



# VISBRONZE CAMERA



**USER MANUAL**

**PART# FG0198**

*Division of D.P.L. Enterprises Inc.*  
3868 East Post Road, Las Vegas, Nevada 89120, (702) 454-5515, FAX (702) 454-5225  
Website: [www.air-care.com](http://www.air-care.com); E-mail: [Info@air-care.com](mailto:Info@air-care.com)

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## 1 Introduction

The Air-Care VIS Bronze is designed specifically for video viewing and recording of Air Ducts and similar spaces that are not accessible for direct inspections. The VIS Bronze and its components have many other uses beyond video inspections. The body of this manual only covers their use in the Air Duct video inspection environment.

The VIS Bronze is the latest development in Air-Care's Video Inspection product line. As video cameras, light sources, video recorders and monitor have evolved, Air-Care has incorporated them into their Video Inspection Systems.

The VIS Bronze has the best image quality and lighting of any camera on the market for this purpose. The ultra wide angle lens and ultra-diffuse, super-bright, white LEDs render a clear, color picture of the interior of the duct from just below the camera to the top of the same duct as well as a clear view downstream of the camera.

The Insertion Rods are each 2.5 ft long with threaded ends and the electrical cable is 50 feet (15m) long. It comes with 10 rods for 25 feet of inspection length, with additional rods available. The camera head is small and streamlined to slide easily into metal, duct board and flex ducts and can be lowered down vertical runs as well. Like the insertion rods, the electrical cable can be extended up to 150 feet with multiple extensions.

The camera is mounted in an ultra-durable DELRIN® lightweight head that is mounted on a flexible spring. This allows the camera to easily work its way through tight bends of the duct and out of corrugations in a flex duct. Simply pushing it forward and twisting the rods will free it from most obstructions.

FG0198 VIS Bronze has a 10.1" Tablet with a WI-FI receiver app for displaying and recording Video in MPEG4 format. The Tablet has its own internal battery for up to 5 hours of recording and playback and can be used to show the customer the inspection as it happens or replay it later, or export it to other media and given to the customer to document the conditions of the Duct Before and After cleaning. The Tablet has its own separate charger.

The camera head, Tablet, accessories, cables, and charger fit into a convenient case, while the extension rods are stored in their Quiver, a 2" diameter x 34" long rigid tube with a screw on cap. The complete system is lightweight and easy to store and operate.

## 2 SAFETY AND PRECAUTIONS

- Read the manual before using the VIS Bronze.
- Avoid kinking or pulling on Camera cable as this will cause irreversible damage.
- Never use the camera and/or cable as an unclogging tool, only to observe the condition of the duct interior, tool position and the cleaning progress.

## 3 PARTS IDENTIFICATION

### UNPACKING INSTRUCTIONS

Before remove items from shipping box inspect for damage. Report any damage immediately to your carrier. Inspect all of the packing material for small parts before discarding packaging material. Report any damage to Air-Care immediately. Any attempt at repairing damages may void the warranty.



*10" android tablet with case and charger*



*Camera head ASM*

*VIS Bronze camera*



*Insertion rods and ends, 50ft cable, quiver with case*



## 4 STORAGE AND CLEANING

1. Always return the individual components to their designated storage areas when not in use.
2. The tablet should be stored inside the body of the camera case with its protective cover.
3. Clean the tablet screen with a microfiber cloth. All other pieces of the equipment should be cleaned with a clean, dry, cloth.
4. Never use solvents or abrasive solutions.

## 5 OPERATING INSTRUCTIONS

1. Open the blue case and remove the camera head 50 ft Video Extension cable.
2. Remove the tablet from its storage slot and protective case. Place it into the retaining slot on the front door, and rotate the top clip to secure it on to the door.
3. Plug in the AC Power pigtail to a grounded AC power cord.
4. The camera and power box have pigtails with a Screw type connector with 15 feet of cable, and a separate 50 foot video extension cable is included.
5. The camera can be connected directly to the power box, or the 50 foot extension can be used. A maximum of 150 ft of cable can be installed (50 Ft Extension cables are available from Air-Care).
6. The camera and internal Wi-Fi are supplied with power when the lighted circuit breaker switch on the back of the case is powered on.
7. The tablet runs on an internal battery or can be charged with its own charger or from a user provided Micro USB charger.
8. Power the table off when not in use.
9. Turn off the power on the blue case when not in use. The tablet charger will operate whenever the pigtail is plugged in even if the circuit breaker is off.
10. The inspection video and photographs can be viewed on the tablet.
11. The tablet will record up to 3 hours of video.
12. The Camera has a rear coupler to install a threaded insertion rod into the end. Each rod is 2.5 feet long and the VIS Bronze includes 10 rods for a total of 25 feet. More rods can be ordered, if needed.

13. The rods must be screwed together firmly so that they will not come unscrewed during the inspection. **DO NOT OVER TIGHTEN**, or it may be difficult to remove them.
14. If the threaded end of a rod becomes damaged, it can be cut off cleaned and then rethreaded with a 5/16-18 die. Call Air-Care for more detailed information.
15. If using the Cobra Power Brush, the DuctMaster or the TruckMaster vacuum hose and power brush, the VIS Bronze can be attached to the housing or hose.
16. Position the camera 12” to 18” behind the brush to reduce the vibration from the brush.
17. Use the “Hook & Loop” Straps or tape to attach the VIS Bronze camera head to the brush hose or cable housing, and secure the wire to the housing with the Hook & Loop straps provided.
18. Since the vacuum hose or brush cable bends and twists, it is necessary to allow some slack in the camera wire to prevent it from being stretched and pulling the connectors apart or breaking the wire.
19. To begin the inspection, select the air duct to be inspected and remove the grill.
20. Plug in the 50 ft wire to the camera head and the transmitter box if it is not already connected.
21. Turn on the power switch on the VIS Bronze Case and be sure the white LED’s are lit on the Camera head.
22. Turn on the tablet with the Air-Care VIS Bronze APP.
23. Start the app on the tablet
24. Verify that you see an image from the camera before inserting the camera into the ducts.
25. You can start the recording as you insert the camera or you can just VIEW the images as the camera is inserted and record video or stills when you reach an interesting area you want to document. Some operators wait until they have reached the maximum distance into the duct before starting the recording, then they slowly pull the camera out and stop at significant areas to record a clear image of the area.
26. For images, stop the video and Tap the camera ICON. After taking such a photo, restart the video recording.
27. Using 1 or 2 of the 2.5 foot sections of Insertion rod, slowly push the camera into the duct. You can rotate the rods and bend it side to side to help work the camera into the duct. **Always rotate Clockwise** to prevent the camera head and rods from loosening. It may also help to pull back the rod a few inches and quickly thrust it forward into the duct. The camera head is on the end of a spring to help it work its way around obstructions and turns in the duct.

28. When you are about 4 feet into the duct, add another rod to the end of the first and push it another 2.5 feet into the duct. You can continue this until you have reached the maximum depth. You can now go to remove another register and inspect another section of duct, if required.
29. It is useful to keep the camera in one place for several seconds to clearly record interesting parts of the ducts or dust floating in the duct or blowing past the camera. Turning the camera over can give better views of some parts of a duct. Try to always turn the Rod **CLOCKWISE**. You do **NOT** want to loosen the rods by turning them counter clockwise unless necessary.
30. If it is hard to get a good grasp of the rod to turn it, you can use a small "Vice Grip" type tool on the metal Hex coupler nuts to turn it around.
31. Verify that the inspection was recorded before packing up the camera.
32. Clean off the camera head and store all of the parts in their assigned storage areas.

## 6 SPECIFICATIONS

<b>Camera</b>	
Color CCD camera with sapphire glass lens	
Viewing angle	160°
Illumination	2 High Powered diffused white LEDs w/ Brightness Control
Operating temperature	20°F – 120°F (-6°C – 50°C)
<b>Cable</b>	
50 foot (15 m) Heavy Duty cable sections with 4 pin screw Connectors.	
<b>Transmitter</b>	
Camera Transmitter: Local WI-FI	NTSC Analog to Digital Converter
<b>Tablet</b>	
10.1" Tablet, Android HP	Included with VIS Bronze w/ Air-Care software to display, record video and images, control brightness and contrast.
<b>Internal Power Supply</b>	
Operates on 100-240 VAC with Internal Regulated Power Supplies for 3.3 VDC, 5 VDC and 12 VDC	



## 7 PARTS LIST

Tablet 10.1" Android HP with VIS Bronze App installed	COM0602	Included
Padded Sleeve to protect Tablet	COM0605	Included
Air-Care VIS Bronze APP, Pre Loaded on Tablet with Full Tablet Manual	SAO0543	Included
Door with Pivots, Tablet bottom Brackets and Top Clip	SAO0528	Included
Bottom Left Tablet support for door (Requires 6-32x1/4 Screw NBS0003)	SAO0536	Included
Bottom Right Tablet support for door (Requires 6-32x 1/4 Screw NBS0003)	SAO0537	Included
Top, turn latch for Tablet on door (Requires 10-24 x1" Screw)	SAO0611	Included
Additional Insertion Rods 2.5 ft long	SAO0376	10 Included
VIS Bronze Electronics Case, with power cord and Storage area	SAO0524	Included
Camera Head with Super Bright White LED's and Spring for tight corners	COM0522	Included
Bulkhead with Wi-Fi, Video Converter, Power Supply, Inside LED, and supporting electronics Package	Call	Included
15 meter (50 ft) Power and Video cable for Camera to Power Box	COM0592	1 Included
Winder Plate for 50 feet of Video Extension Cable	SAO0530	1 Included
Quiver, 2" Diameter x 34" for Insertion rods Handle	SAO0385	1 Included
Complete manual with instructions for VIS Bronze (This Document), Loaded on tablet in electronic form	MM0207	Included

## 8 WARRANTY



### **LIMITED WARRANTY**



**AIR-CARE WARRANTS THIS PRODUCT TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP TO THE ORIGINAL PURCHASER FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF PURCHASE. COMPONENTS LISTED BELOW ARE EXCLUDED FROM THIS ONE YEAR PERIOD AND ARE COVERED FOR PERIODS DESCRIBED BELOW:**

<b>TABLET</b>	<b>90 – DAYS</b>
<b>INSERTION RODS</b>	<b>90 – DAYS</b>
<b>ROUTER AND CONVERTER</b>	<b>90 – DAYS</b>

**WARRANTY COVERS BOTH PARTS AND LABOR (LABOR IS TO BE PERFORMED AT AIR-CARE'S FACILITY LOCATED IN LAS VEGAS, NEVADA).**

**WARRANTY IS EXTENDED TO THE ORIGINAL PURCHASER AND IS NOT TRANSFERRABLE.**

**THIS WARRANTY DOES NOT EXTEND TO ANY DAMAGE TO A PRODUCT CAUSED BY OR ATTRIBUTABLE TO FREIGHT DAMAGE, ABUSE, MISUSE, IMPROPER OR ABNORMAL USAGE. WARRANTY IS ALSO VOID IF THE PRODUCT HAS BEEN MODIFIED OR ALTERED IN ANY WAY.**

**THE PURCHASER IS RESPONSIBLE FOR THE COST OF SHIPPING THE EQUIPMENT TO AIR-CARE'S FACILITY FOR EVALUATION. IF FOUND TO BE DEFECTIVE AND COVERED BY THE TERMS OF THIS WARRANTY, AIR-CARE WILL PAY FEDEX GROUND SHIPPING CHARGES ON THE REPAIRED OR REPLACED ITEM BACK TO THE PURCHASER'S LOCATION. ANY ADDITIONAL EXPEDITED SERVICE CHARGES FOR QUICKER SHIPPING SHALL BE BORNE BY THE PURCHASER. IF THE PRODUCT OR COMPONENT IS NOT FOUND TO BE A WARRANTY ISSUE, THE PURCHASER WILL BE RESPONSIBLE FOR RETURN SHIPPING CHARGES.**

**AIR-CARE IS NOT RESPONSIBLE OR LIABLE FOR INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE OF PERFORMANCE OF THE PRODUCT; DAMAGES WITH RESPECT TO ANY ECONOMIC LOSS, LOSS OF PROPERTY, LOSS OF REVENUES OR PROFITS, LOSS OF USE, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES OF WHATSOEVER NATURE.**

**THE WARRANTY EXTENDED HEREUNDER IS IN LIEU OF ANY AND ALL OTHER WARRANTIES, AND ANY IMPLIED WARRANTIES OF ANY TYPE.**

**THIS WARRANTY GIVES YOU SPECIFIC RIGHTS. THESE RIGHTS AND OTHERS VARY FROM STATE TO STATE.**