

## Tech Note: Comrex Gagl Preliminary Instructions

### What is Gagl?

Gagl is a cloud service offered by Comrex. It allows between one and five users to send and receive audio from computers and smartphones. That audio is conferenced (if more than one user), and delivered to a Comrex hardware codec (such as ACCESS or BRIC-Link, usually in a studio). All participants can hear other participants and the codec “send” audio back to them.

### So it’s like Zoom?

Gagl was designed from the ground up with audio in mind. It doesn’t send video at all, meaning it requires less Internet bandwidth and therefore has higher stability. And unlike video-oriented conferencing offerings, audio quality is the first priority for Gagl. It

uses the well regarded Opus audio encoder and a bitrate that delivers excellent voice and music quality. It also delivers audio directly to your Comrex codec with all the stability enhancements, pro-grade audio connections and features that you’ve come to expect from our hardware.

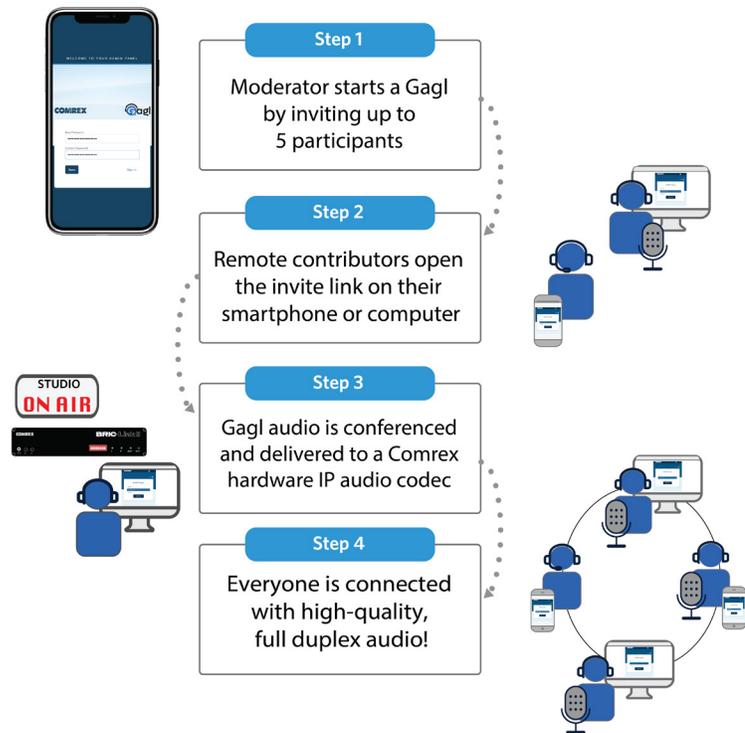


Fig. 1

### What application is Gagl designed for?

Gagl can be the entire hub for a round-robin reporting program. It can run an entire morning zoo radio show. Latency is low enough for call-in talk radio. Or it can simply be a portal for a single contributor to connect back to the studio over a computer or smartphone.

### Does it use an app?

Gagl doesn’t require anything to be installed on your computer or phone, other than a browser. All functionality happens in the browser.

### What else is required?

Because audio is paramount for Gagl, it requires the use of headsets for guests on computers or phones. This removes any audio distortion that can be caused by acoustic echo cancellation. Future updates to Gagl will allow usage without headsets (enable Acoustic Echo Cancellation) but audio quality will not rival headsets.

### Sounds great! How do I get started?

The rest of this document will describe how to start up and use Gagl!

## Admin vs. Moderators vs. Guests vs. Codec

Someone is designated as the Gagl account **Admin**, and this is the person who handles the Gagl subscription. The Admin's email address is used to create a Admin account on Gagl. Within this account, the Admin can set up the Comrex codec parameters and create a list of Moderators. The Admin is also always a Gagl Moderator.

A **Moderator** is the person who creates a Gagl at airtime. This is a person who has the rights to log into the Gagl landing page with a username and password. While using Gagl, the Moderator has certain rights that guests don't have, like the ability to mute guests and make a Gagl connection to the studio codec.

**Guests** are contributors to the Gagl conference. They don't have login rights. Guests access the Gagl with a link provided by the Moderator. Guests can mute themselves, but not other participants.

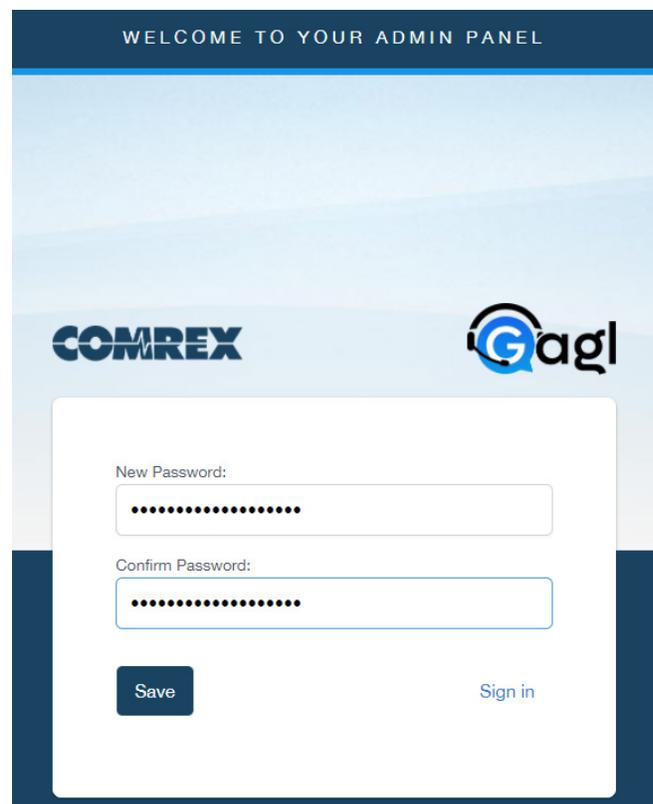
In the case where only one contributor is using Gagl (e.g. a reporter calling into the studio on their smart phone) the concept of Guests doesn't apply. The contributor will be the Moderator.

**Codec** is the Comrex ACCESS or BRIC-Link codec located in the studio, pre-configured by the Admin account. The codec must be configured for unregistered SIP operation and have SIP ports open or forwarded. Firmware 4.5p11 or higher is recommended, as the Gagl user agent is added to the codec SIP whitelist by default on these releases.

## Creating moderators

You'll receive instructions from Comrex on how to set up your Admin account on the Comrex billing site. Once that's complete, you'll receive an email from Gagl to your Admin email account. This email will contain a link to allow you to create your Admin Gagl account. (Fig. 2)

Enter a password (one letter, number, and special character required). Once this is complete you'll be taken to the Moderator dashboard. (Fig. 3)



The screenshot shows a web interface for creating an admin account. At the top, a dark blue header contains the text "WELCOME TO YOUR ADMIN PANEL". Below this, the "COMREX" and "Gagl" logos are displayed. The main content area is a white form with two password input fields. The first field is labeled "New Password:" and the second is labeled "Confirm Password:". Both fields contain a series of black dots representing masked characters. Below the second field, there is a dark blue "Save" button and a blue "Sign in" link.

Fig. 2 - Admin panel

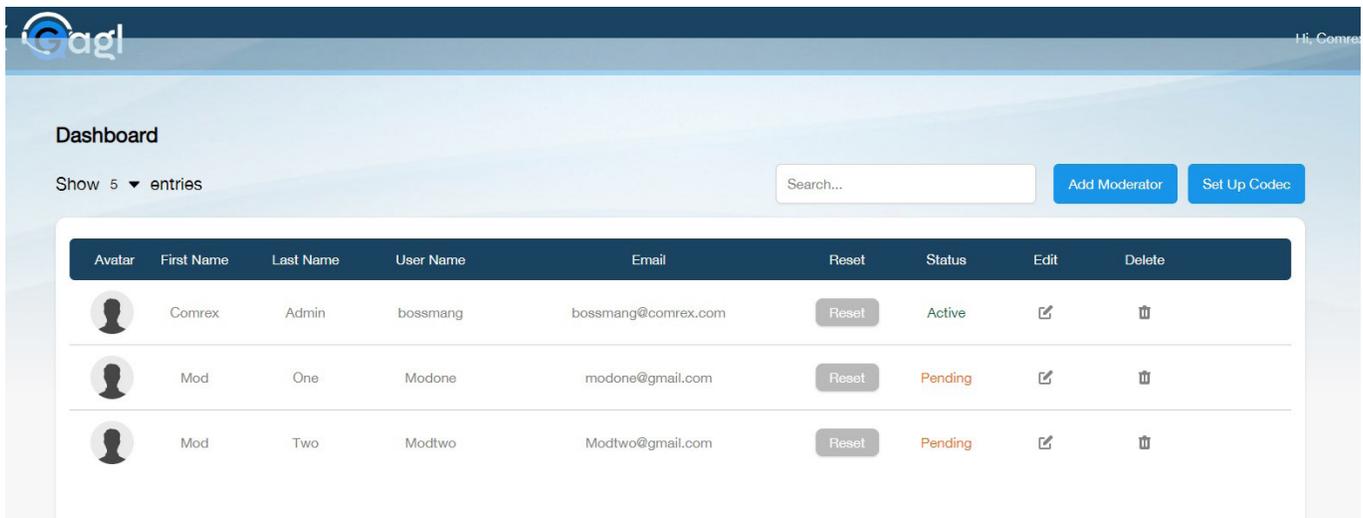


Fig. 3 - Moderator dashboard

The first step within the dashboard is to set up the Comrex codec connection by clicking “Set Up Codec” in the upper right corner.

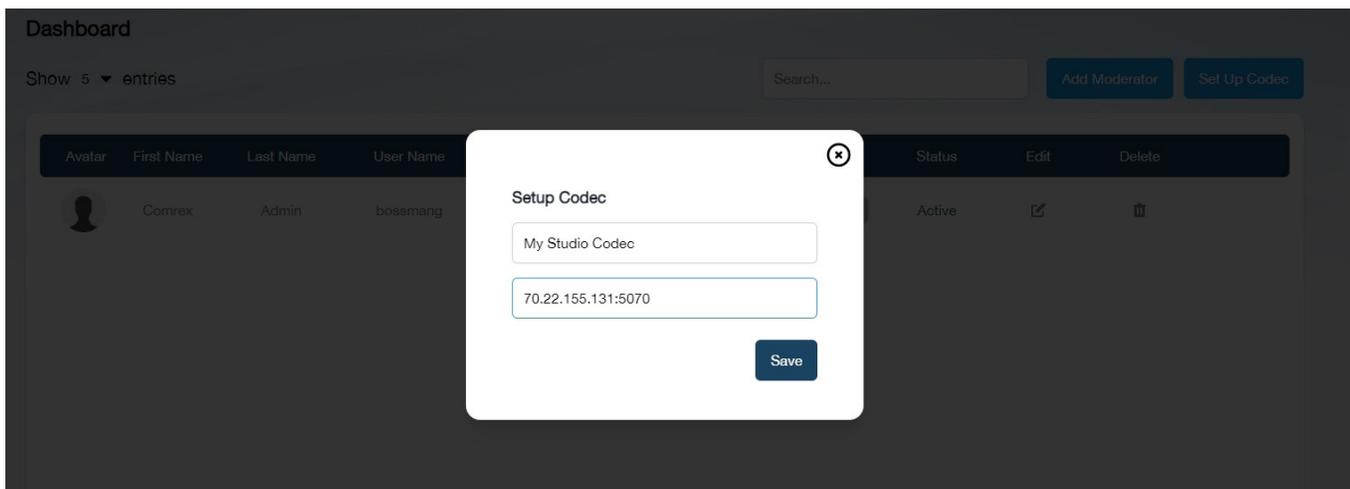


Fig. 4 - Codec setup window

Here you will give a name to your codec connection (to be displayed on the Gagl connection page) along with the IP address of your codec. Note: If you’ve changed the SIP port in your codec settings, make sure you add the port number here (e.g. 70.22.155.131:5070)

In the case where only one contributor is using Gagl (e.g. a reporter calling into the studio on their smart phone) the concept of Guests doesn’t apply. The contributor will be the Moderator. If you only intend to have one Moderator, you can skip the next step (creating moderators) entirely since the Admin account is always a Moderator.

Click **Add Moderator** in the upper right corner, and enter your Moderator's details. Create up to four additional Moderators per Admin account. Once the Moderator is created, they will receive an email with a link to creating their password. Moderators may be edited or deleted by the Admin at any time.

Finally, take note of the user name assigned to the Admin listing on the top entry. You'll need this to use Gagl if you're the Admin.

## Creating a Gagl

Once you have Moderator credentials (or if you're the Admin), log into Gagl at [gagl.comrex.com](http://gagl.comrex.com). Note that you must log in with the user name assigned to you rather than your email address.

You have a choice of inviting Guests here (Fig. 5), or after the Gagl is created on the next screen. If you want to issue invites now (e.g. for a future Gagl), click "Invite people to Gagl", and enter their names and emails. When complete, they will receive an email link to join as a Guest.

Create a unique name for your Gagl in the name field. This name will be cached in your browser the next time you log on. You'll need to name your Gagl in order to issue invites. If you change the name, you'll need to issue new invites.

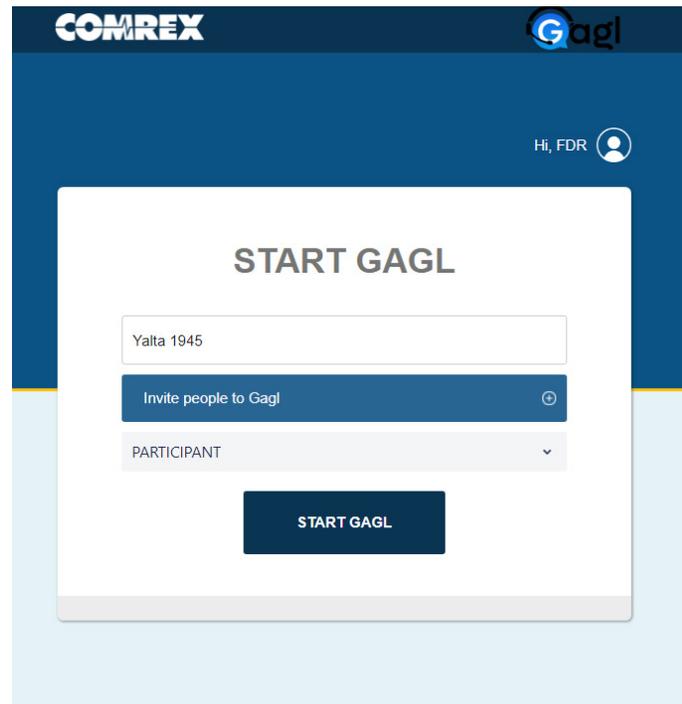


Fig. 5

Before creating your Gagl, you must choose how to participate. This is done via the selection box at the bottom of this page. The choices are:

- Participant:** Moderator computer joins the Gagl along with Guests, all can hear each other and codec (when connected) can hear all. Besides Gagl conferences, in the case of only one contributor, this is the choice to make.
- Silent:** Moderator's entry does not appear in the Guest list, and no Moderator audio is sent to Guests or codec. (This mode is best if Moderator will use the studio console/codec connection to join the Gagl). Moderator can still mute and disconnect Guests.
- Producer:** Moderator is heard by Guests, and Moderator can hear all. Moderator audio is not sent to codec. Moderator can still mute and disconnect Guests. *(coming soon)*

## Running a Gagl

The picture on the following page (Fig. 6) shows the Moderator Guest list screen:

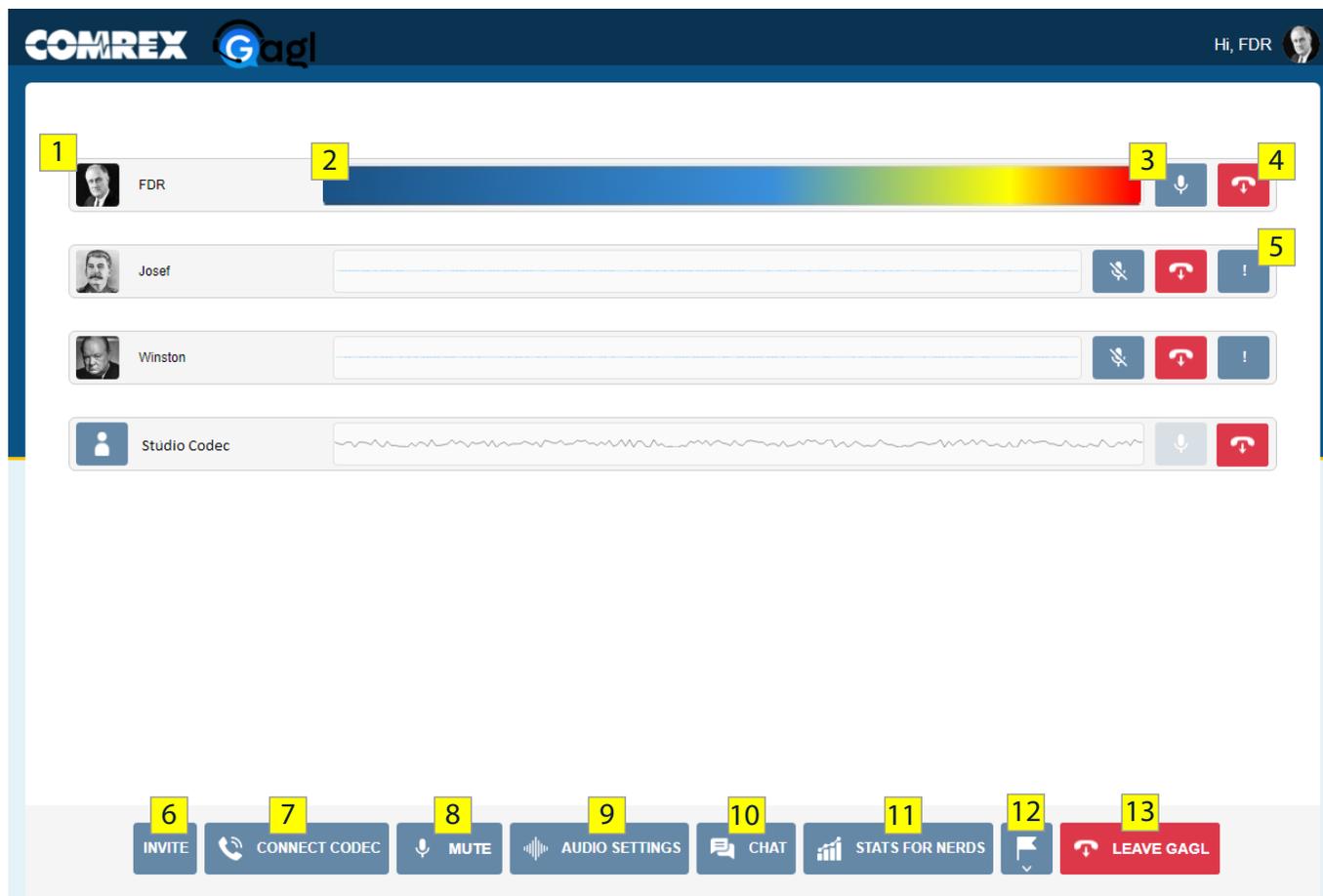


Fig. 6

The functions are outlined below:

1. **Guest list:** An entry will appear for each Moderator, Guest and codec participating in the Gagl.
2. **Audio Meter:** When a Gagl participant speaks, their audio will be reflected here.
3. **“Mute/Unmute Guest” button:** The Moderator can mute and unmute each guest via these buttons.
4. **“Leave Gagl” button:** The Moderator can remove each Guest from the Gagl via these buttons.
5. **Request Unmute button:** If guest has muted themselves, the Moderator can send an unmute request here.
6. **“Invite” button:** Issue email invites to additional Guests (works the same as Invite function on Gagl creation page).
7. **“Connect Codec”:** Make a connection to the pre-configured codec address and add it to the Gagl.
8. **“Mute/Unmute Mod” button:** Mute the local Moderator’s output audio to Guests and codec.
9. **“Audio Settings”:** Choose the input (microphone) and output (speaker) devices on the local computer/phone. Also allows for a simple audio sanity check.

10. "Chat": Open a text chat window visible to all Guests.
11. "Stats for Nerds": Currently providing basic info on participants. Eventually will display connection stats.
12. "Raise/Lower Flag": Sends a notice to Guests that the Moderator wishes to speak next.
13. "Leave Gagl": Ends current Gagl and disconnects all Guests.

The Guest Gagl page (Fig. 7) is similar but with fewer options:



Fig. 7

1. Guest list: An entry will appear for each Moderator, Guest and codec participating in the Gagl.
2. Audio Meter: When a Gagl participant speaks, their audio will be reflected here.
3. "Mute/Unmute Guest" button: Mute the local Guest's output audio to Moderator, Guests and codec.
4. "Audio Settings": Choose the input (microphone) and output (speaker) devices on the local computer/phone. Also allows for a simple audio sanity check.
5. "Chat": Open a text chat window visible to all Guests
6. "Stats for Nerds": Currently providing basic info on participants. Eventually will display connection stats.
7. "Raise/Lower Flag": Sends a notice to the Moderator and other guests that this guest would like to speak.
8. "Leave Gagl": Disconnects local Guest from Gagl.

## Troubleshooting FAQ

**Q: I can't connect to my codec--It says "connected" then a short time later "disconnected".**

**A:** Here's a few ideas:

1. Make sure your codec is configured to accept incoming SIP calls. (*See manual*)
2. Make sure your SIP ports are open for incoming connections on your firewall. (*See manual*)
3. Make sure you're running firmware 4.5p11 on your codec (or you've added "gagl" to your SIP whitelist).
4. Try to make an unregistered SIP call to your target codec from another codec or a softphone like Comrex FieldTap.

**Q: I'm getting dropouts on one of my guests.**

**A:** While Gagl is optimized for slower networks, it still needs a reasonably consistent streaming ability on the guest's network. Avoid using Wi-fi if you can. If you're sharing your bandwidth with other users like streaming and gaming, you may have congestion issues.

**Q: Guests and Mods complain that they can't hear themselves in their headphones.**

**A:** The design of Gagl prevents the system from sending user's audio back to themselves without distracting delay. Local audio connection between a user's microphone and speaker is available in Windows and Mac settings. Or use a headset with only one headphone side (or remove one side from your ear when using Gagl).

**Q: We can't hear one guest, or they can't hear us.**

**A:** Obviously each guest must have a source of microphone audio and a speaker or headphone. Have them select the "Audio Settings" option on their Gagl page and choose which audio device to use. Sometimes guests can miss the prompt to allow use of their microphone when they first click a Gagl guest link. Have them try again.

**Q: What browsers are supported?**

**A:** Chrome and Edge have been tested the most. Firefox and Safari may have some incompatibilities, but we're working on more testing.

**Q: Our guests invites are not being received.**

**A:** Have them check their spam folders. Sometimes the link embedded in the message triggers the spam filters.

**Q: One of my guests sounds much worse than the others.**

**A:** Get them a headset. When using a phone or computer in "speakerphone" mode, the Acoustic Echo Cancellation required causes a colorization of the audio, often described as the "Skype effect". *See our Tech Note on recommended headsets.*

**Q: Can I change the default avatar for me or my guests?**

A: You can use a free third party service called Gravatar to assign a picture to use for each mod and guest. If the email address used for Gagl aligns with a pre-defined gravatar, that picture will appear in Gagl.

**Q: I want to permanently ban one of my guests.**

A: Create a new Gagl with a new name, and re-invite the guests you want to keep.

**Q: I'm using Gagl as a "reporter phone" to my codec. How do they proceed?**

A: Make your reporter a Moderator on the Mod list. They'll get a link to create a password. Once they've done that, have them log in and create a new Gagl with a unique name. They can select "connect codec" to start the connection. Have the reporter save the Gagl link in bookmarks, and the rest should be cached in the browser for the next call.

**Q: How many participants can be in a Gagl?**

A: Currently Gagl is limited to five active users (Mods and Guests).

**Q: One of our Mods has left the company. How can I remove their rights?**

A: The Admin can log into the moderator dashboard and delete the user as a Moderator.

**Q: The Admin has left the company. How do I proceed?**

A: Contact Comrex support for a "Admin reset".