



RAPID – VEYOR

Portable Modular Conveyor System

Operation manual

□ Safety Warning!!!

It is the customer’s responsibility to ensure that all personnel having access to this equipment have their attention drawn to the various warnings and cautions given in the manual.

Serial Number of Drive Section(s):

Serial Number of Slave Sections(s):

Design details are subject to progressive improvement and modifications, which may be incorporated without notice.

Safety Recommendations

To avoid unnecessary injury to the operator, or damage to the unit, please review the following recommendations.

- 1. USE THE CORRECT ELECTRICAL CURRENT:** Conveyors run on standard U.S. and Canadian currents of 110 to 120 volts, 60 HZ, alternating current. Other countries may use different currents. If in doubt check the electrical rating label affixed to the motor. The wrong kind of current could cause an electrical short circuit and possible over-heating or shocks.
- 2. GUARD AGAINST SHOCK HAZARDS:** do not, for any reason, cut or remove grounding prong from power cord. Be sure it is plugged into a properly installed grounding type receptacle.
- 3. AVOID ELECTRICAL SHOCK:** Never insert metal objects such as screwdrivers inside the electrical unit.
- 4. NEVER REACH UNDER BELT OR PLACE HANDS NEAR ROLLERS WHILE IN OPERATION:** Injury to hands and equipment could occur. Always turn power off and unplug power cord before servicing.
- 5. ALWAYS HAVE THE UNIT SERVICED BY QUALIFIED SERVICE TECHNICIAN.**

Obtaining service

If conveyors need service contact:

Rapid-Veyor.

3825 Central Pkwy Ste A

Hudsonville, MI 49426

616-662-0954

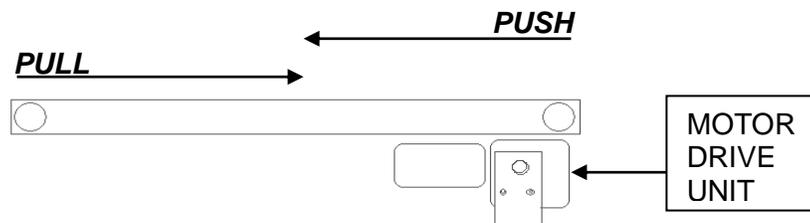
E-mail: sales@rapid-veyor.com

SET-UP OF CONVEYOR SYSTEM:

Before installing a conveyor system, first plan out layout of units. Take into consideration the area around conveyor, and loading and unloading points. The conveyor may be placed directly on the ground, on blocks, or on optional portable adjustable stands. Keep in mind that the drive sections will be higher than slave sections at floor level.

PUSHING VS. PULLING:

The conveyor will work significantly better if the load is being pulled rather than pushed (see illus. Below). Keep this in mind when positioning drive sections. Heavier items should always be pulled to avoid belt slipping. Also avoid long inclined sections being pushed.



WARNING:

Never connect more than one drive section to any amount of slave sections.

Up to seven slave sections can be connected to a drive section; the slave sections can be placed in any location ahead or behind the drive section. Two drive sections should never be powering any common slave sections. This could cause the two drive sections to work against each other, resulting in increased belt wear, and possible overheating and damage of motor. If only lightweight material is being moved, it is possible to connect more than seven slave units to one drive section. Please call Rapid-Veyor (616-662-0954) before attempting this.

CONNECTION OF SECTIONS

Once the layout is planned, begin placing sections together as shown in fig. A. Place sections in a manner that receiver end can be dropped directly in connection cradle of first section. Insure conveyors are pulling or pushing as desired. Be sure bearings of receiving end are fully seated in cradle (see fig. B).

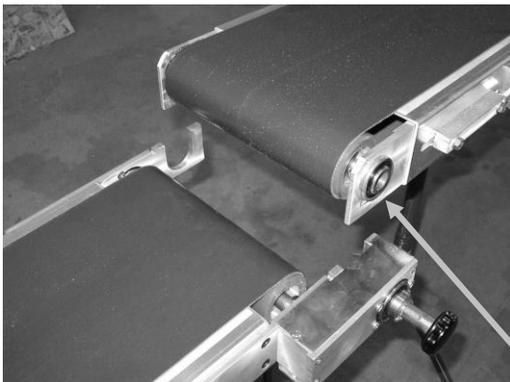
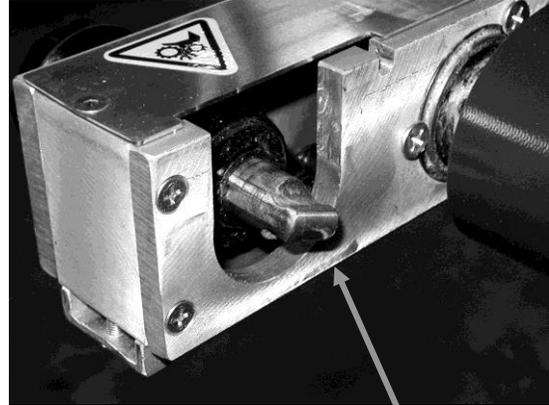
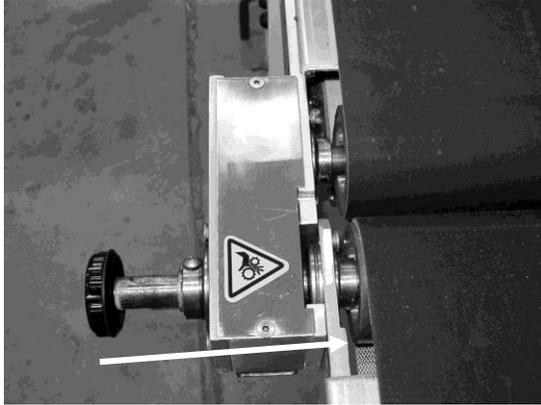


FIG. A Receiver End



FIG. B

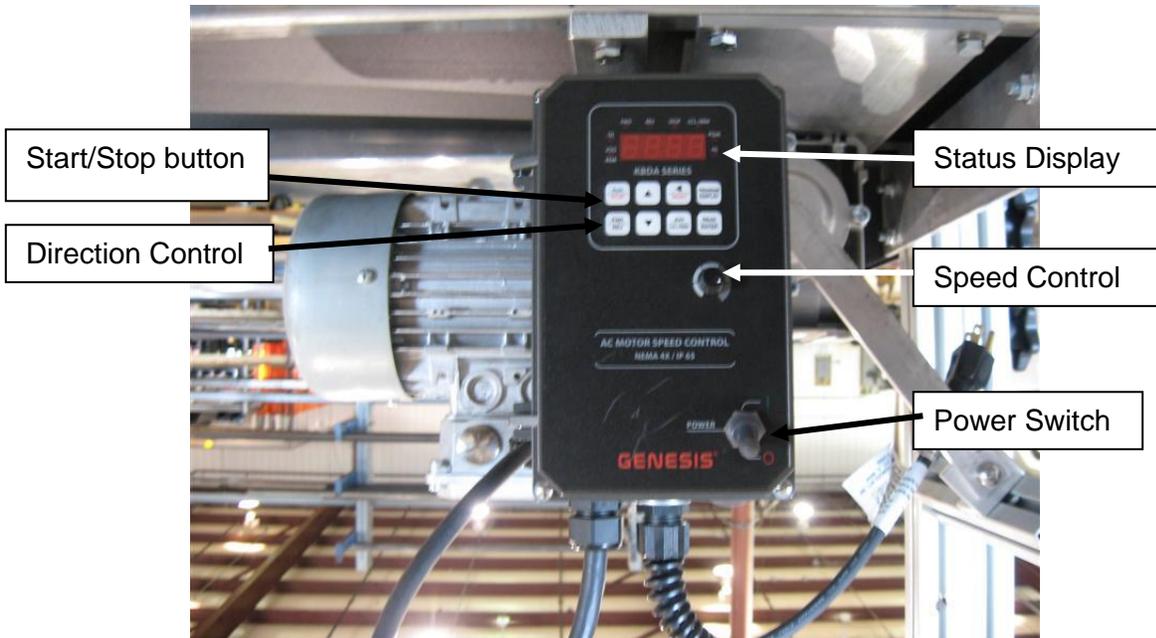
Push in knob of transmission shaft into roller assembly. It may be necessary to push or pull the belt by hand until shaft fully seats into the roller. Reverse steps to disassemble. Note: It may be necessary to reverse motor drive direction a few inches to disengage transmission (see below).



Insert into roller assembly

DRIVE SECTION CONTROLS

Each drive section has its own basic conveyor controls; power on and off, forward and reverse, start and stop, and a speed control. Move the power switch to the “on” position (up) to turn the drive section on. Press the “Run/Stop” button to turn on the motor. The belt travel direction can be changed by pressing the “FWD/REV” button. The belt speed is controlled with the small knob below the buttons. Turning the knob clockwise increases speed, counter-clockwise decreases the speed. The remaining keys are for programming use only.



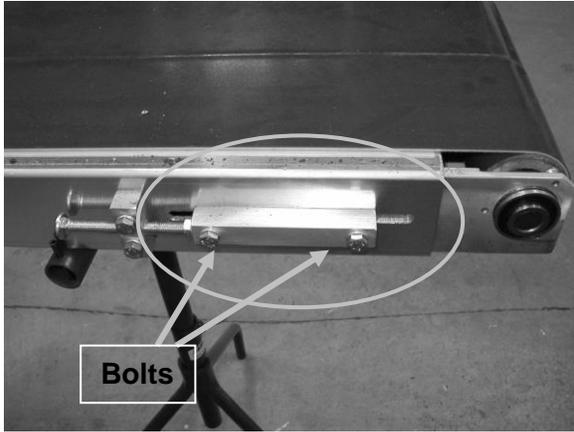
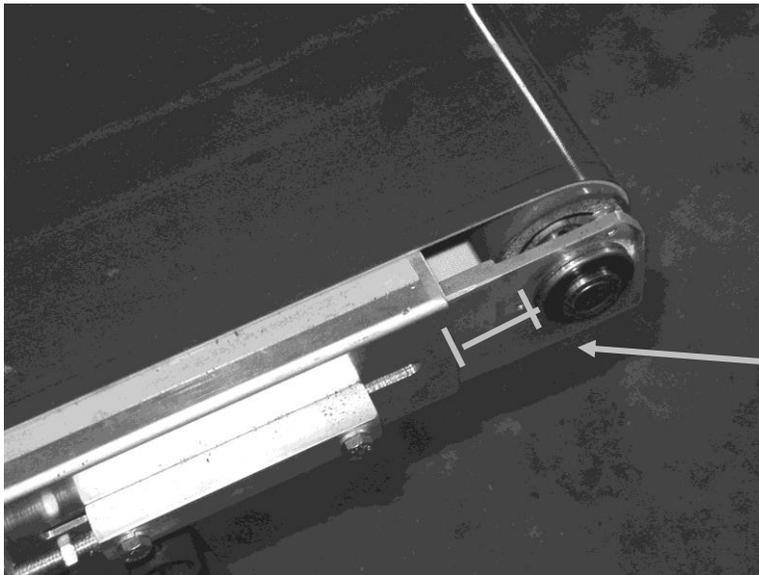


FIG. C

MAINTENANCE

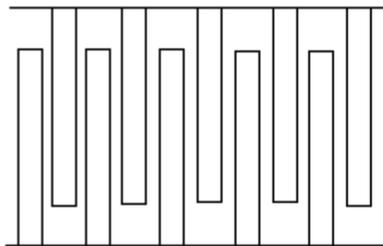
Belt tension and Tracking: the belt tension can be changed by turning in the tensioning screw on each side of the conveyor (see fig. C). The belts have a set tension from the factory, but they will stretch over time. If any visually noticeable belt slipping is occurring the belts may be in need of tensioning. From the factory the

tension is set at 5/8". It is necessary to ensure both sides are even to achieve proper tracking. If the belt is significantly bulging in the middle, it may require adjusting one side out further than the other. This will put more tension on one side of the belt, changing its position in the roller groove.

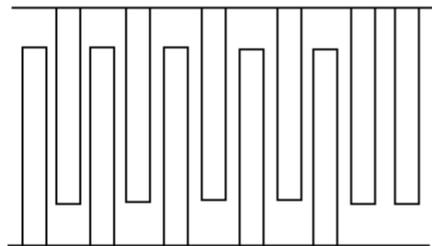


5/8" space from conveyor bed to notch on roller assembly

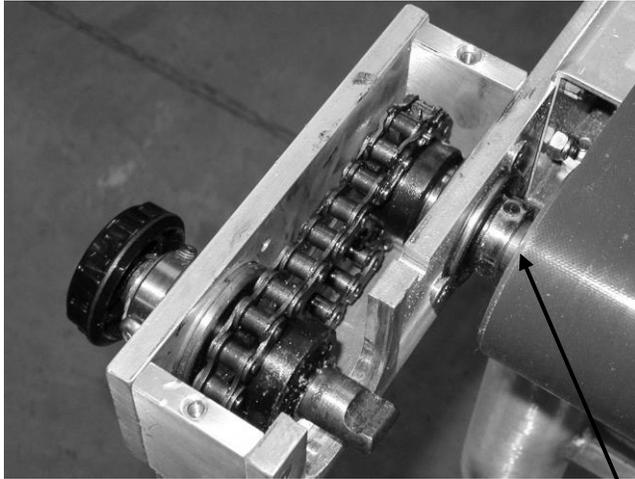
Removing the belt: loosen tensioner and allow roller to fully retract into conveyor bed. Pull the pin out of the belt lacing, and remove belt. Reverse steps to re-install. Take note of intertwining of lacing and position of belt with snub roller underneath conveyor section. The lacing should be centered with each other (equal on each side).



Correct



WRONG



Roller disassembly: Remove belt. Loosen set screws (see fig. D) on roller shaft. Remove hex head bolts (1/2") from tensioner assembly (refer back to fig. C). Slide assembly out of conveyor bed. Disassemble shaft from mounting slides (fig. G). Remove tension screws from around bearing snap rings (fig. E). The bearings can be replaced by gently and squarely tapping on the outside portion. Note: Rollers connected to transmission, must have the chain and sprocket removed first.

Fig. D Set screws

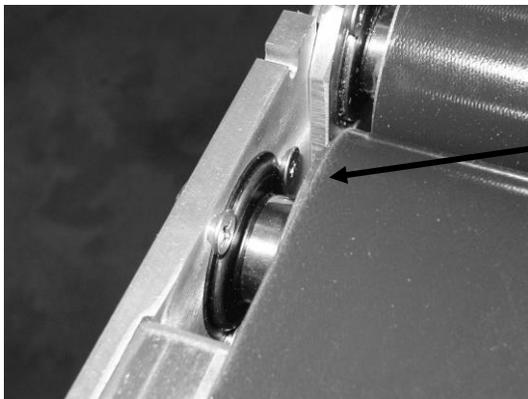
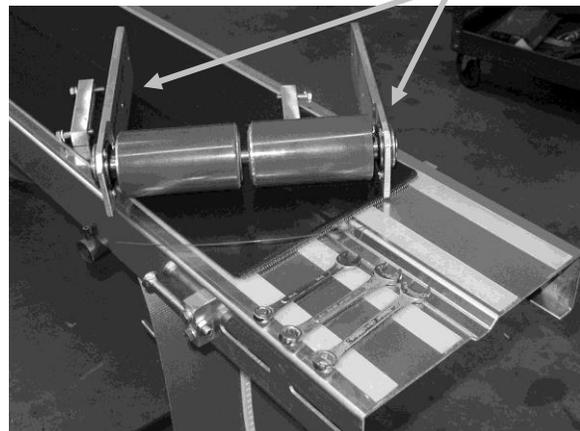


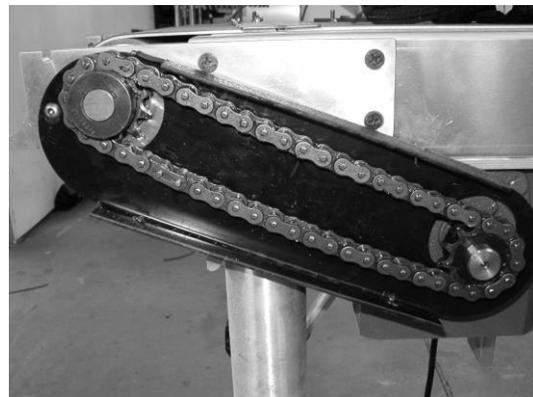
Fig. E Tension Screws

Fig. F Mounting slides



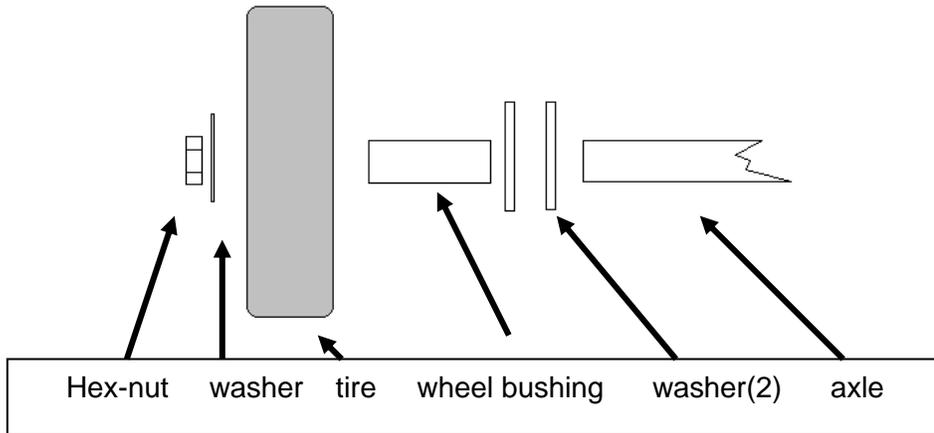
Cleaning and lubricating: All sections can be cleaned with mild soap and water. The motor and electrical control box are water-resistant (NEMA 4 protection rating). The motor/drive unit may be washed with a low-pressure hose. However, avoid direct spraying of motor. Lubricate transmission chains monthly (fig. D), and drive chain (fig. G), with a heavy weight oil. Spray roller bearings and transmission shaft with white lithium spray lubricant (fig D and E).

Fig. G



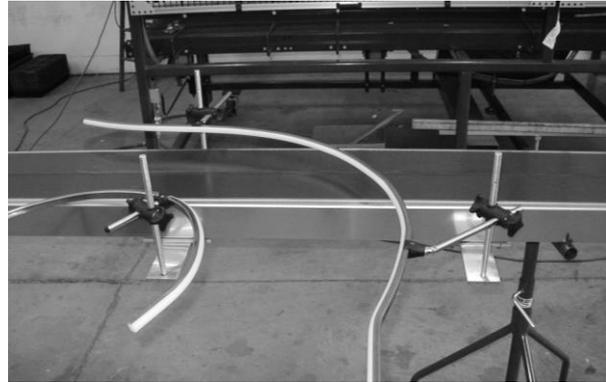
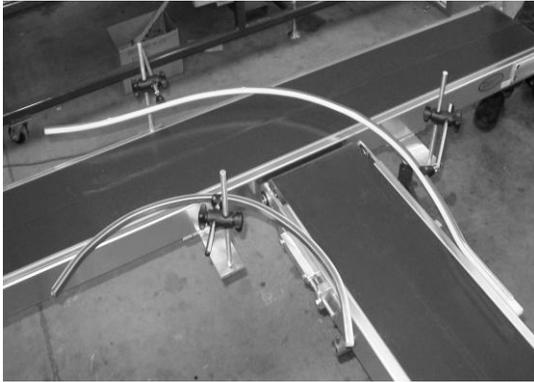
Optional Equipment:

Cart: The cart is only to be used in conjunction with the wheeled axle in place on the drive section. Do not use with extensions (optional equipment) attached to axles. If needed remove adjustable extensions and install wheels in upper mount as shown below. Use caution when loading and unloading cart. Never attempt loading and unloading of conveyor sections with one individual. When loading sections onto cart, first always start by placing the cart under the drive section opposite motor end. Also be sure that the cart is fully ahead of roller assembly (see below), and only the conveyor's aluminum shell is resting on the cart.

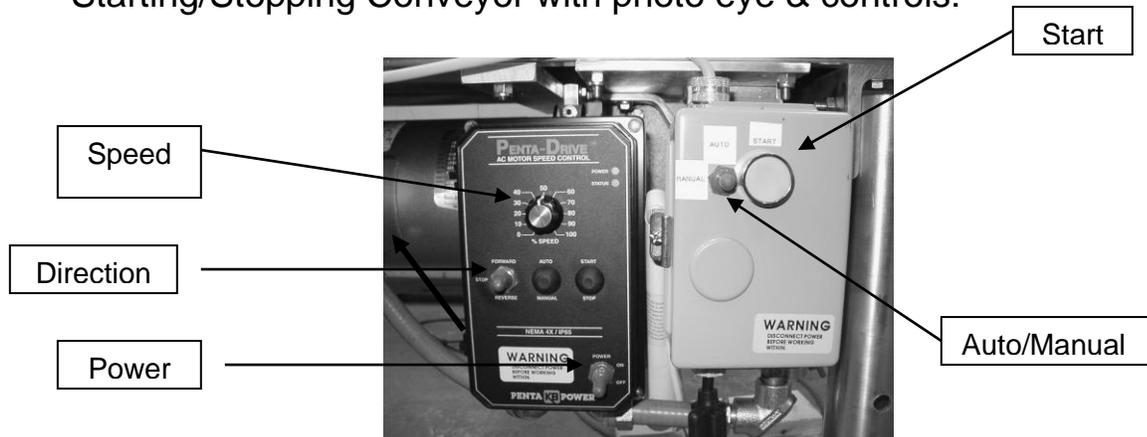


Note position of cart in relation to end roller assembly, never let conveyor roller assemblies rest on support bracket

Cornering sections: When a turn is needed one section must T into the next. The junction should be placed near the middle of the next section (see below). The longer curved section is to be placed on the outside of turn using the two rotating head mounting rods. While the smaller curve is placed on the inside of the turn using the fixed head rod.



Starting/Stopping Conveyor with photo eye & controls:



One option for your new *RAPID-VEYOR* is what we call a STOP-EYE. Basically, when an object on the conveyor breaks the beam and the mode switch is set to AUTO, the conveyor will come to a stop. Step by step instructions are below on how to start and re-start the conveyor using the eye. There is also manual mode for when you don't want to use the eye.

AUTO MODE (using the eye to stop the conveyor):

1. Plug the unit into a 120VAC power source.
2. Turn the power switch on the black drive box to the "ON" position.
3. Select "AUTO" on the gray box next to the drive.
4. Select which direction you want the conveyor belt to run "FORWARD" or "REVERSE".
5. Press the "START" button on the gray box.
6. Adjust the speed to your needs.

When an object breaks the beam, the conveyor will come to a stop. To re-start the conveyor, remove any objects in front of the eye so it has a clear view of the reflector, and press the "START" button. The conveyor should start running at the pre-set speed and direction. If it doesn't check to see the switches are set in the right position as described in steps 1-6 above.

Photo Eye LED's:

Green: ON Steady = Power to eye, conveyor in AUTO MODE

Yellow: ON Steady = Beam is not broken, conveyor will run in AUTO MODE

Yellow: ON Blinking = Some light is being reflected, but not enough. Adjust reflector.

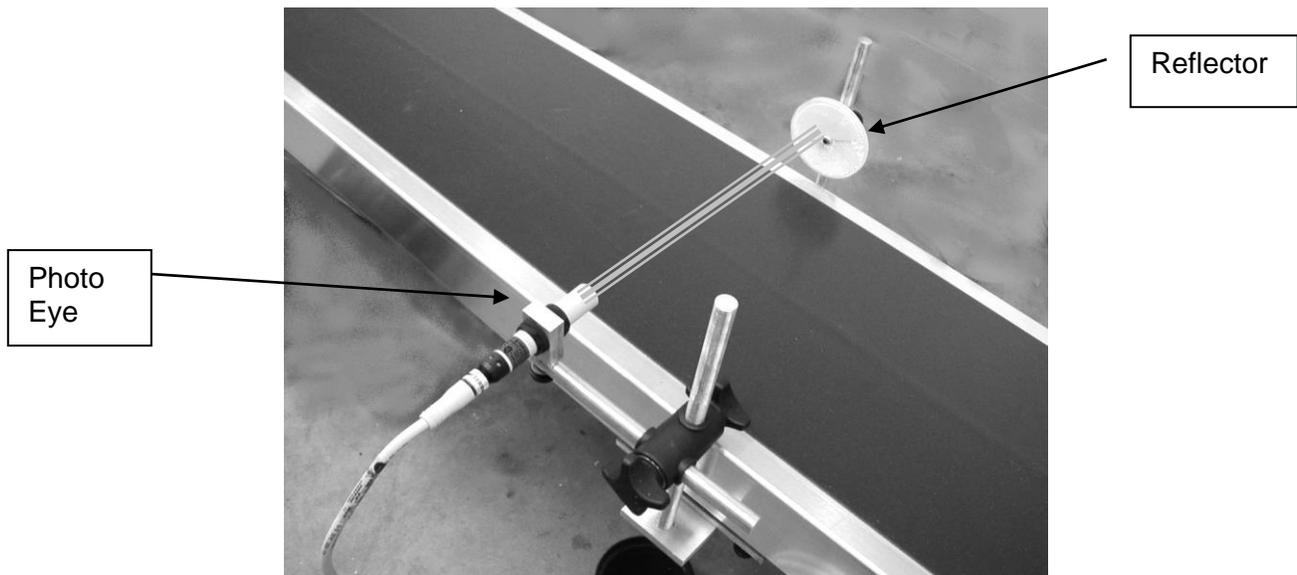
Yellow: OFF Steady = Object breaking beam. Remove object or adjust eye/reflector.

MANUAL MODE (using the conveyor without the eye)

1. Plug the unit into a 120VAC power source.
2. Turn the power switch on the black drive box to the "ON" position.
3. Select "MANUAL" on the gray box next to the drive.
4. Select which direction you want the conveyor belt to run "FORWARD" or "REVERSE".
5. Press the "START" button on the gray box.
6. Adjust the speed to your needs.

Conveyor will run regardless of photo eye. *The "START" button still needs to be pushed after the power is on to get the conveyor to run.

Photo Eye Setup:



The picture above shows correct alignment of the photo eye with the reflector. When the eye is lined up correctly, the YELLOW LED will be ON STEADY. When it is not lined up correctly, or there is an object between the eye and the reflector, the YELLOW LED will be OFF.

Photo Eye Tips:

- At full speed, it can take the conveyor up to 18" or more (depending on how heavily loaded) to come to a complete stop. So don't position the eye and the very end of the conveyor, although it will stop, the product closest to the end may fall off.
- Keep the lens of the eye away from the product on the conveyor; if it comes in contact with product the lens may become scratched or otherwise damaged.
- **When possible keep the eye cord set directly under the conveyor or coil it up to avoid creating a trip hazard. Also damage to the photo eye cord can occur.**
- **If you wish to use the conveyor without the eye, remember to put the mode switch into the "MANUAL" position. (Refer to page 8)**



*RAPID AUTOMATED SYSTEMS INC.
Limited Warranty*

Rapid Automated Systems Inc. warrants the Rapid - Veyor System sold by Rapid Automated or an authorized distributor will be free from defects in material and workmanship for a period of two years from the date of shipment. Rapid Automated Systems obligation under this warranty is limited to repairing or replacement, at Rapid Automated Systems option, F.O.B. manufacturing plant, any part of goods found to be defective within the warranty period. This obligation is conditioned upon receipt by Rapid Automated Systems of prompt notification via, phone, e-mail, or written letter of the claimed defect, including a description of the defect and its discovery, and the opportunity for Rapid Automated Systems to inspect the goods in the buyer's facility. This obligation does not include costs of labor or other charges incurred in removing or reinstalling parts, and does not apply to goods damaged by misuse, neglect or accident. Or to goods which have been improperly applied, installed, adjusted, operated, maintained, repaired or altered by persons other than Rapid Automated Systems.

Rapid Automated Systems makes no additional warranties, expressed or implied, as to any goods and in particular Rapid Automated Systems makes no warranties of merchantability or fitness for any particular purpose. In no event shall Rapid Automated Systems be liable for failure of the goods to comply with federal, state or local laws or for incidental or consequential damages (including loss of profits).

Please note: In case of motor, drive, or reducer failure during the warranty period, Rapid Automated Systems will on your behalf contact the manufacturer of the motor, drive, or reducer and assist you the buyer in settling the claim.

For any questions regarding this warranty please e-mail us at sales@rapid-veyor.com or phone at 616-662-0954 during regular business hours. 8:00AM – 5:00PM EST Monday – Friday.