



## **Colour Explosion Proof Video Camera User Manual**



**Models: VID-C and VID-C-50**

ISO 9001:2000



**Part Number: MAN-0036 Rev 07  
October 2008**

## **IMPORTANT INFORMATION**

This manual is for informational purposes only. Although every effort has been made to ensure the correctness of the information, technical inaccuracies may occur and periodic changes may be made without notice. Net Safety Monitoring Inc., assumes no responsibility for any error contained within this manual.

This manual is a guide for use of the VID-C and VID-C-50 Camera and the data and procedures contained within this document have been verified and are believed to be adequate for the intended use of the camera. If the camera or procedures are used for purposes other than as described in the manual without receiving prior confirmation of validity or suitability, Net Safety Monitoring Inc. does not guarantee the results and assumes no obligation or liability.

No part of this manual may be copied, disseminated or distributed without the express consent of Net Safety Monitoring Inc.

Net Safety Monitoring Inc. products are carefully designed and manufactured from high quality components and can be expected to provide many years of trouble free service. Each product is thoroughly tested, inspected and calibrated prior to shipment. Failures can occur which are beyond the control of the manufacturer. Failures can be minimized by adhering to the operating and maintenance instructions herein. Where the absolute greatest of reliability is required, redundancy should be designed into the system.

## **WARRANTY**

Net Safety Monitoring Inc warrants this camera against defective parts and workmanship for a period of for 36 months from date of purchase. No other warranties or liability, expressed or implied, will be honoured by Net Safety Monitoring Inc.

Contact Net Safety Monitoring Inc. or an authorized representative for details.

We welcome your input at Net Safety Monitoring Inc. If you have any comments please contact us at the telephone number or address below or visit our web-site, [www.net-safety.com](http://www.net-safety.com), and complete our on-line customer survey.

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# SECTION 1: Introduction

## Description

The Net Safety Monitoring Inc. Video Camera is mounted inside an explosion proof housing designed to provide maximum safety and security in Hazardous locations. The video camera delivers a composite video output for use with most VCR's or video monitors. The Field of View (FOV) provides for large area coverage by one camera. The two models offered are the VID-C and the VID-C-50. The difference is in the Viewing Angle and Field of View (FOV). See features below.

## Features

- Full colour video with optional black and white.
- Compatible with industry standard CCTV hardware and software.
- Three (3) feet of video cable with RCA Jack included.
- Extreme compact size.
- Factory sealed enclosure eliminating the need for conduit seals in the field.

## Models:

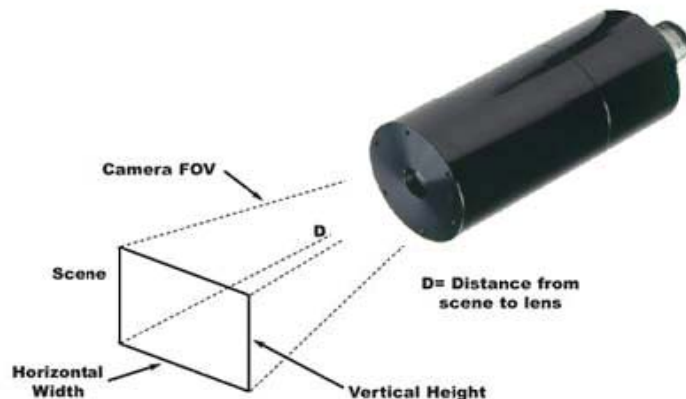
VID-C

Viewing Angle of 60 degrees horizontal.

VID-C-50

Viewing Angle of 9.14 degrees horizontal with a scene of 8 feet by 10 feet located 50 feet from the camera.

Figure 1: Viewing Angle and Scene.



## **SECTION 2: Installation and Start Up**

### **Check Package**

Remove all the components from the packaging carefully, check components against the packing list. Inspect all components for obvious damage and broken or loose parts. Notify the carrier and distributor immediately of any damaged or missing parts.

### **Location of Camera(s)**

Proper location of the VID-C or VID-C-50 is essential for providing maximum coverage. The most effective placement and numbers of cameras varies depending on the location. Experience, common sense and knowledge of the area will determine the number of cameras needed and the best locations to monitor the area adequately.

The following factors are important and should be considered for every installation:

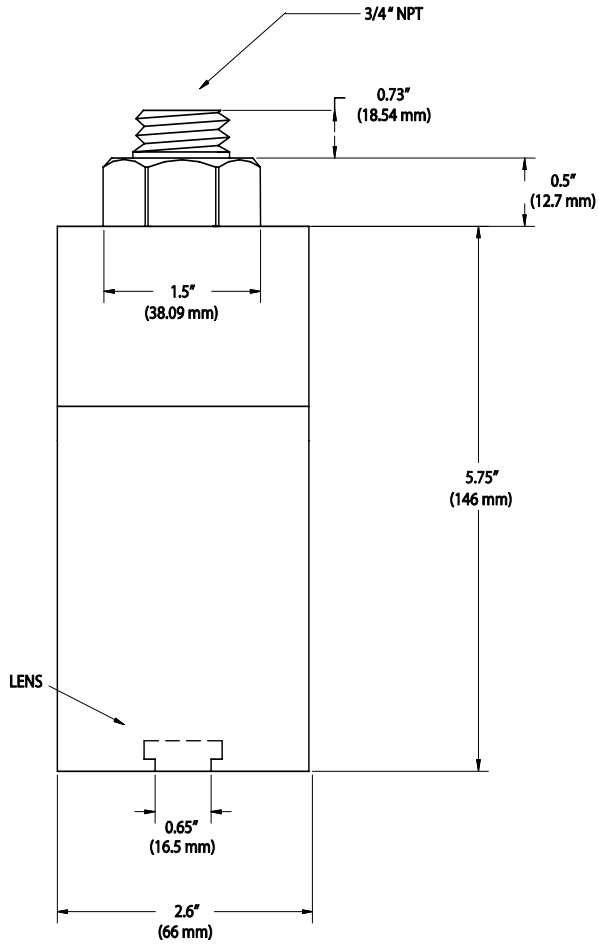
- The VID-C or VID-C-50 should be located where it is safe from potential sources of contamination i.e. oil film, dirt.
- The VID-C or VID-C-50 must be accessible for cleaning.
- Exposure to excessive heat or vibration can cause premature failure of electronic devices and components. This should be avoided if possible.

**Note:** The camera comes with three (3) feet of wires attached.

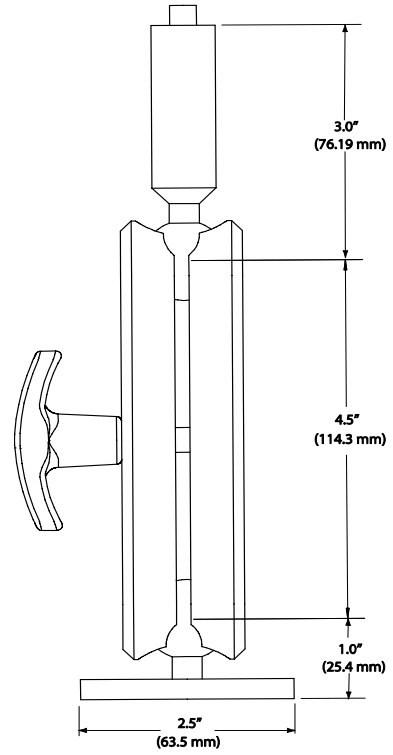
If the camera is separated from the video monitoring system by more than three (3) feet, wires have to be terminated inside a Certified Junction Box. The General Termination Net Safety Multi-purpose Junction Box (JB-MPG-A/S) can be used, however the camera's coaxial RCA video cable has to be connected to an RCA adapter cable (of desired length) to provide the correct termination. This adapter cable is not provided by Net Safety Monitoring.

Figure 2: Dimensional Drawing

VID-C or VID-C-50 Camera



Swivel Mount



## SECTION 2: Installation and Start Up

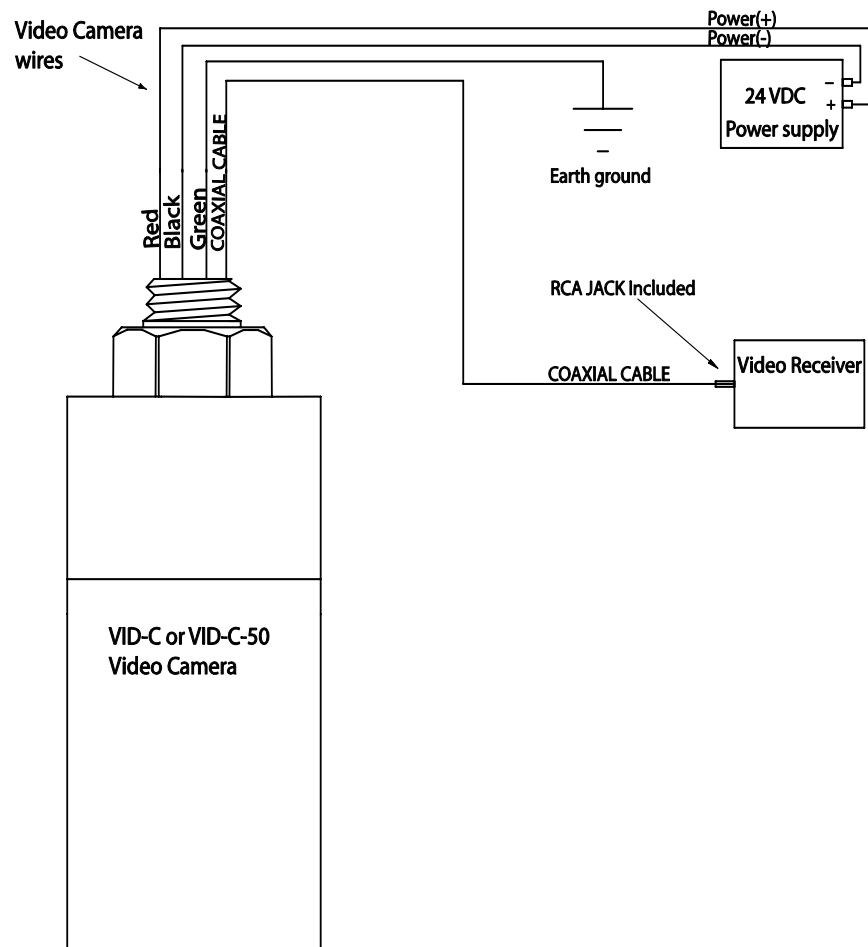
### 2.1 Wiring

**Warning:**  Do not open the Video Camera's Housing in a Hazardous area.

The unit contains semiconductor devices that are susceptible to damage by electrostatic discharge. An electrostatic charge can build up on the skin and discharge when an object is touched. It is therefore necessary to use caution when handling the device. Take care not to touch electronic components. Refer to Appendix A "Electrostatic Discharge Handling Procedure".

An RCA Jack is terminated at the end of the three (3) feet coaxial cable. Coaxial cable transmission is up to 100 feet without amplification. Regular video cable transmission is from 500 feet to a maximum of 700 feet. The wiring procedures in this manual are intended to ensure proper functioning of the device under normal conditions. Because of variations however, in wiring codes and regulations, total compliance to these ordinances cannot be guaranteed. Be certain that all wiring complies with applicable regulations that relate to the installation of electrical equipment in Hazardous areas. If in doubt, consult qualified personnel before wiring the system. See Figure 3 for wire designations.

Figure 3: VID-C or VID-C-50 wiring diagram



## SECTION 2: Installation and Start Up (cont'd)

**Note:** The use of coaxial cable is highly recommended for the video signal to protect against interference caused by extraneous electrical “noise”.

### 2.2 Checklist

The following checklist is provided to check the system and conform that all phases of the system installation are complete and have been performed correctly.

- VID-C or VID-C-50 is securely mounted.
- All wiring and cable are properly connected.
- Power source is operational.

### 2.3 Start Up

Once the wiring has been completed, the video camera can be powered up. Check to ensure the unit is functioning properly by performing a walk- through in the coverage area. The camera should be adjusted to so that the field of view is covering the desired area.

### 2.4 Troubleshoot

The video camera is not designed to be repaired in the field. If a problem should develop, check for correct wiring. If the problem persists, please contact our service department to try and resolve the issue over the phone. If the issue cannot be solved over the phone, the camera may have to be returned to the factory for repair. Refer to “How to Return Equipment”.

### 2.5 Maintenance

To ensure reliable viewing, it is important to periodically clean the camera’s window. Although the frequency of this cleaning is determined by the requirements of the particular process, it is recommended that the unit be cleaned every year. Use the included window cleaning kit, to clean the front side of the window/lens.

### 2.6 Spare Parts / Accessories

Net Safety	Description
Swivel-7	Swivel Mount

## 2.7 How to Return Equipment

A Material Return Authorization number is required in order to return equipment. Please contact Net Safety Monitoring at **(403) 219-0688**, before returning equipment or consult our Service Department to possibly avoid returning equipment.

If you are required to return equipment, include the following information:

1. A Material Return Authorization number (provided over the phone to you by Net Safety).
2. A detailed description of the problem. The more specific you are regarding the problem, the quicker our Service Department can determine and correct the problem.
3. A company name, contact name and telephone number.
4. A purchase order, from your company, authorizing repairs or request for quote.
5. Ship all equipment, prepaid to:  
**Net Safety Monitoring Inc.,  
2721 Hopewell Place NE,  
Calgary, Alberta, Canada, T1Y 7J7**
6. Mark all packages: **RETURN for REPAIR.**
7. Waybills, for shipment outside Canada, must state: **Equipment being returned for repair  
All charges to be billed to the sender**

Ensure a duplicate copy of the packing slip is enclosed inside the box indicating item 1 – 4 along with the courier and account number for returning the goods.

Pack items to protect them from damage and use anti-static bags or aluminum-backed cardboard as protection from electro-static discharge.

**ALL equipment must be shipped prepaid. Collect shipments will not be accepted.**

# Appendix

## Appendix A: Electrostatic Sensitive Device (ESD)

**Definition:** Electrostatic discharge (ESD) is the transfer, between bodies, of an electrostatic charge caused by direct contact or induced by an electrostatic field.

The most common cause of ESD is physical contact. Touching an object can cause a discharge of electrostatic energy—**ESD!** If the charge is sufficient and occurs near electronic components, it can damage or destroy those components. In some cases, damage is instantaneous and an immediate malfunction occurs. However, symptoms are not always immediate—performance may be marginal or seemingly normal for an indefinite period of time, followed by a sudden failure.


To eliminate potential ESD damage, review the following guidelines:

- Handle boards by metal shields—taking care not to touch electronic components.
- Wear grounded wrist or foot straps, ESD shoes or heel grounders to dissipate unwanted static energy.
- Prior to handling boards, dispel any charge in your body or equipment.
- Ensure all components are transported and stored in static safe packaging
- When returning boards, carefully package in the original carton and static protective wrapping
- Ensure **ALL** personnel are educated and trained in ESD Control Procedures

In general, exercise accepted and proven precautions normally observed when handling electrostatic sensitive devices. A warning label is placed on the packaging, identifying product using electrostatic sensitive semiconductor devices.



## Appendix B: Technical Data and Specifications

Specification	Video Camera (VID-C and VID-C-50)
Operating Voltage Range	(10.5 to 32) VDC
Power consumption at 24VDC	2.0 Watts , 70 mA nominal
Operating Temperature Range	-25° C to +60° C (-13F to +140F)
Storage Temperature	-40° C to +60° C (-40F to +140F)
Resolution	Horizontal(H) 420 TV lines
Number of Pixels	Effective: 512(H), 429(V)
Weight	3.5 lbs (1.6 kg)
Camera's Enclosed Material	Powder coated or anodized Aluminum (Optional Stainless Steel)
Viewing Angle	<b>VID-C</b> (3.6 mm Lens): Horizontal 60°, <b>VID-C-50</b> (25 mm Lens): Horizontal 9.14° with a scene of 8 feet by 10 feet located at a distance of 50 feet from the camera
S/N (Signal to Noise Ratio)	≥ 48 DB
Output	1.0 V p-p, 75 Ohms composite signal (NTSC)
Connector	Standard RCA Video Signal Connector
<b>Approvals</b>	
Approvals	 Housing is CSA certified for hazardous locations. Class 1, Division 1, Groups B, C and D. NEMA 4X for environmental protection.

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