



TECHNICAL Practice

TELECOM SOLUTIONS FOR THE 21ST CENTURY

MSB-30
MSB-30-EWP
Mic / Speaker / Button
Panel for IP Cameras

March 7, 2013

Add Two-Way Voice Communication to Your Existing IP Network Camera



It is common for IP based network cameras to have two-way audio connections. When this is the case, the **MSB-30** can be added to turn your IP network camera into a VoIP (Voice over Internet Protocol) video phone, allowing both voice and video to stream over the internet. If the camera already has a tiny speaker and microphone, the **MSB-30** can be added to get better and louder sounding audio by using the audio input and output connections provided by the camera. The **MSB-30** has a microphone, a speaker, and a momentary push button housed in a stainless steel flush mount panel. An optional Viking model **VE-5x5** can be used to surface mount the unit to a wall or pedestal.

The **MSB-30** line level audio input and output connections can be directly connected to the IP camera's line level audio output and input connections for two-way voice communications. A built-in 2 watt amplifier powers the internal speaker.

er, and there are volume controls to adjust both the speaker volume and microphone sensitivity. The 2 watt amplifier can be used to power an auxiliary speaker for even greater volume and coverage.

The **MSB-30** also has a momentary "CALL" button switch which can provide a momentary contact closure to trigger the IP network camera, or ring a door bell. The front panel blue LED lights continuously to show the unit is powered, and to help identify the "CALL" button location at night. An external contact closure can be used to turn off the blue LED, or simply wire it in parallel with the momentary "Call" button switch to make the blue LED wink off when the button is pressed.

The **MSB-30-EWP** adds Enhanced Weather Protection (EWP). Use for outdoor installations where the unit is exposed to precipitation or condensation. EWP products feature foam rubber gaskets and boots, sealed connections, gel-filled butt connectors, as well as urethane or thermal plastic potted circuit boards with internally sealed, field-adjustable trim pots. For more information, see **DOD# 859**.

Features

- **Vandal Resistant Features:** 14 gauge louvered 316 stainless steel faceplate with permanent laser etched graphics, speaker/mic screen, heavy duty metal "Call" button and hex drive mounting screws
- **Weather Resistant Features:** Marine grade 316 stainless steel faceplate, screws and push button switch. Switch internally sealed per IP67. Mylar speaker. Self-draining mic mount. Faceplate, mic and speaker gaskets. Weather resistant powder paint on optional **VE-5x5** (**DOD# 424**).
- Volume adjustments for microphone and speaker
- Two watt amplifier to drive speaker
- Power supply included
- Blue LED indicator
- Extended temperature range (-15°F to 130°F)
- Optional **VE-5x5** surface mount back box (**DOD# 424**)
- Optional **MSB-30-EWP** is designed to meet IP66 Ingress Protection Rating (see **DOD# 859** for more information)

Applications

Use with IP camera to add two-way voice communications for:

- Business entrances
- Residential entrances
- Pedestrian gates
- ATM machines
- Parking lots/ramps

Specifications

Power: 120V AC/13.8V AC UL listed adapter provided

Dimensions: Overall: 127mm x 127mm x 57mm (5" x 5" x 2.25"), Plastic Electrical Box: 102mm x 102mm x 54mm (4" x 4" x 2.12")

Shipping Weight: 1.5 Kg (3.3 lbs)

Operating Temperature: -26°C to 54°C (-15°F to 130°F)

Humidity – MSB-30: 5% to 95% non-condensing

Humidity – MSB-30-EWP: Up to 100% condensing

Connections: Gel-filled butt connectors

Phone...715.386.8861

www.vikingelectronics.com

IF YOU HAVE A PROBLEM WITH A VIKING PRODUCT, PLEASE CONTACT: VIKING TECHNICAL SUPPORT AT (715) 386-8666

Our Technical Support Department is available for assistance Monday 8am - 4pm and Tuesday through Friday 8am - 5pm central time. So that we can give you better service, before you call please:

1. Know the model number, the serial number and what software version you have (see serial label).
2. Have your Technical Practice in front of you.
3. It is best if you are on site.

RETURNING PRODUCT FOR REPAIR

The following procedure is for equipment that needs repair:

1. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (RA) number. The customer MUST have a complete description of the problem, with all pertinent information regarding the defect, such as options set, conditions, symptoms, methods to duplicate problem, frequency of failure, etc.
2. Packing: Return equipment in original box or in proper packing so that damage will not occur while in transit. Static sensitive equipment such as a circuit board should be in an anti-static bag, sandwiched between foam and individually boxed. All equipment should be wrapped to avoid packing material lodging in or sticking to the equipment. Include ALL parts of the equipment. C.O.D. or freight collect shipments cannot be accepted. Ship cartons prepaid to:
Viking Electronics, 1531 Industrial Street, Hudson, WI 54016
3. Return shipping address: Be sure to include your return shipping address inside the box. We cannot ship to a PO Box.
4. RA number on carton: In large printing, write the R.A. number on the outside of each carton being returned.

RETURNING PRODUCT FOR EXCHANGE

The following procedure is for equipment that has failed out-of-box (within 10 days of purchase):

1. Customer must contact Viking's Technical Support at 715-386-8666 to determine possible causes for the problem. The customer MUST be able to step through recommended tests for diagnosis.
2. If the Technical Support Product Specialist determines that the equipment is defective based on the customer's input and troubleshooting, a Return Authorization (R.A.) number will be issued. This number is valid for fourteen (14) calendar days from the date of issue.
3. After obtaining the R.A. number, return the approved equipment to your distributor, referencing the R.A. number. Your distributor will then replace the product over the counter at no charge. The distributor will then return the product to Viking using the same R.A. number.
4. **The distributor will NOT exchange this product without first obtaining the R.A. number from you. If you haven't followed the steps listed in 1, 2 and 3, be aware that you will have to pay a restocking charge.**

LIMITED WARRANTY

Viking warrants its products to be free from defects in the workmanship or materials, under normal use and service, for a period of one year from the date of purchase from any authorized Viking distributor or 18 months from the date manufactured, whichever ever is greater. If at any time during the warranty period, the product is deemed defective or malfunctions, return the product to Viking Electronics, Inc., 1531 Industrial Street, Hudson, WI., 54016. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (R.A.) number.

This warranty does not cover any damage to the product due to lightning, over voltage, under voltage, accident, misuse, abuse, negligence or any damage caused by use of the product by the purchaser or others. This warranty does not cover non-EWP products that have been exposed to wet or corrosive environments.

NO OTHER WARRANTIES. VIKING MAKES NO WARRANTIES RELATING TO ITS PRODUCTS OTHER THAN AS DESCRIBED ABOVE AND DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

EXCLUSION OF CONSEQUENTIAL DAMAGES. VIKING SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE TO PURCHASER, OR ANY OTHER PARTY, FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR EXEMPLARY DAMAGES ARISING OUT OF OR RELATED TO THE SALE OR USE OF THE PRODUCT SOLD HEREUNDER.

EXCLUSIVE REMEDY AND LIMITATION OF LIABILITY. WHETHER IN AN ACTION BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE OR STRICT LIABILITY) OR ANY OTHER LEGAL THEORY, ANY LIABILITY OF VIKING SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT, OR AT VIKING'S OPTION, REFUND OF THE PURCHASE PRICE AS THE EXCLUSIVE REMEDY AND ANY LIABILITY OF VIKING SHALL BE SO LIMITED.

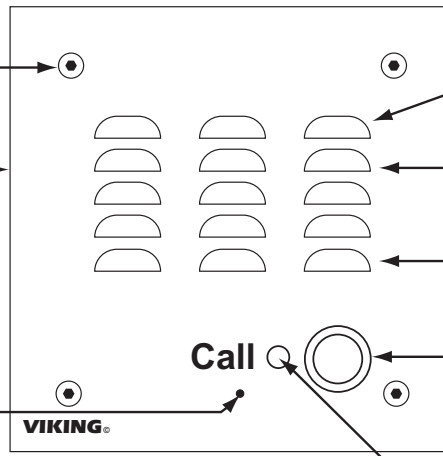
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Features Overview

Mounting Screws: (4) 6-32 x 3/4" Marine grade 316 stainless steel, flat head, 5/64" hexdrive, screws (included).

Faceplate: 14 gauge Marine grade 316 stainless steel faceplate and push button switch (sealed per IP67).

Condensation Drain Hole



Microphone: Omni-directional microphone with protective water-resistant cloth.

Speaker: Mylar speaker with rubber gasket to maintain water-tight seal and eliminate water deterioration.

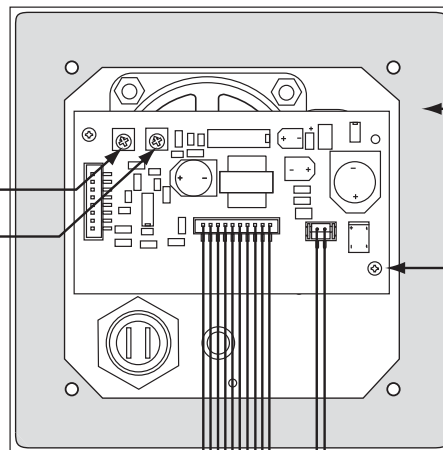
Speaker Screen: Stainless steel speaker screen with 0.018" diameter holes to prevent punctures from paperclips, etc.

Push Button Switch: Solid 316 stainless steel internally sealed per IP67.

LED: Lights blue when powered up.

Microphone Volume

Speaker Volume



Faceplate Gasket: 1/8" thick closed cell PVC to provide a water-tight seal.

Ring Terminal (included)

Earth Ground (optional)

To increase surge protection, loosen the PCB mounting screw and fasten a wire with the included ring terminal from the mounting screw to earth ground (grounding rod, water pipe, etc.)

Line Level Audio Output from Microphone (YELLOW wires)

Push Button Contacts (BLACK wires)

LED Control Input (BLUE wires)

12-15V AC or DC Power Input (RED/BLACK wires)

Line Level Audio Input (ORANGE wires)

Auxiliary Speaker Output (WHITE wires)

Installation

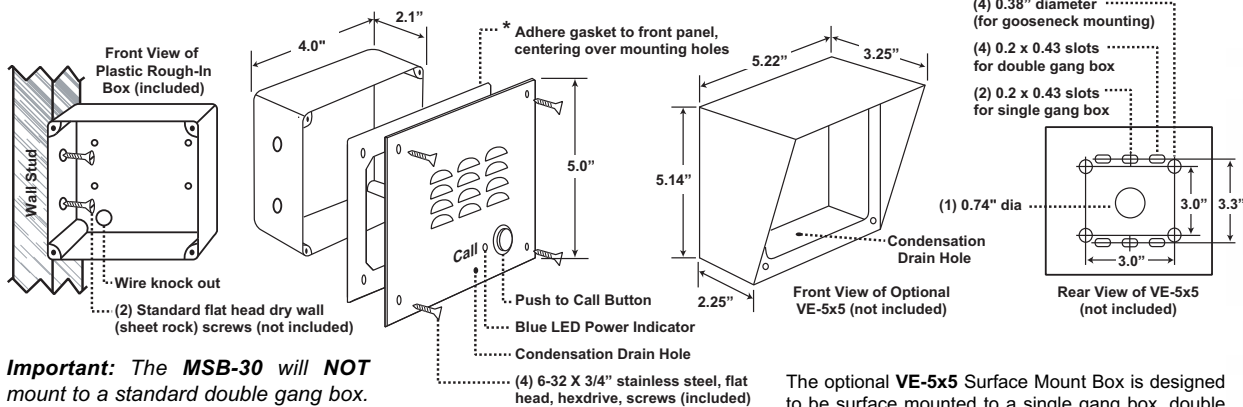
A. Mounting



IMPORTANT: Electronic devices are susceptible to lightning and power station electrical surges from both the AC outlet and the telephone line. It is recommended that a surge protector be installed to protect against such surges.

Caution: When warm air comes in contact with cold surfaces, such as outside walls and conduits, it causes condensation. To prevent condensation from accumulating inside the **MSB-30** always bring conduit into the bottom of the unit. If this is not possible, drill a 1/4" diameter hole in the bottom of the gray plastic box.

***Note:** Peel off paper liner and adhere gasket to the back of the faceplate, centering it over the four corner mounting holes. Be careful to position the modular jack inside the chassis as not to damage the components on the circuit board.



Important: The **MSB-30** will **NOT** mount to a standard double gang box.

Note: The plastic rough-in box (part # **259576**) may be purchased separately in advance. Go to www.vikingelectronics.com and click on "Spare Parts".

The optional **VE-5x5** Surface Mount Box is designed to be surface mounted to a single gang box, double gang box or **VE-GNP** gooseneck pedestal (right). For more information on the **VE-5x5** and **VE-GNP** see **DOD# 424**.



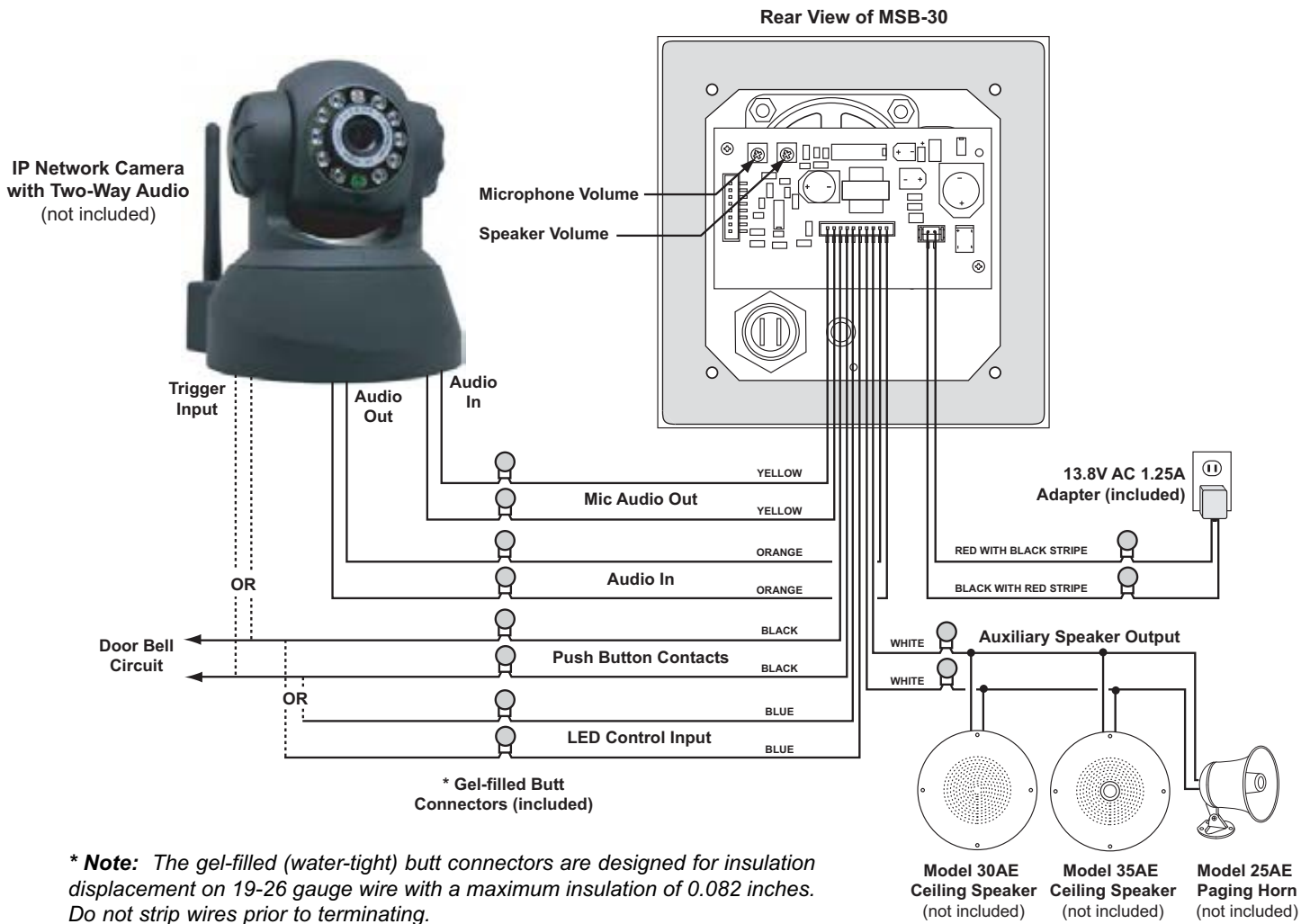
B. Wiring

Each of the **MSB-30**'s features can be used a' la carte. So depending on your application, connect only the features that are needed.

1. If microphone audio is needed, connect the MIC AUDIO OUT (yellow wires) to the camera's Line Level Audio In connections.
2. If arrival notification is needed, connect the PUSH BUTTON (black wires) to a trigger or alarm input, or use in place of an existing doorbell.
3. If controlling the front panel blue LED light is needed, connect the LED CONTROL (blue wires) to a normally open set of contacts. The blue LED will go dark when the contacts are closed. The LED CONTROL can also be connected directly to the PUSH BUTTON (black wires) to make the blue LED wink off when the "CALL" button is pressed.

If the camera has a motion sensing feature that is used for detecting the arrival of a person, connect the PUSH BUTTON (black wires) to the LED CONTROL (blue wires) to give appearance the "CALL" button is functional when pressed.

4. If additional speaker volume is needed, connect the AUX SPEAKER (white wires) to up to three 8 ohm speakers.
5. If speaker audio is needed, connect the AUDIO IN (orange wires) to the camera's Line Level Audio Output.
6. When all else is wired, connect the 12-15V AC OR DC (red/black wires) to the provided power supply adapter.



Operation

Each of the **MSB-30** features operates independently, so any or all of them can be use or not used. Listed below is how each of the features operates.

1. **MIC AUDIO OUT** is a line level audio output of the audio picked up by the **MSB-30**'s internal microphone. The output level (or sensitivity of the microphone), can be adjusted with the volume control labeled "MIC".
2. **AUDIO IN** is a line level input that is amplified with an on-board 2 watt amplifier to drive the **MSB-30**'s internal speaker. The speaker volume can be adjusted with the volume control labeled "SPEAKER".
3. **AUX SPEAKER** is an additional speaker output, driven from the same 2 watt internal amplifier, that can drive up to an additional three 8 ohm speakers. Viking models 30AE and 35AE ceiling speakers can be used for indoor applications, and the Viking model 25AE paging horn can be used for outdoor, factory, or warehouse environments.
4. **PUSH BUTTON** is a normally open set of contacts that momentarily close when the front paneled "Call" button is pressed.
5. **LED CONTROL** is a normally open input that will turn off the front panel blue LED light when a contact closure is provided.
6. **12 – 15V AC OR DC** is the power supply input. The **MSB-30** comes with an included 13.8VAC power adapter.

Product Support Line...715.386.8666

Fax Back Line...715.386.4345

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