contacta STS-K020 Window Intercom System User Guide

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Contents

Product Overview

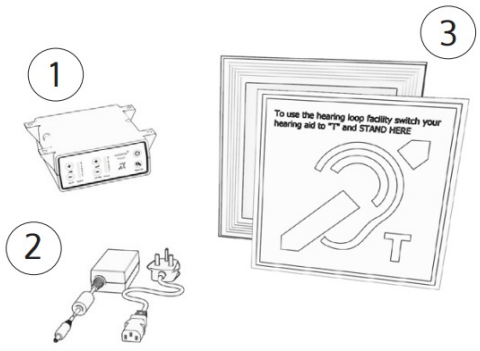
Contacta's STS-K020 is designed for retrofitting into screens where there are existing openings between 2-4" in diameter. This product is designed for installation at locations such as banks, post offices, and more.

A hearing loop aerial is included to provide additional assistance for hearing device wearers.

The microphone bracket is balistically tested to threat level IIIA, test standard: modified/abbreviated NIJ 0108.01.

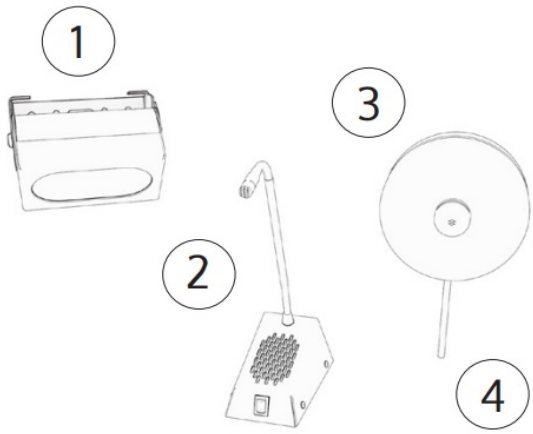
Kit Components

General Components



1. Amplifier [STS-A31H]
2. Power Supply [PS-55]
3. Hearing Loop Aerial [IL-AE98]

Speaker and Microphone Components



1. Overhead Speaker [STS-S23]
2. Staff Unit [PS-SU1]
3. Glass Mounted Microphone Assembly featuring STS-M14-000 [balistically tested to threat level IIIA]
4. Metal Stem for Microphone (3 foot standard)

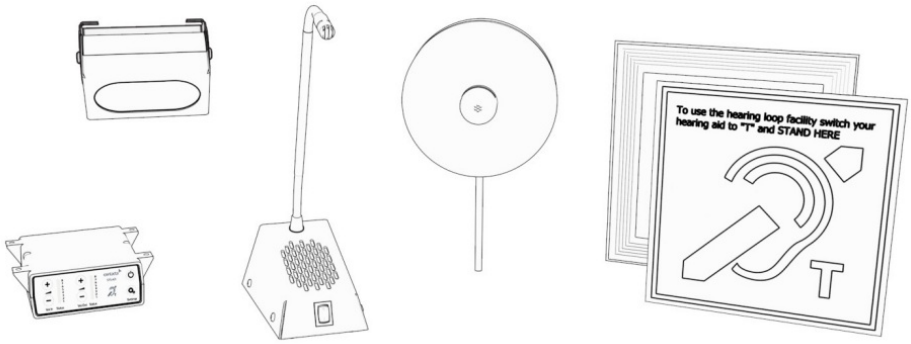
Also included is a Fixing Kit, which contains:

- (6) 8-32” Screws
- (6) P Clips
- (10) Adhesive Clips
- Screws for STS-S23

Installation Instructions

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

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



Recommended Tools

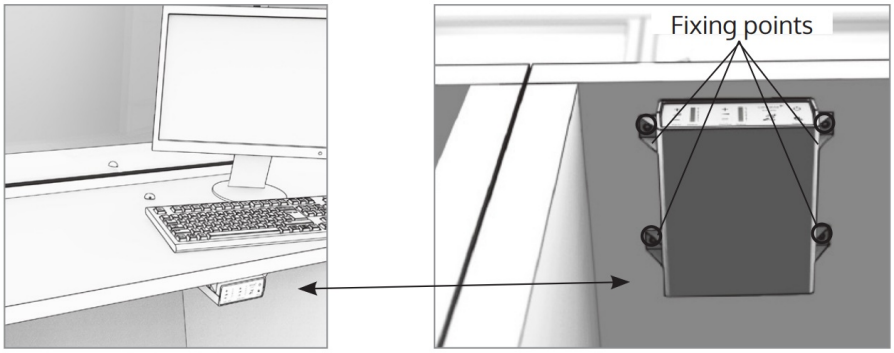
A basic toolkit recommended to install the system will include:

- Screwdrivers (Flat or Blade 2.5mm and Phillips Head PH2)
- Battery or Mains Drill
- Drillbits: 2mm, 3mm, 5mm and 7mm
- Allen Key Set

- Cable Tacking Gun
- Wire Cutters/Strippers
- Pliers
- Tape Measure
- Pencil or Marker Pen
- Cable Ties
- Electrical Insulation Tape
- Trunking

Trim cables if necessary (excluding power supply) to the required length to connect to the back of the amplifier. Bare approximately 6 mm of the cable ends to connect the 2 pin plugs.

Amplifier Installation



1. Place the amplifier under the staff counter, ensuring that it will not obstruct staff when they are sitting. The amplifier front should face outwards with adjustment buttons accessible. Ensure access to the rear panel for necessary connections.
2. Mark the four fixing points for the amplifier under the counter.
3. Drill and fix the amplifier in place using the supplied screws.
4. Install the amplifier's power supply close to a power socket outlet using the supplied mounting bracket and fixing screws.

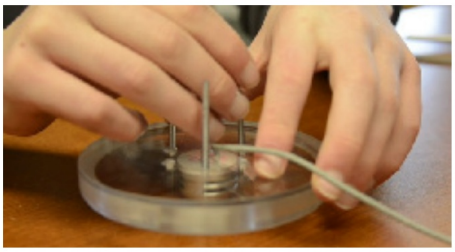
Customer Microphone Assembly Installation

STS-C100 Anti-Vandal Microphone with Glass Mount Kit

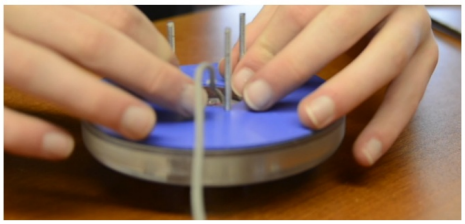
The microphone bracket is balistically tested to threat level IIIA, test standard: modified/abbreviated NIJ 0108.01.

1. Confirm the hole in the glass is between 2 ½ and 4 ½ inches in diameter.

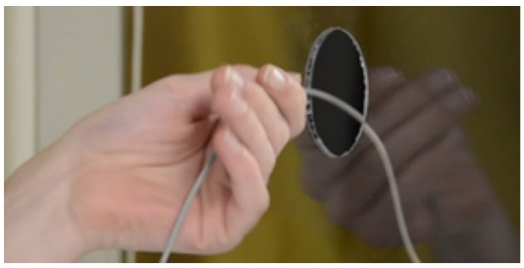
2. Separate the front and rear polycarbonate plates.
3. Place the customer facing plate (containing the stainless steel microphone capsule) on a flat surface, with the capsule facing downwards.
4. Screw an 8-32 2” stud into every second hole (three total).



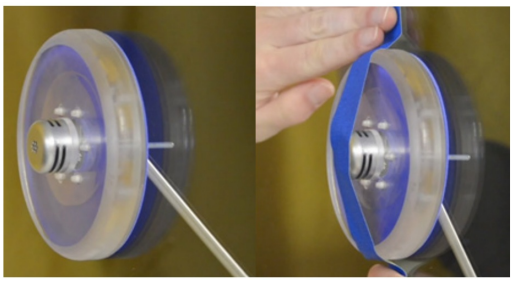
5. Feed one blue rubber gasket through the microphone wire and align the holes with the three studs. Then, push the gasket down so that it is flush on the polycarbonate plate.



6. While standing on the customer-side, feed the microphone wire attached to the front polycarbonate plate through the opening of the glass barrier and onto the staff side.
   The microphone capsule should point forward, towards the customer standing position.



7. When the end of the wire is reached, hold the front polycarbonate plate flush to the opening in the glass barrier. Use tape to temporarily secure the front polycarbonate plate to the window, ensuring it holds the plate and the microphone capsule securely.



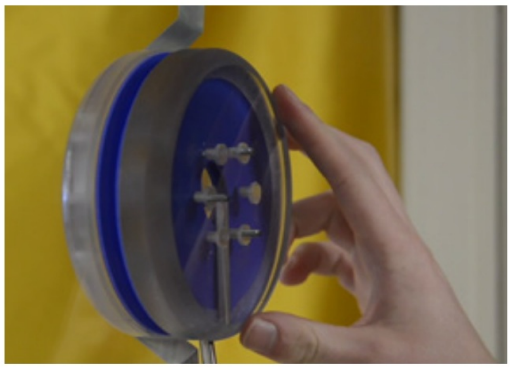
8. Move to the staff side. Feed the second blue rubber gasket through the microphone wire, aligning the holes of gasket to slip it onto the three 8-32 2” studs and flush against the screen.

9. The assembly kit is supplied with 3 feet of stainless steel tubing, designed to conceal and protect the microphone wire routing on the screen.
    - The tubing may be separate from the microphone wire or have the wire inside it already depending on the model and supply setup. If your tubing is separate, insert the wire into it and thread through.
    - The tubing with the microphone wire should be positioned on the inside of the screen (staff side). It can be cut to the size required.
    - The tubing and wire can be fitted in any direction by turning the plate around to the desired direction: vertically, diagonally, or horizontally. Note: Assistance from another person on the other side of the screen may be required.
10. Measure and cut the metal tubing to the required length. Feed the wire through the tubing until reaching the end. The tubing may be bent to a desired configuration.

    Note:
    - Tubing is held into position by the two polycarbonate plates.
      The edge of the tubing is pressed between the plates and should be located in the designated ingress of the staff side plate. The tubing is designed to run along the window surface, concealing the wire and leading it neatly to the screen edge.
    - Depending on the type of your screen and length of the tubing used, a self adhesive cable clip might be required to hold and support the far end of the stem into position on the screen.

- If you require tubing in longer lengths please contact the manufacturer as longer lengths are available to order.

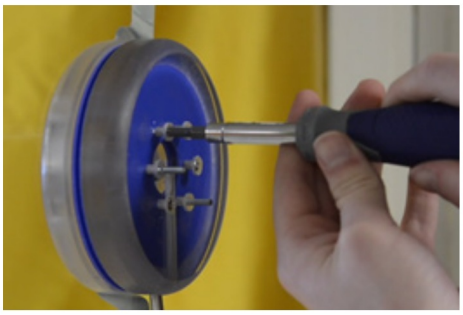
11. Align and place the rear (staff-facing) plate onto the studs, ensuring the metal tubing is pointing towards the direction you require.



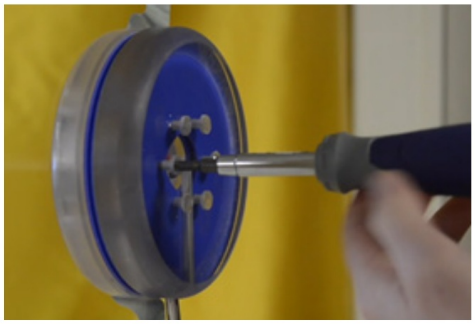
12. Screw in three of the 8-32 2” screws into the three empty holes in the plate, tightening enough to hold all the pieces together.

    Note:

    You may need to lift the unit slightly to properly align the screws.



13. Now remove the alignment studs by unscrewing them and replace them with the remaining three 8-32 2” screws.



14. Tighten all six screws in a “star” configuration. Tighten each in small increments until all screws are completely tightened and the two plates are held firmly into position, securely holding the stainless steel tube with the wire.
15. Route the microphone cable from the edge of the screen back to the amplifier in a neat and tidy fashion, using cable containment where required.
16. Plug the green connector into the ‘Cust Mic’ port on the back of the amplifier.
17. Remove the tape holding the customer side plate and the microphone capsule.
18. The microphone and speaker installation is now complete. The system should resemble the unit on the following page (dependant on the tubing set up).

Customer Speaker Installation

STS-S23

The intended location of the speaker is on a window frame, secured tightly with supplied screws.

The speaker can be installed onto metal, wooden or plastic frames, at either the top of a screen or on the sides.
The speaker angle can be adjusted to point towards the customer for better sound.

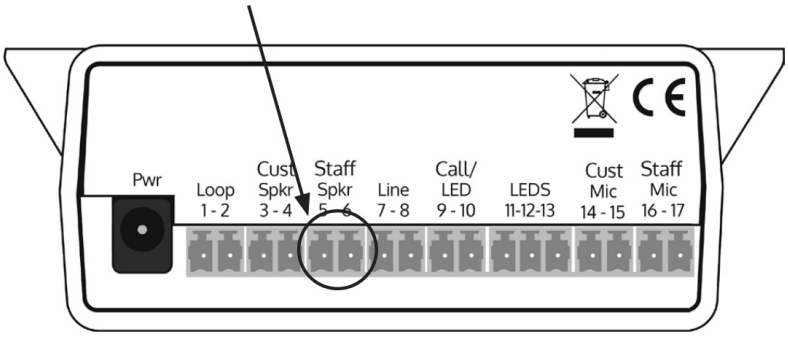
The optimum installed height is 6-8 feet from the customer.
Environments with background noise may require a lower installation.

1. Find a location on the customer side directly above the glass barrier where interactions will take place. Ensure there is enough space to drill and there is no glass behind the material.
2. Check the cable route back to the amplifier location under the counter, considering cable length and access through countertop.
3. Mark the fixing points to mount the speaker bracket while ensuring there is access to retrieve the cable.
4. Drill fixing points using a drill bit smaller in diameter than the screws that will be permanently installed.
5. Align the speaker bracket with the fixing points.
6. Mount the back plate using the appropriate screws/fixings.
7. With the cable facing down, slip the screws on the side of the speaker into the groves of the bracket. Adjust the position of speaker and tighten screws to secure in place.
8. Route the cable from the speaker back to the amplifier in a neat and tidy fashion, using cable containment where required.
9. Plug the speakers' connector into the "Cust Spkr" port on the back of the amplifier.

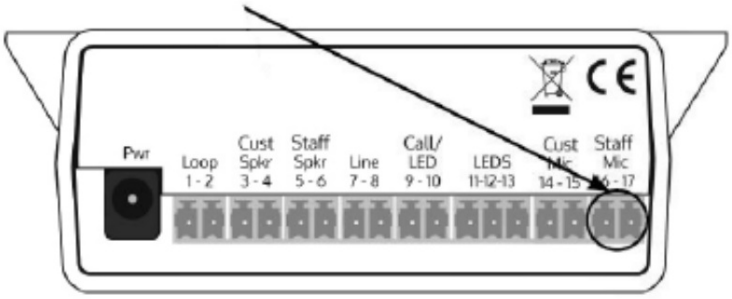
Staff Speaker & Microphone Installation

STS-SU1 Staff Unit

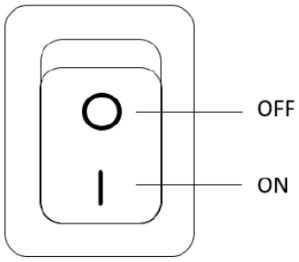
1. Place the staff unit on the staff side of the countertop, ensuring that it does not cause an obstruction and is as close to staff as possible.
2. Use the cable management hole in the counter to run the staff microphone cable back to the amplifier.
   If there is not already a cable management hole, drill one (or at least a 1/2 inch hole) in a suitable location near the rear of the counter.
3. Plug the unit's connectors with BLACK and YELLOW wires into the "Staff Spkr" port on the back of the amplifier.
   Note: The BLACK wire should be on the LEFT side of the connector. The YELLOW wire should be on the RIGHT side of the connector.



4. Plug the unit's connectors with BLACK+WHITE and RED wires into the "Staff Mic" port on the back of the amplifier.
   Note: The BLACK+WHITE wires should be on the LEFT side of the connector. The RED wire should be on the RIGHT side of the connector.

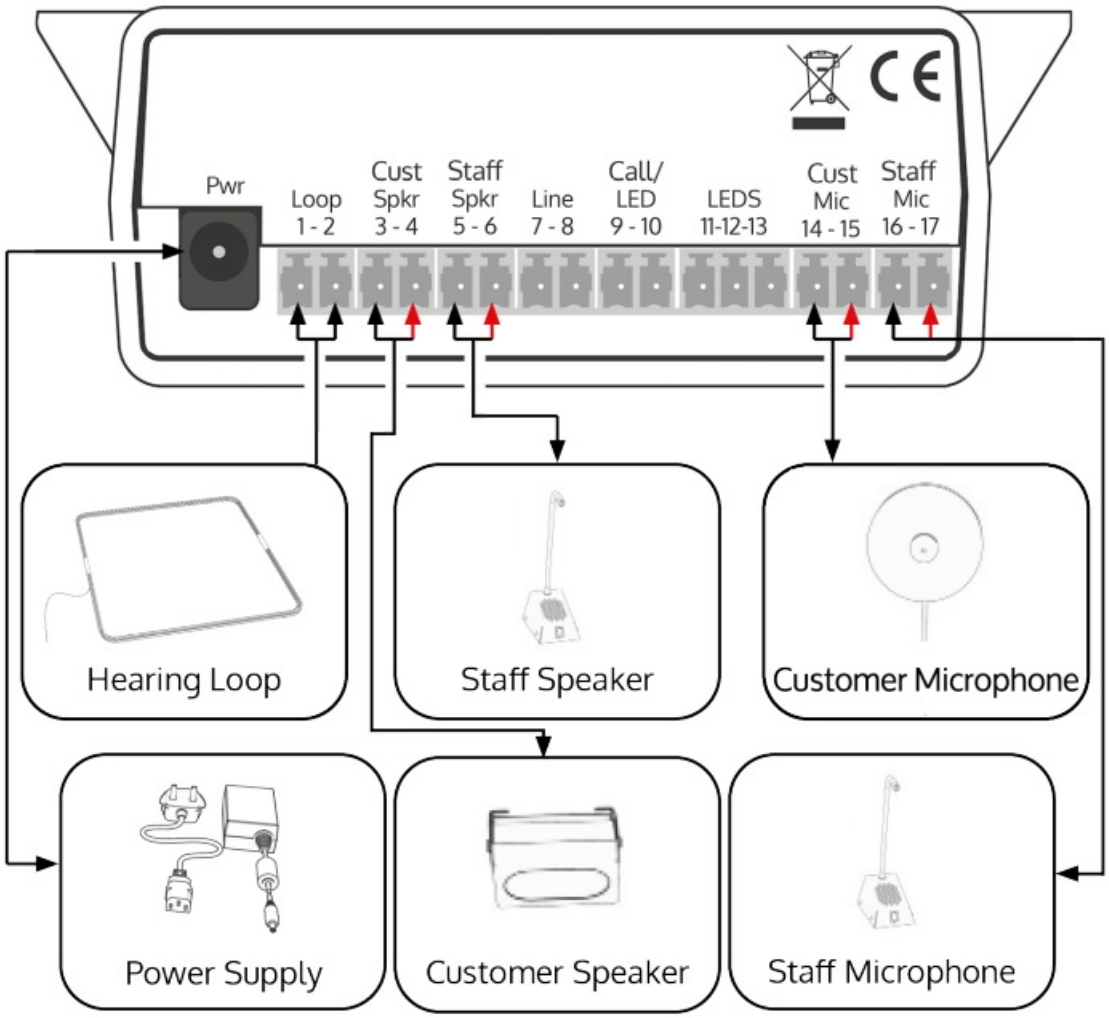


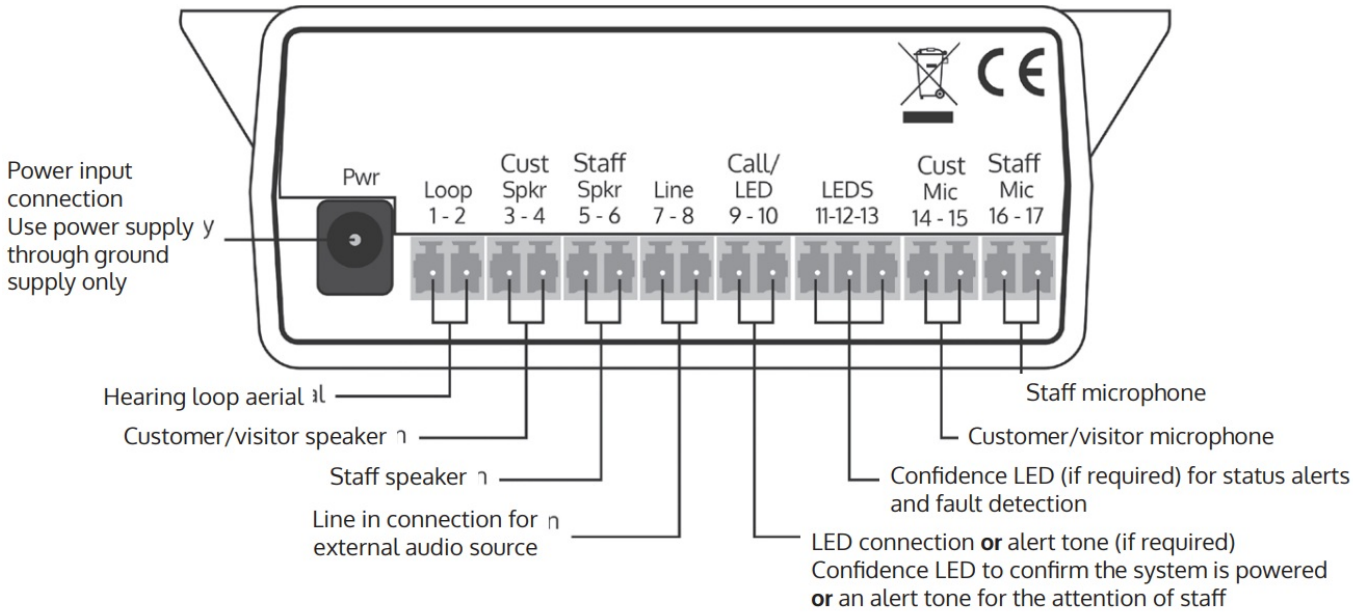
5. The staff unit microphone can be turned on or off by pressing the unit's switch. When pressed down, the "O" position indicates the unit is OFF, and the "I" position indicates the unit is ON.



Note: This switch only turns the staff microphone on or off. The customer microphone remains active at all times.

Amplifier Connections





Hearing Loop Installation

IL-AE98 Window Mount Hearing Loop

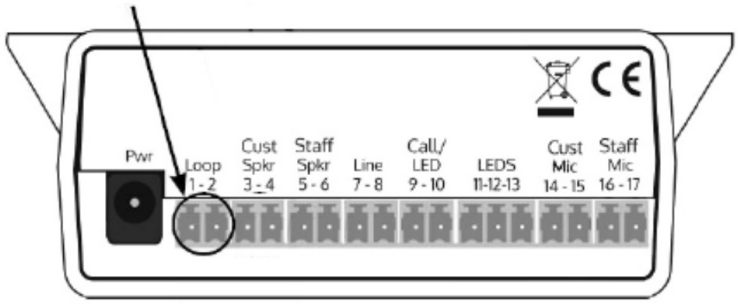
The IL-AE98 Window Mount Hearing Loop should be installed on the screen on the staff side.

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. 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.

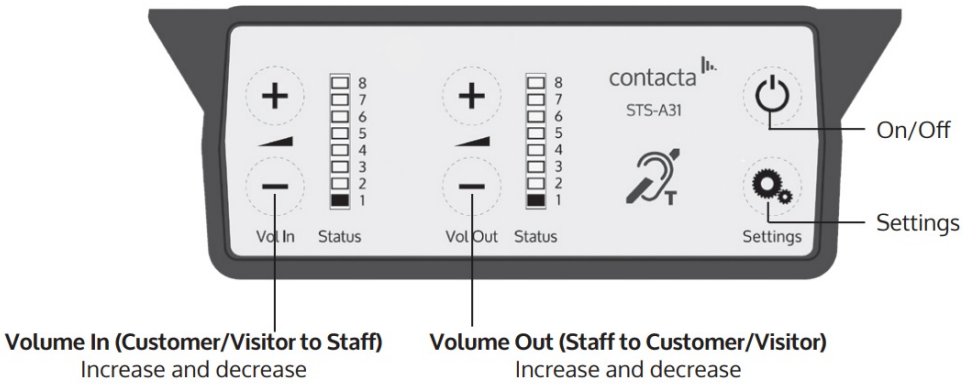
4. Carefully attach the sheet on the glass barrier with the international hearing loop signage facing the customer. Slowly apply to glass barrier while smoothing out air bubbles with straight-edged tool.
5. Remove the liner on the solid blue sheet, exposing the adhesive.
6. Carefully apply the hearing loop aerial with the attached cable to the adhesive on the solid blue sheet. Ensure the cable is at the edge of the sheet, and the wire is 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 cabling neatly to the amplifier location on the staff side. Plug the loop's connector into the "Loop" port on the back of the amplifier.



Amplifier Setup

Overview of Front Panel Buttons

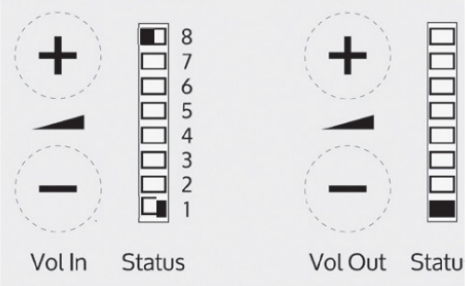


Setup

1. Connect all green plugs to the back of the amplifier, following the locations printed above the sockets (or see Connections on page 5).
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 bars show the volume.
7. Ensure the mouse microphones are placed as close to their intended users as possible.
8. Check the amplifier is fully functional by ensuring the red 'fault' light is NOT showing on the front.
9. **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 18).

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 the factory default settings:

1. Unplug the power supply and then reconnect it.
2. Press the On/Off button and Volume In (-) button together, then release.
3. The Volume In LED bar will have all LEDs illuminated, while the Volume Out LED bar will display the firmware revision number in a fixed pattern of LEDs. This indicates that default settings have been restored.

Engineer's Mode

Engineer's 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

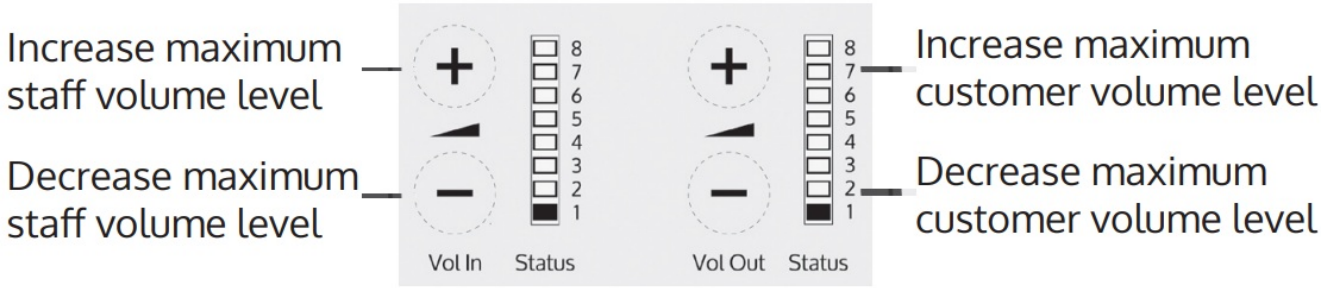
 Save and exit Engineer's Mode

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 optimize the system for the environment in which it is installed.



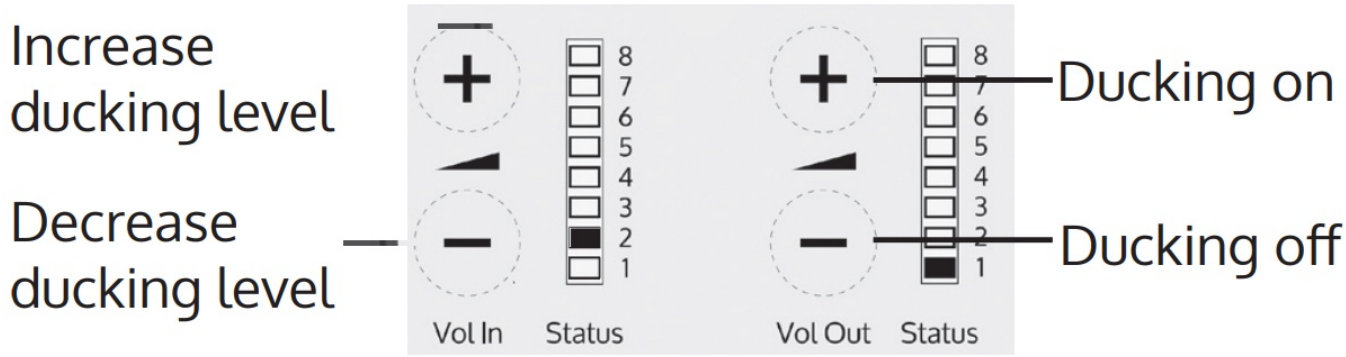
1. Ensure the customer and staff volumes are turned completely down.
2. Adjust staff (Volume In) volume to a comfortable level. Press and hold the Volume In (+) or (-) buttons to increase or decrease the level. The corresponding LED bar will show the volume setting.
3. Increase customer (Volume Out) 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. Decrease customer (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.

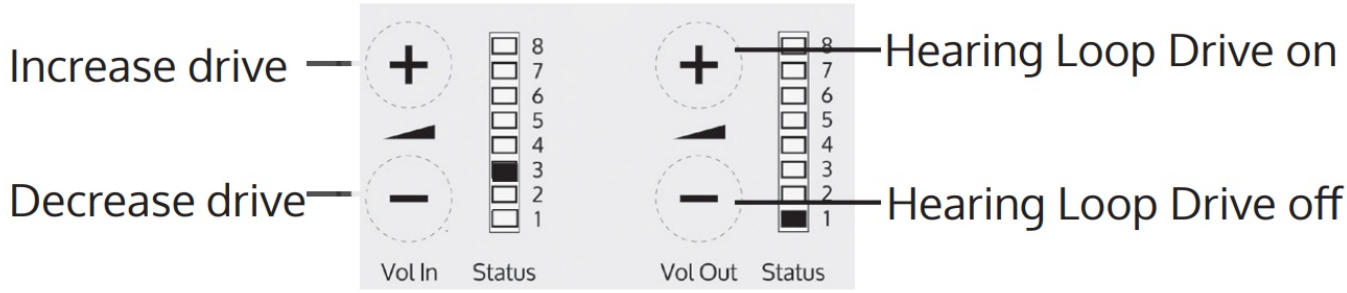
The ducking function is provided to reduce feedback on a window intercom system. Feedback occurs when the overall setting of both volume controls is too high. The ducking system works by detecting which microphone in the conversation is being used, and temporarily reducing the volume setting.



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.

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 Engineer's 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 too high. 2. Microphone positioned too close to speaker.	1. Access the amplifier Engineer's 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.

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Contacta has a policy of continuous product development, and therefore small specification changes may not be reflected in this manual. Images, labels, packaging, accessories and product colors are subject to change without notice.

Documents / Resources

	contacta STS-K020 Window Intercom System [pdf] User Guide STS-K020, Window Intercom System, STS-K020 Window Intercom System