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Section 3: Appendix
Section 1: User Article

1. Introduction

Thank you for purchasing the Hands-Free expandable Video Intercom System HFX-700M.
This intercom system uses 2-wire installation and allows you to identify and communicate with callers at the door, from the security and convenience of any room in your home or office. Visitors activate the system by pressing a call button on the outdoor camera, which sounds a doorbell chime as well as turning on the inside video monitor. A two-way intercom then lets you speak with visitors after first visually identifying them.

It consists of a monitor station and an outdoor doorbell/camera unit. This unit is capable of expanding up to a total of 4 indoor monitors and 2 door cameras. Expansion monitors available for this system come in two models, video (EX-700H) or Audio only (EX-700A).

For more information regarding the complete line of our products, please visit www.comelitusa.com
2. HFX-700M KIT
2.1. HFX-700M KIT Parts Identification

[Diagram of HFX-700M KIT with parts identification]

2.1.1 HFX-700M Main monitor identification

1. 3.5" Color TFT Screen
2. Speaker
3. In use LED
4. Monitor LED
5. Intercom LED
6. Communication LED
7. Microphone
8. Cut-off button (∧)
9. Intercom button (∨)
10. Monitoring button ()
11. Door release button (∥)
12. Power switch
13. Brightness tuner (❖)
14. Sharpness tuner ()
15. Bell Volume tuner ()
16. Speaker Volume tuner ()
17. JP1, video display option during door release operation
   - Enable video display (JP1 left) (default)
   - Disable video display (JP1 right)
18. JP2, door status report option
   - Bell tone indication (JP2 left) (default)
   - LED light on Door Open Button (JP2 right)
19. JP3, external doorbell trigger option
   - N.O. dry contact (default) (allow bypass current of 24VDC/1A)
   - 12VDC150mA current output
2.1.2. HFX-700M or EX-700D Door Camera identification

1. White LED Illumination
2. 1/3" Color CCD
3. Microphone
4. Speaker
5. Call button
6. Screw cover
7. CCD vertical view angle adjustment dial
   (-6 degrees, 0 degrees, 8 degrees, 16 degrees)
8. Wire to door strike
9. Wire to main Monitor
10. JP 2 (automatic LED light supplement option)
11. JP1, lock control output option and CCD on/off during the output

N.O. dry contact output; CCD on. (default) (24VDC/1A bypass current)

12VDC/300mA current output; CCD off to. (to save power)
2.2. HFX-700M KIT Operation

Operating the video intercom system consists of responding to visitor calls from door camera, releasing a door strike from indoor monitor; audio and video monitoring from any indoor monitor; voice broadcast from one monitor to all others; engage intercom function after voice broadcast.

2.2.1. Visitor Calls from Door Camera
A. When the Call button on the camera is pressed, All monitors on the system will ring with a chime sound and all monitors will be activated.
B. After the call, if nothing on the monitor is pressed, the system will time out after 30 seconds. If the monitor button is pressed, the system will stay active for 90 seconds.
C. You are able to terminate the activity on the monitor at any time by pressing the Cut-off button.
D. Press door release button from monitor can release remote door strike at door camera.

2.2.2. Audio and Video monitoring
A. Pressing the monitor button will turn on the audio and video from door camera.
B. If there is a second door camera on this system, pressing the Monitor button again will scroll the image to the second expansion door camera.
C. At anytime if you wish to terminate the monitoring, press the Cut-off button to terminate the system.

2.2.3. Push to talk mode(similar to walky-talky)
A. Communication LED on means voice is free to go out from monitor to door camera.
B. During the conversation, press the Monitor Button for 2 seconds to switch to push-to-talk mode. In this mode, pressing the Monitor Button (Communication LED will turn on) will activate the one-way voice communication to the door camera; releasing the Monitor Button and (Communication LED turns off) allow for one-way voice communication to come in from the door camera to the monitor.
C. This function can be useful when the environment at door camera side becomes too noisy.
3. Expansion Video Monitor (EX-700H)

3.1. EX-700H Identification

1. 3.5" Color TFT Screen
2. Speaker
3. In use LED
4. Monitor LED
5. Intercom LED
6. Communication LED
7. Microphone
8. Cut-off button (.borrow)
9. Intercom button ( seizing)
10. Monitoring button (preservation)
11. Door release button (discharge)
12. Power switch
13. Brightness tuner (limp)
14. Sharpness tuner (ʃell)
15. Bell Volume tuner (ladder)
16. Speaker Volume tuner (ladder)
17. JP1, video display option during door release operation
   - Enable video display (JP1 left) (default)
   - Disable video display (JP1 right)
18. JP2, door status report option
   - Bell tone indication (JP2 left) (default)
   - LED light on Door Open Button (JP2 right)
3.2. EX-700H Operation

◆ Operates the same as the main monitor unit (Refer to page 4).

3.2.1. Broadcast and intercom function

A. When system consists of main monitor and expansion monitor and an outdoor doorbell/camera unit, the system can provide intercom function.

B. Press the intercom button 📣 from any monitor, all other monitors will react by making bell sound. At the same time, host can speak and broadcast voice message to all other monitors.

C. The broadcast mode can last for 20 seconds. During the 20 seconds, any other monitor can answer the call by having the intercom button pressed in order to engage the intercom communication. Once the intercom communication has been established, talk time is for a maximum of 90 seconds. This function provides audio intercom communication only, monitors will not show any video.

D. At anytime if you wish to terminate the monitoring, press the Cut-off button 🛑 to terminate the system.
4. Expansion Audio Monitor (EX-700A)

4.1. EX-700A Identification

1. Speaker
2. In use LED
3. Monitor LED
4. Intercom LED
5. Communication LED
6. Microphone
7. Cut-off button
8. Intercom button
9. Monitoring button
10. Door release button
11. Power switch
12. Bell Volume tuner
13. Speaker Volume tuner
14. JP2, door status report option

- Bell tone indication (JP2 left) (default)
- LED light on Door Open Button (JP2 right)
4.2. EX-700A Operation
A. Operates the same as the main monitor unit (Refer to page 13).
B. EX-700A only audio function, not video function.

4.2.1. Broadcast and intercom function
A. When system consists of main monitor and expansion audio monitor and an outdoor doorbell/camera unit, the system can provide intercom function.
B. Press the intercom button from any monitor, all other monitors will react by making bell sound. At the same time, host can speak and broadcast voice message to all other monitors.
C. The broadcast mode can last for 20 seconds. During the 20 seconds, any other monitor can answer the call by having the intercom button pressed in order to engage the intercom communication. Once the intercom communication has been established, talk time is for a maximum of 90 seconds. This function provides audio intercom communication only.
D. At anytime if you wish to terminate the monitoring, press the Cut-off button to terminate the system.
5. Optional video input converter (EX-VIN)

5.1. EX-VIN Identification

1. Power LED
2. The 2-wire terminals for connecting to the main monitor
3. BNC connector for external camera video input

5.2. EX-VIN Operation

A. EX-VIN converts video signal on the 2-wire transmission format of the system.
B. Press the monitor button from any monitor to see the camera from the main door camera, press it again to scroll to the external camera device connected to the EX-VIN.
C. Pressing the cut-off button to exit the monitoring mode.

* The EX-VIN does not provide power to the external CCTV Camera.
Section 2: Installation Article

1. System layout

- System layout 1:
  NOTE: the system is capable of expanding up to a total of 4 monitors
  (1 main video monitor + 3 expansion video monitors or 3 expansion audio
  monitors (any mix of video or audio) and 2 door cameras.

Maximum wiring distance
(Using dry contact lock control at doorbell camera)

<table>
<thead>
<tr>
<th>Wire type</th>
<th>Wire assignment</th>
<th>A Max</th>
<th>B Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAT-5 (AWG#24)</td>
<td>Signal wires</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
</tr>
<tr>
<td>AWG#22 parallel wires</td>
<td>Signal wires</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
</tr>
<tr>
<td>AWG#18 parallel wires</td>
<td>Signal wires</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
</tr>
</tbody>
</table>

Maximum wiring distance
(Using the 12VDC/300mA lock control at doorbell camera)

<table>
<thead>
<tr>
<th>Wire type</th>
<th>Wire assignment</th>
<th>A Max</th>
<th>B Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWG#22 parallel wires</td>
<td>Signal wires</td>
<td>50m (164 feet)</td>
<td>50m (164 feet)</td>
</tr>
<tr>
<td>AWG#18 parallel wires</td>
<td>Signal wires</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
</tr>
</tbody>
</table>

NOTE: CAT-5 is not recommended for this type of installation.
System layout 2:

NOTE 1: The wiring HUB can amplify and distribute the 2-wire signal among the main monitor and sub-monitors.

NOTE 2: The system is capable of expanding up to a total of 5 monitors with 1 EX-HUB or 8 total monitors with 2 EX-HUBs connected in one system.

**Maximum wiring distance**
( Using dry contact lock control at doorbell camera)

<table>
<thead>
<tr>
<th>Wire type</th>
<th>Wire assignment</th>
<th>A Max</th>
<th>B Max</th>
<th>C Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAT-5 (AWG#24)</td>
<td>Signal wires</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
</tr>
<tr>
<td>AWG#22 parallel wires</td>
<td>Signal wires</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
</tr>
<tr>
<td>AWG#18 parallel wires</td>
<td>Signal wires</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
</tr>
</tbody>
</table>

**Maximum wiring distance**
( Using the 12VDC/300mA lock control at doorbell camera)

<table>
<thead>
<tr>
<th>Wire type</th>
<th>Wire assignment</th>
<th>A Max</th>
<th>B Max</th>
<th>C Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWG#22 parallel wires</td>
<td>Signal wires</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
</tr>
<tr>
<td>AWG#18 parallel wires</td>
<td>Signal wires</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
<td>100m (328 feet)</td>
</tr>
</tbody>
</table>

NOTE: CAT-5 is not recommended for this type of installation.
NOTE 1: OUT4 can also be used to connect to an expansion monitor.
NOTE 2: wiring distance <300 ft.
2. Read before installation

The proper height of monitor or door camera is 160–170 cm (63”–67”) from the ground. This may vary on each installation. View range should be actively tested before complete.

Viewing window of door camera is about 70 cm up-n-down, and 100 cm left-n-right.

NOTE 1: Wiring distance

- From main monitor to door camera:
  Maximum of 328 feet with AWG18 normal 2-wire parallel wires or CAT-5 cable.
  Maximum of 164 feet with AWG22 normal 2-wire parallel wires.

- From monitor to monitor (every section):
  Maximum of 328 feet with AWG22 normal 2-wire parallel wires or CAT-5 cable.

NOTE 2: the installation environment

- Please avoid installation in an enclosed environment as this may cause feedback.
- Please avoid installation in direct sunlight as this can cause a blurry picture or dark shadows on subjects facing the camera.
- Please avoid wire installation near other power or signal lines and avoid placing units close to high power appliances as this may cause audio/video interference.
3. HFX-700M installation
3.1. Examine package contents

NOTE: Examine the following contents of the package.

- Main monitor X1
- Wall mount bracket X1
- Door camera X1
- Manual X1
- Adaptor X1
- White wall mount screws X4
- Flat head screws X4
- Screws wrench X1

3.2. Install main monitor

A. Fasten the wall mount bracket using the provided hardware.
B. Fasten wires on terminals accordingly (Refer to 3.4).
C. Select jumpers for desired function (Refer to 3.5).
D. Plug-in pin wires and mount the monitor unit on bracket.

Do not plug in the power at this stage.
3.3. Install door camera
A. Open the hidden latch, and unscrew to remove door camera unit from bracket.
B. Fasten wall mount bracket to the surface where the unit will be installed.
C. Fasten wires on terminals and select jumpers for desired function (Refer to 3.6).
D. Mount door camera unit back on the bracket and secure the assembly screw.

3.4. HFX-700M wiring and setting
A. Wire the system from terminal to terminal accordingly.

1. Connect to a N.C. magnetic switch sensor for door status detection.
2. Trigger a N.O. external chime or strobe light which is synchronized with door bell trigger.
3. Terminals for expansion monitor(w/polarity)
4. Terminals for the 2nd doorbell camera (EX-700D) or EX-VIN (no polarity)
5. Terminals for the 1st doorbell camera (EX-700D) or EX-VIN (no polarity)
6. Terminals for power adapter
7. Terminals to main monitor (no polarity)
8. Terminals for door strike
9. Electric Lock
3.5. Jumper function on main monitor

3.5.1. JP1, video display option during door release operation
A. Enable video display (JP1 left) (default) if door release is dry contact output.
B. Disable video display (JP1 right) if door release is 12VDC/300mA direct current output.

3.5.2. JP2, door status report options
A. PT1/PT2 connect a N.C. switch sensor to detect door status and react as JP2 options.
B. Bell tone indication (JP2 left) (default).
C. LED light on Door Open Button (JP2 right).

3.5.3. JP3, external doorbell trigger options
A. DG1/DG2 trigger a N.O. device to synchronize with doorbell trigger and react as JP3 options. Wrong setting may cause damage to the equipment.
B. DG1(+) and DG2(-) have polarity.
C. JP3 on left for N.O. dry contact (default) (allow bypass current of 24VDC/1A) (figure 1).
D. JP3 on right for 12VDC150mA current output (figure 2).
3.6. Jumper function on door camera

3.6.1. JP1, door control options and CCD on/off during the output

◆ Each Door Camera on the system is able to operate and release one electric lock. On a full system with 2 door cameras, the user is able to release up to two electric locks. The system can only release one electric lock at a time, depending on which door camera the call originated from. There are two door release wiring options that work with the Video Intercom System.

◆ The system can either provide a normally open dry contact (figure 1), or can be configured to give power (12V DC 300mA) straight to an electric lock that is within the power requirements (figure 2). If you are using power from the system (figure 2), it is necessary to use an electric lock that requires less than 300mA of power to engage the strike.

Figure 1: Door Release Option 1 (Additional power supply)

NOTE 1: When jumper setting is on the left (factory setting), the DOOR RELEASE terminals provide as N.O. dry contact, with no polarity allowing maximum by-pass current of AC24V or DC24V 1A.

NOTE 2: This option will keep the video on during the release of the strike.

Figure 2: Door Release Option 2 (Using power from the system)

NOTE 1: When jumper setting is on the right, the DOOR RELEASE terminals provide current output of maximum 12VDC/300mA.

NOTE 2: This option will cut CCD power during the operation and there will be a momentary loss of video upon release of the strike.

3.6.2. JP2, light sensor options

A. Factory setting is left which enables automatic LED illumination at in low lighting conditions.

B. Select and plug JP2 to its right to disable LED illumination of the doorbell camera at all times.
4. Expansion video monitor (EX-700H) Installation

4.1. Examine package contents

NOTE: Examine the following contents of the package.

*Adaptor* X1
*Wall mount bracket* X1
*Expansion monitor* X1
*White wall mount screws* X2
*Flat head screws* X2

4.2. Install expansion video monitor

A. Fasten the wall mount bracket using the provided hardware.
B. Fasten wires on terminals accordingly. (Refer to 4.3)
C. Select jumpers for desired function (Refer to 4.4).
D. Plug-in pin wires and mount the monitor unit on bracket.

*Monitor*  
*Wall mount bracket*  
*Do not plug power at this stage.*
4.3. EX-700H wiring and setting
A. Wire the system from terminal to terminal accordingly.

1. Terminals for expansion monitor (w/ polarity)
2. Connect to a N.C. magnetic switch sensor for door status detection.
3. Terminals from previous monitor (w/ polarity)
4. Terminals for next monitor (w/ polarity)
5. Terminals for power adapter

4.4. Jumper function on EX-700H

4.4.1. JP1, video display option during door release operation
A. Enable video display (JP1 left) (default) if door release is dry contact output.
B. Disable video display (JP1 right) if door release is 12VDC/300mA direct current output

4.4.2. JP2, door status report options
A. PT1/PT2 connect a N.C. switch sensor to detect door status and react as JP2 options
B. Bell tone indication (JP2 left) (default)
C. LED light on Door Open Button (JP2 right)
5. Expansion audio monitor (EX-700A) Installation

5.1. Examine package contents

NOTE: Examine the following contents of the package.

- Expansion non-video monitor X1
- Wall mount bracket X1
- Adaptor X1
- White wall mount screws X2
- Flat head screws X2

5.2. Install expansion audio monitor

A. Fasten the wall mount bracket using the provided hardware.
B. Fasten wires on terminals accordingly. (Refer to 5.3)
C. Select jumpers for desired function (Refer to 5.4).
D. Plug-in pin wires and mount the monitor unit on bracket.

Monitor

Wall mount bracket

Do not plug power at this stage.
5.3. EX-700A wiring and setting

A. Wire the system from terminal to terminal accordingly.

1. Terminals for expansion monitor (w/polarity)
2. Connect to a N.C. magnetic switch sensor for door status detection.
3. Terminals from previous monitor (w/polarity)
4. Terminals for next monitor (w/polarity)
5. Terminals for power adapter

5.4. Jumper function on EX-700A

5.4.1. JP2, door status report options
A. PT1/PT2 connect a N.C. switch sensor to detect door status and react as JP2 options
B. Bell tone indication (JP2 left) (default)
C. LED light on Door Open Button (JP2 right)
6. Expansion door camera (EX-700D) Installation

6.1. Examine package contents

NOTE: Examine the following contents of the package.

- Door Camera (X1)
- White wall mount screws (X2)
- Flat head screws (X2)
- Security screw wrench (X1)

6.2. Install expansion door camera

A. Open the hidden latch, and unscrew to remove door camera unit from bracket.
B. Fasten wall mount bracket to the surface where the unit will be installed.
C. Fasten wires on terminals and select jumpers for desired function.
   (page 17)
D. Mount door camera unit back on the bracket and secure the assembly screw.

6.3. EX-700D wiring and setting

- Terminals for EX-700D door camera
- Terminals for main monitor DR2 terminals
- Terminals for door strike
- Electric Lock
7. Metal door camera housing (EX-700V) installation

7.1. Examine package contents

A. Examine the following contents of the package.

B. EX-700V is an optional housing assembly kit to enclose EX-700D to become flush mount metal doorbell camera.

C. Depending on different wall materials, please be careful to cut the hole according to the measurements below to fit the flush mount bracket for the EX-700V.

<table>
<thead>
<tr>
<th>Measurements</th>
<th>Unit:mm</th>
<th>Unit:inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wooden wall (cut open size)</td>
<td>100x150x41</td>
<td>3.94&quot;x5.91&quot;x1.62&quot;</td>
</tr>
<tr>
<td>Cement or brick wall (cut open size)</td>
<td>114x165x49</td>
<td>4.49&quot;x6.50&quot;x1.93&quot;</td>
</tr>
<tr>
<td>Front panel (outlook)</td>
<td>120x180x7</td>
<td>4.72&quot;x7.08&quot;x0.28&quot;</td>
</tr>
</tbody>
</table>

A. Examine the following contents of the package.

B. EX-700V is an optional housing assembly kit to enclose EX-700D to become flush mount metal doorbell camera.

C. Depending on different wall materials, please be careful to cut the hole according to the measurements below to fit the flush mount bracket for the EX-700V.
7.2. Assembly Procedure

**STEP 1-1 :**
A. If on wooden wall, cut open space is 100x150x41mm.
B. Embed box may not necessary. Go to Step 2.

**STEP 1-2 :**
A. If on cement or brick wall, cut open a hole size of 114x165x49mm.
B. Make sure the stamp wire outlet on embed box been pried open.
C. Insert and secure embed box inside the hole.

**STEP 2 :**
A. Install bracket 2 on top of the embed box.
B. If without embed box, fasten bracket 2 directly on the wooden wall.

**STEP 3 :**
A. Install bracket 1 on top of bracket 2.

**STEP 4 :**
A. Remove doorbell camera unit from its plastic wall mount bracket.
B. Install the doorbell camera unit on top of bracket 1.

**STEP 5 :**
A. Place rubber seal and speaker cover on position of the front panel.
B. Fasten safety screws by using the attached wrench.

---

**STEP 1-1 and SETP 2**

- Bracket 2
- wooden wall
- 3.0 Ø x 6mm Screw

**STEP 1-2 and SETP 2**

- Bracket 2
- Embed box
- Cement or brick wall
- 4.5 Ø x 10mm Screw

**STEP 3**

- Bracket 1
- doorbell camera unit
- 3.0 Ø x 6mm Screw

**STEP 4**

- Bracket 1
- doorbell camera unit
- front panel

**STEP 5**

- Bracket 1
- doorbell camera unit
- front panel
8. Optional video input converter (EX-VIN) Installation

8.1. Install video input converter

A. Package contains no accessories.
B. Wire EX-VIN to the video distribution box of the camera
C. Plug in BNC, no setting is necessary

8.2. EX-VIN wiring and setting

1. 2-wire terminals on EX-VIN
2. DR1 or DR2 terminals on main monitor
3. BNC for camera video
9. Technical Specifications

9.1. HFX-700M(main monitor) specification

Display: 3.5" digital TFT-LCD
Resolution: 320 x 240 pixels
Auto Timer (visitor call): 30 seconds time out; 90 seconds for conversation
Auto Timer (intercom): 20 seconds time out; 90 seconds for conversation
Operating Temperature: 14°F ~ 140°F, indoor
Dimensions (w/ bracket): 4.65"(L) x 7.0"(W) x 1.42"(D)
Power adaptor: input 100~240VAC 50/60Hz; output 23VDC/1A(24W), external
Power consumption: standby 2.1W, operating 7.8W (maximum)

9.2. HFX-700M(door camera) or EX-700D specification

Image Sensor: 1/3" Sharp CCD
Resolution: 250,000 pixels (NTSC)
Camera Lens: F/NO: 2.0 (120 degree)
View Angle: -6°,0°,8°,16° manually adjustable
Auto Light Sensor: enable/disable selectable (JP1)
Operating Temperature: -13°F ~ 140°F, outdoor
Dimensions (w/ bracket): 3.86"(L) x 5.12"(W) x 1.42"(D)
Power consumption: powered by main monitor for maximum by pass current of 24V/1A
Remote Control: maximum of DC12V/300mA

9.3. EX-700V(Metal Door Camera Housing) specification

NOTE: EX-700V is an optional housing assembly kit to enclose EX-700D to become flush mount metal doorbell camera.

- Wooden wall (cut open size): 3.94"x5.91"x1.62"
- Cement or brick wall (cut open size): 4.49"x6.50"x1.93"
- Front panel (outlook): 4.72"x7.08"x0.28"
- Housing: Aluminum
9.4. EX-700H (optional video monitor) specification

- **Display:** 3.5” digital TFT-LCD
- **Resolution:** 320 x 240 pixels
- **Auto Timer (visitor call):** 30 seconds time out; 90 seconds for conversation
- **Auto Timer (intercom):** 20 seconds time out; 90 seconds for conversation
- **Operating Temperature:** 14°F ~ 140°F, indoor
- **Dimensions (w/ bracket):** 4.65”(L) x 7.0”(W) x 1.42”(D)
- **Power adaptor:** input 100~240VAC 50/60Hz; output 23VDC/1A(24W), external
- **Power consumption:** standby 1.4W, operating 3.0W (maximum)

9.5. EX-700A (optional non-video monitor) specification

- **Auto Timer (visitor call):** 30 seconds time out; 90 seconds for conversation
- **Auto Timer (intercom):** 20 seconds time out; 90 seconds for conversation
- **Operating Temperature:** 14°F ~ 140°F, indoor
- **Dimensions (w/ bracket):** 4.65”(L) x 7.0”(W) x 1.42”(D)
- **Power adaptor:** input 100~240VAC 50/60Hz; output 23VDC/1A(24W), external
- **Power consumption:** standby 1.4W, operating 3.0W (maximum)

9.6. EX-VIN (video converter) specification

- **Operating Temperature:** -13°F ~ 140°F, outdoor
- **Dimensions (w/ bracket):** 3.8”(L) x 2.5”(W) x 0.97”(D)
- **Power consumption:** powered by main monitor

9.7. EX-HUB (Home Run Configuration HUB) specification

- **Power Input:** DC23V ~ DC24V
- **Power consumption:** Standby 1.8W; Operating 2W
- **Operating Temperature:** -4°F ~ 140°F
- **Storage temperature:** -13°F ~ 158°F
- **Weight:** 0.5 lbs
- **Dimensions:** 3.90”x3.19”x0.71”
- **Housing:** Metal
10. Trouble Shooting

Note: Before requesting service, check the troubleshooting guide to solve the problem.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No power (no picture on monitor)</td>
<td>Make sure AC plug is firmly inserted into the AC outlet. Make sure the power terminal is firmly connected into the monitor unit. Check to ensure polarity is correct. (Red=positive, Black=negative).</td>
</tr>
<tr>
<td>System is on but no picture on the monitor</td>
<td>Make sure the cable is connected securely between the master monitor and the camera. Adjust the brightness and sharpness controls.</td>
</tr>
<tr>
<td>Sound is too low</td>
<td>Adjust the volume control.</td>
</tr>
<tr>
<td>Picture is too dark or too white</td>
<td>Adjust the brightness and sharpness controls</td>
</tr>
</tbody>
</table>

NOTE: Be sure to use this product with the AC adapter supplied by the manufacturer.
Section 3: Appendix

APPENDIX 1: WARNING

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THE MONITOR OR POWER ADAPTER TO WATER OR MOISTURE.

CAUTION: DO NOT OPEN. RISK OF ELECTRICAL SHOCK.

CAUTION! TO REDUCE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER OR BACK, NO USER SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

OTHER WARNINGS

◆ Monitor is designed for indoor use only. Do not install outdoors.
◆ Keep the equipment dry. If water should get in, wipe off immediately. Water contains minerals that can erode electronic circuits.
◆ Intercom system is not operational during a power failure.
◆ Intercom system may be affected by radio frequency interference or EMI (electrical magnetic interference) in areas where broadcasting station antennas are close by.
◆ Keep all wiring at least 1 foot away from fluorescent lighting, dimmer switches and AC power.

EXPLANATION OF TWO SYMBOLS

The lighting flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute risk of electrical shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.
APPENDIX 2: IMPORTANT SAFETY INSTRUCTIONS

WARING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THE MONITOR OR POWER ADAPTER TO WATER OR MOISTURE.

◆ Read Instructions - All the safety and operating instructions should be read before operating this equipment. These instructions should be retained for future reference.
◆ Heed Warnings - All warnings on the equipment and in the operating instructions should be adhered to. All instructions regarding care and operation of this equipment should be followed.
◆ Power Sources - Equipment should only be connected to the power supply specified in the operating instructions or as marked on the equipment.
◆ Power Cord Protection - Keep cable cords and plugs clear of other objects, particularly at the point where they exit the equipment.
◆ Cleaning - Clean the equipment by wiping with a soft cloth (do not use any abrasive agents or water).
◆ Non-use Periods - Power cords should be unplugged from the outlet when left unused for a long period of time.
◆ Object and Liquid Entry - Take care not to drop objects or liquids on any part of the equipment.
◆ Damage Requiring Service - The unit should be serviced by a qualified service personnel when:
  - The power supply cord or the plug has been damaged or
  - Objects have fallen, or liquid has been spilled onto the equipment or
  - The equipment has been exposed to rain or
  - The equipment does not appear to operate normally or exhibits a marked change in performance or
  - The equipment has been dropped and/or the enclosure has been damaged.
◆ Servicing - Do not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to as Qualified Distributor's Service Personnel.
APPENDIX 3: FCC CLASS B NOTICE

NOTE:
This equipment has been Certified and found to comply with the limits regulated by FCC, and CE. Therefore, it is designed to provide reasonable protection against interference and will not cause interference with other appliance usage. However, it is imperative that the user follows this manuals guidelines to avoid improper usage which may result in damage to the unit, electrical shock, and fire hazard or injury. In order to improve the feature functions and quality of the product, the specifications are subject to change without notice from time to time.

NOTE:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to connect the interference by one or more of the following measures:

- Reorient or relocate the monitor unit
- Increase the separation between the monitor and camera
- Connect the equipment on a separate outlet
- Consult the dealer or an experienced radio or television technician
APPENDIX 4: SERVICE AND WARRANTY

To receive after sales service, please provide the following information when contact.

a. Name of the product
b. Model and serial number of the product
c. The store's name where you purchased
d. Date purchased
e. Idea and area of possible problems

Information Card

<table>
<thead>
<tr>
<th>Product name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model and serial number</td>
</tr>
<tr>
<td>The store's name</td>
</tr>
<tr>
<td>Date purchased (receipt)</td>
</tr>
</tbody>
</table>

The warranty statements

a. This product is produced under strict internal quality control and inspection procedures.
b. The warranty is good for one year from the date purchased. If the product reacts down under proper treatment during warranty, please contact our after sales connection for free-of-charge repairs.
c. The following exceptional cases will be subject to charge, even during warranty period.
   ▶ Breakdown caused by transport, or through careless treatment by customer.
   ▶ Breakdown caused by unauthorized repair or modification.
   ▶ Breakdown caused by natural disaster or electric power disorder.