



**Colour Explosion Proof Video Camera
USER MANUAL
VID-C**



ISO 9001:2000



Part Number: MAN-0036-00 Rev 4

Copyright © 2002 Net Safety Monitoring Inc.
Printed in Canada

This manual is provided for informational purposes only. Although the information contained in this manual is believed to be accurate, it could include technical inaccuracies or typographical errors. Changes are, therefore, periodically made to the information within this document and incorporated without notice into subsequent revisions of the manual. Net Safety Monitoring Inc. assumes no responsibility for any errors that may be contained within this manual.

This manual is a guide for the use of a VID-C 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 written 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.

Net Safety Monitoring Inc., warrants its sensors and detectors against defective parts and workmanship for a period of 24 months from date of purchase and other electronic assemblies for 36 months from date of purchase.

No other warranties or liability, expressed or implied, will be honored by Net Safety Monitoring INC

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

Table of Contents

Chapter 1 Introduction	1
Description	1
Features	1
Chapter 2 Installation and Start Up	2
What's in the package	2
Location of Camera(s)	2
<i>Figure 1 VID-C Dimensional Diagram</i>	3
<i>Figure 2 Swivel Mount</i>	4
VID-C Wiring	5
<i>Figure 3 Wiring diagram for the VID-C colour video camera</i>	6
Installation Checklist	7
Start Up	7
Chapter 3 Troubleshooting	7
Chapter 4 Maintenance	8
Appendix A Technical Specifications	I
Appendix B Electrostatic Sensitive Device Handling Procedure	II

Chapter 1 Introduction

Description

The Net Safety Monitoring Inc. VID-C explosion proof video camera is ideally suited for safety monitoring systems in hazardous locations. The color video camera, mounted in an explosion proof housing, delivers a composite video output for use with most VCR's or video monitors. The wide viewing angle provides for large area coverage by one camera.

Features

- ▶ Full color video with optional black and white
- ▶ Compatible with industry standard CCTV hardware and software
- ▶ 3 feet of video cable with RCA jack included
- ▶ Viewing angle of 52° horizontal
- ▶ High Resolution
- ▶ Extremely compact size

Chapter 2 Installation and Start Up

What's in the package

Remove all the components from the packing box(s) carefully; check components against the packing list. Inspect all components for obvious damage and broken/loose parts. Notify the carrier and distributor immediately if damage is found or parts are missing.

Location of Camera(s)

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

Refer to figure 1 and 2 for installation information.

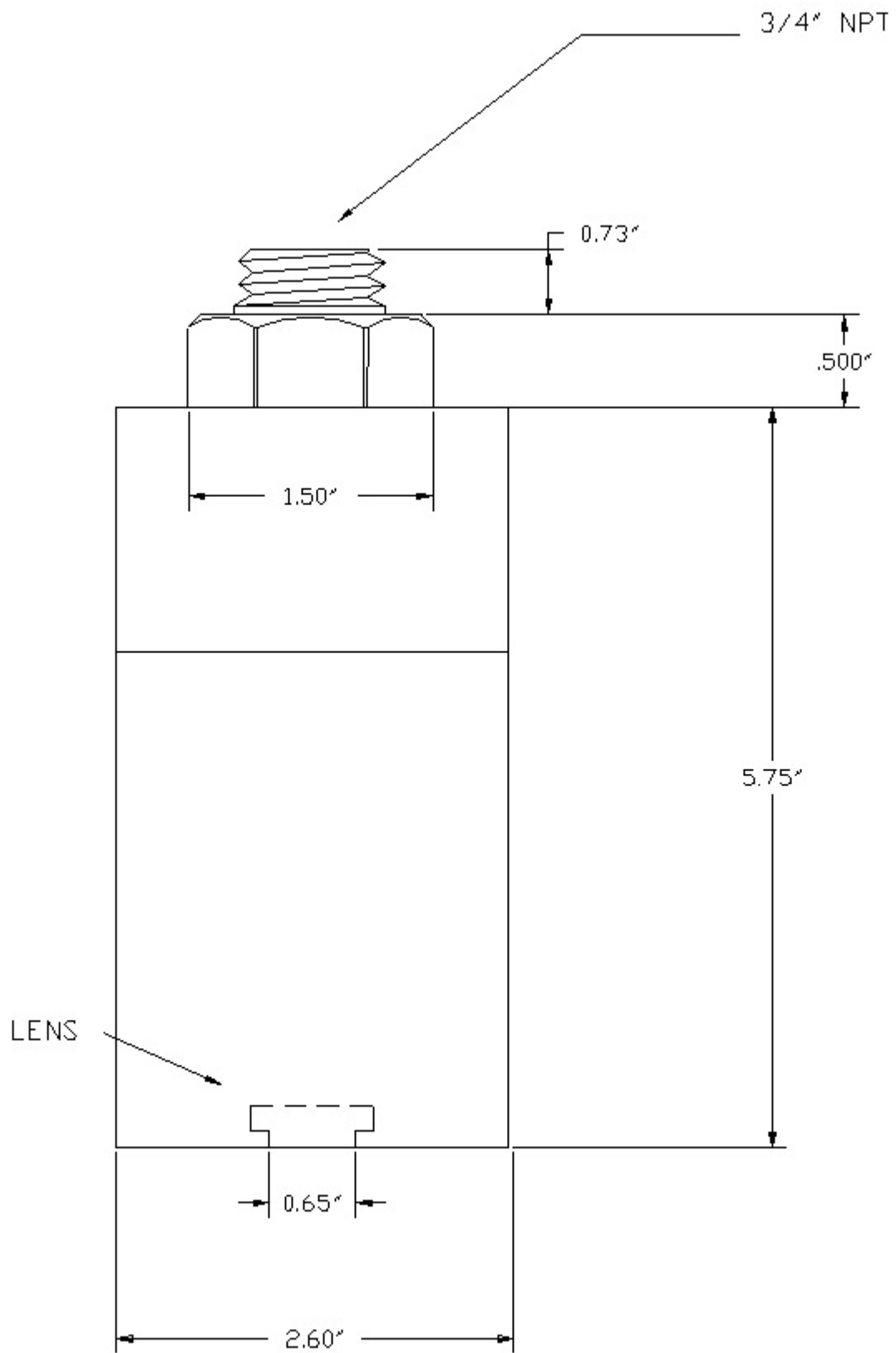


Figure 1 VID-C Dimensional Diagram

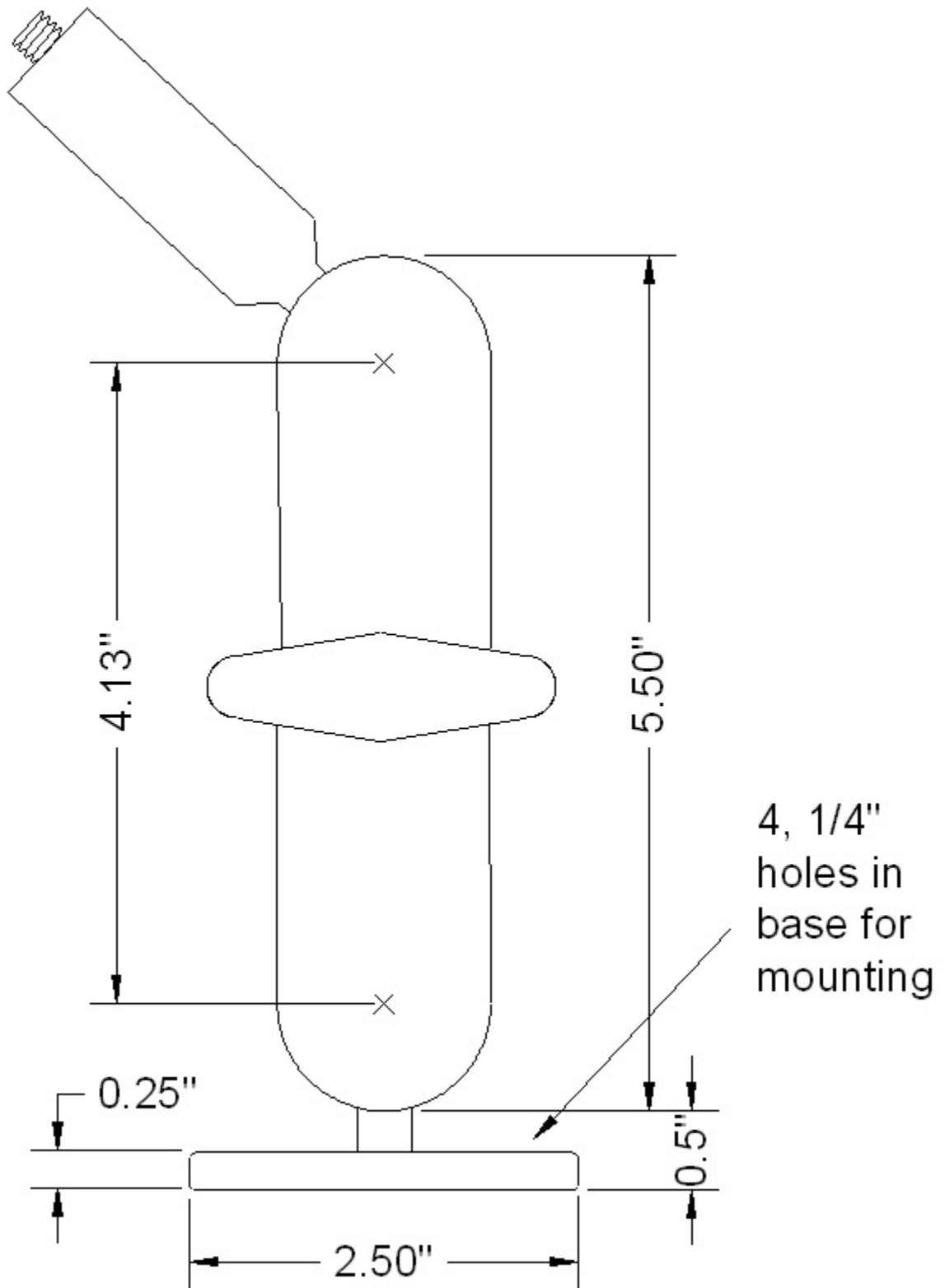


Figure 2 Swivel Mount

VID-C Wiring

NOTE

The VID-C 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. Therefore, use caution when handling the device, taking care not to touch the terminals or electronic components. For more information on proper handling, refer to 'Electrostatic Sensitive Device Handling Procedure', in Appendix A.

Refer to Figure 3 for wiring information. An RCA jack is terminated at the end of the 3 foot coaxial cable. Coaxial cable transmission is up to 1000 feet without amplification. Regular video cable transmission is from 500 feet to 700 feet maximum.

NOTE:

The wiring procedures in this manual are intended to ensure proper functioning of the device under normal conditions. However, because of the many variations 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 a hazardous area. If in doubt, consult a qualified official before wiring the system.

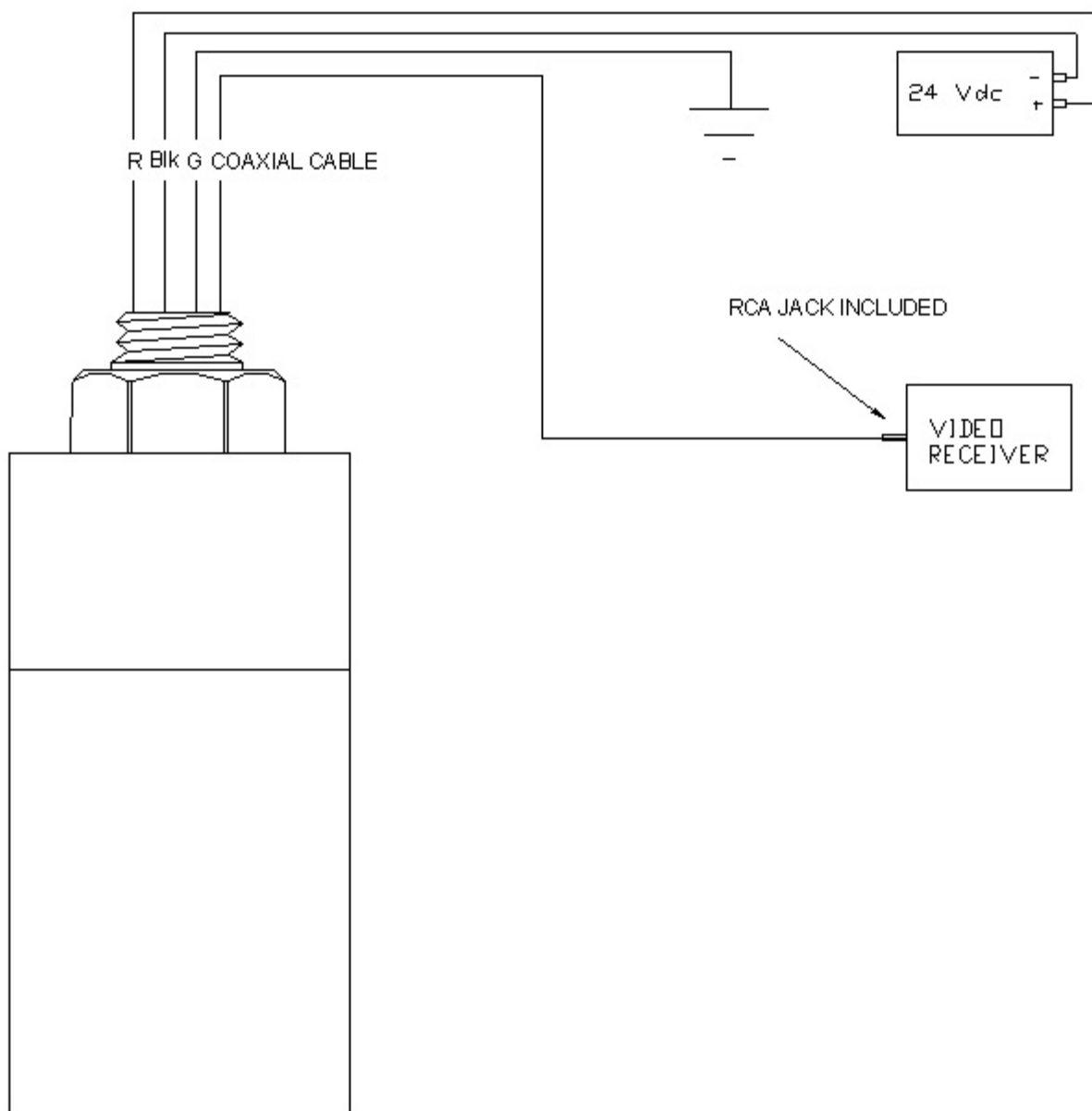


Figure 3 Wiring diagram for the VID-C colour video camera

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

Refer to applicable wiring codes when installing and wiring the VID-C. After the field wiring has been carefully connected, check that the correct wires are connected to the corresponding terminals and that voltage levels do not exceed the specifications. When the wiring and voltages have been verified remove power form the system.

Installation Checklist

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

- ✓ **VID-C is securely mounted**
- ✓ **All wiring and cables are properly connected**
- ✓ **power source is operational**

Start Up

With power applied, check that you are receiving a video signal on your VCR or video monitor.

Chapter 3 Troubleshooting

The VID-C is not designed to be repaired in the field. If a problem should develop, carefully check for correct wiring. If it is determined that the problem is caused by an electronic defect, the device must be returned to the factory for repair.

The unit is under full warranty for Two Years from the date of purchase.

Net Safety Monitoring Inc. supplies all distributors with advance replacement units. These units are available to you during the warranty period. This allows Net Safety Monitoring Inc. time to repair your unit while you keep your operations running smoothly.

Before returning devices or components, contact the nearest distributor so that an MRA (Material Return Authorization) number can be assigned. A written statement describing the malfunction must accompany the returned device or component to hasten finding the cause of the failure, thereby reducing the time and cost of the repair to you. Use sufficient packing material in addition to an anti-static bag or aluminum-backed cardboard as protection from electrostatic discharge.

Chapter 4 Maintenance

To ensure reliable viewing, it is important to periodically clean the camera window. Although the frequency of this cleaning is determined by the requirements of the particular process, it is recommended that the VID-C be cleaned every year.

- 1 Using the included window cleaning kit (part number HDW-0061), clean the front side of the window.

Appendix A

Technical Specifications

- ▶ Operating Voltage:
12V to 32 V
- ▶ Power Consumption (at 24 Vdc):
2.0 Watts nominal.
70 mA nominal.
- ▶ Operating Temperature:
-25°C to +60°C (-13°F to +140°F).
- ▶ Storage Temperature:
-40°C to +60°C (-40°F to +140°F).
- ▶ Resolution:
Horizontal 350 TV lines.
- ▶ Number of Pixels:
Total: 252K pixels; Effective: 512(H) 492(V)
- ▶ Dimensions:
Refer to *Figure 1* and *2*
- ▶ Shipping Weight (approximate):
1.6 Kg (3.5 lb)
- ▶ Detector Enclosure Material:
Powder coated or anodized aluminum (Optional Stainless Steel)
- ▶ Certification:
Housing is certified to CSA. Certified ratings are; NEMA 4X for environmental protection and CSA, Class I, Division 1 Groups B, C and D for hazardous locations.
- ▶ Viewing Angle
Horizontal 52°
- ▶ S/N (Signal to Noise ratio):
≥ 46dB
- ▶ Output
1Vp-p, 75 ohms composite signal (NTSC)
- ▶ Connector:
Standard RCA Video Signal Connector

Appendix B

Electrostatic Sensitive Device Handling Procedure

Electrostatic damage can occur in several ways. The most familiar is by physical contact. Touching an object causes a discharge of electrostatic energy that has built up on the skin. If the charge is of sufficient magnitude, a spark will also be visible. This voltage is often more than enough to damage some electronic components. Some devices can be damaged without any physical contact. Exposure to an electric field can cause damage if the electric field exceeds the dielectric breakdown voltage of the capacitive elements within the device. In some cases, permanent damage is instantaneous and an immediate malfunction is realized. Often, however, the symptoms are not immediately observed. Performance may be marginal or even seemingly normal for an indefinite period of time, followed by a sudden and mysterious failure.

Damage caused by electrostatic discharge can be virtually eliminated if the equipment is handled only in a static safeguarded work area and if it is transported in a package or container that will render the necessary protection against static electricity. Net Safety Monitoring Inc. modules that might be damaged by static electricity are carefully wrapped in a static protective material before being packaged. Foam packaging blocks are also treated with an anti-static agent. If it should ever become necessary to return the module, it is highly recommended that it be carefully packaged in the original carton and static protective wrapping.

Since a static safeguarded work area is usually impractical in most field installations, caution should be exercised to handle the module by its metal shields, taking care not to touch electronic components or terminals.

In general, always exercise all of the accepted and proven precautions that are normally observed when handling electrostatic sensitive devices.

A warning label is placed on the packaging, identifying those units that use electrostatic sensitive semiconductor devices.



* Published in accordance with EIA standard 471



Distributed By:

2721 Hopewell Place NE
Calgary, Alberta, Canada T1Y 7J7
Telephone: (403) 219-0688 Fax: (403) 219-0694
www.net-safety.com
E-mail: netsafe@net-safety.com