Gemini Intercom Quick Start Guide

trilogy

A CLEAR-COM COMPANY

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This guide is intended as a Quick Start Reference only. Comprehensive information covering the products is provided on the accompanying CD.

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Overview

This Quick Start Guide is designed to take you through the initial stages of setting up your Gemini Intercom system. More detailed information is provided in the Implementation and Configuration Guides which are provided on the CD included with your order.

Here is the outline of the steps you should follow:

- Unpack and visually inspect all equipment
- Create an IP Address plan for your intercom system
- Select a suitable PC to manage the system
- Install the Gateway Configuration Editor and database
- Configure your PC Firewall
- Create a configuration shell
- Set up each Gemini in turn and verify connection to the database
- Connect to each Gemini using the Web Browser feature
- Connect peripheral devices, e.g. control panels

First Step – unpack and inspect

- Carefully unpack all boxes and inspect the equipment carefully for any transit damage.
- Locate the despatch note (one per consignment) and check that all items match your purchase order.
- You may find it helpful to record the serial numbers in a safe place. These may be required at a later date if additional options are purchased.
- Locate the product CD and make a note of the licence number. You will need them later.
- At this point, do not power up the Gemini equipment.

Network plan and IP addresses

The Gemini matrix frame will normally be connected to an IP network. This allows it to communicate with other Trilogy IP-based intercom products and to connect to the Gateway Configuration Editor software. However, once correctly configured, a single Gemini matrix frame can operate in isolation.

Each Gemini frame requires a single static IP address. In addition, if Gemini is fitted with optional Networked DSP, a further 2 static addresses per Gemini are required.

Your laptop or PC must use an address in the same subnet ("range") as Gemini. If it is not convenient to adjust the address of your PC then the default addresses used by Gemini must be changed, as described later. Make a note of the values which you plan to use.

	IP	DSP 1 DSP 2	subnet mask	gateway address
Gemini	192.168.200.200	192.168.200.210 192.168.200.211	255.255.255.0	not set
Laptop / PC	192.168.200.100	n/a	255.255.255.0	not set

Any mistakes or inconsistencies in these values may lead to unpredictable audio behaviour. For example, if you declare a gateway address on your PC, this must also be declared within the configuration data for Gemini. If your system includes IP connected control panels, or multiple Gemini, the plan should be extended accordingly.

Management PC

PC manufacturers continually revise and update their specifications making it difficult to give definitive guidelines. The following specification is correct at date of issue (April 2016):

- Intel Core i3 or i5 CPU (or equivalent)
- 4 GB (min), 8 GB (preferred) Dual channel DDR3 RAM
- Windows 7 or later, 32 / 64 bit (preferred)
- Graphics with 512 MB supporting 1280 x 1024 resolution on a 19" monitor
- CD / DVD reader for software installation

There are two software components to be considered:

- Gateway Configuration Editor. This is optimised for Windows 7, 8, 8.1 and 10. Normally, Gateway only needs to be active when changes to the system configuration are planned.
- Database Supervisor. The primary task of this small application is to prepare and package the data prior to "pushing" it to each Gemini matrix. Ideally, the database itself should be left running at all times. If it is shutdown or disconnected, Gemini will continue to run using a locally cached copy of the most recent data. The only functionality lost is local re-assignment of panel keys.

Install Software

Two components will normally be installed:

- Gateway Configuration Editor
- Database Supervisor

For smaller systems, these components may be installed alongside each other on a single PC. For larger systems it is advisable to split the installation across two computers, so that the database is left running continuously. If the database is shut down or disconnected, there will be minor loss of functionality. Gateway editor may be closed when configuration changes are complete.

- Insert the supplied CD and from the menu, select the option to “Install Software”.
  - Select just the two components listed above -- adding extra components may impair system performance
  - You should normally accept all other default options
- The database runs as a Windows System Service and starts automatically: to view and manage the database, a small graphical application (Database Supervisor) is provided. You will find this at ***Programs > Trilogy > Trilogy V5 > Database Supervisor.***
- Once launched, a small additional icon will appear in the PC system tray, next to the clock.

On first run, you will be prompted to enter your software licence key code. This is supplied on the jewel case of the CD or DVD which accompanies your order. Take a note of this and keep it safe for any future re-installation.

Configure the firewall

In order for Gemini to connect to the database, a number of ports must be opened on the PC firewall.

- During installation, a script will run to open the ports for the Microsoft Windows firewall: for other firewalls please consult the documentation supplied with that product.
- To carry out the task manually, the following ports must be opened to allow inbound access:
  - TCP 12005 management database data
  - TCP 12006 management database control
  - TCP 13001 management database supervisor
- Additionally, on any PC used for voice communication the following ports must be opened to allow inbound access:
  - UDP 2076 control and signalling
  - UDP 2077 voice packets
- Finally, if the Virtual Panel application is installed, the following port must be opened to allow inbound access:
  - TCP 6822 Virtual Panel to host connection.

Gateway – the Configuration Editor

- Start Gateway from ***Programs > Trilogy > Trilogy V5 > Configuration Editor.***
- Log-in using the default credentials ***Admin | trilogy***
- A new “blank” configuration file will be created. Use the basic editors by single clicking items in the “tree”.
- Open the editor for “Domain 1”: currently no Gemini matrix hosts are present. Add hosts using the green “+” button until the list matches your planned system.

- Highlight each host entry in turn and set the Host IP address. Refer to the IP address plan created earlier.
- If Gemini is fitted with the optional Networked DSP boards, they must be enabled and their IP addresses entered on the form as shown.

File Management

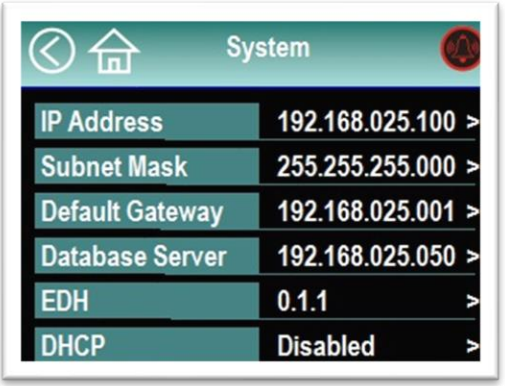
Any changes are posted to the database when you press the "tick". Once changes are posted, you can close Gateway at any time and changes will not be lost.

- Backup the current configuration by pressing the red disk icon, seen on the top toolbar.
- Establish a file naming convention which will help with locating files in the future. For example, 20180110a would indicate the first file created on 10th January 2018.
- An automatic "backup to local Gemini flash RAM" feature may be configured from the Gateway editor Preferences menu. This is recommended and will guard against possible PC or hard drive failure.
- Leave Gateway running: you will need it again shortly.

Gemini – Setting the basics

- If you have purchased more than one Gemini, to avoid any possibility of IP address conflicts, it is best to power up the frames one-by-one. At this stage, do not connect to your network.
- Connect 1 or 2 IEC mains cables to each frame.
  - The power supplies are auto sensing for input voltages from 90 – 260 VAC. There is no power switch: the unit will power-up immediately.
  - The two power supplies provide for main and backup operation. If both are fitted but only one is connected, the unit will show an alarm message under the Status menu on the front panel touchscreen.
- The Gemini boot cycle takes approximately 30 seconds: when ready, the touchscreen display shows the home screen.

- Unless agreed pre-delivery, Gemini is supplied from the factory with default network and identity settings. Before connecting to your network, these values must be set accordingly.
- Using the front panel touch screen, navigate to the ***Settings*** menu.
- Choose the ***log-in*** option, then using the on screen keypad enter the default password ***trilogy***. Simply enter the equivalent numbers as shown on the keys: for ***trilogy***, enter ***8745649***. Now you can change values.
- The same password is used to access Gemini using your web browser: see page 15.
- Change the IP Address, Subnet Mask, gateway and Database Server addresses by pressing the small > arrow at the end of each line and using the keypad.
- Each octet must be entered as 3 digits including all leading zeros. So an address of 192.168.25.1 must be entered as 192.168.025.001.



- Now set the correct EDH address, as explained in the next section.

Gemini – setting the identity (EDH address)

Each Gemini has a unique identity defined within the database by a three part EDH address.

- EDH stands for Enterprise – Domain – Host.
  - The E value is reserved for future use.
  - The D value corresponds to a subnet or physical location.
  - The H value represents to an individual Gemini matrix host.
- Typically, a single Gemini would be 0.1.1.
- Two Gemini linked locally to provide a single 64 port matrix would be 0.1.1 and 0.1.2.
- Two Gemini linked over IP but in different locations, would be 0.1.1 and 0.2.1.
- The EDH value is automatically generated as the database configuration builds and cannot be edited later. Values of D and H are shown in square brackets [ ], in the Gateway navigation tree. If you are building a multi-host system, it may be helpful to note these values on the IP Address Plan created earlier.

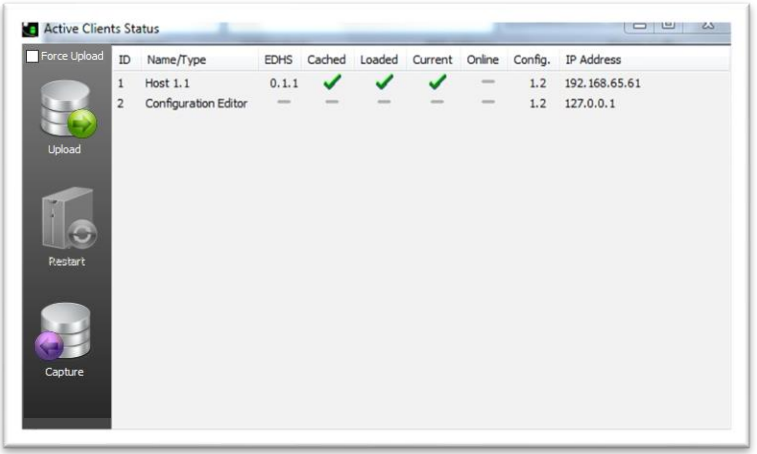
Restart to apply changes

- These changes are only applied when Gemini re-starts. Press the notification message on the top line of the touchscreen and follow the prompts.
- Once Gemini has re-started, navigate to the ***Settings > System*** menu and check that the new values are correct.
- You can view these settings in “read-only” mode without logging in.

Connect to your network

- If the settings are correct, connect the Ethernet port on the rear of Gemini to your network using a standard Ethernet cable.
- On the system management PC, open the Gemini Active Clients form from the settings icon (gears), then the View menu.

Active Clients Form



The primary function of the Active Clients form is to send the latest configuration from your PC to all currently connected Gemini hosts. This is a two phase process:

- **Upload**: takes around 20 seconds and happens in the background without disturbing the system.
- **Restart**: also takes about 20 seconds but all communication will cease and panels will reset during this phase.

Depending on your system settings, once the upload phase is complete, you will see a warning message asking if you wish to go-ahead and re-start.

Follow the Upload >> Restart sequence for the single Gemini matrix which is listed on screen.

An additional option on the Active Clients form is to **Capture** a snapshot of the currently running system configuration. This is useful when local key assignments and audio level adjustments have been made by panel operators, for example, during a programme rehearsal. These changes would otherwise be lost when Gemini is restarted. For full details please see the Gateway Editor Configuration Guide 70090622, supplied on CD.

Repeat for each Gemini in your system

If you have more than one Gemini, repeat the steps explained on pages 9 through 13 inclusive as you add matrices one by one.

When all Gemini hosts appear in the Active Clients Form list, the initial set-up is complete.

Gemini Web Browser

Each Gemini matrix includes a self-contained web server, providing a range of engineering and diagnostic information.

Once Gemini is running, as outlined above, open your web browser and type the previously configured IP address (see page 9) into the address bar.

The web pages also provide a convenient means of setting up some additional parameters. The Settings pages are password protected, using the same password as for the Gemini front screen (see page 9). The default is ***trilogy*** – note that the web pages give an option to change this password – you cannot change the password on Gemini itself. Changing the password in the browser will simultaneously change the Gemini front touch panel password.

Next Steps……..

- Using the “basic” Host editor, define each port as 4-wire or panel from the drop down list next to the “?” symbol.
- Give each port a suitable name: remember, most panels can display a maximum of 5 characters.
- Using the “basic” panel editor, add keys to talk to other panels, and to speak and listen to 4-wire circuits. Drag and drop key targets from the palette area shown below each panel.
- You should normally use “speak” keys to communicate between panels.
- A range of keys are provided to both speak and listen to 4-wire audio circuits. The choice depends on your application, but remember, 4-wire subscribers are essentially dumb. They cannot choose to either speak or listen.
- Save, upload, re-start and test frequently.
- To create a larger matrix, define a Gemini HSL Ring and attach the correct Gemini host matrices. Connect the HSL (high-speed link) cables to complete this step.
- Enhance the configuration by creating Conferences, IFBs and Groups.

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