

# AccuMic II™ Microphone



Installation & Operation Manual

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

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AccuMic II Installation and Operation Manual  
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## Introduction

The AccuMic II™ is a highly-advanced microphone designed specifically for use with small to medium-size video conferencing systems, including the ClearOne V-There.

It features three unidirectional microphone elements positioned to pick up sound in a 360-degree pattern. Each mic element features noise cancellation, automatic gating control, PA adaptive mode, adaptive ambient mode, and ClearOne's proprietary Gentner® Distributed Echo Cancellation® to make communication between several people a natural, seamless experience. All of these functions operate automatically, requiring no user adjustments.

### Product Registration

Please register your AccuMic II 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.

### Professional Services Group

For additional help on how to install, set up, or operate the AccuMic II, please contact 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.

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

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

### Technical Services

Telephone: 1.800.283.5936 (USA) or 1.801.974.3760  
 Fax: 1.801.977.0087  
 E-mail: [tech.support@clearone.com](mailto:tech.support@clearone.com)  
 Web site: [www.clearone.com](http://www.clearone.com)

## Sales and Customer Service

Telephone: 1.800.945.7730 (USA) or 1.801.975.7200  
 Fax: 1.800.933.5107 (USA) or 1.801.977.0087  
 E-mail: sales@clearone.com

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Telephone: +49 911 955159-0  
 Fax: +49 911 955159-10  
 E-mail: global@clearone.com

## Unpacking

You should verify that you have received the items pictured below with your AccuMic II.

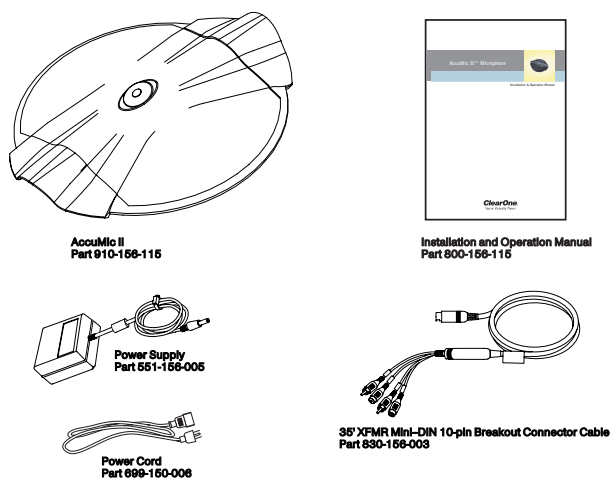


Figure 1. AccuMic II system contents

! 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

### Connecting the AccuMic II

The AccuMic II easily connects to most video codecs at the line level audio input and output, as shown in the table below.

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 compatibility with AccuMic II

## To connect to a video codec

1. Connect the 10-pin end of the mini-DIN cable to the 10-pin connector on the AccuMic II (see Figure 3).
2. Connect the Speaker Ref In plug (white) to the video codec's Audio Out jack.
3. Connect the Mic Out plug (red) to the video codec's Audio In jack.
4. Using an RCA audio cable (not included), connect the Speaker Ref Out plug to the television's Audio In jack.
5. Connect the DC Power connector to the power supply.
6. Connect one end of the power cord to the power supply and the other end to the AC outlet.

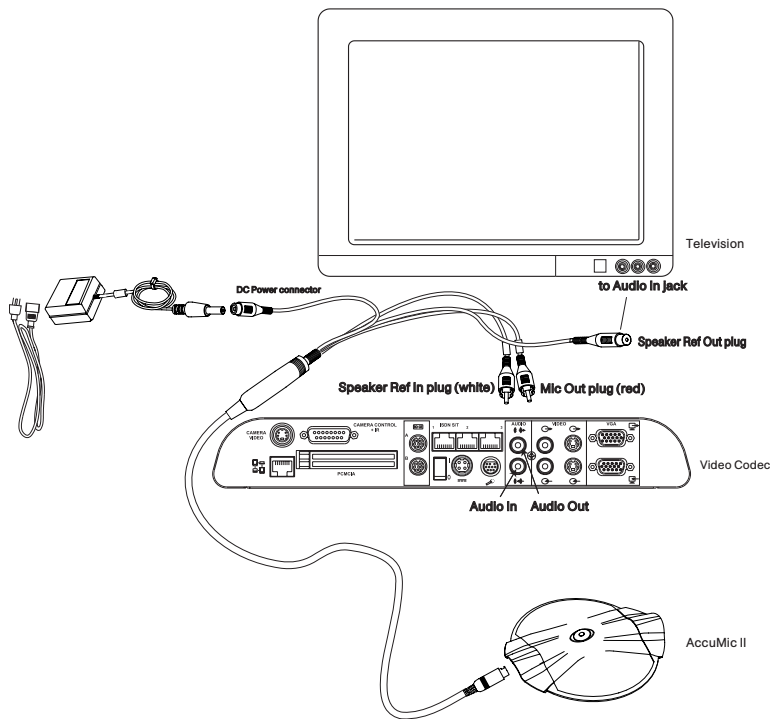


Figure 3. AccuMic II connections

## To connect a second AccuMic II

You can connect an optional AccuMic II extension mic (kit part no. 910-156-117) to expand the sound pick-up capabilities of the conferencing system. The kit includes an AccuMic II and a 10' (3 meter) 8-pin to 8-pin mini-DIN cable.

1. Disconnect the first AccuMic II from its electrical power source.
2. Connect one end of the 10' (3 meter) mini-DIN cable that comes with the AccuMic II extension kit to the 8-pin connector on the first AccuMic II (see Figure 4).
3. Connect the other end of the cable to the 8-pin connector on the extension AccuMic II.
4. Reconnect the first AccuMic II to its electrical power source.

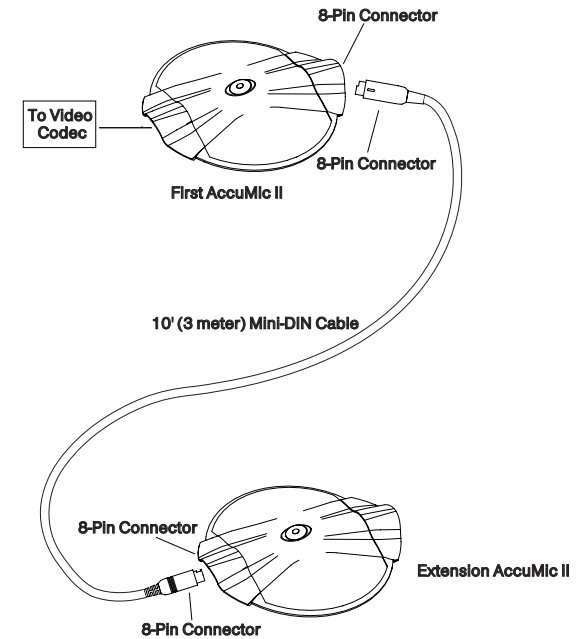


Figure 4. Connecting a second AccuMic II

5. Place the mic pads a suitable distance apart on the conference table to accommodate meeting participants.

## Operation

### Using the AccuMic II

The AccuMic II is a plug-and-play microphone; the only function that is controlled manually is Mute. Press the Mute button (on top of the mic pad) to mute the AccuMic II's mics; press Mute again to unmute the mics.

When using two connected AccuMic IIs, pressing the Mute button on either unit mutes/unmutes both AccuMic II mic pads.

The AccuMic II uses three LEDs that indicate the direction your voice is coming from, letting you know you're being heard at the distant site.

### Troubleshooting

If you have trouble with your AccuMic II, the unit might not be set up properly or other equipment might be malfunctioning. To begin, check the following:

- The AccuMic II power supply is plugged into a 120/240-volt electrical outlet.
- The base connector cable from the power supply to the AccuMic II 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 on the top of the AccuMic II illuminate in the direction of the participant speaking. Participants need to be within 10 feet of the AccuMic II.

If problems persist, please contact our Technical Services Group.

## Specifications

### Dimensions (L/W/H)

8" x 6.5" x 1"  
20.3 x 16.5 x 2.5 cm

### Weight

1 lb./45 kg

### Operation

Temperature: 5–40° C/  
41–104° F  
Humidity: 50–80%

### Storage

Temperature: 5–70° C/  
41–158° F  
Humidity: 10–90%

### Power

12VDC, 2A, 25W, center  
positive

### Microphone Out

RCA jack  
Nominal level: -10dBu  
Impedance: 100Ω

### Speaker Reference In

RCA plug  
Nominal level: -10dBu  
Impedance: 200kΩ

### Speaker Reference Out

RCA jack  
Nominal level -10dBu

### Cable

(1) 35' (10.7 m) 10-pin  
mini-DIN to four-way break-  
out cable adapter:

- 1 Power In 12VDC, 2A,  
25W
- 1 Microphone Out
- 1 Speaker Reference In
- 1 Speaker Reference Out

### Microphones

3 elements, each with 120-  
degree pickup range

### Visual Feedback Indication

3 LEDs that indicate direc-  
tion of audio pickup

### Mute Button

Mutes all mic elements

### A/D Conversion

24 bit, 16kHz

### Frequency Response

50Hz–7kHz

### AEC Tail Time

130ms

### Noise Cancellation

6dB attenuation

### Auto Mixer and Input Configuration

Automatic gating control  
PA adaptive mode  
Adaptive ambient mode  
Echo cancellation  
Noise cancellation  
First mic priority  
NOM

### Regulatory and Standards

FCC, CE, IC

### Optional AccuMic II Extension Mic

Includes AccuMic II micro-  
phone and 10' (3 meter)  
extension cable.

Kit part number: 910-156-  
117.

## Warranty

### End-User Warranty

ClearOne Communications, Inc. (Manufacturer) warrants that this product is free of defects in both materials and workmanship. Should any part of this product be defective, the Manufacturer agrees, at its option, to:

- A. Repair or replace any defective part free of charge (except transportation charges) for a period of one year from the date of installation for the end-user, provided the owner returns the product to the Manufacturer at the address set forth below. No charge will be made for parts or labor during this period;
- B. Furnish replacement for any defective parts in the product for a period of one year from the date of original purchase. Replacement parts shall be furnished without charge, except labor and transportation.

This Warranty excludes assembled products not manufactured by the Manufacturer whether or not they are incorporated in a Manufacturer product or sold under a Manufacturer part or model number.

#### THIS WARRANTY IS VOID IF:

- A. The product has been damaged by negligence, accident, act of God, or mishandling, or has not been operated in accordance with the procedures described in the operating and technical instructions; or,
- B. The product has been altered or repaired by other than the Manufacturer or an authorized service representative of the Manufacturer; or,
- C. Adaptations or accessories other than those manufactured or provided by the Manufacturer have been made or attached to the product which, in the determination of the Manufacturer, shall have affected the performance, safety or reliability of the product; or,
- D. The product's original serial number has been modified or removed.

NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, APPLIES TO THE PRODUCT. MANUFACTURER'S MAXIMUM LIABILITY HEREUNDER SHALL BE THE AMOUNT PAID BY THE END-USER FOR THE PRODUCT. No person or entity authorized to assume any obligation or other liability in connection with the products. No action, regardless of form, arising out of or relating to the product or this Warranty, may be brought by end-user more than one (1) year after the cause of action has accrued.

Manufacturer shall not be liable for punitive, consequential, or incidental damages, expenses, or loss of revenue or property, inconvenience, or interruption in operation experienced by the end user due to a malfunction in the purchased product. No warranty service performed on any product shall extend the applicable warranty period.

In case of unsatisfactory operation, the end-user shall promptly notify the Manufacturer at the address set forth below in writing, giving full particulars as to the defects or unsatisfactory operation. Upon receipt of such notice, the Manufacturer will give instructions respecting the shipment of the product, or such other matters as it elects to honor this warranty as above provided. This warranty does not cover damage to the product during shipping and the Manufacturer assumes no responsibility for such damage. All shipping costs shall be paid by the customer.

This warranty extends only to the original end user and is not assignable or transferable. This Warranty is governed by the laws of the State of Utah, without regard to the conflicts of interests provisions thereof.

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

## Compliance

### FCC Part 15 Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment 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/her own expense.

Changes or modifications not expressly approved by ClearOne Communications, Inc. could void the user's authority to operate the equipment.

### European Compliance

This equipment has been approved in accordance with Council Directive 1999/5/EC "Radio Equipment and Telecommunications Equipment."

**CE** Conformity of the equipment with the guidelines below is attested by the CE mark.

#### EC Declaration of Conformity

Application of Council Directive(s):	1999/5/EC Radio equipment and Telecommunications Terminal Equipment (R&TTE) Directive
Manufacturer's Name:	ClearOne Communications, Inc.
Manufacturer's Address:	1825 West Research Way Salt Lake City, Utah 84119 U.S.A.
Model No.:	AccuMic II

#### Standard(s) to which Conformity is declared:

##### 89/336/EEC "Electromagnetic Compatibility (EMC) Directive":

EN 55022: 1994 (Emissions)	Specification for limits and methods of measurement of radio interference characteristics of information technology equipment.
EN 61000-3-2:1995/A1/A2:1998	Part 3: Limits – Section 2: Limits for harmonic current emissions.
EN 61000-3-3:1995	Section 3: Limitation of voltage fluctuations and flicker in low voltage supply systems for equipment with rated current up to and including 16 A.

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EN 55024: 1998 (Immunity)	Information technology equipment – Immunity characteristics – Limits and methods of measurement.
EN 61000-4-2: 1995/A1:1998	Electrostatic Discharge
EN 61000-4-3: 1996/A1:1998	Radiated RF Immunity
EN 61000-4-4: 1995	Electrical Fast Transients
EN 61000-4-5: 1995	Lightning Surge
EN 61000-4-6: 1996	Conducted RF Immunity
EN 61000-4-8: 1993	Radiated Magnetic Field Immunity
EN 61000-4-11: 1994	Voltage Dips and Voltage Interruptions
<b>73/23/EEC “Low Voltage Directive (LVD)”:</b>	
EN 60950: 1992	Safety of Information Technology Equipment, Including A1, A2, A3, A4 and A11 Electrical Business Equipment.





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