

VTC AccuMic™



Installation & Operation Manual

**ClearOne**<sup>®</sup>  
You're Virtually There<sup>SM</sup>

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VTC AccuMic Installation and Operation Manual  
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Introduction

Thank you for choosing ClearOne’s VTC AccuMic™—a high quality microphone for video, Internet, and PC conferencing systems.

This manual outlines the installation and use of your VTC AccuMic. If, after reading it, you should have questions on installation, set up, or operation, please contact ClearOne Technical Services Group at one of the numbers listed below.

Professional Services Group

For additional help on how to install, set up, or operate the VTC AccuMic, please contact the ClearOne Technical Services Group at the number at the bottom of the page. We welcome your comments so we can continue to improve our products and serve your needs.

ClearOne Communications, Inc. ~ 1825 Research Way, Salt Lake City, UT 84119

Technical Services

Telephone: 1.800.283.5936 (USA) or 1.801.974.3760  
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Sales and Customer Service

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## Product registration

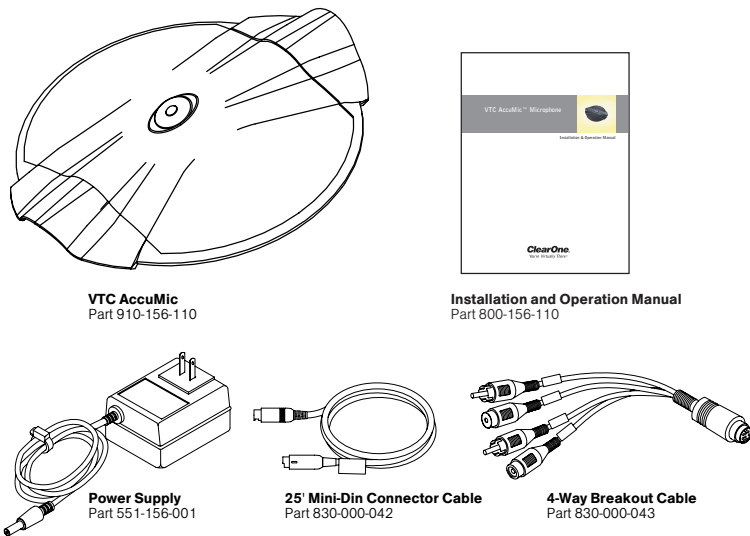
Please register your VTC AccuMic online by visiting [www.clearone.com](http://www.clearone.com). When your product is properly registered, ClearOne Communications is better able to serve you should you require technical assistance. Registration information is also used to notify you of upgrades and new product information.

## Returning your VTC AccuMic for service

If you need to return your VTC AccuMic to ClearOne for service, please call the Technical Services Group to obtain a return authorization number.

## Unpacking

As you unpack your VTC AccuMic, verify that you have received the following parts.



**Figure 1. Items shipped with the VTC AccuMic**

**!** ClearOne Communications is not responsible for product damage incurred during shipment. You must make claims directly with the carrier. Inspect your shipment carefully for obvious signs of damage. If the shipment appears damaged, retain the original boxes and packing material for inspection by the carrier. Contact your carrier immediately.

## Installation

To ensure the best performance from your VTC AccuMic, follow these setup tips:

- Put your VTC AccuMic on a desk or table in the middle of your conference area. Participants should be within a 10 foot (3.05 m) radius.
- Consult your video conferencing manual or telecommunications administrator to determine the audio input and output options.
- VTC AccuMic works with line level audio support.

## Safety Instructions

This section lists important safety instructions that you should read and understand before setting up and using your VTC AccuMic.

### Caring for your VTC AccuMic

- Follow all warnings and instructions marked on your VTC AccuMic.
- Unplug your VTC AccuMic from the wall outlet before cleaning.
- Do not use liquid or aerosol cleaners. Use a damp cloth moistened with water to clean the outside of your VTC AccuMic pad and power supply.

### Choosing a location

- Do not use your VTC AccuMic near water. For example, do not use it near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.
- Do not place your VTC AccuMic on an unstable cart, stand, or table. Your VTC AccuMic could fall, causing it to be seriously damaged.

### Electrical considerations

- Do not allow anything to rest on the cords and cables connected to your VTC AccuMic.
- Do not put your VTC AccuMic where the cords can be walked on.
- Do not overload wall outlets and extension cords, as this can result in the risk of fire or electric shock.
- Never push objects of any kind into the openings on your VTC AccuMic pad or power supply. Objects might touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock.
- Never spill liquid of any kind on your VTC AccuMic.

- To reduce the risk of electric shock, do not disassemble your VTC AccuMic pad or power supply. Send it to ClearOne when repair work or service is required. Opening or removing covers might expose you to dangerous voltage or other risks. Incorrect reassembly can cause electric shock when you next use your VTC AccuMic.
- Avoid using your VTC AccuMic during an electrical storm. There can be a remote risk of electric shock from lightning.

### When to repair your VTC AccuMic

Unplug your VTC AccuMic from the wall outlet and return it to ClearOne if any of the following conditions occur:

- The power supply cord is damaged or frayed.
- Liquid has been spilled into your VTC AccuMic pad or power supply.
- Your VTC AccuMic does not operate normally when you follow the operating instructions.
- Your VTC AccuMic has been dropped or damaged.
- Your VTC AccuMic exhibits a distinct change in performance.

### Power supply service

Use only the power supply that comes with your VTC AccuMic. If you have any questions call ClearOne at 1.800.283.5936.

**!** Do not attempt to service the power supply yourself. It must be serviced by ClearOne.

## Making Connections

The VTC AccuMic is a versatile component of your conferencing system and easily connects to most video codecs at the line level audio input and output as shown in Figure 2.

If your video codec has internal echo cancellation, you should disable it before using the VTC AccuMic. Please refer to your video codec manual for instructions.

Model Name	Line Level	3.5mm	Model Name	Line Level	3.5mm
<b>CTG</b>			<b>SONY</b>		
SM-01	Y		PCS1500	Y	
SM-02	Y		<b>TANDBERG</b>		
<b>BNI</b>			Vision 600	Y	
Large Group Conference Phone	Y		Vision 770	Y	
Medium Group RollAbout	Y		Vision 880	Y	
Person Desktop WorkStation	Y		Vision 2500	Y	
<b>GENTNER</b>			Vision 5000	Y	
APV200	Y		Vision 6000	Y	
APV200-IP	Y		Vision 7000	Y	
V-There	Y		Vision 2500 Portable	Y	
<b>INTEL</b>			Vision 5000 Portable	Y	
Intel Team Station	see PictureTel	(exclusive Dist.)	Vision 6000 Portable	Y	
Intel Video System 500	see PictureTel	(exclusive Dist.)	Codec 1000	Y	
<b>PICTURETEL</b>			Codec 2500	Y	
Intel Team Station	Y		Codec 5000	Y	
Concorde 4500 & System 4000ZX	Y		Codec 6000	Y	
Venue 2000 Model 50	Y		Health Care System III	Y	
Venue 2000 Model 30	Y		<b>VBRICK</b>		
PictureTel 760	Y		Vbrick 1000 series	Y	
Intel ProShare Video System 500		Y	Vbrick 2000 series	Y	
Live 200		Y	Vbrick 3000 series	Y	
Zydacron OnWAN for Win95		Y	<b>VCON</b>		
Zydacron OnWAN 250	Y		Cruiser 384		Y
LiveLAN		Y	Mediacconnect 6000	Y	
PictureTel 550		Y	<b>VTEL</b>		
<b>POLYCOM</b>			TC 1000	Y	
View Station FX	Y		TC 2000	Y	
VS 4000	Y		HS 2000	Y	
View Station MP	Y		LC 5000	Y	
View Station V.35	Y		WG 500		Y
Video View Station	Y		SmartStation		Y
View Station DCP 512	Y		SetTop 250	Y	
View Station SP	Y				
H.323 128	Y				
<b>RSI</b>					
Video Flyer	Y				
Media Pro	Y				

Figure 2. Video codec connectivity

### To connect the VTC AccuMic

1. Connect the 9-pin end of the mini-DIN cable to the 9-pin connector on the VTC AccuMic (see Figures 3 and 4).
2. Connect the 8-pin end of the mini-DIN cable to the 8-pin connector on the 4-way breakout cable.
3. Connect the DC Power jack to the Power Supply plug.
4. Connect the Speaker Ref In plug to the video codec's Audio Out jack.
5. Connect the Mic Out plug to the video codec's Audio In jack.
6. Using an RCA audio cable (not included), connect the Speaker Ref Out jack to the television's Audio In jack.

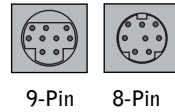



Figure 3. Mini-DIN connectors

 Additional extension cables might be needed to make all the connections.

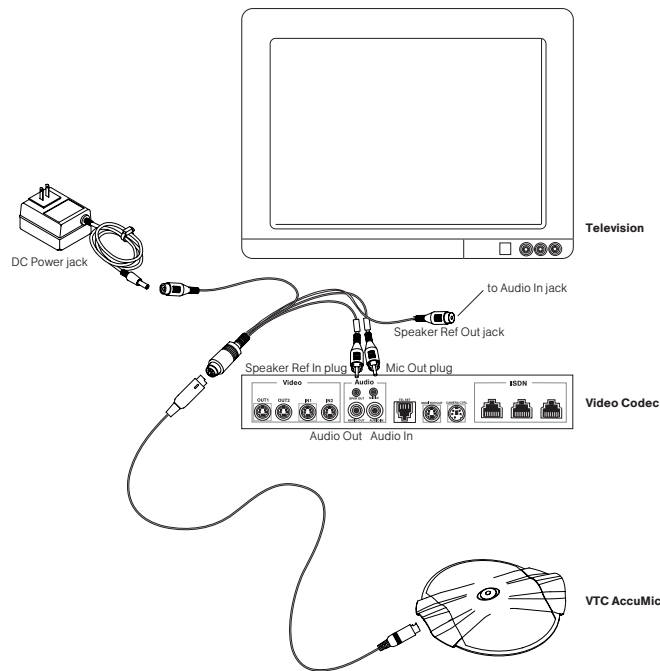


Figure 4. Connecting to a video codec

### To connect an additional VTC AccuMic

You can connect an additional VTC AccuMic to extend sound pick-up to the conferencing system.

1. Disconnect the first VTC AccuMic from its electrical power source.
2. Connect one end of a 10' (3 meter) mini-DIN VTC AccuMic cable (part 830-000-041) to the 8-pin connector on the first VTC AccuMic (see Figure 5).
3. Connect the other end of the cable to the 8-pin connector on the extension VTC AccuMic.
4. Reconnect the first VTC AccuMic to its electrical power source.

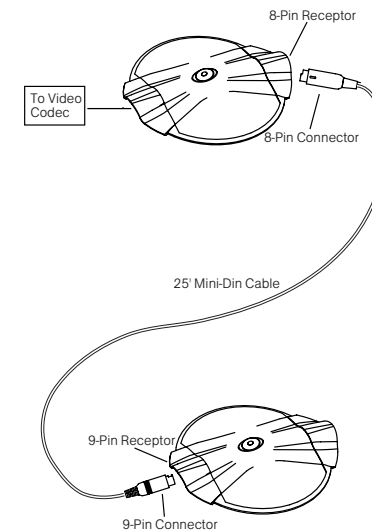


Figure 5. Connecting a second VTC AccuMic

## Operation

The VTC AccuMic's operation is almost completely automatic. The only manual control is the mute function.

### Mute

The Mute button (on top of the unit) mutes the VTC AccuMic. Press the **Mute** button once to activate mute. To deactivate mute, press the **Mute** button again.

During a call, the illuminating LEDs track the direction of your voice, letting you know you're being heard at the distant location.

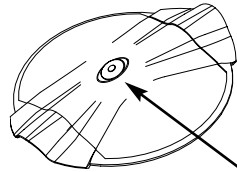


Figure 6. Mute button

## Troubleshooting

If you are having trouble with your VTC AccuMic, check the following:

- The VTC AccuMic power supply is plugged into a 120-volt electrical outlet.
- The base connector cable from the power supply to the VTC AccuMic is securely connected.
- Connections to the video codec and television are secure.
- The equipment the other party is using is comparable in quality to your video conferencing system and is working properly.
- The LEDs illuminate in the direction of the participant. The participants need to be within 10 feet (3.1 meters) of the VTC AccuMic.

If problems persist, contact the Technical Services Group.

## Specifications

<b>Electrical</b>	<b>Connections</b>	<b>Humidity:</b> 10–90%
<b>Power:</b> 15–18VDC, 500 mA, 2.1 mm center positive	<b>Cables:</b> (1) 25' (7.62 m) 8-pin to 9-pin mini-DIN (10' (3.1 m) cable available, order 830-000-041)	<b>Dimensions:</b> 8'/20.3 cm (L) x 6.5'/16.5 cm (W) x 1'/2.54 cm (H)
<b>DSP:</b> TMS320C32, 60MHz AD conversion: 16 bit, 16kHz	(1) 8-pin to 4-way breakout cable adapter: Power In, 15–18VDC, 500mA	<b>Weight:</b> 1 lb/.45 kg
<b>Frequency response:</b> 50Hz–7kHz	1 Microphone Out 1 Speaker Reference In 1 Speaker Reference Out	<b>Features</b> Microphone: 3 elements Visual Feedback: 3 LEDs Mute button
<b>AEC tail-time:</b> 64msec	<b>Regulatory</b> FCC: Class A Part 15, sub part B Standards: Meets ITU-T recommendation G.167	AGC: Dynamic automatic gain control with noise suppression VTM: 360-degree dynamic audio pickup
<b>Microphone Out (RCA plug):</b> Nominal level: –15dBu Impedance: 1kOhms	<b>Environment</b> Operating Temperature: 0-104° F/5–40° C	AEC: Removes echo and eliminates clipped speech
<b>Speaker Reference In (RCA plug):</b> Nominal level: –15dBu Impedance: 10kOhms	<b>Humidity:</b> 50–80%	
<b>Speaker Reference Out (RCA jack):</b> Nominal level: –15dBu Impedance: in parallel with Speaker Reference In	<b>Storage Temperature:</b> 41-158° F/5–70° C	

## Warranty

ClearOne Communications, Inc. warrants the original purchaser that this product will be free from defects in materials and workmanship for a period of one (1) year from the date of purchase. During the limited warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or a similar model, which may be a refurbished model) at ClearOne's option, without charge for either parts or labor. ClearOne is not responsible for costs incurred in delivering or shipping your VTC AccuMic to or from the service site. All replaced equipment becomes the property of ClearOne.

This limited warranty will not apply if the product is modified, tampered with, misused, or subjected to abnormal working conditions (including, but not limited to, lightning and water damage).

This limited warranty does not guarantee you uninterrupted service. Repair or replacement as provided under this limited warranty is the exclusive remedy of the purchaser. This limited warranty is in lieu of all other warranties, express or implied, including but not limited to any implied warranty of merchantability or fitness for a particular use or purpose. ClearOne will in no event be liable for any special, indirect, incidental, punitive, or consequential damages of any kind or character, including, without limitation, loss of revenue or profits, failure to realize savings or other benefits, loss of data or use, damage to equipment, and claims against the purchaser by a third person, even if ClearOne has been advised of the possibility of such damages.

This limited warranty gives you specific legal rights. You may have others. The law of certain states and nations do not allow limitations on duration of an implied warranty, or the exclusion or limitation of incidental or consequential damages, so the above limitations, disclaimers, or exclusions may not apply to you.

To obtain service under this limited warranty, contact ClearOne Technical Support at 1.800.283.5936 (USA) or 1.801.974.3760. You will be given a Return Authorization (RA) number to help ClearOne keep track of your limited warranty request. Once you have received your RA number, send the package, postage prepaid and insured, to ClearOne. Include proof of the date of purchase.

**IMPORTANT:** If you return your VTC AccuMic, pack it securely and be sure your RA number is visible on the outside of the package.

### Other restrictions

You will not (and will not allow any third party to)

- Decompile, disassemble, or otherwise reverse engineer or attempt to reconstruct or discover any source code or underlying ideas or algorithms of the software by any means whatsoever or,
- Remove any product identification, copyright, or other notices.

## Compliance

### FCC Rules Compliance

The ClearOne VTC AccuMic has been tested and found to comply with the limits for a Class A digital device as specified in Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. The VTC AccuMic generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You must use shielded cables with this equipment to ensure compliance with the Class A FCC limits.

Changes or modifications not expressly approved by ClearOne Communications, Inc. could void your authority to operate your VTC AccuMic.

### Radio and Television Interference

The VTC AccuMic generates, uses, and can radiate radio frequency energy. If your VTC AccuMic is not installed and used in strict accordance with the manufacturer's instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If your VTC AccuMic does cause harmful interference with radio or television reception, which can be determined by turning the VTC AccuMic off and on, try to correct the interference by:

- Reorienting or relocating the radio or television receiving antenna
- Increasing the separation between your VTC AccuMic and the receiver
- Connecting your VTC AccuMic to an outlet or electrical circuit different from the one to which the receiver is connected
- Consulting your ClearOne dealer or an experienced radio/television technician for help

You may want to obtain a copy of **How to Identify and Resolve Radio-TV Interference Problems**, Stock #004-000-0345-4. This booklet was prepared by the FCC and is available from the U.S. Government Printing Office, Washington DC 20402.

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

### Canadian Regulatory Information

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

