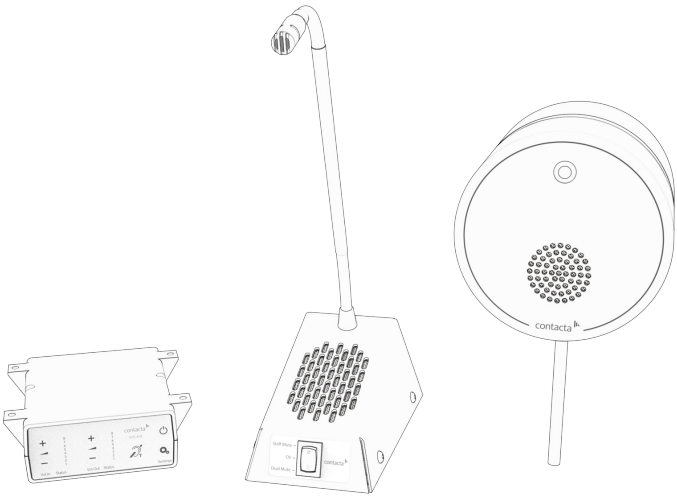
contacta

Window Mounted System

STS-K021 (Non-Ballistic Rated)
STS-K022 (UL 752 Level 3 Ballistic Rated)
STS-K023 (UL 752 Level 8 Ballistic Rated)



Installation & User Guide

August 2025

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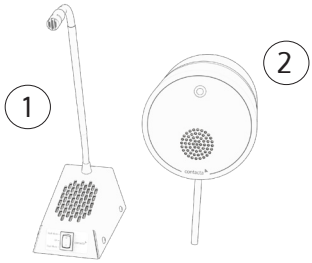
Product Overview

Window intercom systems provide assistance for clear communication where normal speech is impaired by use of glass or other similar barriers. The STS-K023 system includes a ballistic-certified level 8 in-glass speaker and microphone module for the customer side. The STS-K022 system includes a ballistic-certified level 3 in-glass speaker and microphone module for the customer side. All versions of this kit are installed in the same manner and use the following instructions.

There is a hearing loop component included, providing additional assistance for hearing device wearers.

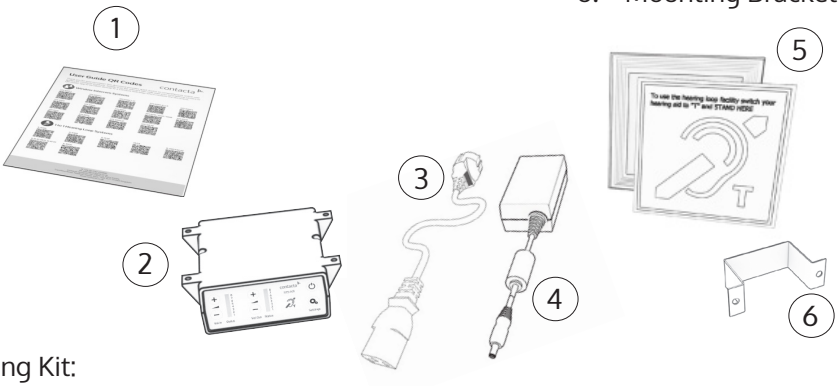
Speaker & Microphone Components

1. Staff Gooseneck Microphone and Speaker
2. Retrofit Level 8/Level 3/Level 0 In-Glass Module



General Components

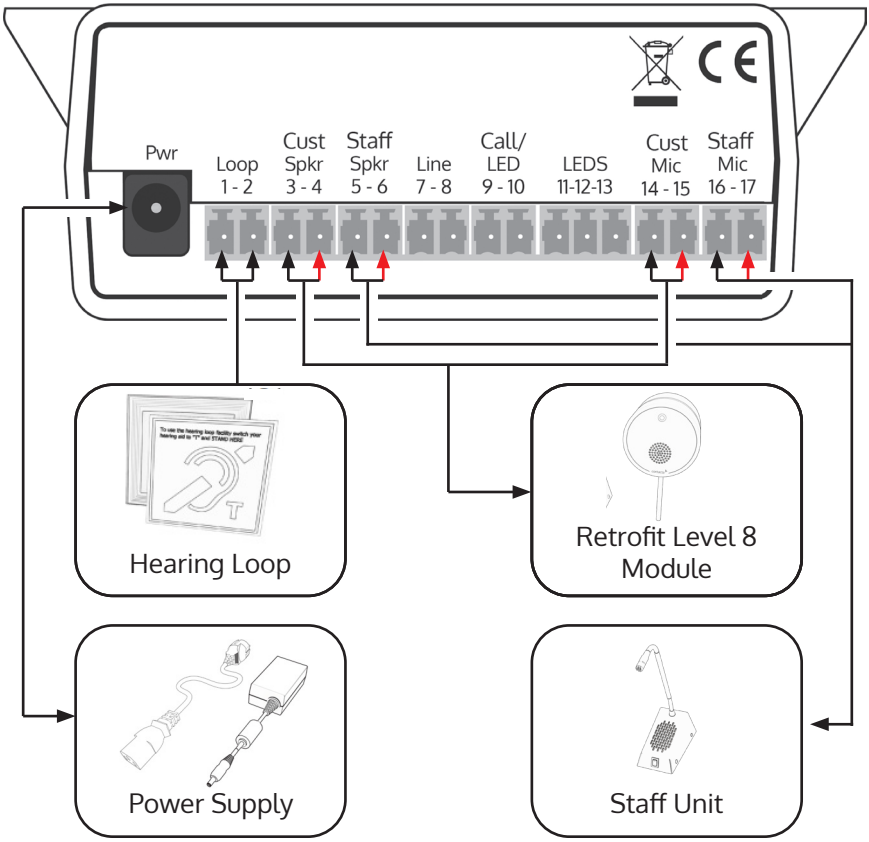
1. QR Code Sheet (User Manuals)
2. Amplifier
3. IEC Lead
4. Power Supply
5. Hearing Loop Aerial [IL-AE98]
6. Mounting Bracket

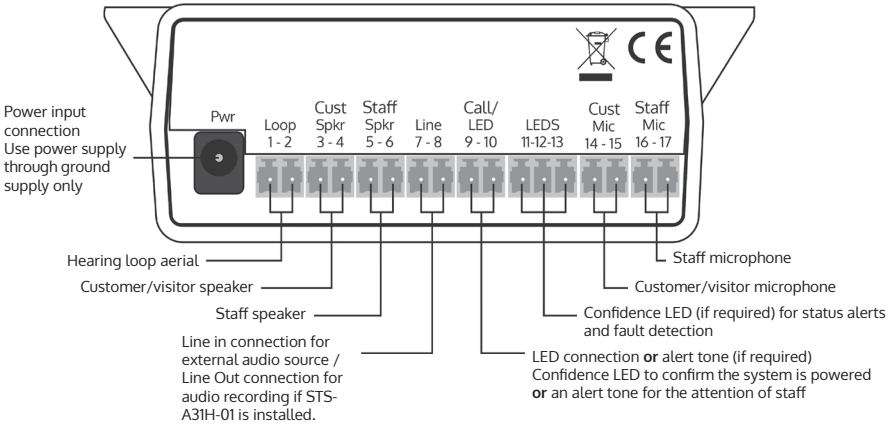


Fixing Kit:

- Adhesive Clip x 10 / No.6 x 1/2" Countersunk Screws x 12 / P-Clips x 6

Connections



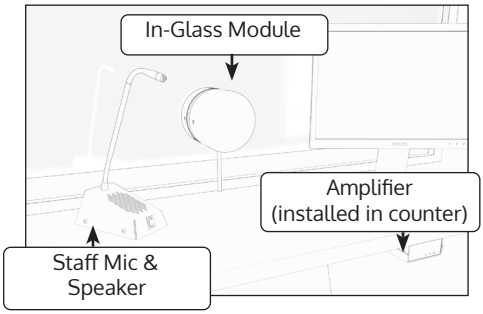


Installation Instructions

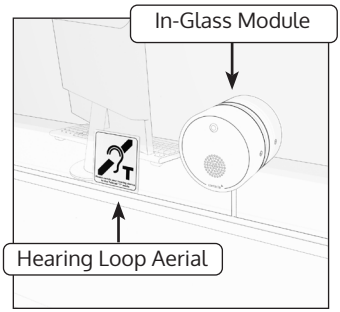
We recommend that installation is carried out by a qualified integrator, adhering to relevant standards.

Check the contents of the box to familiarize yourself with the components.

Staff Counter Side



Customer Side



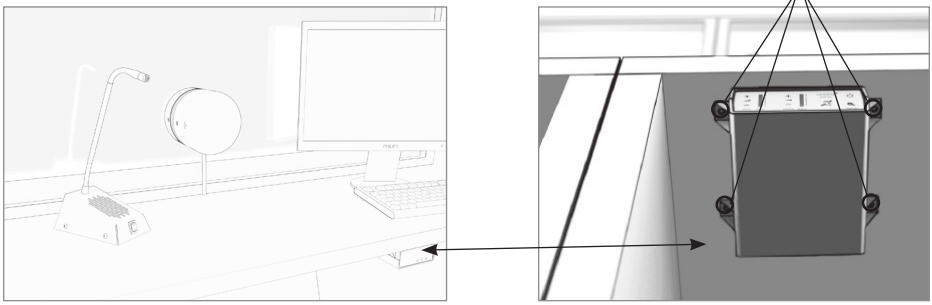
Recommended Tools

A toolkit recommended to install the system will include:

- Screwdrivers (Flat or Blade 2.5mm and Phillips Head PH2)
- Battery or Electric Drill
- Drillbits: 2mm, 3mm, 5mm and 7mm
- Allen Key Set
- Cable Tacking Gun (10mm)
- Wire Cutters/Strippers
- Pliers/adjustable wrench
- Tape Measure
- Pencil or Marker Pen
- Flashlight
- Cable Ties
- Electrical Insulation Tape
- Wire molding

Speaker & Microphone Kit Installation

Staff Side Amplifier Installation



1. Place the staff microphone on the staff side of the counter top, ensuring that it does not cause an obstruction and is as close to staff as possible.

2. Place the amplifier under the staff counter, ensuring that it will not obstruct staff when they are sitting.

3. Mark the four fixing points for the amplifier under the counter.

4. Drill and fix the amplifier in place using the supplied screws.

5. Use a cable management hole to run the staff microphone cable back to the amplifier. If there is not already a cable management hole, drill in a suitable location near the rear of the surface.

6. Install the amplifier's power supply close to a power socket outlet using the supplied mounting bracket and fixing screws.

Staff Unit Installation

The STS-K021/22/23 In-Glass Modules are provided with Contacta's STS-SU1-3W three way staff unit. To set up the STS-SU1-3W, place the unit in the desired location on the staff side area of the window. The STS-SU1-3W has 3 male euroblock connectors that all connect into the back of the STS-A31H / STS-A31H-01 and one female euroblock connector (Green/Blue) that connects to the Customer Microphone.

Please follow the below colour coded instructions to ensure for correct system connections.

Summary:
Green/Blue (Male Euroblock) --> Female Connector on Customer Microphone
White (16)/Red (17) --> Staff Mic Input on Amp
Purple (14)/Brown (15) -->Customer Mic Input on Amp
Black (5)/Yellow (6) --> Staff Speaker Input on Amp

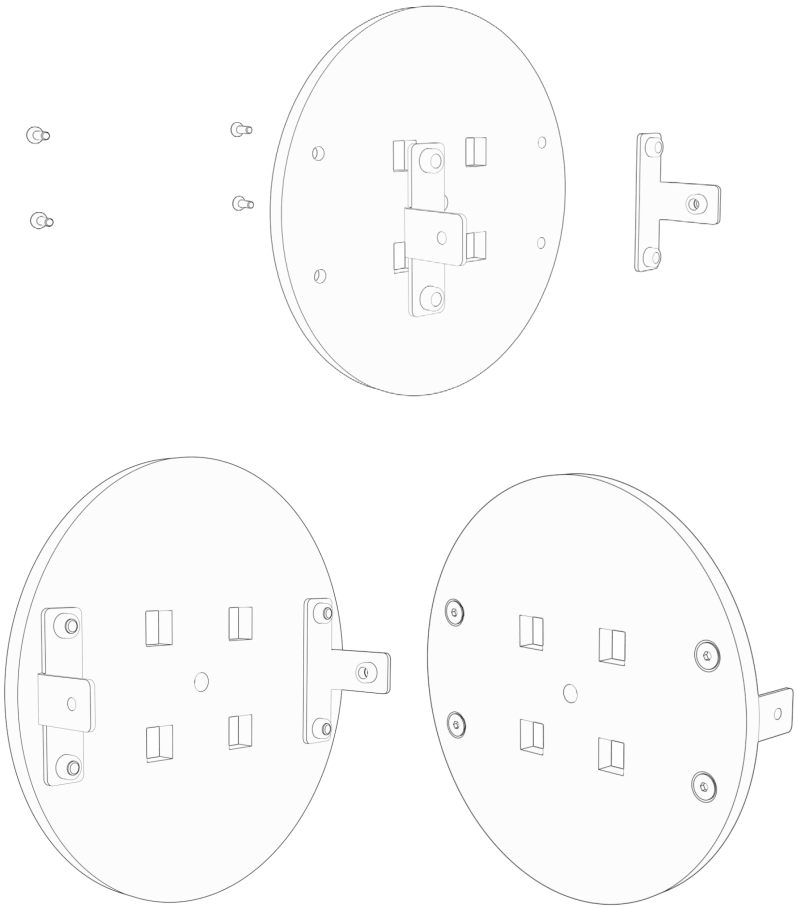
Please reference the STS-SU1-3W Setup Guide for further instructions.

Customer Side In-Glass Module Installation

Step 1: Plate Assemblies

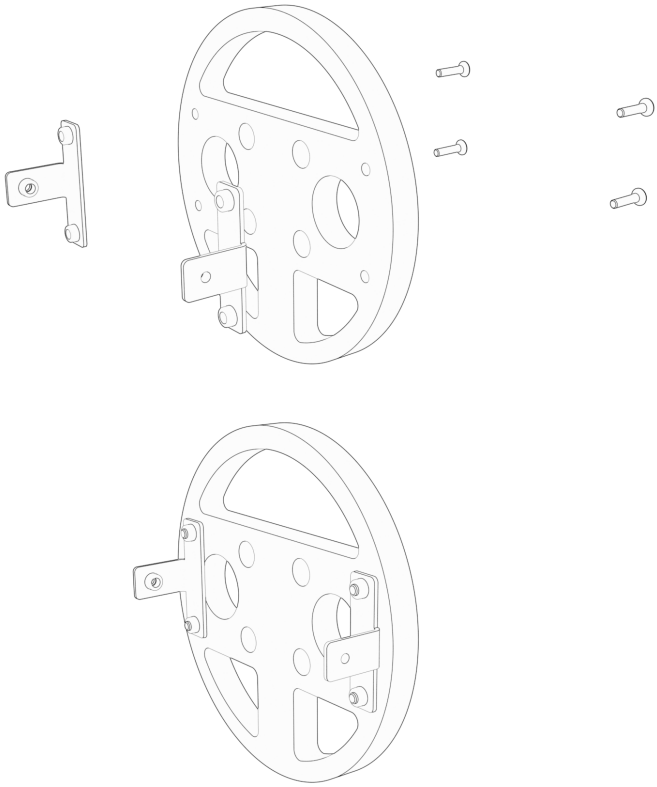
1. Take the ¼" (6.35mm) plate and assemble two of the L brackets as shown in the diagram below.

   Four of the M4 x 18mm (0.7") countersunk bolts should be used, once assembled the screws should sit flush into the ¼" (6.35mm) plate. **Note:** A hex key for assembling these is supplied.



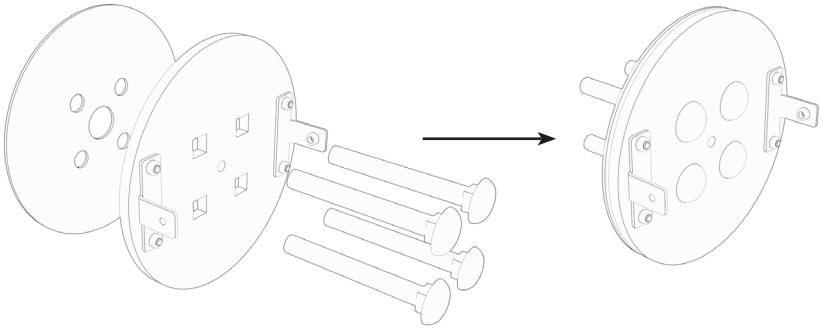
2. Take the ½" (12.7mm) plate and assemble two of the L brackets to it as shown below.

   The four M4 x 18mm (0.7") countersunk screws should be used, along with the same hex key as in the front installation. Once assembled, the screws should sit flush into the ½" (12.7mm) plate.

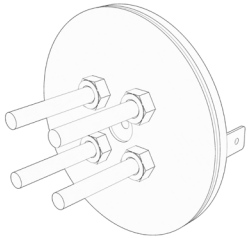


Step 2: Front Assembly

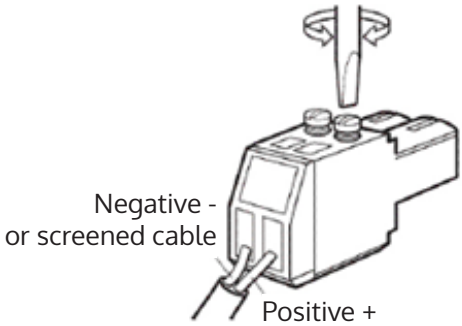
1. Assemble the front assembly by positioning one of the silicon gaskets onto the ¼" (6.35mm) plate, placing the long bolts into the plate as shown in the following diagram.



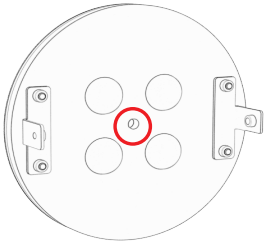
2. Tightly secure the front assembly at the rear using four of the eight provided nuts.



3. Take the speaker and microphone sub assembly and remove the Euroblock connectors. Note the connection wires polarity as these will need to be re-attached in the same orientation at a later stage.

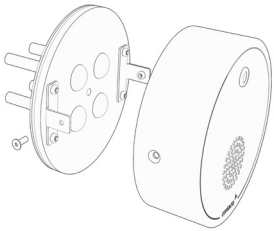


4. Thread the wires into the central hole and pass through.



5. Take the speaker and microphone assembly and two of the M4 x 18mm (0.7") countersunk screws provided.

6. Place the assembly into position, ensuring that the microphone is at the top and that the Contacta logo is in the correct orientation.



7. Ensure no wires are trapped and that the majority of the wire length has been threaded through to the other side. Ensure there is no insulation protruding from the assembly.

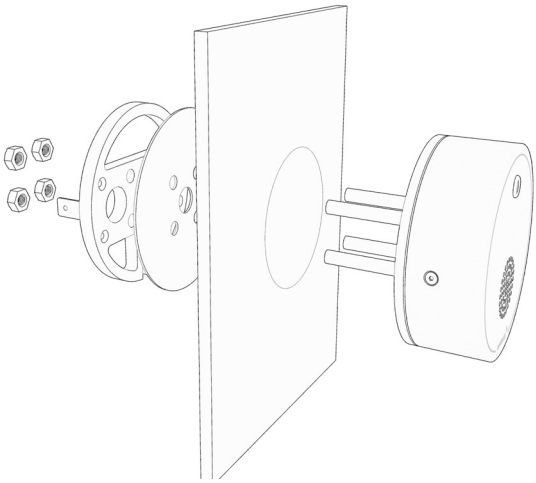
8. Secure the front assembly using the two provided M4 x 18mm (0.7″) screws and hex key.

Step 3: Assembly to Glass

1. Position the assembly onto the customer facing side of the glass, aligning centrally with the hole ensuring that the bolts pass through the glass.

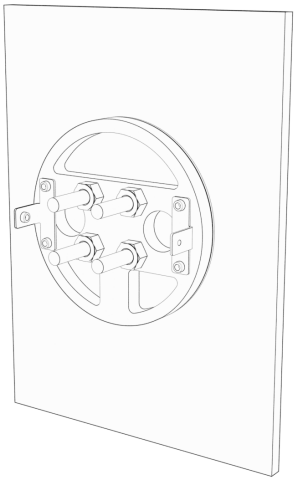
2. Holding the unit in position, thread the wires through the silicon gasket hole and the plate hole, taking note of the direction of the wire channel. Thread the second gasket onto the exposed ends of the bolts on the other side of the glass, followed by the ½″ (12.7mm) plate assembly.

   Take note of the position of the tube channel and the orientation you wish the tubing and wiring to exit the assembly. Using the four provided nuts, tighten this assembly into position by sandwiching the glass, ensuring you do not overtighten the nuts as this may crack the glass.



Customer Side View:

Staff Side View:

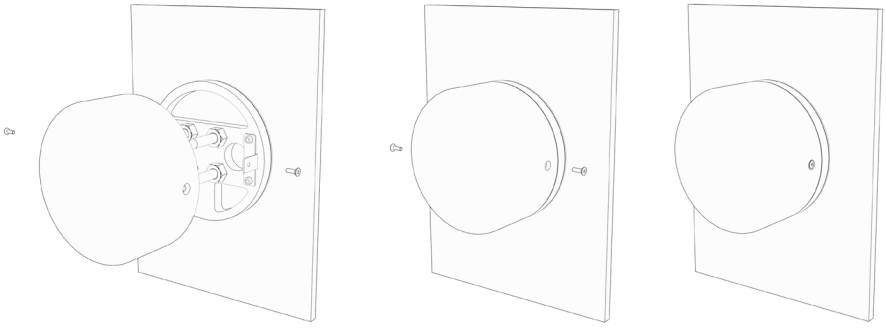


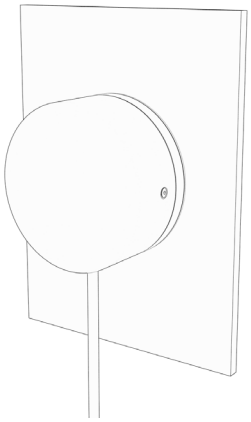
3. Measure and cut the wire tubing to the desired length.

4. Feed the microphone and speaker wires through the tubing until reaching the end (Please note that the tubing may be bent to a desired configuration).

5. Secure the tubing in place.

6. On the staff side, use the rear cover plate and the two remaining M4 x 18mm (0.7") countersunk screws to secure the cover in place as shown below, ensuring that the excess wiring is exiting the assembly.

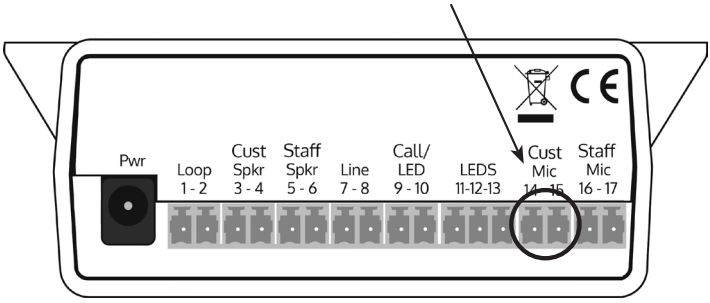




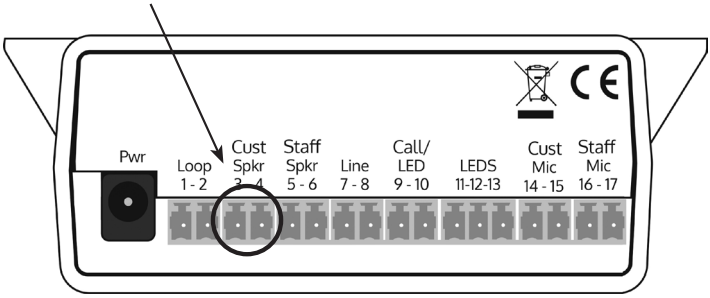
7. After securing the rear cover, the rear assembly and tubing should appear as pictured (orientation dependant).

8. Re-attach the previously removed Euroblock connectors in the correct orientation.

9. Plug the unit's microphone connector into the "Cust Mic" port on the rear of the amplifier. Note: the RED wire should be on the RIGHT side of the connector.



10. Plug the unit's speaker connector into the "Cust Spkr" port on the rear of the amplifier.



Hearing Loop Installation

The IL-AE98 Window Mount Hearing Loop should be installed indoors on the staff side.

Ensure hearing loop signage is displayed clearly.

1. Determine the location of the hearing loop aerial on the glass barrier. Make sure to place it directly in front of where a customer will stand, in a non obstructive location. It is recommended that the unit is placed on the bottom corners of the glass barrier for optimal performance. Do not exceed 2 feet above the average standing customer.

2. Clean the area with a glass cleaner and thoroughly wipe dry.

3. Remove the liner on the blue sheet with a faint outline of the international hearing loop signage to expose the adhesive backing. Please note that both sheets are not solid blue.

4. Carefully attach the sheet onto the glass barrier with the international hearing loop signage facing the customer. Slowly apply to glass barrier while smoothing out air bubbles with straight-edged tool.

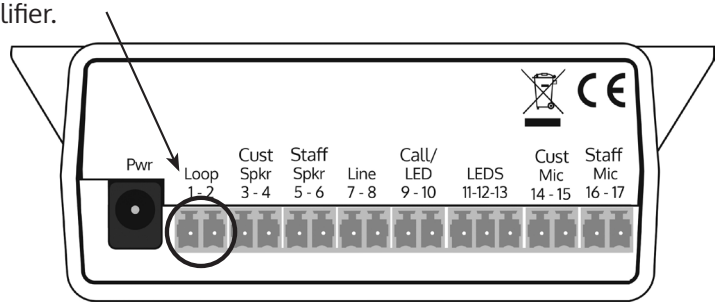
5. Remove the liner on the solid blue sheet, exposing the adhesive.

6. Carefully apply the hearing loop aerial with the attached wire to the adhesive on the solid blue sheet. Ensure the wire is at the edge of the sheet, coming from the back side of the aerial when applied.

7. Attach the solid blue sheet with hearing loop aerial to the sheet attached to the glass barrier. Slowly apply while smoothing out air bubbles with straight-edged tool.

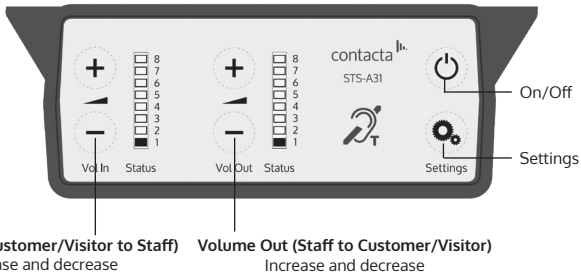
8. Route the wiring neatly to the amplifier location on the staff side.

9. Plug the loop's connector into the "Loop" port on the back of the amplifier.



Amplifier Setup

Overview of Front Panel Buttons



Setup

1. Connect all green plugs to the back of the amplifier, following the locations printed above the sockets (see page 4).

2. Power on the amplifier by pressing the On/Off button.

3. When powered and in normal operational mode the amplifier will display Volume In LED 1 and Volume Out LED 1 as steady green.

4. When the amplifier is switched off, all audio is muted and none of the LEDs are illuminated. Pressing any button will turn the amplifier on again.

5. Adjust Volume In and Volume Out to a comfortable level.

6. Press and hold the Volume In (+) or (-) buttons to increase or decrease the level. The corresponding LED bar will show the volume setting.

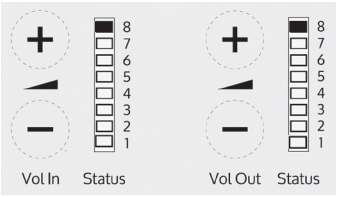
6. Ensure the mouse microphones are placed as close to their intended users as possible.

7. Check the amplifier is fully functional by ensuring the red 'fault' light is NOT showing on the front.

8. **The Amplifier is now set up.**

Our Window Intercom System amplifiers are pre-set to volume levels suitable for nearly all users. Should you need to adjust the Maximum Volume, Ducking or Hearing Loop levels outside of the pre-set amplifier parameters, use Engineer's Mode (see page 19).

Fault Diagnosis LEDs



- Volume In LED 8 will stay red if there is a fault with the staff microphone.
- Volume Out LED 8 will stay red if there is a fault with the customer/visitor microphone.
- Volume In LED 8 will flash red if there is a fault with the loop (e.g. a broken aerial).

Factory Default Settings

To return the amplifier to the factory default settings:

1. Unplug the power supply and then reconnect it.
2. The LED indicators will show a light pattern in the “Vol In” column. This indicates the firmware revision. This will be followed by a green light at the bottom of each column.
3. Within 20 seconds, press the On/Off button and Volume In (-) button **together**, then release them.
4. The “Vol In” column will again indicate the firmware revision. This indicates that the settings have been restored.

Troubleshooting

Symptom	Possible Fault	Action
There is no power detected through the amplifier (and there is power at the socket).	1) Power jack not plugged in or faulty. 2) Plug fuse has blown. 3) Faulty power supply unit. 4) Faulty amplifier.	1) Check power jack is firmly plugged in. 2) Replace fuse. If it blows again, replace the power supply unit. 3) Replace the power supply unit. 4) Replace amplifier.
The red LED is illuminated on front panel.	1) **Constant red LED:** Staff or customer/visitor microphone fault. 2) **Red LED comes on after speech:** Induction loop fault.	1) Ensure microphone is wired correctly and firmly plugged in. Try alternative microphone to ensure port is working. 2) Ensure induction loop connector is wired correctly and firmly plugged in.
I can't hear audio through the induction loop.	1) Induction loop or microphone is disconnected. 2) Loop tester has a fault.	1) Check instructions for correct connections and, if possible, check the hearing device with a known working hearing loop. 2) Ensure loop tester has a new set of batteries.
I can hear interference through speakers (buzzing / whistling / hissing).	1) Unscreened or poorly earthed third party equipment is being used in close proximity. 2) Internal volume gain set to high. 3) Incorrect power supply being used.	1) Switch off any third party equipment to identify the source of interference. 2) Access the amplifier engineers mode to adjust the internal settings. 3) Ensure that our grounded power supply unit is connected.
Amplifier goes into feedback.	1) Internal volume gain set to high. 2) Microphone positioned too close to speaker.	1) Access the amplifier engineers mode to adjust the internal settings. 2) Move the microphone to a location further from the speaker.
Unit does not go into power saving mode.	1) Ambient noise in area is too high.	1) Switch off any air con systems, desktop fans and/or computers to reduce ambient noise.

If no action is successful please seek assistance from your distributor or a Contacta installer.

Engineer's Mode

Engineers Mode allows you to adjust the Volume In and Out levels, Ducking levels and Hearing Loop levels to better suit your environment and achieve the best possible performance.

Before entering Engineer's Mode, cycle the power. To do this either:

- Switch the power off at the mains socket and back on again
- Remove the power connector and re-insert it

To enter Engineer's Mode, simultaneously press and release the following buttons within 20 seconds of cycling the power:

- Settings button
- Volume In increase button
- Volume Out increase button

Number 1 LED on the Volume In will flash green to indicate that you are in Engineer's Mode.

The on/off and settings buttons in Engineer's Mode operate as follows:

 Move to the next setup area

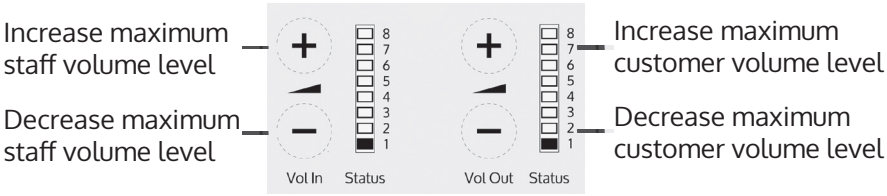
 Save and exit Engineer's Mode

The amplifier will automatically exit Engineer's Mode if no buttons are pressed for 2 minutes.

There are 3 editable setup areas in Engineer's Mode. You will always enter setup area 1 first. The green Volume In LED bar will flash to indicate which setup area you are in.

Setup Area 1:
Maximum Volume Adjustment (LED 1 flashes)

Setup Area 1 allows you to adjust the Volume In and Volume Out levels to further optimise the system for the environment in which it is installed.



1. Ensure the customer/visitor and staff volumes are turned down.

2. Adjust staff (Volume In) volume to a comfortable level. Press and hold the Volume In (+) or (-) buttons to increase or decrease the level. The corresponding LED bar will show the volume setting.

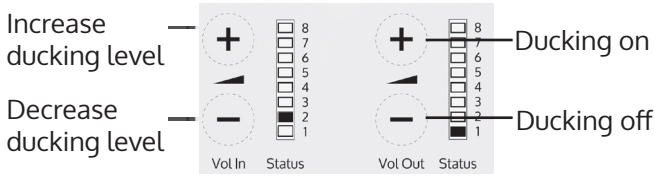
3. Raise customer/visitor (Volume Out) volume until feedback is heard. Press and hold the Volume Out (+) or (-) buttons to increase or decrease the level. The corresponding LED bar will show the volume setting.

4. Lower customer/visitor (Volume Out) volume until feedback is eliminated.

Setup Area 2:
Ducking Adjustment (LED 2 flashes)

Setup Area 2 allows you to adjust the Ducking level or to turn it on/off.

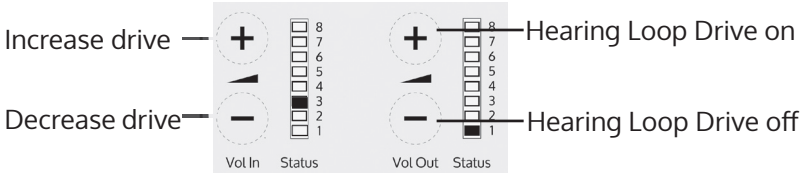
The ducking function is designed to reduce feedback on a window intercom system. Feedback occurs when the overall setting of both volume controls is too high. The ducking system works by detecting which microphone in the conversation is being used, and temporarily reducing the volume setting.



Setup Area 3:
Hearing Loop Drive Adjustment (LED 3 flashes)

Setup Area 3 allows you to adjust the Hearing Loop Drive or to turn it on/off.

Hearing loops improve communication by enabling hearing device users to hear sound sources directly, cutting out background noise.



The drive levels should be adjusted so the red LED 8 is illuminated only when

there are peaks in the speech volume.

If the amplifier does not have a loop attached, turn the Hearing Loop Drive off as indicated in the diagram above.

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