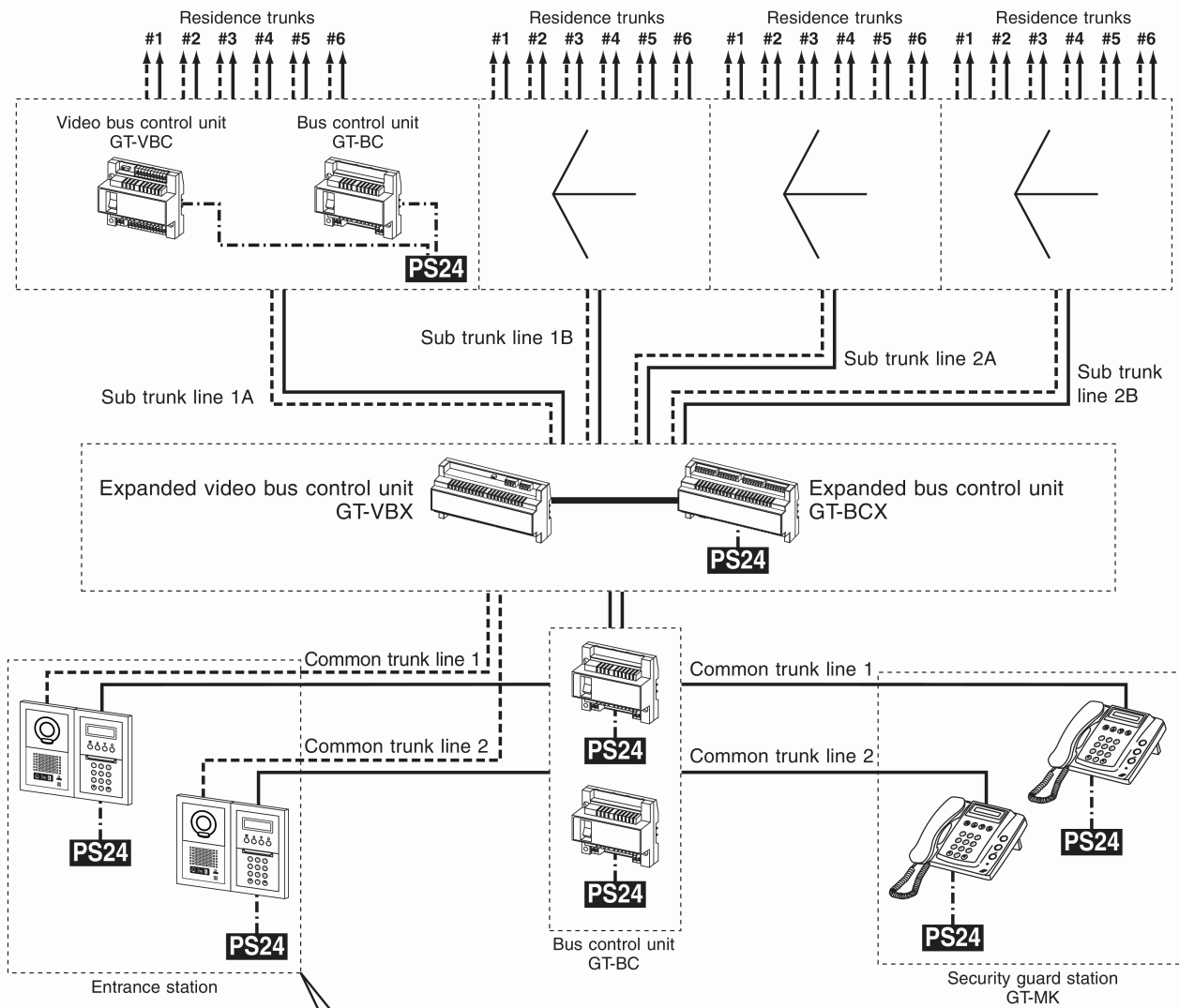
The Expanded Configuration GT system uses the GT-VBX Expanded Video Bus Control Unit and the GT-BCX Expanded Bus Control Unit to provide 4 additional sub trunk lines, allowing up to 4 sets of GT-VBC and GT-BC control units (the same units used in a Standard Configuration GT system) to be used instead of just one set. The GT-VBX and GT-BCX must be mounted adjacent to each other, as their interconnecting cable is only 40cm long.

Two additional GT-BC Bus Control Units are also able to be used to provide two sets of trunk lines for entrance stations and concierge/security guard stations.

The wiring of the sub trunk line is the same as the standard system.

Common area

- : Audio signal line (1)
- - - : Video signal line (1)
- · - · - : Power supply line (1)

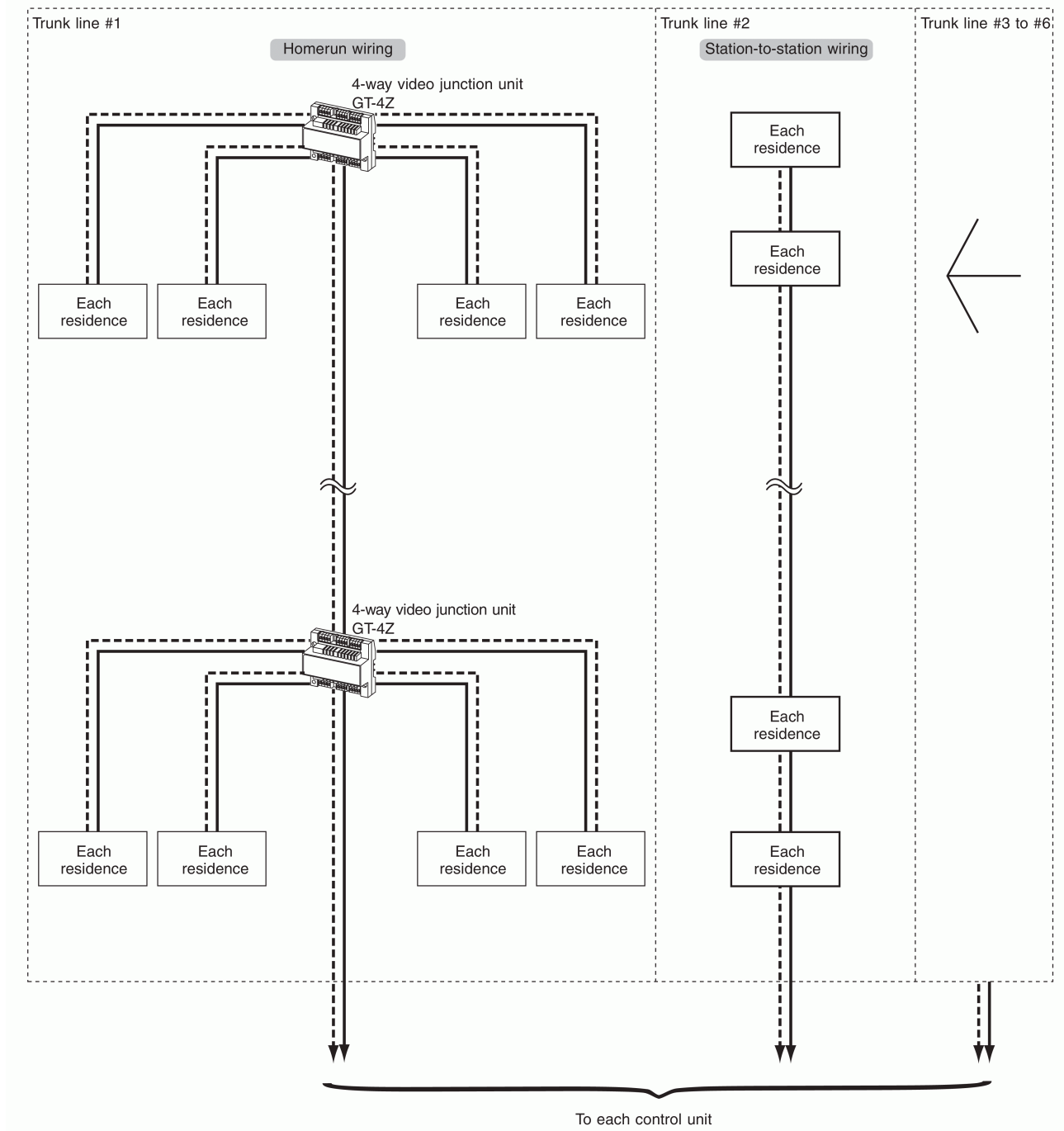


GT Tenant Configuration

The below residence/tenant configuration diagram applies for the video and audio/control **trunk lines** emerging from the BT-VBC and GT-BC units in both the Standard and the Expanded GT Configurations. Star wiring from a trunk line to a set of 4 adjacent tenant monitors requires a GT-4Z 4-way Video Junction Unit, but tenant station-to-station wiring does not require any additional GT-4Z.

For wiring from the control units to each residence, station-to-station wiring or star wiring using a 4-way video junction unit is possible.
 ⚠ Mixing on the same trunk line is not possible.

- : Audio signal line (1)
- - - : Video signal line (1)
- · - · - : Power supply line (1)

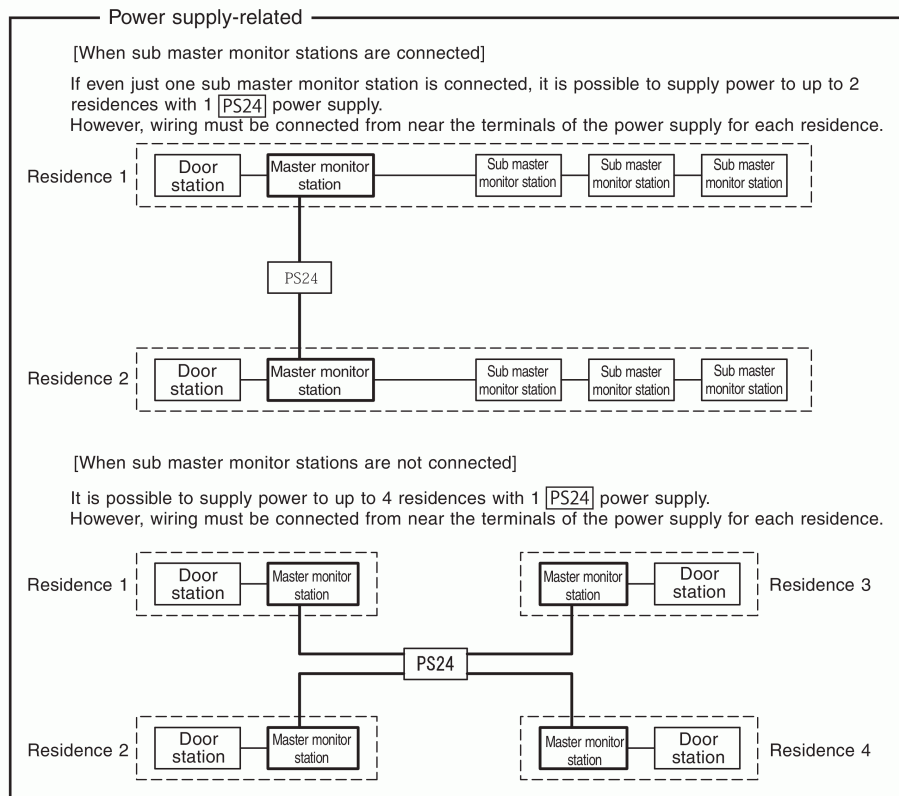
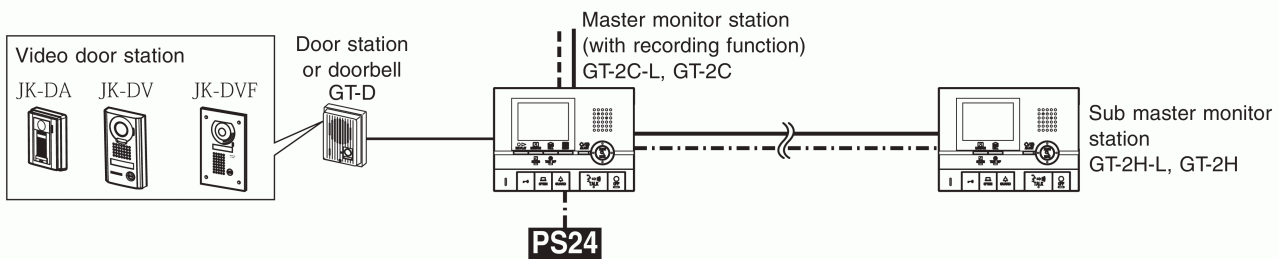


GT Tenant Monitor Station Power Supply Requirements

Non GT-2C monitor stations are powered from the trunk lines.

When GT-2C master monitor stations are used, a **local PS24 power supply** must be used to power the GT-2C, and all sub-master monitors or monitors connected to each GT-2C. A single PS24 may power the GT-2C and other stations for 2 or 4 tenants under the following circumstances:

- **If one or more sub-master** monitor stations are connected to a GT-2C for a tenant, then a single local PS24 power supply may power all of the monitor stations (and door stations) for **two adjacent tenants** with this configuration of monitor stations.
- **If no sub-master** monitor stations are connected to a GT-2C, then a single local PS24 power supply may power all of the GT-2C master monitor stations (and door stations) for **four adjacent tenants**.
- In both of the above cases, wiring should star out from the PS24 from as close as possible to its terminals, to each of the tenant's GT-2C stations.



Further GF Video-intercom System Information Links

Brochures

[Aiphone GT video-intercom brochure](#)

[Aiphone GT multi-tenant video-intercom brochure](#)

Data Sheets

[Aiphone GT-1A video-intercom audio station data sheet](#)

[Aiphone GT-1C video-intercom master station data sheet](#)

[Aiphone GT-1D video-intercom handset data sheet](#)

[Aiphone GT-1M-L video-intercom master station data sheet](#)

[Aiphone GT-2C video-intercom master station data sheet](#)

[Aiphone GT-2H video-intercom sub-master station data sheet](#)

[Aiphone GTA-DES video-intercom entrance station data sheet](#)

[Aiphone GT-DM video-intercom entrance station data sheet](#)

[Aiphone GT-MK video-intercom concierge station data sheet](#)

[Aiphone GTV-DES104 video-intercom entrance station data sheet](#)

[Aiphone GTV-DES202 video-intercom entrance station data sheet](#)

Installation and User Guides

[Aiphone GT video-intercom system installation](#)

[Aiphone GT video-intercom entrance stations installation](#)

[Aiphone GF-HID video-intercom prox reader installation](#)

[Aiphone GF-HID-I video-intercom prox reader installation](#)

[Aiphone GF-OP2/GF-OP3 video-intercom postal lock panels installation](#)

[Aiphone GH-XP video-intercom prox reader \(stand alone\) installation](#)

[Aiphone GT-1C video-intercom master station installation](#)

[Aiphone GT-1D video-intercom handset installation](#)

[Aiphone GT-1M-L video-intercom master station installation](#)

[Aiphone GT-2C & GT-2H video-intercom stations installation](#)

[Aiphone GT-DIP switch setting matrix installation](#)

[Aiphone GTW-LC video-intercom lift control adaptor installation](#)

Software Downloads

[Aiphone GT video-intercom setup software download](#)

Where to buy Aiphone GT Video-intercoms in Victoria Australia



Clever Home Pty Ltd

Phone (03) 9722 9210 Fax (03) 9733 1254

[Clever Home Automation Website: www.cleverhome.com.au](http://www.cleverhome.com.au)

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