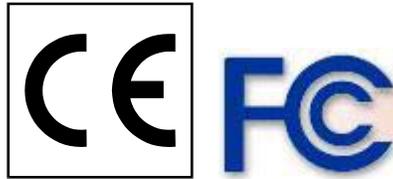


XX152-02-00

SURVEYORVFT

FIXED CAMERA DOME



Vicon Industries Inc. does not warrant that the functions contained in this equipment will meet your requirements or that the operation will be entirely error free or perform precisely as described in the documentation. This system has not been designed to be used in life-critical situations and must not be used for this purpose.

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Installation & Operation Manual





Dear Valued Customer:

Thank you for selecting Vicon systems and products for your video needs.

Since Vicon's beginning in 1967, our only business has been the design, engineering, and production of the highest quality video systems and equipment for use in a wide variety of security, safety, control, surveillance, and communication applications.

We stand behind the quality and dependability of every product with an industry leading Beneficial Use warranty.

If you are not satisfied with a Vicon product or service, I would like to know. Your complete satisfaction is the mission of every Vicon employee.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth M. Darby". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kenneth M. Darby
President

FCC Notice

Note: Complies with Federal Communications Commission Rules & Regulations Part 15, Subpart B for a Class A digital device.

WARNING

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instruction, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class A computing device in accordance with the specification in subpart B of part 15 of the FCC rules, which are designed to provide reasonable protection against such interference in a commercial installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the equipment with respect to the receiver.
- Relocate the equipment away from the receiver.
- Plug the equipment into a different electrical outlet so that the equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

The user may find the following booklet prepared by the Federal Communications Commission helpful:

"Interference Handbook, Bulletin CIB-2"

This booklet is available from the U.S. Government Printing Office, Superintendent of Documents, Mailstop SSOP, Washington, D.C. 20402-9328, ISBN 0-16-045542-1.

 **Warning:** *Power must be removed from this unit before removing circuit modules or ribbon cables.*

 **Caution:** *This unit contains circuit cards with integrated circuit devices that can be damaged by static discharge. Take all necessary precautions to prevent static discharge*

Important Safeguards

GRAPHIC SYMBOL EXPLANATION

The lightning bolt symbol alerts the user to the presence of dangerous voltage that may present the risk of electric shock.



The exclamation point symbol alerts the user to the presence of important operating and maintenance instructions.

- 1. Read Instructions** - Read all safety and operating instructions before the product is operated.
- 2. Retain Instructions** - Retain all safety and operating instructions for future reference.
- 3. Heed Warnings** - Pay attention to all product warnings.
- 4. Follow Instructions** - Follow all operating instructions.
- 5. Cleaning** -(Do not use caustic, abrasive or aerosol cleaners)
 - a) For units that CAN BE DISCONNECTED from the power source, use a damp cloth for cleaning.
 - b) For units that CANNOT BE DISCONNECTED from the power source, use a damp cloth for cleaning and do not allow moisture or liquids to enter vents.
- 6. Attachments** - Use only Vicon recommended attachments to prevent unit damage and personal injury.
- 7. Water and Moisture** - Use only products designed for outdoor environments where they will be exposed to water or moisture.
- 8. Accessories** - Do not place the unit on an unstable surface to avoid falling. Use only Vicon recommended mounting accessories..
- 9. Ventilation** - Do not block ventilating slots and openings as they ensure reliable operation. Do not place the unit near a heat source or into an enclosure unless recommended by Vicon.
- 10. Power Sources** - The product should only be operated from the recommended power source. If not specified, consult your Vicon dealer or local power company.
- 11. Grounding** - Only products equipped with a 3-prong grounded plug should be inserted into a grounded power outlet. Contact an electrician to replace an obsolete outlet. Do not force a plug into a non-grounded outlet.

12. Power Cord Protection - Power supply cords should not be routed in trafficked areas or in tight spaces where they will be pinched or used to bear weight. Allow some slack in the cord where it enters the unit.

13. Outdoor Cable Grounding - Use only grounded outdoor cables to protect against voltage surges and static charges. Section 810 of the National Electrical Code, ANSI/NFPA 70-1984, provides information on proper grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors and the requirements of grounding electrodes.

14. Lightning - Disconnect the product from its power source and cable system when possible to prevent damage due to lightning and power-line surges.

15. Power Lines - Do not locate outside cables over power or utility lines where they can fall and make direct contact. Contact with power lines can be fatal.

16. Overloading - Do not overload wall outlets and extension cords to prevent risk of fire and electric shock.

17. Object and Liquid Entry - Never probe through, or spill liquid into, enclosure openings to prevent risk of fire or electric shock.

18. Servicing - Refer all servicing to qualified service personnel.

19. Damage Requiring Service - Obtain service when:

- a) The power-supply cord or plug is damaged.
- b) Objects have fallen or liquid has been spilled into the product.
- c) The product is not designed for outdoor use and has been exposed to water or moisture.
- d) The product does not operate per the operating instructions. Perform Vicon recommended adjustments, modifications and troubleshooting only to avoid unit damage and personal injury.
- e) The product has been dropped.
- f) The product shows a significant change in performance.

20. Replacement Parts - Use only Vicon specified replacement parts or an approved equivalent to prevent unit damage and injury.

21. Safety Check - Request safety checks to be performed following repair or maintenance to verify proper operation.

22. ESD Precaution - Take all normal electrostatic discharge precautions to avoid component damage during installation and operation.

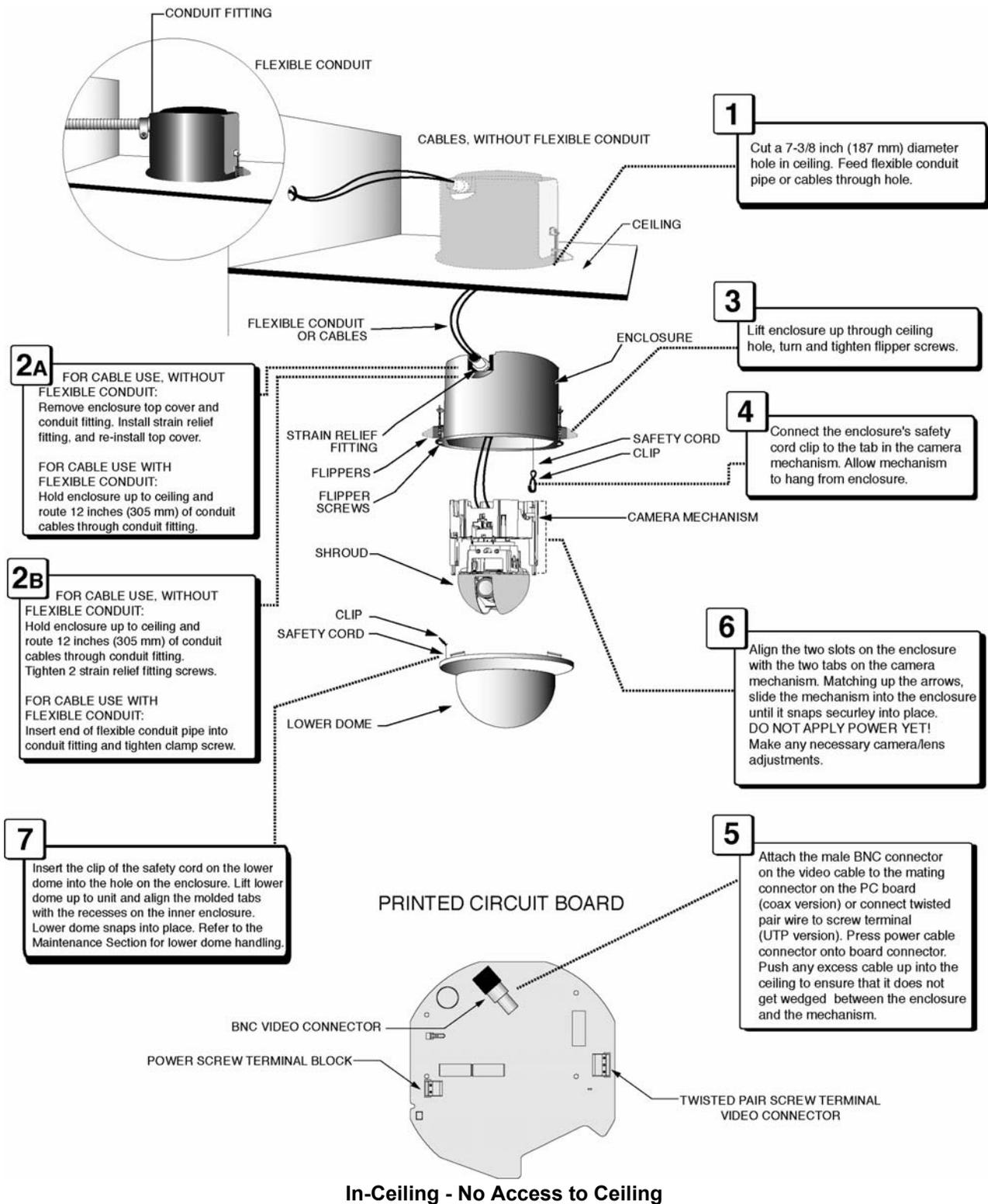
23. For 230 VAC Devices- When the disconnect device is not incorporated in the equipment or when the plug on the power supply is intended to serve as the disconnect device, follow the guidelines below:

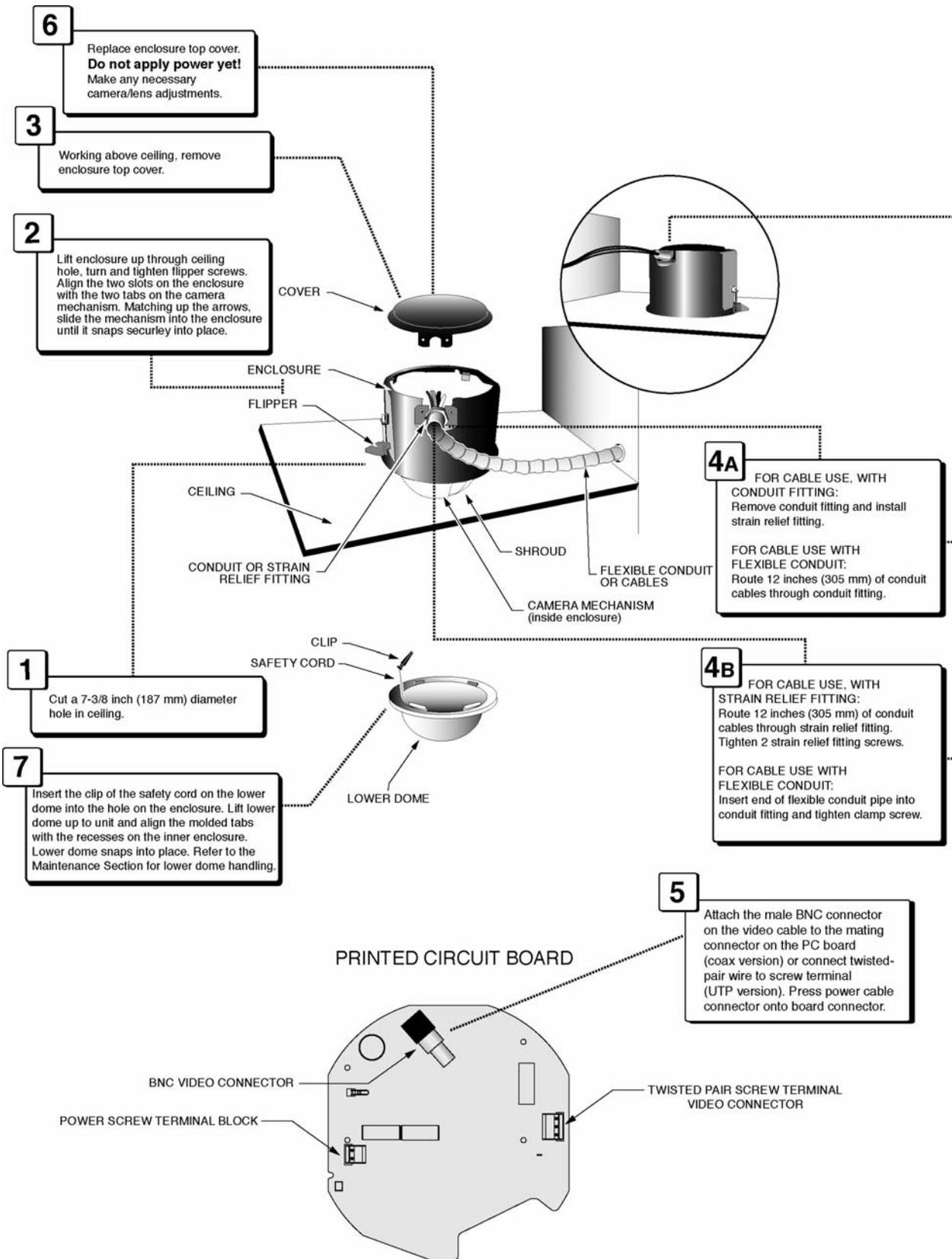
- a) For permanently connected 230 VAC units, a readily accessible disconnect device must be incorporated into the site wiring.
- b) For 230 VAC units with a plug, the outlet must be installed near the unit and be easily accessible.

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Quick Installation





6
 Replace enclosure top cover.
Do not apply power yet!
 Make any necessary camera/lens adjustments.

3
 Working above ceiling, remove enclosure top cover.

2
 Lift enclosure up through ceiling hole, turn and tighten flipper screws. Align the two slots on the enclosure with the two tabs on the camera mechanism. Matching up the arrows, slide the mechanism into the enclosure until it snaps securely into place.

1
 Cut a 7-3/8 inch (187 mm) diameter hole in ceiling.

7
 Insert the clip of the safety cord on the lower dome into the hole on the enclosure. Lift lower dome up to unit and align the molded tabs with the recesses on the inner enclosure. Lower dome snaps into place. Refer to the Maintenance Section for lower dome handling.

4A
FOR CABLE USE, WITH CONDUIT FITTING:
 Remove conduit fitting and install strain relief fitting.

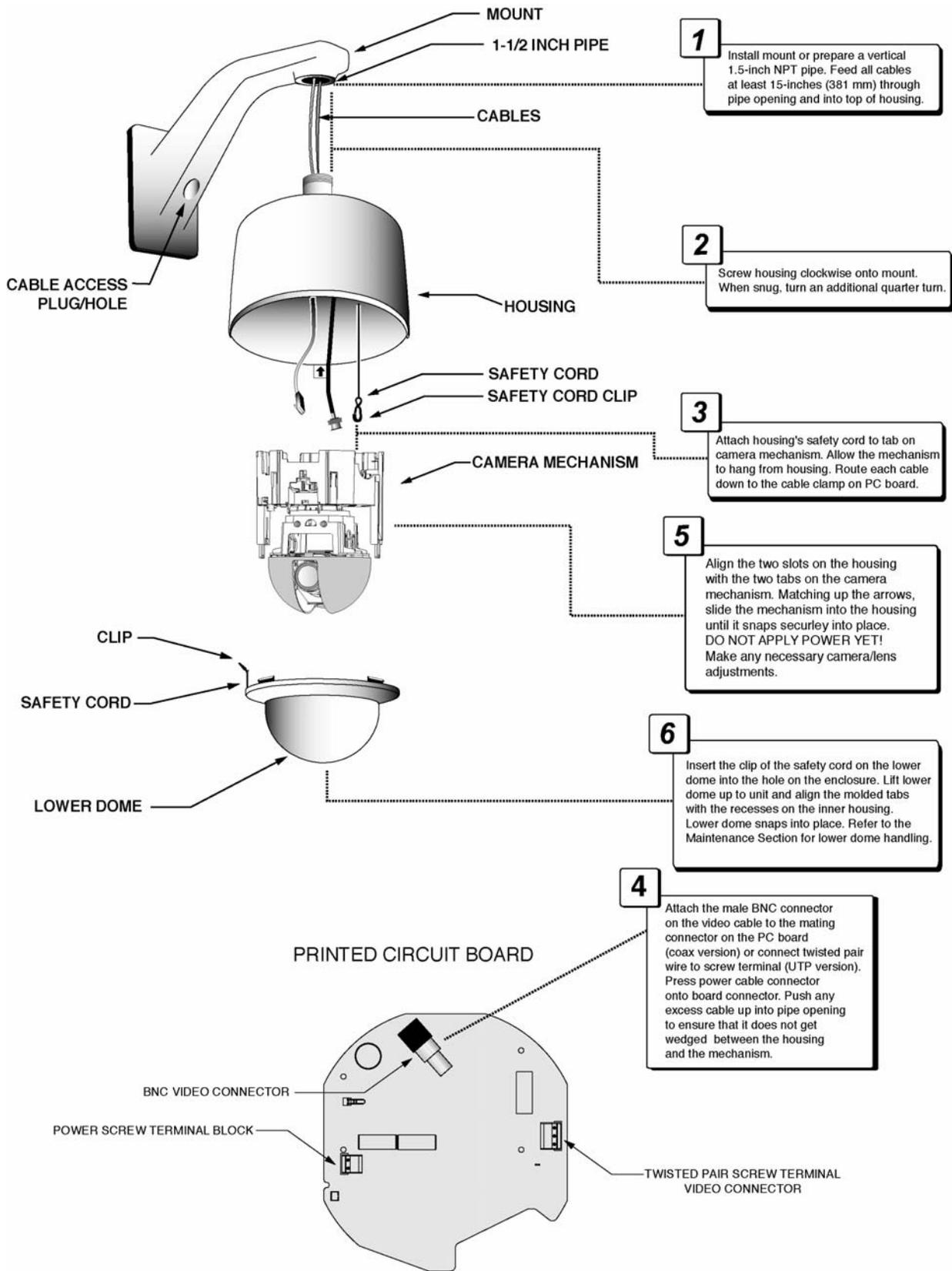
FOR CABLE USE WITH FLEXIBLE CONDUIT:
 Route 12 inches (305 mm) of conduit cables through conduit fitting.

4B
FOR CABLE USE, WITH STRAIN RELIEF FITTING:
 Route 12 inches (305 mm) of conduit cables through strain relief fitting. Tighten 2 strain relief fitting screws.

FOR CABLE USE WITH FLEXIBLE CONDUIT:
 Insert end of flexible conduit pipe into conduit fitting and tighten clamp screw.

5
 Attach the male BNC connector on the video cable to the mating connector on the PC board (coax version) or connect twisted-pair wire to screw terminal (UTP version). Press power cable connector onto board connector.

In-Ceiling – Access to Ceiling



1 Install mount or prepare a vertical 1.5-inch NPT pipe. Feed all cables at least 15-inches (381 mm) through pipe opening and into top of housing.

2 Screw housing clockwise onto mount. When snug, turn an additional quarter turn.

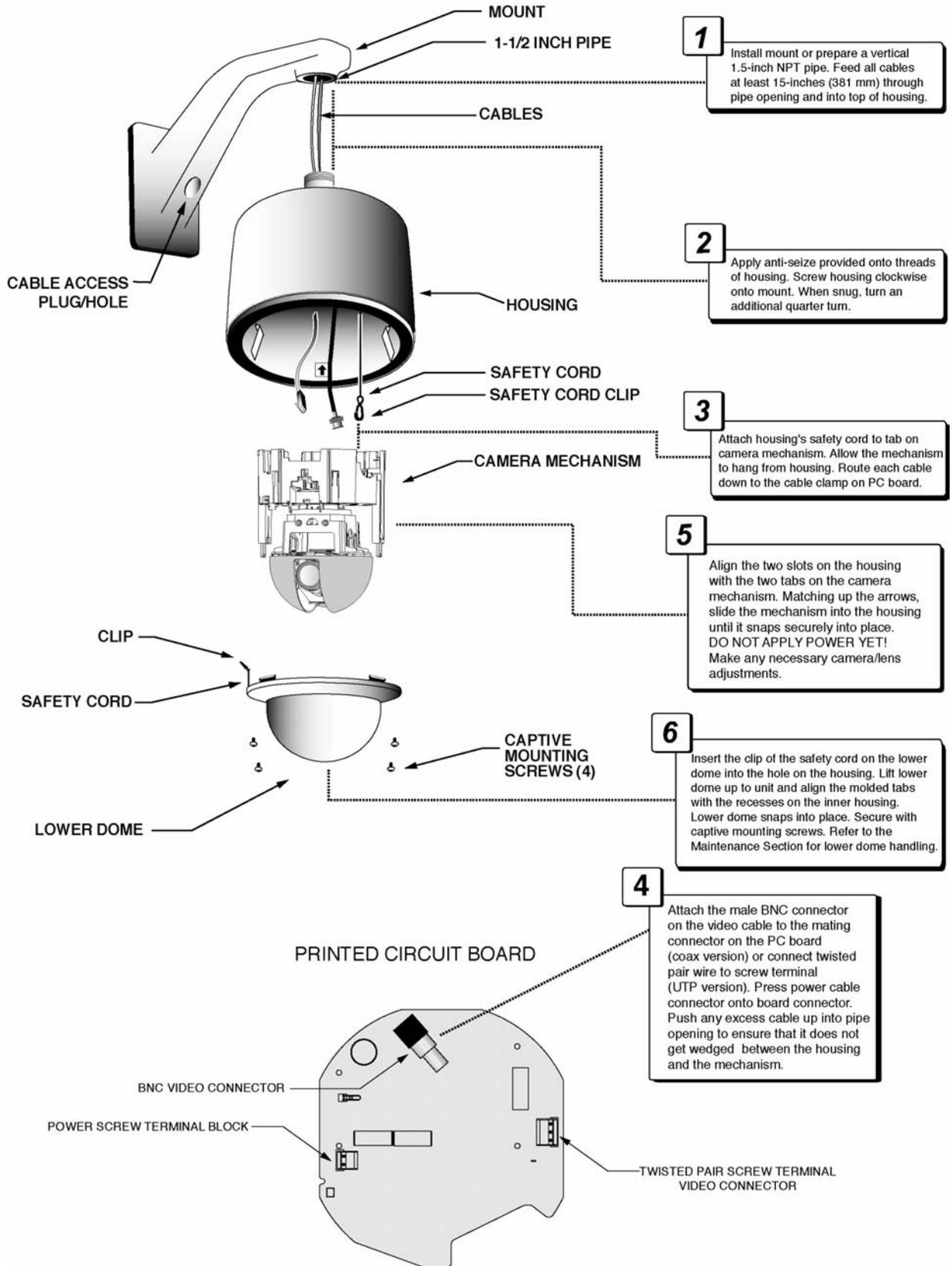
3 Attach housing's safety cord to tab on camera mechanism. Allow the mechanism to hang from housing. Route each cable down to the cable clamp on PC board.

5 Align the two slots on the housing with the two tabs on the camera mechanism. Matching up the arrows, slide the mechanism into the housing until it snaps securely into place. **DO NOT APPLY POWER YET!** Make any necessary camera/lens adjustments.

6 Insert the clip of the safety cord on the lower dome into the hole on the enclosure. Lift lower dome up to unit and align the molded tabs with the recesses on the inner housing. Lower dome snaps into place. Refer to the Maintenance Section for lower dome handling.

4 Attach the male BNC connector on the video cable to the mating connector on the PC board (coax version) or connect twisted pair wire to screw terminal (UTP version). Press power cable connector onto board connector. Push any excess cable up into pipe opening to ensure that it does not get wedged between the housing and the mechanism.

Pendant - Indoor



Pendant – Outdoor

Introduction

The information in this manual covers the installation, operation, and maintenance of the SurveyorVFT Series of Fixed Camera Domes. This unit should only be installed by a qualified technician using approved materials in accordance with national, state and local wiring codes. Read this manual through completely before attempting installation.

The SurveyorVFT Series of Fixed Camera Domes offers a compact domed housing incorporating a fixed camera and lens combination. The camera domes are available for indoor in-ceiling and pendant mounting configurations and outdoor pendant mounting configurations. Each model has a corresponding version that transmits video over twisted pair (UTP). An appropriate receiver is required for these models. There is a choice of high-resolution color or day/night cameras with a 2.6-6 mm or 5-50 mm varifocal lens; some models offer autoiris lenses. A smoked lower dome is included on indoor models; a clear dome is used on outdoor versions. Refer to Table 1 for model numbers and descriptions.

The camera position has a unique 3-axis adjustment, allowing for adjustment of pan, tilt and rotation about the lens axis (roll), for any angle of view required. The varifocal lens allows for lens adjustment capability and autoiris adjustment is available by a potentiometer. Cameras accept 24 VAC and also feature line lock capability.

SurveyorVFT Fixed Camera Dome series meets FCC requirements for a Class A device.

Table 1
Models, Product Codes and Descriptions

Model*	Product Code	Description
SVFT-C266M/ SVFT-C266M-C	8725/8725-01	In-ceiling; 1/3-in. ExView™ high-resolution color camera with isolated power input and 2.6-6 mm manual varifocal lens; 24 VAC; smoked lower dome; coaxial video transmission; NTSC/PAL
SVFT-C266A/ SVFT-C266A-C	8726/8726-01	In-ceiling; 1/3-in. ExView high-resolution color camera with isolated power input and 2.6-6 mm autoiris varifocal lens; 24 VAC; smoked lower dome; coaxial video transmission; NTSC/PAL
SVFT-C550M/ SVFT-C550M-C	8727/8727-01	In-ceiling; 1/3-in. ExView high-resolution color camera and 5-50 mm manual varifocal lens; 24 VAC; smoked lower dome; coaxial video transmission; NTSC/PAL
SVFT-P266M/ SVFT-P266M-C	8730/8730-01	Indoor Pendant; 1/3-in. ExView high-resolution color camera with isolated power input and 2.6-6 mm manual varifocal lens; 24 VAC; smoked lower dome; coaxial video transmission; NTSC/PAL
SVFT-P266A/ SVFT-P266A-C	8731/8731-01	Indoor Pendant; 1/3-in. ExView high-resolution color camera with isolated power input and 2.6-6 mm autoiris varifocal lens; 24 VAC; smoked lower dome; coaxial video transmission; NTSC/PAL
SVFT-P550M/ SVFT-P550M-C	8732/8732-01	Indoor Pendant; 1/3-in. ExView high-resolution color camera and 5-50 mm manual varifocal lens; 24 VAC; smoked lower dome; coaxial video transmission; NTSC/PAL
SVFT-W266DNA/ SVFT-W266DNA-C	8735/8735-01	Outdoor Pendant; 1/4-in. high-resolution day/night color camera with isolated power input and 2.6-6 mm autoiris varifocal lens; 24 VAC; clear lower dome; coaxial video transmission; NTSC/PAL
SVFT-W266A/ SVFT-W266A-C	8736/8736-01	Outdoor Pendant; 1/3-in. ExView high-resolution color camera with isolated power input and 2.6-6 mm autoiris varifocal lens; 24 VAC; clear lower dome; coaxial video transmission; NTSC/PAL
SVFT-W550A/ SVFT-W550A-C	8737/8737-01	Outdoor Pendant; ExView 1/3-in. high-resolution color camera and 5-50 mm autoiris varifocal lens; 24 VAC; clear lower dome; coaxial video transmission; NTSC/PAL

*Note: Each model is also available in a twisted pair (UTP) version. Simply add a "-T" to the model number and a -40 to the product code (ex., SVFT-C266M-T, 8725-40; SVFT-C266M-TC, 8725-41).

UTP Receivers		
V212-NVT	7631	Receiver, converts UTP video to composite up to 500 ft from transmitter
V213-NVT	6518	Receiver, converts UTP video to composite up to 1000 ft from transmitter
V652R-NVT	7453	Receiver, converts UTP video to composite up to 3000 ft from transmitter (does not support Vicoax systems)
V1613-NVT	7648	16-channel Hub receiver, converts UTP video to composite up to 1000 ft from each transmitter
V1662-NVT	6519	16-channel Hub receiver, converts UTP video to composite up to 3000 ft from each transmitter (does not support Vicoax systems)

Installation

Unpacking and Inspection

All Vicon equipment is tested and inspected before leaving the factory. It is the carrier's responsibility to deliver the equipment in the same condition as it left the factory.

Inspection for Visible Damage

Immediately inspect the cartons upon delivery. Make a note of any visible damage on all copies of the carrier's freight bill. Make sure the carrier's agent (the person making the delivery) signs the note on all copies of the bill. If the agent does not have claim forms, contact the carrier's office.

Inspection for Concealed Damage

As soon as possible after delivery, unpack the unit and inspect it for concealed damage. Do not discard the carton or packing materials. If the unit is damaged, contact the carrier immediately and request forms for filing a damage claim. Make arrangements for a representative of the carrier to inspect the damaged equipment. If the equipment must be returned for repair, follow the Shipping Instructions at the end of this manual.

SurveyorVFT Fixed Dome Components

The SurveyorVFT fixed camera dome units consist of an enclosure/housing, a camera mechanism, a shroud, and a smoked (indoor) or clear (outdoor) lower dome.

Enclosure

The enclosure is a metal shell that houses the camera mechanism for the in-ceiling model. A safety cord and clip are provided to connect to the camera mechanism during installation. In addition, a small hole is provided on the side of the enclosure for connection of the lower dome's safety cord. A removable top cover, a 0.75-inch (19 mm) conduit fitting and a pair of rotating flippers that give a convenient and sturdy connection of the enclosure into the ceiling are provided. For in-ceiling installations that do not use conduit pipe, a 0.75-inch (19 mm) strain relief fitting provides solid cable anchoring at the enclosure.

Camera Mechanism

The camera mechanism includes an integral camera/lens combination, with a color camera and a varifocal lens. It is designed for easy "snap-in" installation into the enclosure or housing. The camera/lens position can be manually adjusted. The integral PC board provides wiring connections. For outdoor units, a thermostatically-controlled heater is provided for temperature control.

Shroud

The shroud is a 5.4 in. (137 mm) textured black ABS plastic shell. It has a 1.4 in. (35.6 mm) slotted opening for the camera. This shroud conceals the position of the camera and snaps onto the camera drive.

Lower Dome

The lower dome is an assembly comprised of a 5.9 inch (150 mm) diameter acrylic plastic shell, a trim ring and a safety cord. Lower domes for indoor versions come in a choice of smoked, chrome or gold finishes. Standard outdoor lower domes are clear and use 4 screws for additional support. All lower domes are anchored to the enclosure by the safety cord. Refer to the Maintenance section for care.

Housing

The housing for the SurveyorVFT fixed indoor pendant configurations is a molded plastic protective cover for the camera mechanism; outdoor pendant configurations have a die-cast aluminum housing with a sunshield. The housing has a 1.5-inch NPT pipe flange mount. In addition, the housing is equipped with a safety cord and clip that is used to suspend the camera drive during installation. Another safety cord connects the lower dome to the housing.

Sunshield

A sunshield pre-installed over the housing used on the outdoor pendant version is for radiation sun-blocking protection.

 CAUTION: For any environment subject to moisture, use the outdoor pendant model.

Mounting the Unit

In-Ceiling Mounting

The SurveyorVFT fixed dome rests on the ceiling material and occupies the space between the lower ceiling and upper building frame. There are two methods of installation. The first method can be used for ceilings with no access to the space above, as in a typical hard material ceiling. The second method is used for a ceiling with access, as in the case of a dropped ceiling (metal grid type). All mounting hardware is provided. Refer to the section on Optional Independent Support for installations requiring additional support (most commonly, a dropped ceiling).

Using the Provided Scribe

A small metal scribe is provided to assist in marking an accurate hole size in a ceiling tile. Use it as follows.

1. Place the ceiling tile on a large flat surface, face up.
2. Measure and make a small mark at position **A** from any corner (11.9 in./302 mm). Refer to Figure 1.
3. Measure and make a small mark at position **B** (8.2 in./208 mm), placing the scribe as perpendicular to the **A**-edge as possible.
4. Place the scribe across **B** and **C**. Rotate the scribe around center **C** for a full turn.
5. Cut out the circle using a sharp tool on the scribed line.

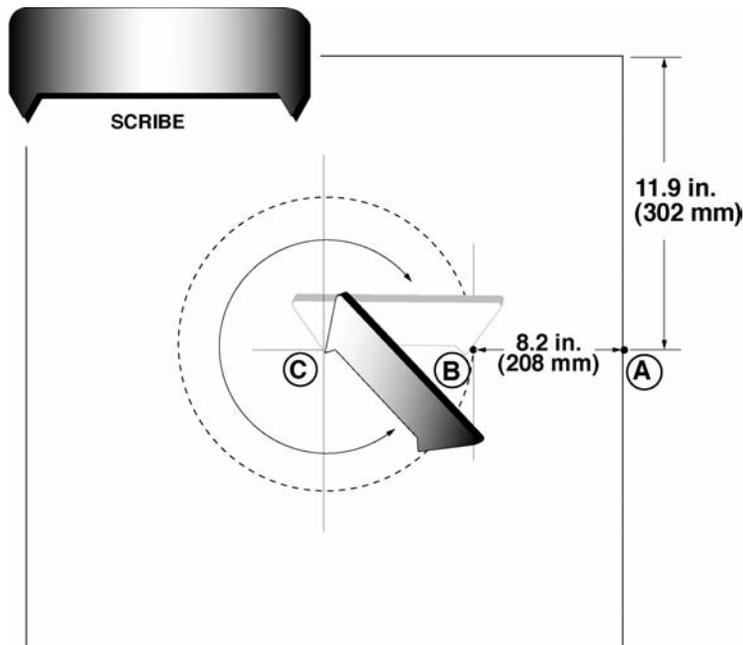


Figure 1
Use of the Scribe

Mounting from Below the Ceiling

Use this method of installation if there is no access to the space above. The ceiling material must provide suitable strength to support the weight of the SurveyorVFT fixed dome with the two flippers on the enclosure. Be sure the area around the selected location is clear of obstacles (such as steel beams, headers, pipes, electrical wiring, etc.) that would interfere with mounting. Video, sync, and power cables must be routed to the location.

1. Mark with the scribe and cut a 7-3/8 in. (187 mm) hole in the ceiling at the desired location. Remove the tile from a dropped ceiling if necessary. Feed all necessary flexible conduit pipe or cables down through the hole.

2. If cables are used without the use of flexible conduit:
 - a. Remove the enclosure top by loosening the 3 screws. Remove the conduit fitting by loosening the nut and sliding it out. Install the supplied strain relief fitting in its place and re-attach the top cover.
 - b. Hold the enclosure near the hole in the ceiling and route cables through the strain relief fitting.
2. If cables are channeled through flexible cable:
 - a. Hold the enclosure near the hole in the ceiling and route conduit cables through the conduit fitting.
 - b. Insert the end of the flexible conduit pipe into the conduit fitting. Cable length should be flush with the bottom of the enclosure, approximately 12 in. (305 mm). Tighten the clamp screw.
3. Lift the enclosure up through the ceiling hole. Turn and tighten the flipper screws to obtain a flush fit with the ceiling plane.
4. Connect the enclosure's safety cord clip to the tab in the camera mechanism to allow the drive to hang from the enclosure. Refer to Figure 2 for location of tab.

Continue with section on Cable Connections.

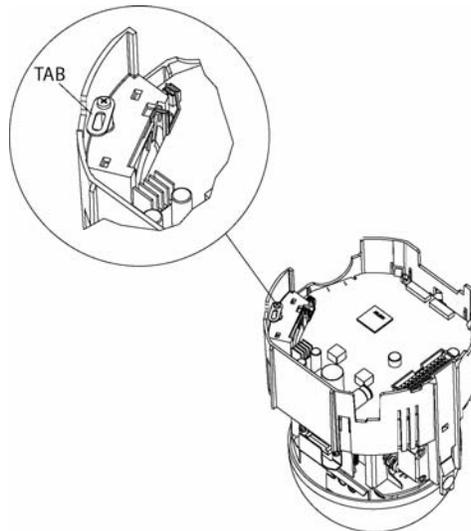


Figure 2
Safety Cord Installation

Mounting from Above the Ceiling

Use this method of installation if there is access to the space above. The ceiling material must provide suitable strength to support the weight of the SurveyorVFT fixed dome with the two flippers on the enclosure. Refer to the section on Optional Independent Support for installations requiring additional support. Be sure the area around the selected location is clear of obstacles (such as steel beams, headers, pipes, electrical wiring, etc.) that would interfere with mounting. Video, sync, and power cables must be routed to the location.

1. Mark with the scribe and cut a 7-3/8 in. (187 mm) hole in the ceiling at the desired location. Remove tile from dropped ceiling if necessary. Feed all necessary flexible conduit pipe or cables down through the hole.
2. Lift the SurveyorVFT enclosure up to the ceiling and snap it into the hole. Turn and tighten the flipper screws for a flush fit. Connect the enclosure's safety cord clip to the tab in the camera mechanism to allow the mechanism to hang from the enclosure. Align the 2 slots on the camera mechanism with the tabs in the enclosure, being sure to match up the arrows on both the drive and in the enclosure. Insert the camera mechanism into the enclosure until it snaps into place.

3. Working above the ceiling, remove the enclosure top by loosening the 3 screws and lifting it off.
4. If cables are used without the use of flexible conduit:
 - a. Remove the conduit fitting by loosening the nut and sliding it out. Install the supplied strain relief fitting in its place and re-attach the top cover.
 - b. Route approximately 12 in. (305 mm) of cables through the strain relief fitting. Tighten the two (2) strain relief fitting screws to compress the cables. Do not overtighten the screws and crush the cables.
4. If cables are channeled through flexible cable:
 - a. Route approximately 12 in. (305 mm) of conduit cables through the conduit fitting.
 - b. Insert the end of the flexible conduit pipe into the conduit fitting and tighten the clamp screw.

Continue with the section on Cable Connections.

Optional Independent Support

If it is necessary to provide independent support for the SurveyorVFT fixed dome other than ceiling material, order the optional In-Ceiling Mount Model Kit, model SVFT-IC-MKT. It consists of a pre-assembled set of mounting rails and folding ring. Refer to Figure 3A.

1. With the 7-3/8-inch (187 mm) diameter hole cut in the ceiling tile and the tile replaced in the ceiling, push the folded assembly up through the hole and unfold.
2. Position the assembly squarely over the hole and fasten the caddy rail clips to the existing frame. Remove the adjacent tiles to access the clips.
3. Adjust the position of the caddy rail clips along the frame to obtain the best “X” position.
4. Slide the assembly along the caddy rails to obtain the best concentric “Y” position. Tighten the horizontal adjustment screws to secure the position.
5. With the ring concentric with the hole, slide the ring vertically along the support slots to obtain the best flush fit in the ceiling. The ring should be firmly seated against the tile without warping the tile. Refer to Figure 3B.
6. Complete the installation as described in the previous procedure. When using this kit, the flippers squeeze the mounting ring assembly for a snug fit.

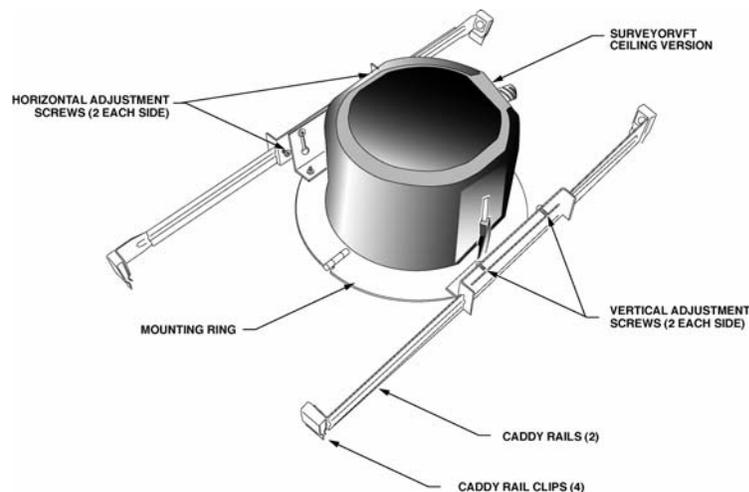


Figure 3A
Installation of Optional In-Ceiling Mounting Kit

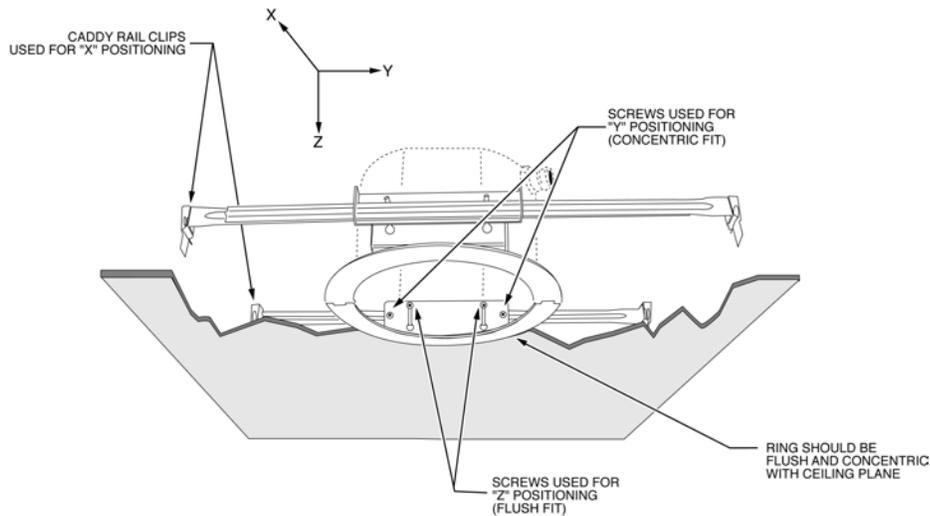


Figure 3B
Installation of Optional In-Ceiling Mounting Kit

Indoor Pendant

The indoor pendant model mounts on a Vicon mount or a 1.5-in. vertical pipe with an appropriate coupling. The pipe is a standard 1.5-in. NPT type and must be oriented vertically so the SurveyorVFT fixed camera dome can effectively hang from the pipe. Be sure the area around the selected location is clear of obstacles (such as steel beams, headers, pipes, electrical wiring, etc.) that would interfere with mounting. Video, sync, and power cables must be routed to the location.

1. Install the mount in accordance with the installation manual included with the mount or prepare the vertical 1.5-in. NPT pipe.
2. Feed all necessary cables through the back of the mount or out the end of the 1.5-in. NPT pipe, approximately 15 in. (381 mm) in length.
3. Lift the housing up to the mount or pipe and feed the cables through its top opening.
4. Place the housing onto the 1.5-in. pipe and screw clockwise, looking up at the housing. When it becomes snug, turn it an additional quarter-turn.
5. Verify that each cable drops from the pipe opening at least 15 in. (381 mm) in length.
6. Lift the camera mechanism up to the housing and attach the housing's safety cord clip to the camera mechanism's tab. Allow the SurveyorVFT mechanism to hang from the housing. Refer to Figure 2.
7. Route each cable from the inside top of the housing down over to its mating connector on the camera PC board. Add 1 in. (25 mm) of extra length to each cable for termination (if not previously terminated) and cut them. The approximate length of each cable should be 14 - 15 in. (356 - 381 mm).

Continue with the section on Cable Connections.

Outdoor Pendant

The outdoor pendant model mounts on a Vicon mount or a 1.5-in. vertical pipe with an appropriate coupling. The outdoor version includes a sunshield, heater and weather protection. Be sure the area around the selected location is clear of obstacles (such as steel beams, headers, pipes, electrical wiring, etc.) that would interfere with mounting. Video, sync, and power cables must be routed to the location.

Note: *The standard 1.5-inch pipe referred to in this manual has the actual dimensions of: outside diameter: 1.9 in. (48.3 mm); inside diameter: 1.61 in. (40.9 mm); wall thickness: 0.145 in. (3.37 mm) minimum (ANSI standard grade thickness).*

1. Install the mount in accordance with the installation manual included with the mount or prepare the vertical 1.5-in. NPT pipe.
2. Feed all necessary cables through the back of the mount or out the end of the 1.5-in. NPT pipe, 15 in. (381 mm) in length.
3. Apply the provided anti-seize lubricant to the first 2-3 unpainted threads of the housing.
4. Lift the sunshield/housing up to the mount and feed the cables through its top opening.
5. Place the housing onto the 1.5-in. pipe and screw clockwise, looking up at the housing. When it becomes snug, turn it an additional quarter-turn.
6. Verify that each cable drops from the pipe opening at least 15 in. (381 mm) in length.
7. Lift the SurveyorVFT camera mechanism up to the housing/sunshield and attach the housing's safety cord clip to the camera mechanism's tab. Allow the camera mechanism to hang from the housing. Refer to Figure 2.
8. Route each cable from the inside top of the housing down over to its mating connector on the camera PC board. Add 1 in. (25 mm) of extra length to each cable for termination (if not previously terminated) and cut them. The approximate length of each cable should be 14 - 15 in. (356 - 381 mm).

Continue with the section on Cable Connections.

Cable Connections

Both power and video connections are made to the integral printed circuit board (PC board) on the camera mechanism. The PC board provides a board-mounted BNC connector for coaxial or a screw terminal for twisted pair video and a removable two-position screw terminal connector for camera power. Refer to Figure 4 when performing these connections. Refer to Cable Recommendations in the Reference section. There is also a provision for adjusting the focus with the auxiliary video output port provided on the underside of the camera mechanism. This adjustment should be performed during installation. Refer to Figure 6.

Coaxial Video Cable

Attach the male BNC connector on the video cable to the mating BNC connector on the PC board.

Twisted-Pair Video Cable

For the models using the twisted-pair video connection, use the twisted-pair video wire connector as shown in Figure 4. Strip off approximately 0.25 in. (6 mm) of insulation from each individual wire. Attach each wire to the screw terminal on the PC board. Pin 1 is for Video and Pin 2 is Ground; Pin 3 is Not Used. Refer to Figure 4. Refer to the instructions supplied with the receiver for those connections.

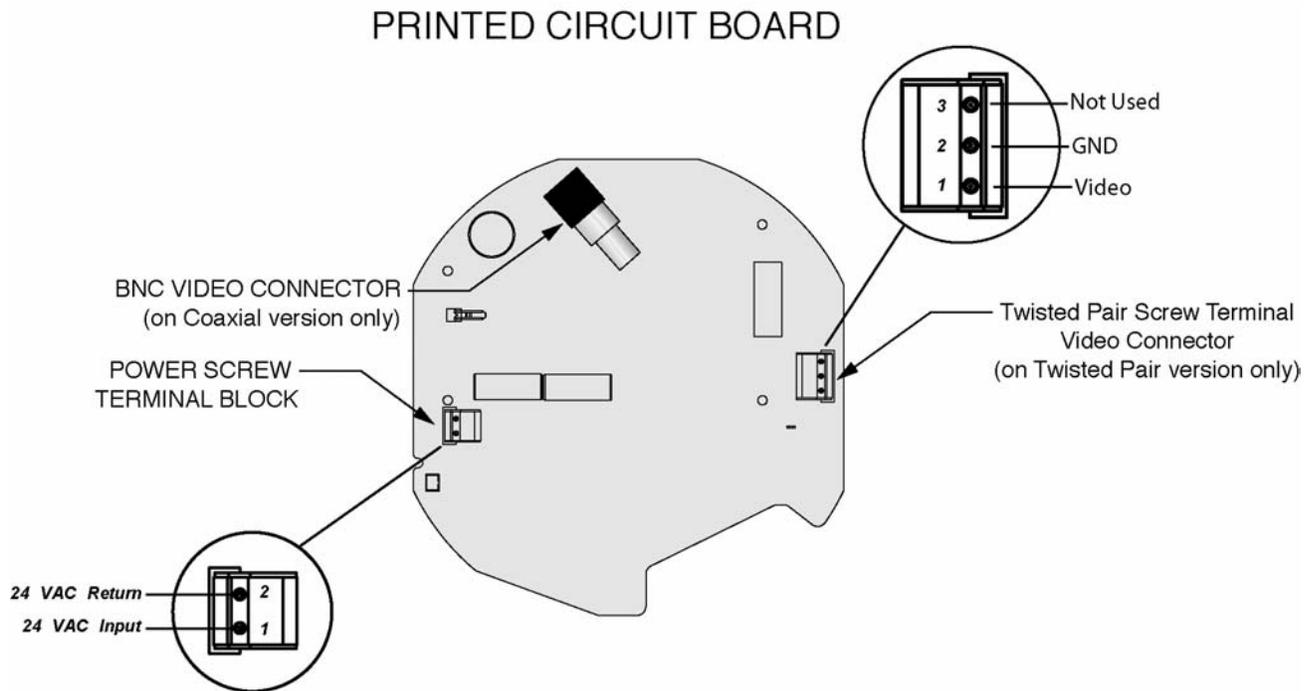
Camera Power Connections

Note: *Vicon systems and components, like most electronic equipment, require a clean, stable power source. Voltage irregularities such as surges, drops, and interruptions can affect the operation of your equipment and, in severe cases, damage certain components. Vicon strongly recommends the use of line conditioners, voltage regulators, and uninterruptible power supply (UPS) systems.*

Power is connected through a two-position detachable screw terminal connector on the PC board (P8). Refer to Figure 4. Refer to Table 2 for the input power connections.

1. Find the detachable power cable connector supplied on the PC board.
2. Strip approximately 1 in. (25 mm) of insulation off power cables. Then strip off approximately 0.25 in. (6 mm) of insulation off each individual wire. Attach the camera power cables to the connector according to Table 2.
3. Press the cable connector onto the board connector. The connector is keyed to prevent incorrect installation.

The camera is shipped prepared for 24 VAC.



**Table 2
Camera Power Connections**

Pin Number	Function
1	24 VAC Input
2	24 VAC Return

DIP Switch Settings

There is a DIP switch on the front camera board that allows the selection of: Switch 1 - ALC (OFF) or ELC (ON); Switch 2 – Internal (Crystal) Synchronization (ON) or Line Lock (OFF); Switch 3 – AGC (ON or OFF); Switch 4 – BLC (ON or OFF). ALC setting is for external autoiris and ELC setting is for internal autoiris. The day/night camera includes a switch to select having the day/night feature turned ON or OFF. If day/night is turned ON, at a low light level the camera changes to monochrome mode and the resolution and sensitivity increase. Refer to Figures 5 and 6 for the location and setting of the switches. See Table 3 for camera and lens specifications.

There are two potentiometers on the camera. VR1 on the back board is for V-phase adjustment; VR1 on the top board is for autoiris adjustment. Refer to Figure 5.

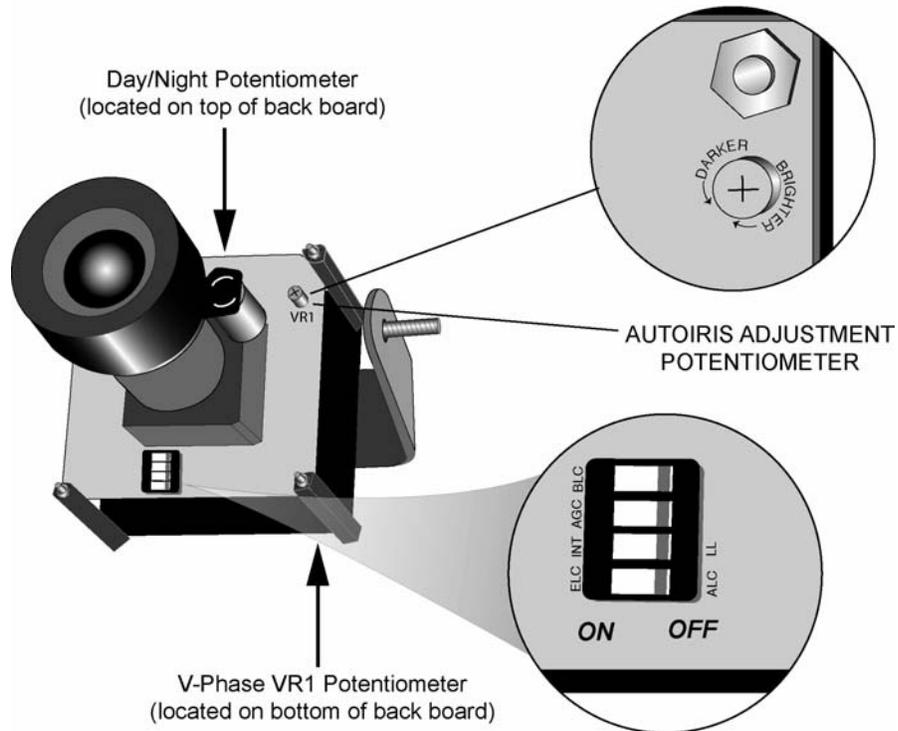
Camera Synchronization

If there is more than one unit in a system, the cameras have to be synchronized to ensure there is no roll of video. If the camera will be used in a line lock video application, the camera interface board is already set in line lock mode by default. Camera synchronization is DIP switch selectable, line locked or internal. The use of line-locking synchronization using a V-phase potentiometer (pot) is typically included in video equipment requiring external video synchronization. As an example, equipment like a video switcher unit uses the camera's line lock to reduce "video jump" on its monitor during camera switching. The V-phase pot allows video to power line phase adjustment up to 180°. If more than 180° of adjustment is required, swap the lines attached to the 24 VAC terminal block connector. Be sure that the selector DIP switch is set to position "LL". Note that the performance of the camera's line lock depends on the quality of the power source. If the camera experiences roll or jitter due to the quality of the power source, then it is best to set the camera to internal "crystal" mode. This is done by setting the selector switch to "INT."

The adjustment for the line lock V-phase (VR1) is on the bottom board of the camera.

Autoiris Adjustments

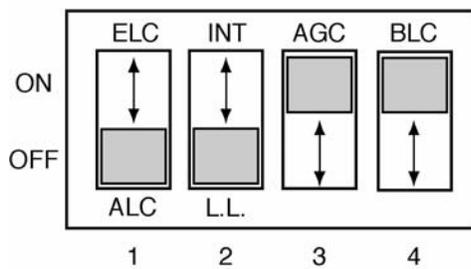
On autoiris lenses, iris adjustment may be required if the picture appears dark or grainy or has poor color. To obtain the sharpest picture possible, the iris adjustment should be made from a "full bright" setting down to an acceptable video level. This assures that the internal AGC of the camera is not operational. There is a potentiometer to adjust the DC level for autoiris; potentiometer VR1 is on the camera front board. Refer to Figure 5. Use a small jeweler's screwdriver to make adjustments. Turning the potentiometer opens and closes the iris to regulate light extremes. Turning the potentiometer clockwise opens the iris wider, allowing more light. Autoiris control is DIP switch selectable.



The Camera/Lens assembly must be installed so that the markings on the PCB can be read left to right. This ensures that the video display is oriented correctly.

Figure 5
Potentiometer/DIP Switch Location

Camera Switch Settings



Day/Night Setting

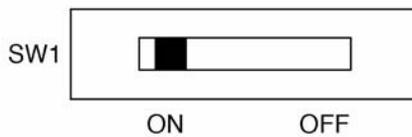


Figure 6
DIP Switch Settings

Final Installation

In-Ceiling

After all cabling is complete, (if not previously done) connect the enclosure's safety cord clip to the tab in the camera mechanism to allow the mechanism to hang from the enclosure. Align the 2 slots on the camera mechanism with the tabs in the enclosure, being sure to match up the arrows on both the drive and in the enclosure. Insert the camera mechanism into the enclosure until it snaps into place. Refer to Figure 9.

Note: Assure that there is no extra slack in the cabling that will interfere with proper installation and operation. Push any extra cabling up into the ceiling.

The camera and lens can now be adjusted. Refer to Figure 7.

The camera position can be adjusted in three axes, horizontally (pan), vertically (tilt) and rotation about the lens axis (roll). With the camera powered on and video displayed in a monitor, turn the camera to point in the desired direction. The tilt position can also be adjusted. Loosen the two nuts, if necessary, on either side of the camera mounting frame (use an open end 11/32 wrench). Position the camera and retighten nuts. The camera mounting bracket position can be adjusted relative to the closeness to the dome by loosening the lock nuts and changing the vertical position of the camera mounting frame within the slots in the mounting bracket. Refer to Figure 8.

The lens can be manually adjusted. On the 5-50 mm lens, the telephoto/wide adjustment is the front ring, iris (open and close) is the middle ring and focus (near to infinity) is the end ring. On the 2.6-6 mm lens, focus (near to infinity) is the front ring and the telephoto/wide adjustment is the end ring; iris is fixed. Refer to Figure 7. On autoiris lenses, a potentiometer is provided for iris adjustment. In some installations, the picture may be "squared up" by rotating the lens about its own axis up to 360° (roll adjustment).

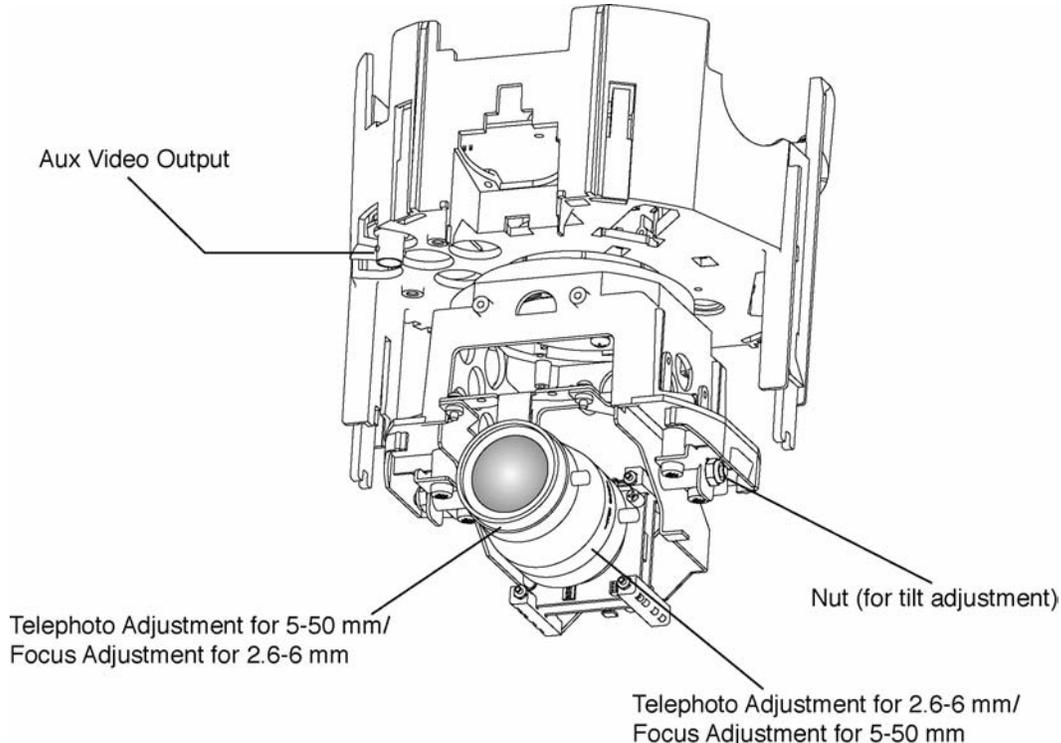


Figure 7
Camera/Lens Adjustments – 5-50 mm Version Shown

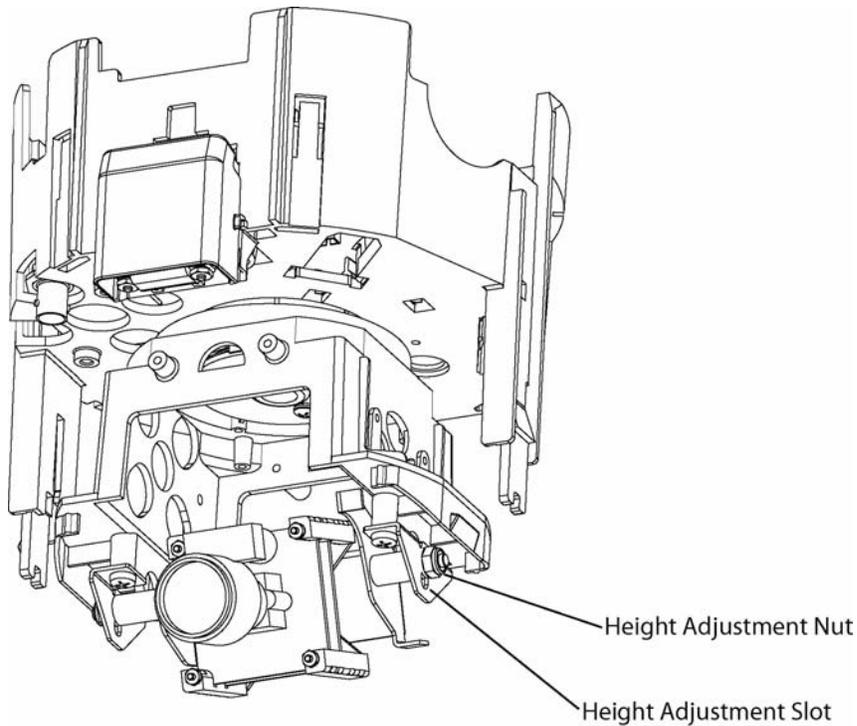


Figure 8
Camera Mounting Bracket Adjustment – 2.6-6 mm Version Shown

Insert the clip of the safety cord on the lower dome into the hole in the enclosure. Refer to label in the enclosure. Lift the lower dome up to the SurveyorVFT and align the molded tabs on the lower dome with the recesses on the inner enclosure. Press the lower dome into the SurveyorVFT and verify that it snaps into place on both sides. The upper edge of the lower dome should be flush with the ceiling plane. Refer to Figure 9.

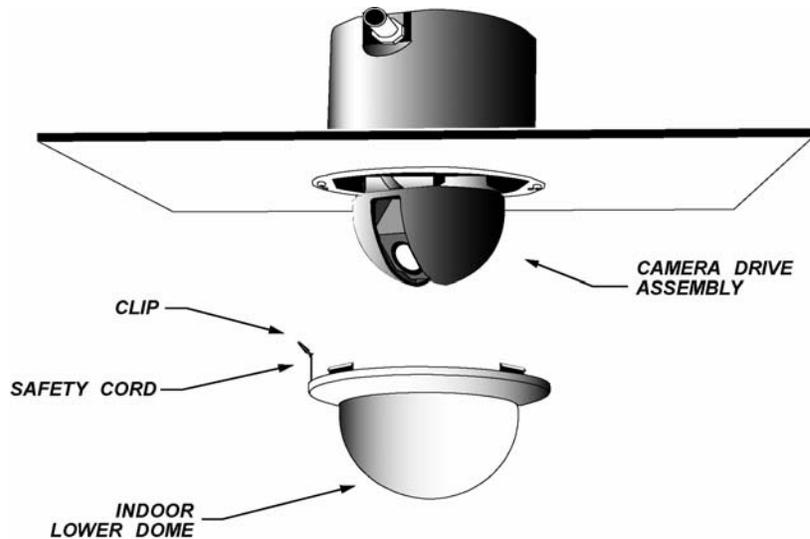


Figure 9
In-Ceiling Mount Final Installation

Indoor Pendant

After all the cabling is complete, push the SurveyorVFT camera mechanism straight up into the housing. Align the 2 slots on the camera mechanism with the tabs in the enclosure, being sure to match up the arrows on both the mechanism and in the enclosure. Insert the camera mechanism into the enclosure until it snaps into place. Refer to Figure 10.

Note: Assure that there is no extra slack in the cabling that will interfere with proper installation and operation. Push any extra cabling up into the mount or pipe.

After the SurveyorVFT is in place, the camera/lens can be adjusted. The camera position can be adjusted horizontally and vertically and rotation about the lens axis (roll). With the camera powered on and video displayed in a monitor, turn the camera to point in the desired direction. The tilt position can also be adjusted. Loosen the two nuts, if necessary, on either side of the camera mounting frame (use an open end 11/32 wrench). Position the camera and retighten nuts. The camera mounting bracket position can be adjusted relative to the closeness to the dome by loosening the lock nuts and changing the vertical position of the camera mounting frame within the slots in the mounting bracket. Refer to Figure 8.

The lens can be manually adjusted. On the 5-50 mm lens, the telephoto/wide adjustment is the front ring, iris (open and close) is the middle ring and focus (near to infinity) is the end ring. On the 2.6-6 mm lens, focus (near to infinity) is the front ring and the telephoto/wide adjustment is the end ring; iris is fixed. Refer to Figure 7. On autoiris lenses, a potentiometer is provided for iris adjustment.

After the camera/lens is properly adjusted, the lower dome can be installed. Lift the lower dome up to the SurveyorVFT and insert the clip of the safety cord from the lower dome into the hole provided on the inside of the housing to anchor the lower dome. See label inside housing. Holding the lower dome, align the two (2) molded tabs on the lower dome with the recesses on the inner enclosure. Press the lower dome into the SurveyorVFT and verify that it snaps into place on both sides. Refer to Figure 10.

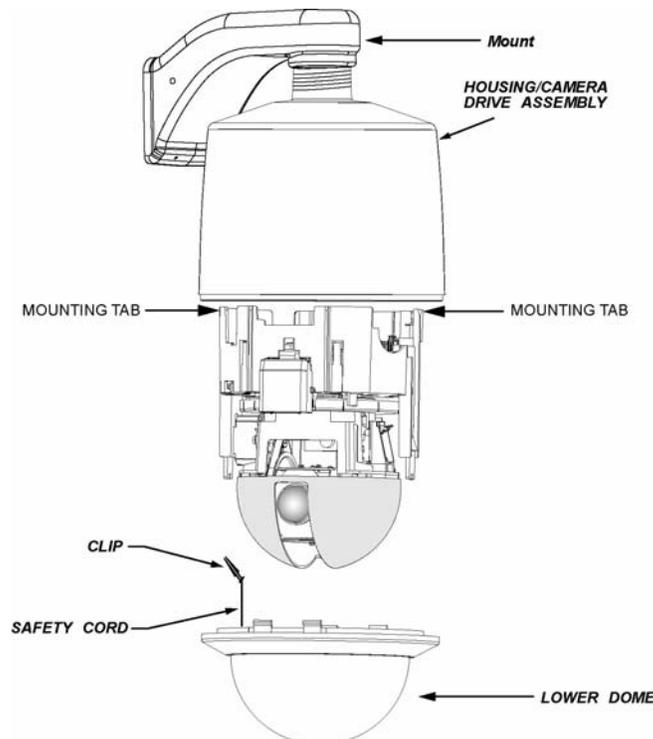


Figure 10
Pendant Mount Dome Final Installation

Outdoor Pendant

After all the cabling is complete, push the SurveyorVFT camera mechanism straight up into the housing. Align the 2 slots on the camera drive with the tabs in the enclosure, being sure to match up the arrows on both the drive and in the enclosure. Insert the camera drive into the enclosure until it snaps into place.

Note: *Assure that there is no extra slack in the cabling that will interfere with proper installation and operation. Push any extra cabling up into the mount or pipe.*

After the SurveyorVFT is in place, the camera lens can be adjusted. The camera position can be adjusted horizontally and vertically and rotation about the lens axis (roll). With the camera powered on and video displayed in a monitor, turn the camera to point in the desired direction. The tilt position can also be adjusted. Loosen the two nuts, if necessary, on either side of the camera mounting frame (use an open end 11/32 wrench). Position the camera and retighten nuts. The camera mounting bracket position can be adjusted relative to the closeness to the dome by loosening the lock nuts and changing the vertical position of the camera mounting frame within the slots in the mounting bracket. Refer to Figure 8.

The lens can be manually adjusted. On the 5-50 mm lens, the telephoto/wide adjustment is the front ring, iris (open and close) is the middle ring and focus (near to infinity) is the end ring. On the 2.6-6 mm lens, focus (near to infinity) is the front ring and the telephoto/wide adjustment is the end ring; iris is fixed. Refer to Figure 7. On autoiris lenses, a potentiometer is provided for iris adjustment.

After the camera/lens is properly adjusted, the lower dome can be installed. Lift the lower dome up to the SurveyorVFT and insert the clip of the safety cord from the lower dome into the hole provided on the inside of the housing to anchor the lower dome. See label inside housing. Holding the lower dome, align the two (2) molded tabs on the lower dome with the recesses on the inner enclosure. Press the lower dome into the SurveyorVFT and verify that it snaps into place on both sides. Tighten the four (4) trim ring screws to hold the lower dome in place. Refer to Figure 10.

Disassembly

The SurveyorVFT Fixed Camera Dome can be easily disassembled by removing the camera mechanism from the housing or enclosure. A safety cord is always available to safely hang the camera mechanism while assembling or disassembling.

In-Ceiling Installation

1. Gently pull down on the lower dome's outside edge, with two hands, until all molded tabs snap out of place.
2. Push in the tabs to release the camera mechanism from the enclosure. It will hang from the safety cord.
3. If it is necessary to completely remove the camera mechanism, disconnect the safety cord clip and all cables.

Pendant Installation

1. On outdoor version only, loosen the four (4) trim ring screws from the outdoor lower dome.
2. Gently pull down on the lower dome's outside edge, with two hands, until all molded tabs snap out of place.
3. Push in the tabs on the housing until the camera mechanism is released.
4. Allow the SurveyorVFT to gently drop down until it is supported by the safety cord.
5. If it is necessary to completely remove the SurveyorVFT, remove all cable connections and disconnect the clip on the end of the safety cord from the tab on the enclosure.

Operation

When power is applied to the camera, the SurveyorVFT fixed dome views the selected scene.

Maintenance

The SurveyorVFT Fixed Camera Dome requires no scheduled maintenance except for the occasional cleaning of the lower dome.

Care and Cleaning of Lower Dome

1. Always handle the lower dome by the flange and avoid touching the inside surface.
2. If dust or other contaminants accumulate in the dome's interior, they should be removed with clean dry air pressure (compressed air cans).
3. If spots, streaks or stains appear on the interior or exterior, they can be removed with a solution isopropyl alcohol and water using a microwave-safe (aluminum free) paper towel. Dry with clean, dry pressurized air.
4. Scratches or surface blemishes on the exterior or interior may be removed with a nonabrasive wax using a soft nonabrasive cleaning cloth. Either liquid or spray cleaner/wax suitable for fine furniture is acceptable.

⚠ Caution: *Excessive rubbing of the dome's surface can cause permanent scratches that may render the dome unusable.*

5. Clean all surfaces with any soft nonabrasive cleaning cloth and cleaning agent suitable for acrylic plastic.

⚠ Caution: *For warranty protection, implement this instruction exactly as stated.*

Fuse Replacement

There is a fuse located in the SurveyorVFT. When necessary, replace it with a fuse of the same value, 0.5 A, 250 V, 5x20 mm slo blo for indoor version; the outdoor version has an additional 1.0 A, 250 V, 5x20 mm slo blo fuse.

Shipping Instructions

Use the following procedure when returning a unit to the factory:

1. Call or write Vicon for a Return Authorization (R.A.) at one of the locations listed below. Record the name of the Vicon employee who issued the R.A.

Vicon Industries Inc.
89 Arkay Drive
Hauppauge, NY 11788
Phone: 631-952-CCTV (2288); Toll-Free: 1-800-645-9116; Fax: 631-951-CCTV (2288)

For service or returns from countries in Europe, contact:

Vicon Industries Ltd
Brunel Way
Fareham, PO15 5TX
United Kingdom
Phone: +44 (0) 1489 566300; Fax: +44 (0) 1489 566322

2. Attach a sheet of paper to the unit with the following information:
 - a. Name and address of the company returning the unit
 - b. Name of the Vicon employee who issued the R.A.
 - c. R. A. number
 - d. Brief description of the installation
 - e. Complete description of the problem and circumstances under which it occurs
 - f. Unit's original date of purchase, if still under warranty
3. Pack the unit carefully. Use the original shipping carton or its equivalent for maximum protection.
4. Mark the R.A. number on the outside of the carton on the shipping label.

Reference

Coaxial cables used to route video signals to and from the unit must meet the video recommendations in this section.

⚠ Caution: Careful selection of the proper cable is essential to obtain the best performance from this equipment. Vicon assumes no responsibility for poor performance when cables other than those recommended are installed. In all cases, coaxial cable impedance should be 75 ohms.

Materials

Use only cable with a pure copper center conductor. Do not use cable with either a copper-plated steel or an aluminum center conductor because these do not transfer signals effectively in the frequency range used in CCTV networks. A center conductor with low DC resistance is required for effective CCTV operation. Solid-core bare copper conductor is best suited to video applications, except where flexing occurs. If the coaxial cable will be subjected to flexing during normal use, select a cable with a stranded center conductor. The preferred dielectric material is cellular (foam) polyethylene. It has better electrical characteristics than solid polyethylene, but is more vulnerable to moisture. Therefore, use only solid polyethylene dielectric cable with a heavy exterior insulation in applications subject to moisture. The shield must be copper braid providing 95% or better coverage.

Cable Types

The most commonly used cable types are RG-59/U and RG-11/U. Each is actually a family of cables with widely varying electrical characteristics, some of which are not suitable for CCTV applications. Choose a cable type by referring to the characteristics and maximum distances listed below. The maximum distance for best picture refers to the distance between the camera and the unit. The characteristics of the cables in this table should be used as a guideline when cables other than Belden are used. Materials and construction must follow the guidelines above. Note that "BC" refers to bare copper and "TC" refers to tinned copper.

Recommended Coaxial Cable Types

Cable Type	Belden Type No.	Alpha Type No.	West Penn Type No.	Type Center Conductor	Type Shield and % Coverage	DC Resistance ohms per 1000 feet (km)
RG-11/U	8213	9847	811,4811	14 Solid BC	BC braid (95%)	2.6 (8.5)
RG-6/U	9248	9804C	806,4806	18 Solid BC	Foil + 61% TC braid (100%)	7.5 (24.6)
RG-59/U	8281	9803	815	20 Solid BC	2 TC braids (96%)	9.9 (32.5)
RG-59/U	9259	----	816	22 Stranded BC	BC braid (95%)	15.0 (49)
RG-59/U	9659	----	----	22 Stranded BC	BC braid (95%)	15.0 (49)

Picture Quality vs Cable Length

Picture Quality	Maximum Cable Run* ft (m)		
	RG-59/U	RG-6/U	RG-11/U
Usable picture	1100 (350)	1500 (450)	2400 (750)
Clean picture	820 (250)	1000 (300)	1600 (500)
Best picture	400 (120)	530 (160)	820 (250)

For longer cable runs, refer to the Product Specifications for Video Amplifiers.

1.5-inch Pipe Designation

The standard "1.5-inch pipe" referred to in this manual has actual dimensions of:

Outside diameter: 1.9 inches (48.3 mm).

Inside diameter: 1.61 inches (40.9 mm).

Wall thickness: 0.145 inches (3.37 mm) minimum (ANSI "standard" grade thickness).

Twisted-Pair Cable

⚠ Caution: Careful selection of the proper cable is essential to obtain the best performance from this equipment. Vicon assumes no responsibility for poor performance when cables other than those recommended are installed.

Materials

Use a pure copper stranded or solid conductor with or without a tin plating to obtain a low DC resistance. Do not use cable with either steel or aluminum stranded conductor because these do not transfer signals effectively for long distances. The preferred insulation is Polyvinyl chloride (PVC). It has better electrical characteristics than polyethylene and resists flames, sunlight and most solvents, but is more vulnerable to moisture.

Cable Types

The most commonly used cable types are point-to-point unshielded twisted pair wire, stranded or solid, unjacketed, 24 gauge or thicker. They can be category 2, 3, 4, or 5. The video signal may co-exist in the same wire bundle as other video, telephone, data, control signals or low-voltage power. It is also acceptable to run the signal adjacent to fluorescent lights or other power sources (in accordance with National Electrical Code, local and other safety requirements). Make sure the pair of wires carrying the video signal is sent as a twisted pair (the blue-white/white-blue wires twisted together as a pair), not a "split pair" (blue-white conductor, part of one pair/orange-white conductor, part of another pair).

Choose a Belden or equivalent cable type by referring to the characteristics and maximum distances listed below. The characteristics of the cables in the Tables should be used as a guideline when cables other than Belden are used. Materials and construction must follow the guidelines above.

Wire resistance may be measured with an ohmmeter by shorting the two conductors together at the far end and measuring the loop-resistance out and back. Compare your readings to the following chart.

Wire Distances

Distance ft (m)	Wire Gauge AWG			
	18	20	22	24
250 (76)	3Ω	5Ω	8Ω	13Ω
315 (96)	4Ω	6Ω	10Ω	16Ω
397 (121)	5Ω	8Ω	13Ω	21Ω
500 (152)	7Ω	10Ω	17Ω	26Ω
630 (192)	8Ω	13Ω	21Ω	33Ω
794 (242)	10Ω	16Ω	26Ω	41Ω
1000 (305)	13Ω	20Ω	33Ω	52Ω
1260 (384)	16Ω	25Ω	42Ω	66Ω
1587 (484)	21Ω	32Ω	52Ω	83Ω
2000 (610)	26Ω	40Ω	66Ω	104Ω

Note: All quoted distance specifications include any coaxial cable in the run. It is recommended that the wire distance be measured to ensure that the capability of the product is correct.

Recommended Unshielded Twisted-Pair Cable Type

Cable Type	Wire Size (AWG)	Insulation Material	Conductor Type	Resistance (ohms)	Number of Twisted Pairs
Belden1721X	24, Solid	Polyethylene	Bare Copper	100	1

Technical Information

ELECTRICAL

Input Voltage: 24 VAC \pm 20%.

Current: Indoor: 0.4 A.
Outdoor: 1.1 A.

Power Consumption: Indoor: 10 W.
Outdoor: 27 W.

Heat Equivalent: Indoor: 0.6 btu/min (0.14 kg-cal/min).
Outdoor: 1.5 btu/min (0.4 kg-cal/min).
Note: These figures represent the conversion of 100% of the electrical energy to heat. Actual percentage of heat generated will be less and will vary from product to product. These figures are provided as an aid in determining the extent of cooling required for an installation.

Maximum Power Cable Distance:

Wire Size (AWG) (Annealed Copper Wire)	Maximum Distance ft (m)	
	Indoor	Outdoor
20	600 (183)	220 (67)
18	938 (286)	344 (105)
16	1500 (457)	550 (168)
14	2400 (732)	880 (268)
12	3750 (1143)	1375 (419)

Connectors: Power: 2-pin removable screw terminal (P8).
Video: BNC (coax) or screw terminal (twisted pair).

Fuse: Indoor: 0.5 A, 250 V, 5x20 mm slo blo.
Outdoor: 1.6 A, 250 V, 5x20 mm slo blo, additional.

**Radio Frequency
Emission Rating:** FCC Class A.

CAMERA/LENS

Specifications: Refer to Table 3.

OPERATIONAL

**Tilt and Horizontal
Adjustment:** 3 axis adjustment, pan (360°), tilt (95°) and roll (lens may be rotated on its axis 360°).

MECHANICAL

Application: Indoor and outdoor models.

Mounting: In-ceiling and pendant models.

Dimensions:

In-Ceiling
Height: 9.7 in. (246 mm).
Total Diameter: 7.1 in. (180 mm).
Dome Diameter: 5.9 in. (150 mm).

Indoor Pendant
Height: 10.0 in. (254 mm).
Total Diameter: 8.0 in. (203 mm).
Dome Diameter: 5.9 in. (150 mm).

Outdoor Pendant
Height: 10.3 in. (236 mm).
Total Diameter: 9.0 in. (262 mm).
Dome Diameter: 5.9 in. (150 mm).

Weight: Approximately 2.5 lb (1.1 kg).

Construction: Plastic, aluminum and steel.

Finish: Painted black enclosure, off-white housing/sunshield, smoked (gray tint) (indoor) or clear (outdoor) lower dome.

ENVIRONMENTAL

Operating Temperature

Range: Indoor: 35 to 122° F (2 to 50° C).
Outdoor: -40 to 122° F (-40 to 50° C).

Operating Humidity: Indoor: Up to 90% relative, noncondensing.
Outdoor: Up to 100% relative, noncondensing.

Storage Temperature

Range: -40 to 150° F (-40 to 65° C).

Storage Humidity: Up to 90% relative, noncondensing.

Wind Load: Outdoor: heavy rain or snow driven by winds up to 80 mph.

**Table 3
Camera Specifications**

Model	Image Device	Color/ Mono	Resolution (TV lines)	Sensitivity fc (lux)	Synchronization	Electronic Iris (sec)	Signal-to-Noise Ratio
SVFT-C266M/ SVFT-C266M-C	1/3" CCD, 2:1 interlace, NTSC/PAL	Color	480	0.07 (0.8) at 40 IRE, f/1.6	Internal/Line lock DIP switch selectable	1/60 – 1/100,000 (1/50 PAL)	>48 dB (AGC off)
SVFT-C266A/ SVFT-C266A-C	1/3" CCD, 2:1 interlace, NTSC/PAL	Color	480	0.07 (0.8) at 40 IRE, f/1.6	Internal/Line lock DIP switch selectable	1/60 – 1/100,000 (1/50 PAL)	>48 dB (AGC off)
SVFT-C550M/ SVFT-C550M-C	1/3" CCD, 2:1 interlace, NTSC/PAL	Color	480	0.07 (0.8) at 40 IRE, f/1.6	Internal/Line lock DIP switch selectable	1/60 – 1/100,000 (1/50 PAL)	>48 dB (AGC off)
SVFT-P266M/ SVFT-P266M-C	1/3" CCD, 2:1 interlace, NTSC/PAL	Color	480	0.07 (0.8) at 40 IRE, f/1.6	Internal/Line lock DIP switch selectable	1/60 – 1/100,000 (1/50 PAL)	>48 dB (AGC off)
SVFT-P266A/ SVFT-P266A-C	1/3" CCD, 2:1 interlace, NTSC/PAL	Color	480	0.07 (0.8) at 40 IRE, f/1.6	Internal/Line lock DIP switch selectable	1/60 – 1/100,000 (1/50 PAL)	>48 dB (AGC off)
SVFT-P550M/ SVFT-P550M-C	1/3" CCD, 2:1 interlace, NTSC/PAL	Color	480	0.07 (0.8) at 40 IRE, f/1.6	Internal/Line lock DIP switch selectable	1/60 – 1/100,000 (1/50 PAL)	>48 dB (AGC off)
SVFT-W266DNA/ SVFT-W266DNA-C	1/4" CCD, 2:1 interlace, NTSC/PAL	Color	Color: 480 Mono: 580	Day: 0.07 (0.8) Night: 0.0009 (0.01) at 40 IRE, f/1.6	Internal/Line lock DIP switch selectable	1/60–1/100,000 (1/50 PAL)	>48 dB (AGC off)
SVFT-W266A/ SVFT-W266A-C	1/3 " ExView CCD, 2:1 interlace, NTSC/PAL	Color	480	0.07 (0.8) at 40 IRE, f/1.6	Internal/Line lock DIP switch selectable	1/60–1/100,000 (1/50 PAL)	>48 dB (AGC off)
SVFT-W550A/ SVFT-W550A-C	1/3" CCD, 2:1 interlace, NTSC/PAL	Color	480	0.07 (0.8) at 40 IRE, f/1.6	Internal/Line lock DIP switch selectable	1/60 – 1/100,000 (1/50 PAL)	>48 dB (AGC off)

Lens Specifications

Model	Focal Length (mm)	Field-of-View	
		Horizontal	Vertical
SVFT-C266M/ SVFT-C266M-C	2.6-6 varifocal with manual iris	106° - 47.6°	78.2° - 35.8°
SVFT-C266A/ SVFT-C266A-C	2.6-6 varifocal with autoiris	106° - 47.6°	78.2° - 35.8°
SVFT-C550M/ SVFT-C550M-C	5-50 varifocal with manual iris	51.8° - 5.6°	39.2° - 4.3°
SVFT-P266M/ SVFT-P266M-C	2.6-6 varifocal with manual iris	106° - 47.6°	78.2° - 35.8°
SVFT-P266A/ SVFT-P266A-C	2.6-6 varifocal with autoiris	106° - 47.6°	78.2° - 35.8°
SVFT-P550M/ SVFT-P550M-C	5-50 varifocal with manual iris	51.8° - 5.6°	39.2° - 4.3°
SVFT-W266DNA/ SVFT-W266DNA-C	2.6-6 varifocal with autoiris	82.05° - 38.26°	60.32° - 28.66°
SVFT-W266A/ SVFT-W266A-C	2.6-6 varifocal with autoiris	106° - 47.6°	78.2° - 35.8°
SVFT-W550A/ SVFT-W550A-C	5-50 varifocal with autoiris	51.8° - 5.6°	39.2° - 4.3°

Vicon Standard Equipment Warranty

Vicon Industries Inc. (the "Company") warrants your equipment to be free from defects in material and workmanship under Normal Use from the date of original retail purchase for a period of three years, with the following exceptions:

1. VCRs, all models: Labor and video heads warranted for 120 days from date of original retail purchase. All other parts warranted for one year from date of original retail purchase.
2. Kollector Elite, Kollector Pro and ViconNet Systems (hardware only), all models: Hard Drives warranted for three years. All other parts warranted for 18 months.
3. AurorAcorD: Hard drives, floppy drives, CD-R/W, DVD drives and any and all archive media warranted for 18 months. All other parts warranted for three years from date of original retail purchase.
4. RAID Storage Devices and Hard Drives, all models: Warranted for one year from date of original retail purchase.
5. Video monitor CRT (cathode ray tube) and LCD monitors, all models: One year from date of original retail purchase.
6. NOVA 1500 CPU: Hard drives, floppy drives, CD-R/W drives and any and all archive media, warranted for 18 months. All other parts warranted for 3 years from date of original retail purchase.
7. Normal Use excludes prolonged use of lens and pan-and-tilt motors, gear heads, and gears due to continuous use of "autopan" or "tour" modes of operation. Such continuous operation is outside the scope of this warranty.

Date of retail purchase is the date original end-user takes possession of the equipment, or, at the sole discretion of the Company, the date the equipment first becomes operational by the original end-user.

The sole remedy under this Warranty is that defective equipment be repaired or (at the Company's option) replaced, at Company repair centers, provided the equipment has been authorized for return by the Company, and the return shipment is prepaid in accordance with policy.

The Company will not be obligated to repair or replace equipment showing abuse or damage, or to parts which in the judgment of the Company are not defective, or any equipment which may have been tampered with, altered, misused, or been subject to unauthorized repair.

Software supplied either separately or in hardware is furnished on an "As Is" basis. Vicon does not warrant that such software shall be error (bug) free. Software support via telephone, if provided at no cost, may be discontinued at any time without notice at Vicon's sole discretion. Vicon reserves the right to make changes to its software in any of its products at any time and without notice.

This Warranty is in lieu of all other conditions and warranties express or implied as to the Goods, including any warranty of merchantability or fitness and the remedy specified in this Warranty is in lieu of all other remedies available to the Purchaser.

No one is authorized to assume any liability on behalf of the Company, or impose any obligations on it in connection with the sale of any Goods, other than that which is specified above. In no event will the Company be liable for indirect, special, incidental, consequential, or other damages, whether arising from interrupted equipment operation, loss of data, replacement of equipment or software, costs or repairs undertaken by the Purchaser, or other causes.

This warranty applies to all sales made by the Company or its dealers and shall be governed by the laws of New York State without regard to its conflict of laws principles. This Warranty shall be enforceable against the Company only in the courts located in the State of New York.

The form of this Warranty is effective August 2, 2004.

THE TERMS OF THIS WARRANTY APPLY ONLY TO SALES MADE WHILE THIS WARRANTY IS IN EFFECT. THIS WARRANTY SHALL BE OF NO EFFECT IF AT THE TIME OF SALE A DIFFERENT WARRANTY IS POSTED ON THE COMPANY'S WEBSITE, WWW.VICON-CCTV.COM. IN THAT EVENT, THE TERMS OF THE POSTED WARRANTY SHALL APPLY EXCLUSIVELY.

Vicon Part Number: 8006-9010-03-01 Rev 804

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