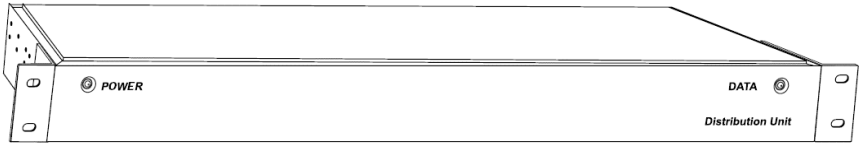


INSTRUCTION MANUAL

DISTRIBUTION UNIT



Please read this manual thoroughly before use, and keep it handy for future reference.

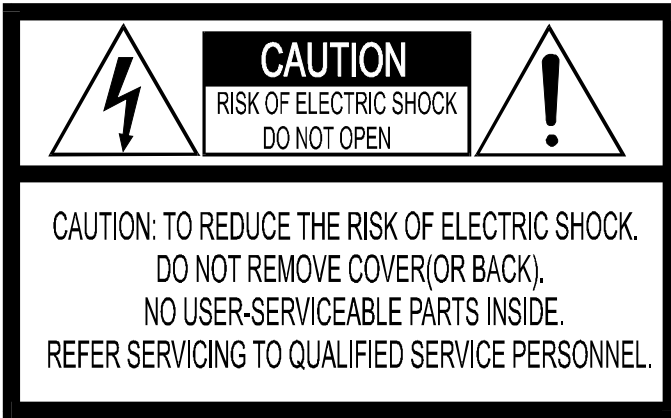
LIMITATION OF LIABILITY

THE INFORMATION IN THIS PUBLICATION IS BELIEVED TO BE ACCURATE IN ALL RESPECTS, HOWEVER, WE CANNOT ASSUME RESPONSIBILITY FOR ANY CONSEQUENCES RESULTING FROM THE USE THEREOF. THE INFORMATION CONTAINED HEREIN IS SUBJECT TO CHANGE WITHOUT NOTICE. REVISIONS OR NEW EDITIONS TO THIS PUBLICATION MAY BE ISSUED TO INCORPORATE SUCH CHANGES.

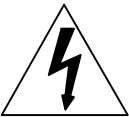
WARNINGS AND CAUTIONS

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the product.

FCC COMPLIANCE STATEMENT

FCC INFORMATION : THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

CAUTION : CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS A DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.
CET APPAREIL NUMÉRIQUE DE LA CLASSE A EST CONFORME À LA NORME NMB-003 DU CANADA.

CE COMPLIANCE STATEMENT

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

IMPORTANT SAFEGUARDS

1. **READ AND RETAIN INSTRUCTIONS**

Read the instruction manual before operating the equipment. Retain the manual for future reference.

2. **CLEANING**

Turn the unit off and unplug from the power outlet before cleaning. Use a damp cloth for cleaning. Do not use harsh cleansers or aerosol cleaners.

3. **ATTACHMENTS**

Do not use attachments unless recommended by manufacturer as they may affect the functionality of the unit and result in the risk of fire, electric shock or injury.

4. **MOISTURE**

Do not use equipment near water or other liquids.

5. **ACCESSORIES**

Equipment should be installed in a safe, stable location. Any wall or shelf mounting accessory equipment should be installed using the manufacturer's instructions. Care should be used when moving heavy equipment. Quick stops, excessive force, and uneven surfaces may cause the equipment to fall causing serious injury to persons and objects.

6. **VENTILATION**

Openings in the equipment, if any, are provided for ventilation to ensure reliable operation of the unit and to protect it from overheating. These openings must not be blocked or covered.

7. **POWER SOURCES**

The equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied at the installation location, contact your dealer. For equipment designed to operate from battery power, refer to the operating instructions.

8. **GROUNDING OR POLARIZATION**

Equipment that is powered through a polarized plug (a plug with one blade wider than the other) will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. Do not defeat the safety purpose of the polarized plug.

Alternate Warning: If the equipment is powered through a three-way grounding-type plug, a plug having a third (grounding) pin, the plug will only fit into a grounding-type power outlet. This is a safety feature. Do not defeat the safety purpose of the grounding-type plug. If your outlet does not have the grounding plug receptacle, contact your local electrician.

9. **CORD AND CABLE PROTECTION**

Route power cords and cables in a manner to protect them from damage by being walked on or pinched by items placed upon or against them.

10. **LIGHTNING**

For protection of the equipment during a lightning storm or when it is left unattended and unused for long periods of time, unplug the unit from the wall outlet. Disconnect any antennas or cable systems that may be connected to the equipment. This will prevent damage to the equipment due to lightning or power-line surges.

11. **OVERLOADING**

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

12. **SERVICING**

Do not attempt to service the video monitor or equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

13. DAMAGE REQUIRING SERVICE

Unplug the equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- A. When the power supply cord or the plug has been damaged.
- B. If liquid has spilled or objects have fallen into the unit.
- C. If the equipment has been exposed to water or other liquids.
- D. If the equipment does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage to the unit.
- E. If the equipment has been dropped or the casing damaged.
- F. When the equipment exhibits a distinct change in performance.

14. REPLACEMENT PARTS

When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

15. SAFETY CHECK

Upon completion of any service or repairs to the equipment, ask the service technician to perform safety checks to verify that the equipment is in proper operating condition.

16. FIELD INSTALLATION

The installation of equipment should be made by a qualified service person and should conform to all local codes.

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1 DESCRIPTION

The distribution unit is a 16-channel RS-422 transmit only (2-wire and ground) distributor. This unit will primarily be used to install pan / tilt / zoom camera in a “star” configuration.

1.1 FEATURES

The unit has the following features:

- Two 3-position, screw terminal connectors, providing an input from a keyboard and an output for an additional daisy-chained distribution unit.
- Sixteen 3-position screw terminal connectors used to output RS-422 transmit signal only.
- power source 12 VDC Input

2 PRE-INSTALLATION INFORMATION

2.1 FRONT VIEW

Figure 1 illustrates the front view of the unit. A power LED indicator is located on the left and a data LED is located on the right side of the front panel of the unit. The power LED will light when power is applied to the unit; the data LED will light when a transmission from the keyboard is received.

2.2 REAR VIEW

Figure 2 illustrates the rear of the unit. Note the three-position terminal screw data output lines numbered 1 - 16, from left to right. Next to that are the three-position terminal screw IN / OUT communication ports. Finally, the standard DC power input cord connection is on the right.

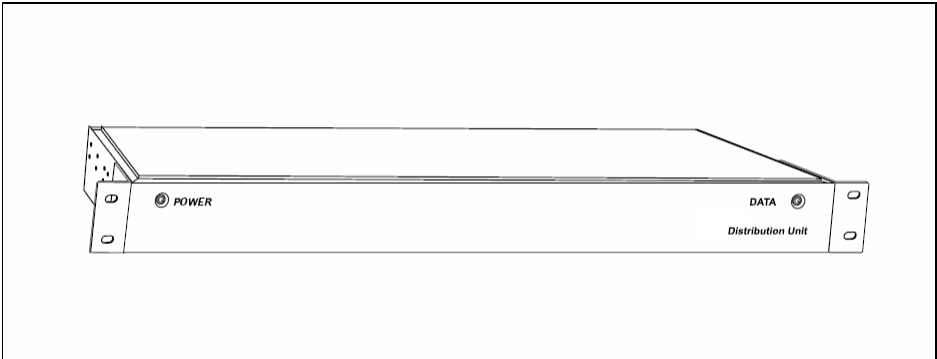


Figure 1. Front View

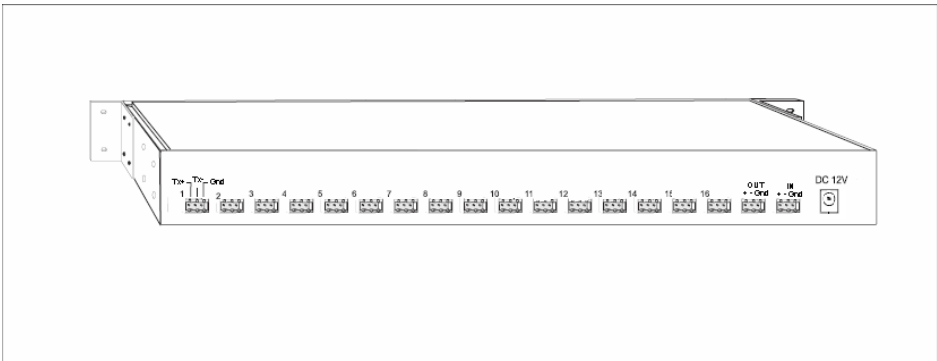


Figure 2. Rear View

Figure 3 further details the mating plugs, pin-outs, and so on pictured in Figure 2.

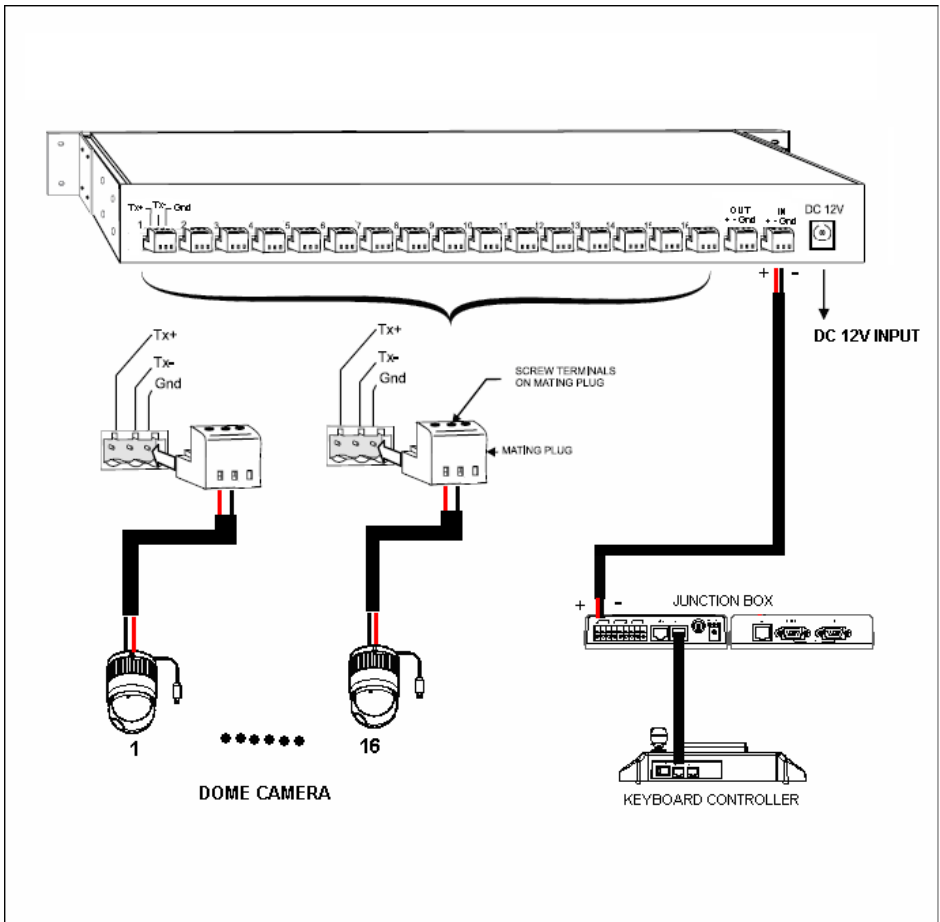


Figure 3. Rear View Connector Details

3 INSTALLATION

Installation of the unit is straightforward. The unit is rack mountable. In addition to the 16 lines available for output with one unit, eight units may be daisy-chained together. This will allow 128 pan / tilt / zoom cameras (that support 128 address settings) to be connected on a single keyboard. Figure 4 illustrates two units daisy-chained providing 32 independent drive lines.

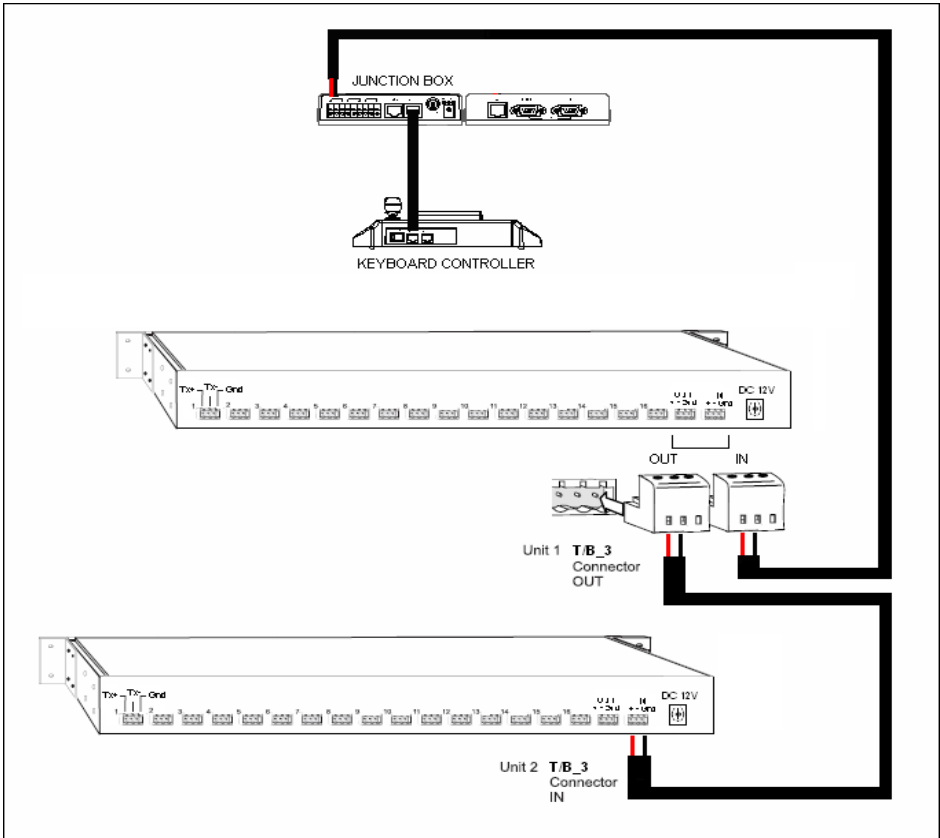


Figure 4. Daisy-Chain Configuration

Note: Each dome camera must be terminated when connected to this unit. An un-terminated setting could cause the camera to work intermittently.

Pictured in Figure 5 is a very simplified block diagram.

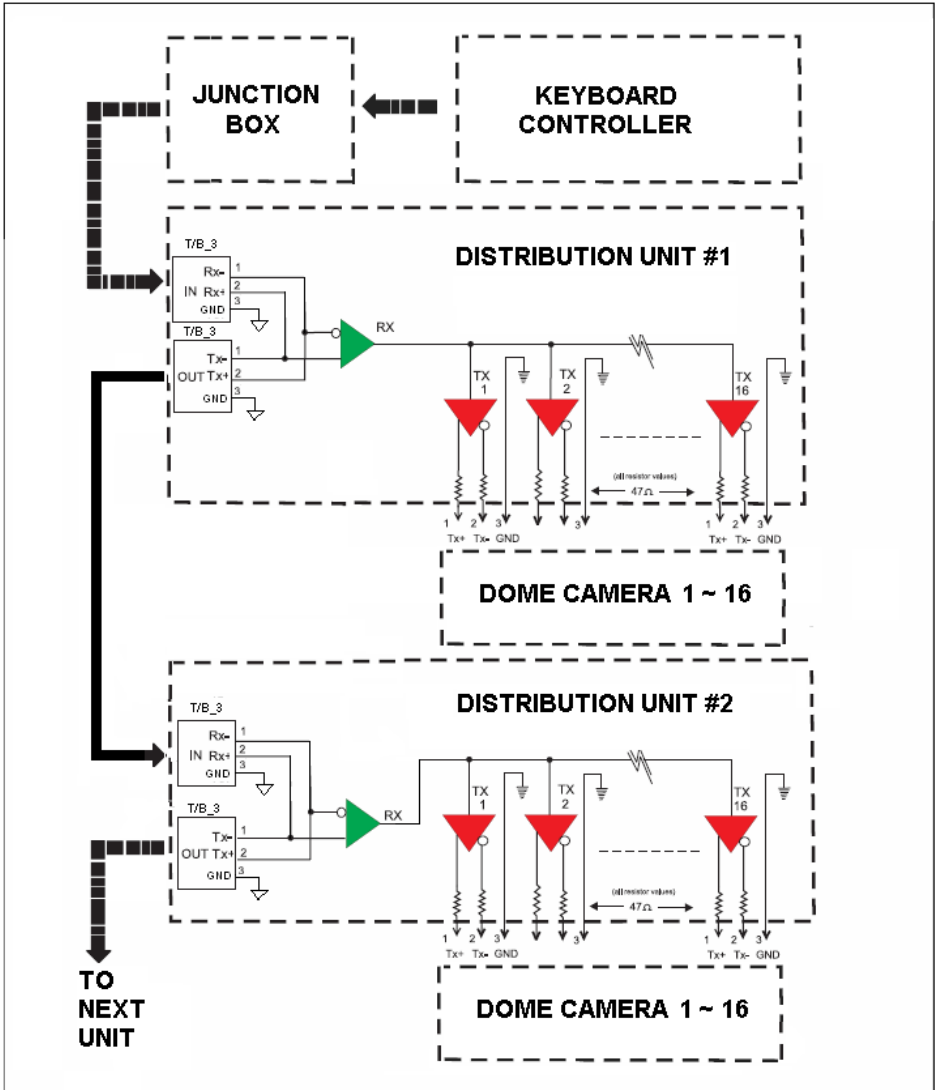


Figure 5. System Block Diagram for connection

4 OPERATION

The unit works as a distribution repeater for expanding one RS-485 communication port into 16 isolated and buffered line driver ports. The primary use is to provide quick, easy, and proper data-line distribution for the pan / tilt / zoom camera. In the case of these isolated RS-422 drive lines, the camera may be located as far as 4,000 feet (1,219 m) away from this unit, depending on the physical parameters of the connection.

Note: This unit only transmits the command signal. So this unit can't use with the half-duplex mode of the RS-485 communication.

5 SPECIFICATIONS

ELECTRICAL

Input Voltage : 12 DC Input

Power
Consumption : 10 watts

RS-485 ports
Input : 3-position screw-terminals with mating
Output : 3-position screw-terminals with mating

Drive Lines : RS-422, sixteen 3-position screw-terminals with mating

Indicators : 1 power LED, green
1 data LED, red

MECHANICAL

Dimensions : 19" W x 1.73" H x 5.63" D
(48.2 cm x 4.4 cm x 14.31 cm)

Operating
Temperature : 32°F to 104°F (0°C to 40°C)

Weight : 4.7 lb (2.1 kg)

GENERAL

Connectors

Power : DC jack

RS-485 : Two 3-pin headers with mating plug
1-16 Port : Sixteen 3-pin headers with mating plug