



201 Grandin Road  
Maineville, Ohio 45039  
(513) 677-0500

# **Reverse Captive Carrier TransTRAX<sup>®</sup>**

## **Installation and Service Manual**

**Utilizing the Grey or Red Carrier and BavSonic Audio**



# TABLE OF CONTENTS

Important Safety Instructions.....	1
Overview .....	1
Tools Necessary for Installation .....	3
Installation Overview .....	3
Inside Vertical Unit Installation .....	4
Cutting the Tube and Chamfering.....	4
Horizontal Wiring Harness.....	5
Formed Radius Installation.....	5
Customer Vertical and Twist Installation .....	6
CC Airlock Installation.....	7
CC Airlock Diagram .....	7
CC Ceiling Trim Installation .....	8
CC Ceiling Trim Diagram .....	8
Power Connection.....	9
Tape and Carrier Installation .....	9
Wiring .....	10
Shift Point Adjustment .....	10
Autocycle Mode .....	11
Track Preparation Diagram.....	12
Customer Mounting Diagram .....	13
Tape Preparation Diagram .....	13
Grey Carrier Mounting Block Diagram .....	14
Red Carrier Mounting Block Diagram .....	15
Customer Audio Adjustment .....	16
Troubleshooting the Reverse Captive Carrier .....	17
Maintaining the Reverse Captive Carrier .....	19
User Instructions.....	20
Shift Point and Switch Setting Diagram.....	21
Wiring Diagram.....	22
Radius and Surface Mount Trim Box Diagram .....	23
Reverse Typical Diagram.....	24
Reverse Grey Carrier Diagram and Parts .....	25
Reverse Red Carrier Diagram.....	26
Reverse Red Carrier Parts .....	27
Reverse Red Carrier Door Adjustment.....	28
Reverse Captive Carrier Shipping Manifest.....	29



## Important Safety Instructions

**Unit should be installed in accordance with all national and local codes.**

**DO NOT** clean this unit with a water spray or the like.

**DO NOT** install near any heat sources such as radiators, heat registers, stoves or other sources that produce heat.

Only use attachments / accessories specified by the manufacturer.

Turn the power switch to the "Off" position when the unit is not in use and before servicing.

Refer all servicing to qualified service personnel. Servicing is required when the unit has been damaged in any way, such as liquid has been spilled or objects fallen into the unit's track, because the unit will not operate normally and further damage could result.

### Overview

The Reverse Captive Carrier TransTrax<sup>®</sup> Captive Carrier is a mechanical, positive drive conveyor system kit intended for the conveyance of pharmacy prescriptions and documents between customers and pharmacists at drive-thru pharmacy lanes. For ease of use by customers, the door of the carrier car opens and shuts automatically. The closing of the door is accomplished by spring force. The opening motion is accomplished when a lever on the bottom of the carrier contacts the inside or outside stabilizers. Inside the carrier is a spring-loaded bail to keep the receipts and small bags from falling or blowing out of the carrier. Note that the carrier inverts during its travel. Whatever is inserted into the carrier flips upside down when it is delivered.

This kit features one piece extruded architectural grade aluminum tubing that has a satin anodized finish. The tubing can be, using a power miter box with the proper blade installed, cut and spliced to suit dimensions dictated by varying site conditions. The system is sold as a complete kit ready to install at a site. The standard kit allows for a maximum tubing centerline-to-centerline distance of 23'11". Minimum distance is 3'11". Maximum overall height is 16'. Longer, shorter and/or taller sites can be accommodated. Please consult the factory for assistance and pricing.

### NOTE

**With factory assistance, the minimum horizontal distance from center line to center line of the vertical tube is 32 inches, maximum horizontal distance from center line to center line of the vertical tube is 33 feet, 10 inches. Maximum vertical height from the top of the horizontal tube to the drive surface or finished floor, whichever is the greater, is 16 feet.**

The Reverse Captive Carrier TransTrax<sup>®</sup> must be run in an overhead configuration. It was not designed to accommodate "Downsend" configurations. If there is a need for this type of configuration at a given site, we suggest that you consider a product from our Autoveyor<sup>™</sup> product line. Please contact us for more details on this product line.

In order to provide the greatest speed and safety of operation, the Reverse Captive Carrier TransTrax<sup>®</sup> operates at two different speeds. The carrier travels at slow speed when it is exposed

to either the customer or pharmacist. Then it travels at a much higher speed when in the horizontal section of the track when the carrier is not exposed to people. This model features a proven system of distance monitoring to control shift points versus less sophisticated "time based" systems. In addition, the Reverse Captive Carrier system features a mechanical brake to prevent the carrier from coasting when the system is off.

The Reverse Captive Carrier features dual stopping heights: high for vehicles such as vans and trucks, low for cars. There are two (high and low) premium weatherproof buttons for send. The stopping height is determined by pressing the appropriate car or truck buttons when sending the carrier out to the customer. The system allows one move from car to truck or vice versa; then the carrier must be recalled.

Customer audio components, including wiring harness, microphone, speaker and two call buttons are included with the Reverse Captive Carrier TransTrax<sup>®</sup>.

The weight capacity of the system is conservatively rated at one pound. There are safeguards built into the system which prevent catastrophic failure should the carrier be overloaded.

This system is intrinsically safe in that the mechanical power levels at the moving parts (carriage and carrier) are below 40 lbs. of force when accessible by the users. The electrical power levels at all locations other than the inside vertical standoff are intrinsically safe in that they are at NEC Class II levels (24vdc 100 VAC) or lower.

The Reverse Captive Carrier TransTrax<sup>®</sup> has been reviewed by a third party for safety and suitability for the given application. Please review the label applied to the machine for details concerning this review.

## **NOTE**

**The intrinsically safe power level does require that the system be smooth running without any extra drag induced by poor fitups, misalignment at joints in the tubing and other installation related problems, or it simply won't run properly.**

Each part in the kit contains a PSA label with the part name and number attached to it. Please read over this manual before installation to familiarize you with the different components and where they are used in the system.

A schematic of an installed Reverse Captive Carrier TransTrax<sup>®</sup> system identifying major components by part number can be found on page 24.

**If there are questions about any of the following, contact the Technical Service Department at (513) 677-0500.**

## **Tools Necessary for Installation**

Phillips head screwdriver #2 tip  
Flat tip screwdriver, #1F2R tip (miniature)  
Screwrunner, #2 Phillips tip  
Level  
Tape measure  
Half Round Bastard File 19/32 x 5/32 x 6  
Power Miter Box with carbide tipped blade  
Hammer Drill and Anchors  
1/8 Shaft conical rotary cutter (Dremel tool preferred)

## **Installation**

### **Installation Overview**

The process of installing a Reverse Captive Carrier TransTrax<sup>®</sup> into a building consists of first mounting the inside vertical, attaching the radius, adding the horizontal section, attaching the customer radius, outside twist, and then mounting the customer end. All horizontal wiring cables are designed to run inside the tubing.

After the tubing is installed, the airlock assembly and ceiling trims are mounted. The electrical connection is then made. The final aspect of the assembly process consists of feeding the drive tape into the machine, and adjusting the shift points.

### **NOTE**

**The inside vertical unit, reverse customer vertical unit, and carrier are all tested as a unit in the factory. Do not mix and match components when installing a multiple lane job.**

The following detailed description provides step by step details of this process, as well as important notes and cautions. **Read these details carefully before attempting to install the Reverse Captive Carrier TransTrax<sup>®</sup>.**

# Installation Procedure

## Inside Vertical Unit Installation

The first part of the Reverse TransTrax<sup>®</sup> Kit is a completely assembled inside vertical unit. The System Electronics are housed in the wall standoff portion of the inside vertical unit. The wall standoff sides open outward to expose the back. The wall standoff back needs to be mounted securely to the wall.

### CAUTION

**The wall standoff supports the entire weight of the inside vertical unit. Do not just use molly bolts or similar type mounts into the drywall. Make certain that the fasteners and mounting surface are adequate to fully support this component and the forces that occur during operation.**

The bottom of the inside vertical unit should be positioned 46" off the inside floor. If the vision window frame obstructs the placement of the wall standoff, it can be repositioned up to 6" higher on the vertical tubing by removing its associated screws and placing it at the higher position.

## Cutting and Chamfering the TransTrax<sup>®</sup> Tube

The Reverse Captive Carrier TransTrax<sup>®</sup> system uses a proprietary aluminum extrusion. This extrusion must be cut using carbide tipped circular saw blade in a power miter box. No other way of cutting the tube is acceptable.

Many have tried to use an abrasive blade installed in a power miter box to cut the tube. Do not use this method as it will yield cuts that will not function properly. Further, since the cuts must be made dead square, a good quality miter box is the only acceptable way to make the cuts.

If you have any questions regarding the proper method of cutting the tubing, please contact the factory. Cutting the tube properly is key to making the system function properly.

The inside vertical extension should be cut to a dimension that will allow the formed radius to exit the building via the 16" x 24" clearance hole in the wall. The inside vertical extension must then be deburred and the tape slot chamfered.



## **NOTE**

**The area of the tape slot where the tubes are joined must actually be chamfered on both tubes and on the top and bottom track and not just deburred to allow the tape to pass easily in the event of a slight misalignment. Inspect the factory prepared ends for an example. The factory prefers to use a conical rotary cutter in a high speed grinding tool such as a Dremel. (Please see page 12)**

## **Horizontal Wiring Harness**

Connect the horizontal wiring harness to the inside vertical assembly and through all other tubing, as the unit is assembled. Sometimes “fishing” the wiring cable through the tubing can be a challenge due to the screws, etc. We have found that a “fish tape” made from a scrap section of tape does a great job. Just attach one end of the harness to a 10-12’ length of tape with electrical tape and push the tape through the tube. The cable can then be easily pulled through using the tape to push the tape through the tube. The cable can then be easily pulled through using the tape to pull the cable. Attach the tubing to the inside vertical unit using two of the extruded internal splice plates. **Be careful when running screws into the tubing not to nick or cut any of the wires. Use the 9/64 drill bit provided.**

## **Formed Radius Installation**

### **CAUTION**

**The formed radii are not designed to be cut. They were designed to be used as is. Any modifications to this component will void the warranty and will likely yield less than acceptable operation.**

The formed radius needs to be attached to the inside vertical unit using the extruded internal splice plates. (See page 12)

The formed radius needs to be attached to the reverse customer vertical unit using the extruded internal splice plates. (See page 12)

## **NOTE**

**The horizontal tubing needs to be cut to a dimension which will allow both of the vertical units to be plumb vertically after it is installed to the formed radii. Be sure to deburr and chamfer each end of the tubing before proceeding.**

## Customer Vertical and Twist Installation

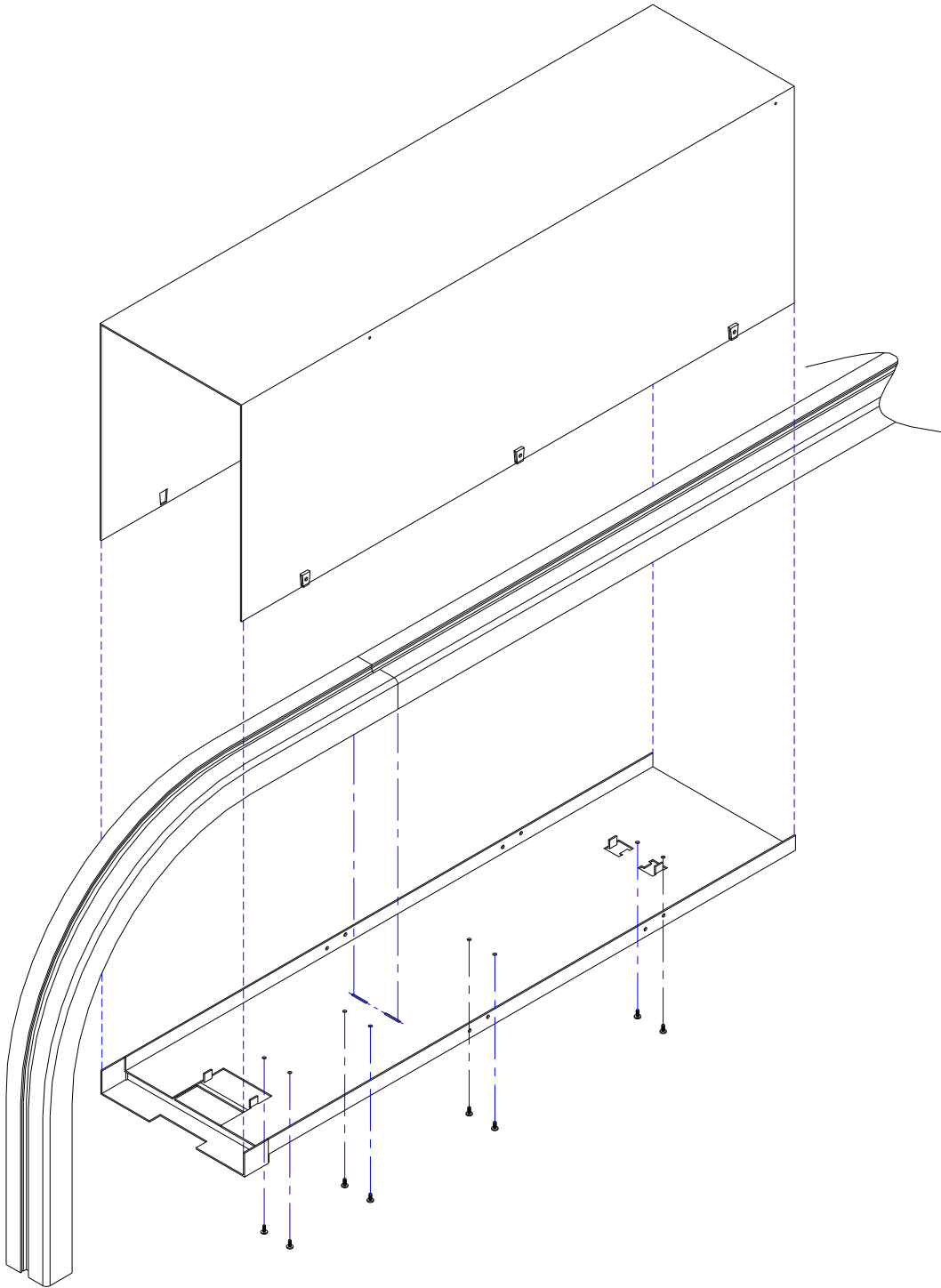
Install the twist on the outside making sure that the top of the twist is at least 1 foot below the ceiling trim. Once the twist is attached, install the customer unit. The customer vertical unit is completely assembled and designed for installation at a site with no elevation difference from the lane to the island. Measure the distance from the lane to the island and cut this amount off of the bottom of the customer vertical unit. It mounts to the island with a customer base. The customer base mounts to the island via two 3/8" holes (Note: base unit to island fasteners not provided) and to the customer vertical tubing via two self-drilling screws. (See page 13). The customer vertical unit is 120" tall. It needs to be cut to length which will allow the horizontal tubing to be plumb horizontally after the formed radius is attached to it. **Be sure to deburr and chamfer each end of the tubing before proceeding.**

### CAUTION

**When cutting off the top of the customer unit; make sure that the vertical cable from the customer unit is pulled back down the customer tube to prevent cutting the cable.**

## CC Airlock Installation

The airlock assembly is a two-piece design. Attach the airlock bottom using the self drilling screws provided. Note the alignment tabs on this part that center it on the tube. The notched end goes on the radius. Install the airlock top to the bottom. Fill the area between the airlock assembly and the 16" x 24" opening with insulating material and cover with drywall, sheathing board or other appropriate material.

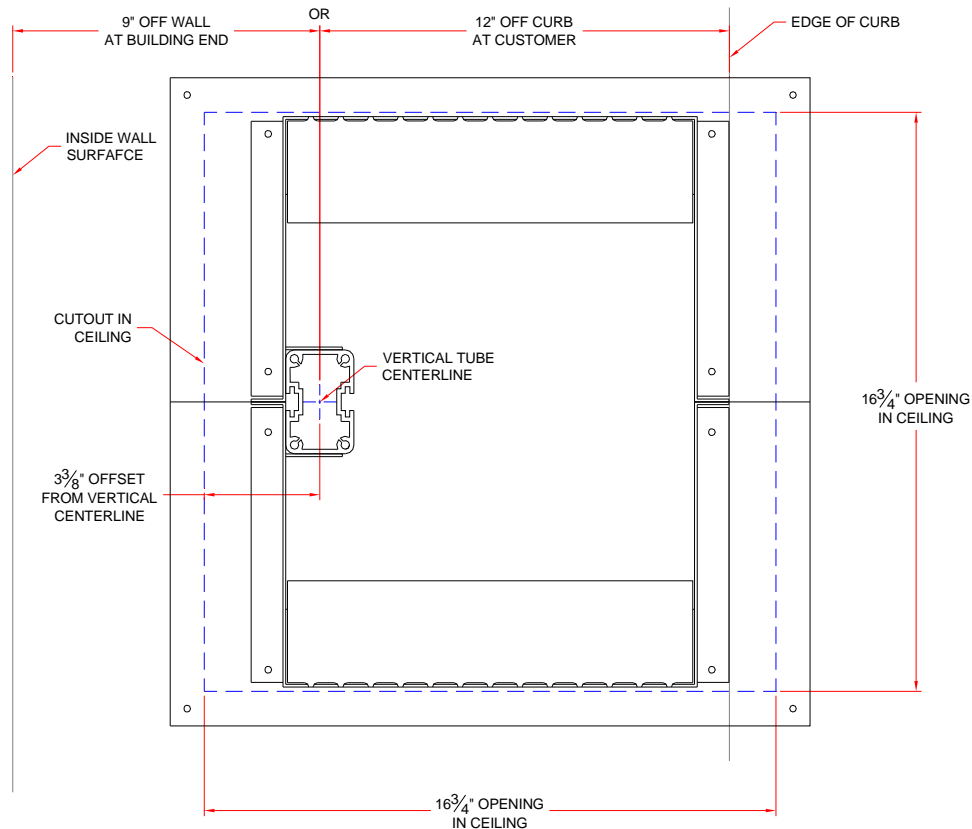


## CC Ceiling Trim Installation

Secure the ceiling trim halves together around the Reverse Captive Carrier TransTrax<sup>®</sup> tube with the #8-32 hardware provided. Holes must be predrilled with the short 9/64" bit provided in the installation accessories to prevent drilling into and damaging wiring. Attach the ceiling trim to the tubing of the Reverse TransTrax<sup>®</sup> with the #8x1/4" self-tapping screws provided. These screws do not protrude into the tubing greatly simplifying running the wiring. Note: The trim must be on the vertical section of tubing, not the radius. If it is necessary to attach the trim to the ceiling, it will be necessary to drill holes for this purpose, as there are no holes provided for this. Test the machine to insure that there is nothing preventing the car from traveling through the flaps.

### NOTE

**Ceiling trims are designed to be mounted on the vertical tube and are not designed to be mounted on the formed radius. When installing trims, make sure that the car moves freely through the trim and does not rub or bump the sides of this component.**



### NOTE

**There are six 1" angled reinforcement plates included in the installation accessories of each Reverse Captive Carrier TransTrax<sup>®</sup>. These are intended to be used when installing the ceiling trims and airlocks when it is not possible to get fasteners in from the bottom of the tube or the sides. Simply attach the angle to the airlock bottom or ceiling trim back and then the side of the tube.**

## Power Connection

The AC Line connection is at the top of the inside vertical standoff. Connection method should comply with all authorities having jurisdiction, (i.e. National, State or Local Electrical Codes). A 1/2" knockout is provided on a single gang box cover. Removing the cover will reveal three leads for termination.

The white wire is the neutral.  
The black wire is the hot. (Single phase 120vac)  
Green is for ground.

### NOTE

**To reduce the risk of shock hazard of both line voltage and static, the ground wire must be connected to a good earth ground.**

The wiring can be enclosed in flexible metallic or nonmetallic conduit. If a cord connection is acceptable, one is provided in the kit complete with a romex connector.

### NOTE

**On the supplied cord the ribbed wire is the neutral connection and the smooth wire is the HOT. Please reduce the cord to a minimum length before connecting. Do not use an extension cord for permanent wiring and do not run the cord through or conceal in walls, ceilings and or other permanent fixtures.**

Press the power button once. The LED above it should come on indicating that the unit has power. Pressing it again should toggle the power off.

## Tape and Carrier Installation

### NOTE

**The AC power must be on to install the tape as this machine has a mechanical brake that requires power to release.**

Remove the customer speaker panel. Also remove the front screw that holds the side speaker mount in place. This will allow the carrier to feed up the customer. Feed the tape into the tape slot at the customer opening insuring that it pushes smoothly all the way into the power unit of the inside vertical unit. Cut the tape two feet longer than this dimension. Remove the tape and dress the ends. Refer to page 13 on how to do this. Attach the carrier to the tape. Before reinserting the prepared tape with carrier attached, take a section of the discarded tape (two feet will do) with square cut ends and run it through the system by hand with a screwdriver. If any rough spots or obstructions exist, correct them before proceeding. Reinsert the tape into the tape slot. At the inside vertical unit, Press and hold the brake release while inserting the tape. Note that the LED comes on.

Engage the tape with a small screwdriver pushing firmly down, without damaging the tape, consistently, but slowly, allowing the tape to engage the gear, wrap around and feed into the tape

return slot. Do this until the magnet block of the carrier is engaging the upper black non-contact switch on the customer vertical unit. Replace the customer panel and speaker mount screw.

Carefully jog the carrier inside and back outside while checking that there is nothing obstructing or binding the carrier. Release the switch back to the normal position.

With the power on, pressing the recall button should cause the carrier to come in. By pressing the car button, the carrier should go out to the lower car stop position. By pressing the truck button, the carrier should go out to the higher truck stop position. Note that the microprocessor control will only allow one move between car and truck or truck and car before it will require the car to be recalled inside. If the carrier does not run, or does not run smoothly, please consult the factory for assistance.

## **Wiring**

The wiring for the Reverse Captive Carrier TransTrax<sup>®</sup> is connectorized and is enclosed within the tubing of the machine. The vertical cable extends through the top of the vertical assemblies and connects with the horizontal cable. The horizontal cable is identical on both ends and cannot be installed backwards.

After you have connected the audio horizontal harness, wrap both ends of the strain relief boot with the electrical tape provided.

## **NOTE**

**A version of this unit dated before 05/2003 has the horizontal harness running directly to the outside base audio board and inside to the audio console.**

## **Shift Point Adjustment**

Please refer to page 21. Open the hinged inside standoff left door to get access to the motor control board. The shift point adjustments are next. There are three adjustments, send, recall and high. The send adjusts when the carrier shifts from low into high speed when the carrier is sent from inside to customer. The recall adjusts when the carrier shifts from low into high speed when the carrier is sent from customer to inside. The high adjusts how long the carrier stays in high speed.

The carrier should be in low speed when traveling through the airlock, radii and in sight of users. It should be in high speed only in the horizontal section. If the carrier is in high speed in the radii, the carrier contents may come out of the car. Adjust the send pot so that when the carrier is traveling from the inside to customer, it shifts into high speed after it comes out of the airlock. Adjust the high pot so that the carrier shifts back into low before it enters the customer formed radius. Adjust the recall pot so that when the carrier is traveling from the customer to the inside, it shifts into high speed after it comes out of the customer formed radius. Observe that the carrier shifts back into slow before it enters the airlock. Re-adjust as necessary so that the carrier is in high speed only in the horizontal section but not in the airlock or formed radii.

## **NOTE**

**The shift points are controlled by a microprocessor that is monitoring the rotation of the sprocket shaft and the settings should not vary due to speed, voltage, temperature, age of machine, etc. Position 1 of dip switch DS1 controls the range of the adjustment for the high speed. On=Long, Off=Short.**

If there is a problem with a carrier missing a switch, check to see what the gap between the switch and the magnet is. Anything over 1/8" and the potential for missing switches exists. This can sometimes be adjusted by loosening the black carrier stabilizers and pulling in the side opposite the stop switch, pushing back the side with the stop switch or a combination of both. Note that the carrier has to have some clearance to the stabilizers to prevent it from binding.

A run limit timer is factory preset at 45 seconds. If the carrier is obstructed during its travel, the motor will shut down after this delay. If more or less time is needed, please consult the factory for assistance.

Close and secure inside standoff left door.

## **Autocycle Mode**

The Reverse Captive Carrier<sup>®</sup> is equipped with an autocycler that can be activated to run the carrier in and out. This is useful to check the unit for proper operation after installation or service.

The procedure for doing this is as follows:

1. Recall the carrier to the inside stops.
2. Turn the power off using the breaker located on the bottom of the black standoff.
3. Press and hold the car and truck buttons on the inside control panel while turning the breaker back on.
4. When the carrier starts moving, release the car and truck buttons

To turn off the autocycler, press the power button on the inside control panel and turn off the unit.

To resume normal operating procedure, press the power button and turn the unit on.

# TRACK PREPARATION

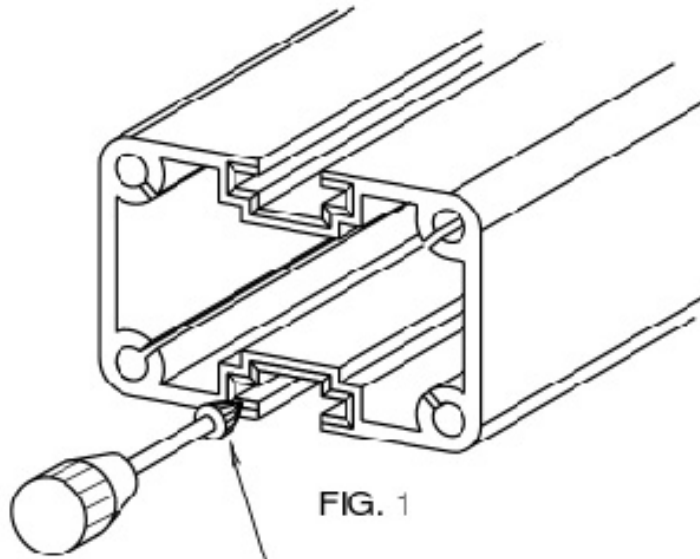


FIG. 1

USE 1/8" CONICAL BURR  
# 125 DREMEL

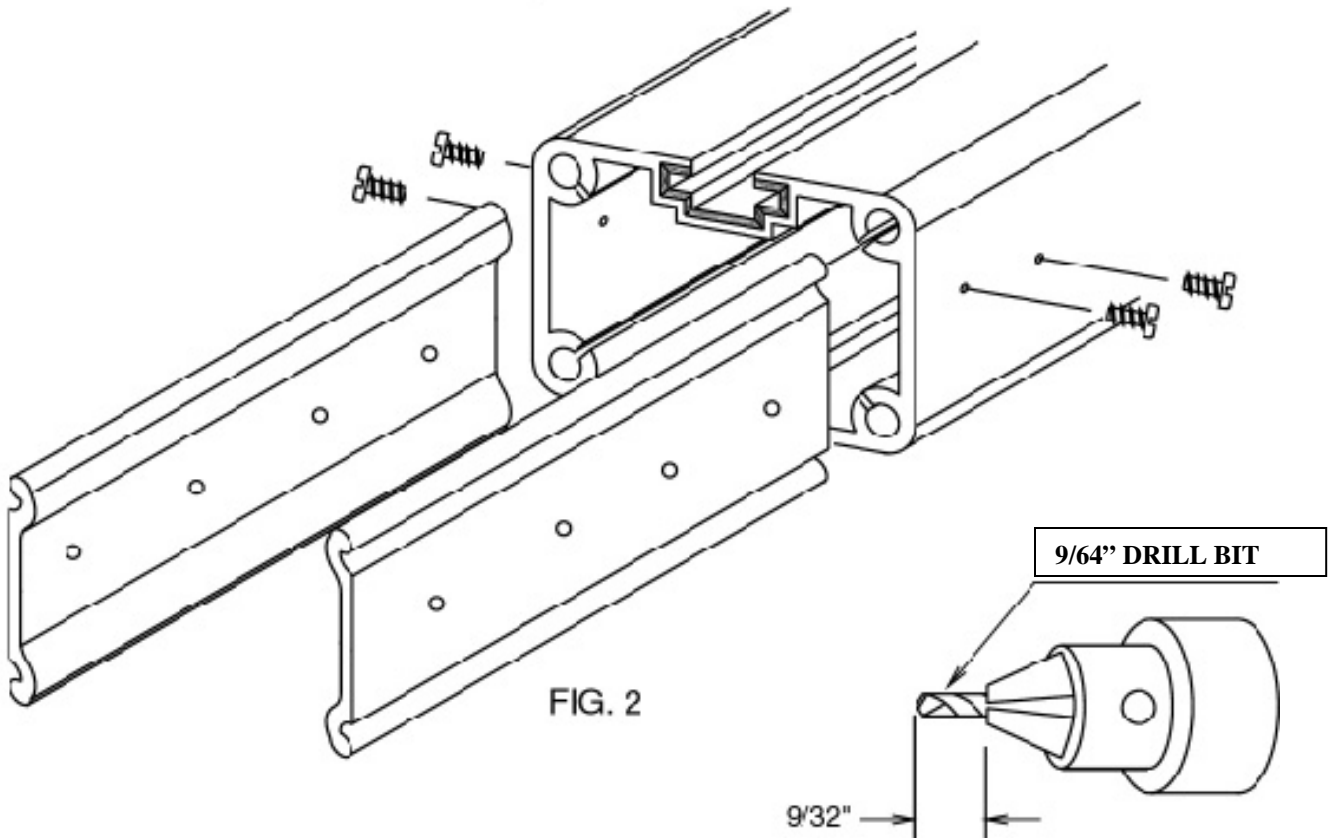


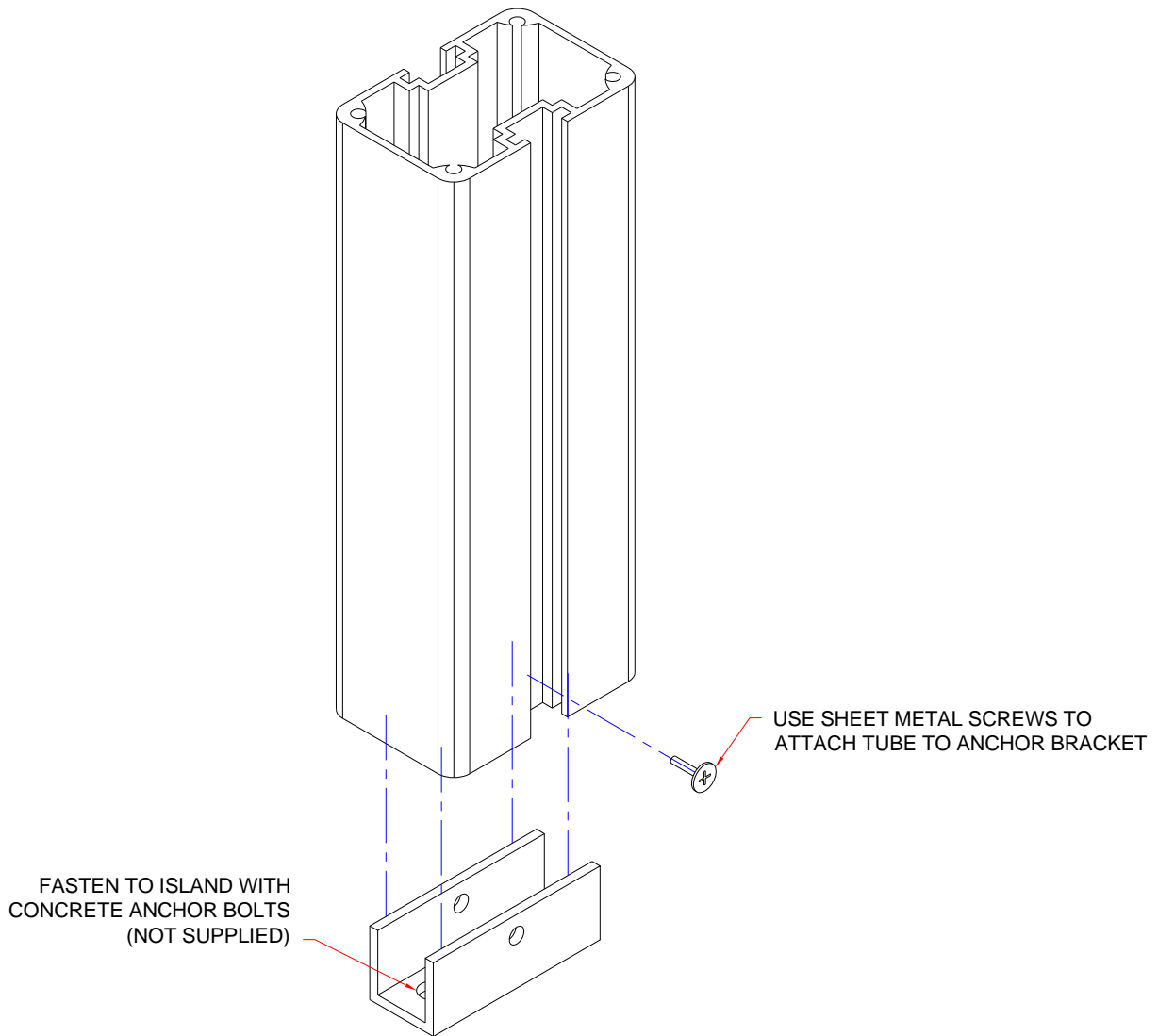
FIG. 2

9/64" DRILL BIT

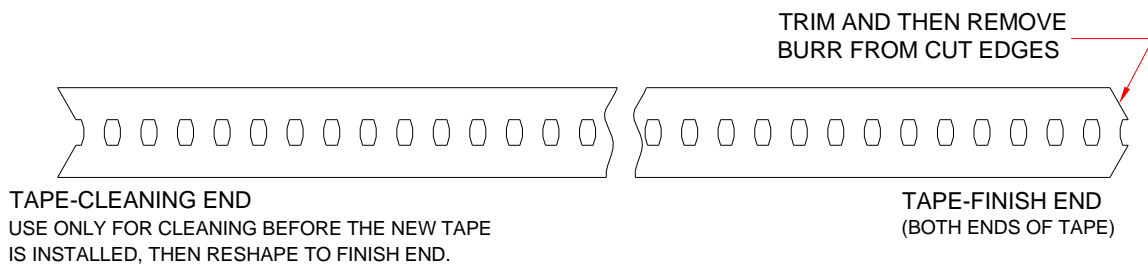
9/32"



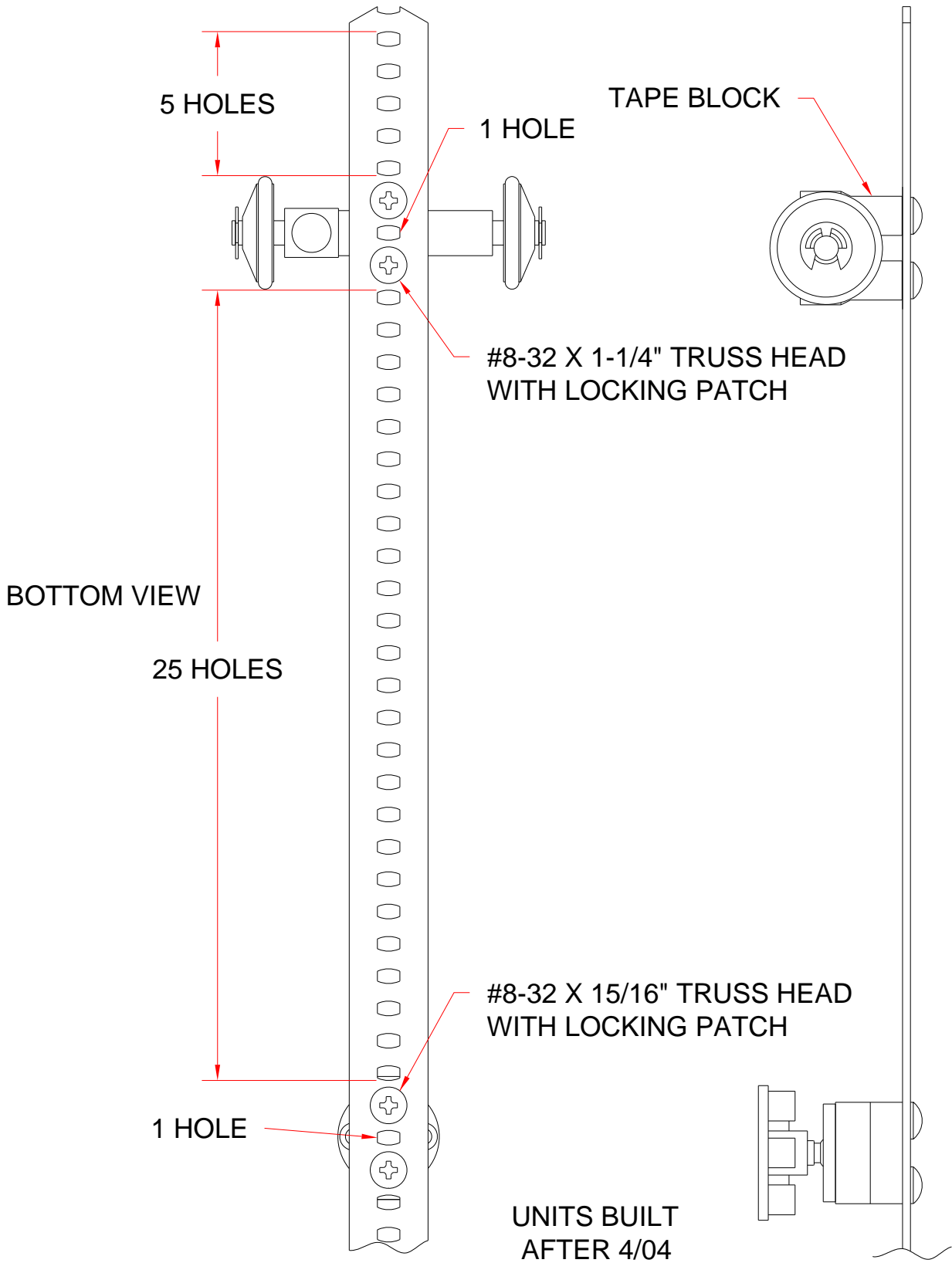
# Customer Mounting Diagram



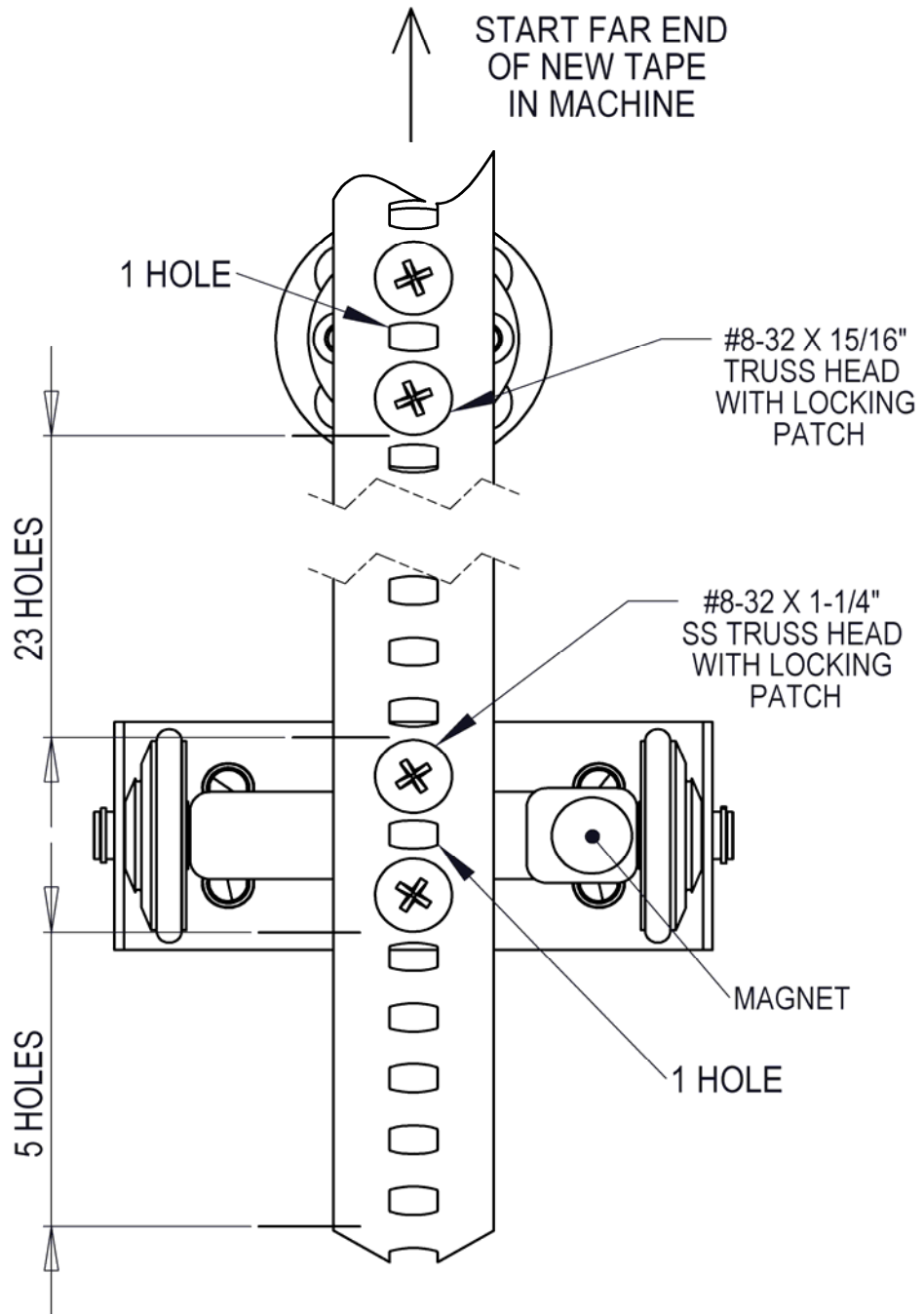
## TAPE PREPARATION



# Grey CC Carrier Mounting Block Diagram

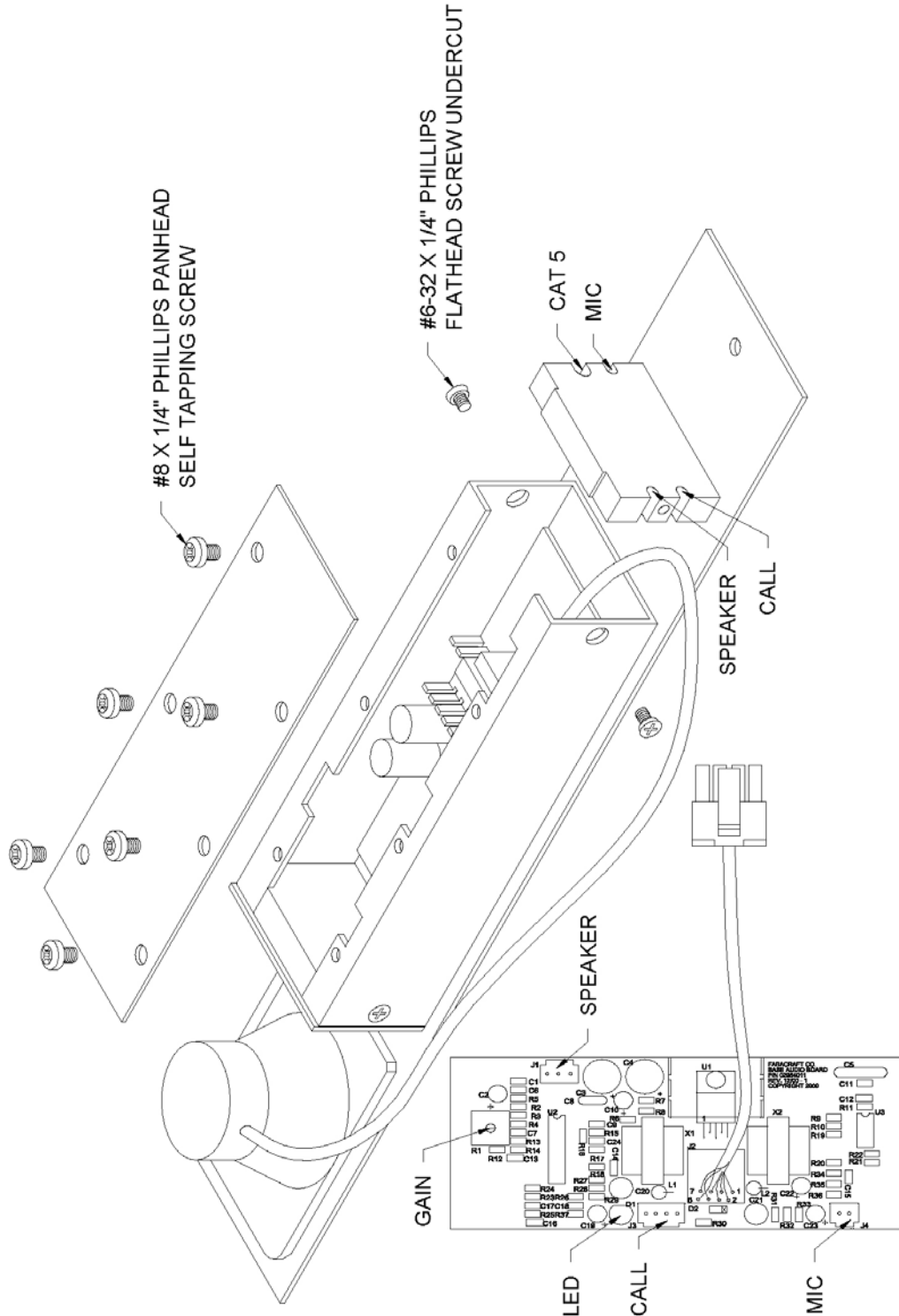


# Red CC Carrier Mounting Block Diagram



# Customer Audio Adjustment

This unit has the BavSonic audio system. There is one NA Base Audio Board located on the back of the customer speaker panel assembly, inside the weatherproof enclosure. Please see diagram below. This NA Base Audio Board adjusts the outgoing volume of the audio to the customer by turning the gain pot.



## **Troubleshooting the Reverse Captive Carrier**

This section assumes that the machine in question has been inspected for loose, damaged or missing parts, tape, belts, wiring, etc.

If the unit has a connector board located behind the customer speaker panel, remove the connecting and audio wires from the connector board and hardwire together matching color to color.

### **Nothing Works**

Check the circuit breaker on the bottom of the inside vertical Unit Standoff. Reset it by toggling it off and back on. Nothing still works, check to insure that there is 110 VAC power coming into the machine. If there is no AC Power, have an electrician restore power to the machine. If there is power, check the fuse marked F1. If it is blown replace it with a 10A fast blow fuse. If the fuse blows again, replace the control board. If nothing still works, please consult the factory.

### **Power On Led Won't Go On or Go Off**

While pressing the power on the inside panel switch assembly, check the led marked PWR on the control board. It should only be on while the switch is depressed. If the PWR led is on or off all the time, replace the inside panel switch assembly. If the PWR led still is on or off all the time, check the wires from the panel switch assembly to the control board for continuity. If the wires are good. replace the control board.

### **Carrier Won't Run When the Recall Button is Depressed**

This presumes that the carrier will run out. Check the led on the control board marked T-L. It should not be on. If it is, replace the inside stop switch. If it is not, press the recall button on the inside panel switch assembly. When the recall button is depressed, the led marked RCL, should be on. If it does not come on, replace the inside panel switch assembly. If it still does not come on, replace the control board.

### **Carrier Won't Run When the Customer Start Button is Depressed**

This presumes that the carrier will run out. Check the led on the control board marked T-L. It should not be on. If it is, replace the inside stop switch. If it is not, press the customer start button. When the button is depressed, the led marked RCL should be on. If it does not come on, replace the customer start switch. If it still does not come on, replace the control board.

### **Carrier Won't Run When the Car Button is Depressed**

This presumes that the carrier will run in. Check the led on the control board marked C-L. It should not be on. If it is, replace the customer car stop switch. If it is not, press the car button on the inside panel switch assembly. When the button is depressed, the led marked SND on the control board should be on. If it does not come on, replace the inside panel switch assembly. If it still does not come on, replace the control board.

### **Carrier Won't Run When the Truck Button is Depressed**

This presumes that the carrier will run in. Check the led on the control board marked TR-L. It should not be on. If it is, replace the truck stop switch. If it is not, press the truck button on the inside panel switch assembly. When the button is depressed, the led marked TRK on the control board should be on. If it does not come on, replace the inside panel switch assembly. If it does come on, replace the control board.

### **Carrier Won't Run in Either Direction**

This presumes that the power led works properly. If it does not, go to the paragraph on "Nothing Works". First replace the motor fuse. Replace it only with an AGC10 fuse. This is a U.L. listed fuse rated for 120vac. Do not use fuses rated for only 32vac. If the carrier does not run, see if you have voltage from the control board to the drive motor. If you do not, check the brake switch adjustment and motor harness for continuity. If the carrier still won't run, replace the drive assembly.

### **Carrier Won't Shift Into High Speed**

Adjust the speed shift points as instructed on page 10. If the carrier will still not run in high speed, monitor the voltage to the drive assembly at the connections to the motor in the power module.

#### **NOTE**

**These connections are fully insulated quick connects; however, there is room to carefully slip meter leads into them sufficient to make contact for measuring purposes.**

The motor must be connected for this test. Run the carrier. The voltage should be approximately 36vdc in slow and 88vdc in high. If the voltage changes and the speed don't, inspect the machine for anything causing excessive drag such as damaged tape, bows, sags or misalignment in the track or bad bearings in the surround. If the voltage doesn't change, observe the led on the control board marked CHAIN. This led should flash twice for each revolution of the motor. If it does not, replace the motor counter. If it still does not, replace the control board.

### **Carrier is in High Speed in the Vertical Section**

Adjust the shift points as instructed on page 10.

### **Carrier Overruns the Stop Position on the Inside End**

First, insure that the carrier is traveling in the slow speed in the vertical section. Check to insure that the gap between the magnet and the black switch is 1/8" or less. With the carrier at the inside and the magnet positioned on one of the inside stop switches; check the led marked T-L. It should be on. If it is not, replace the inside stop switch. If it is still not on, replace the control board.

### **Carrier Overruns the Car & Truck Positions on the Customer End**

First, insure that the carrier is traveling in the slow speed in the vertical section. Check to insure that the gap between the magnet and the black switch is 1/8" or less. With the carrier at the stop position and the magnet positioned on one of the customer car stop switches, check the led marked C-L. It should be on. If it is not, replace the customer stop switch, if it is still not on, replace the control board.

### **Relays and Brake Clicks but the Motor Will Not Run**

There is a brake interlock switch which prevents the drive assembly from running unless the brake fully releases. Disconnect the 2 pin grey connector from J11 on the control board. Jump the 2 pins on the control board with a screwdriver while trying to run the unit. If the unit runs, check the brake switch adjustment and the brake switch harness for continuity. If it still does not run, reconnect the 2 pin grey connector and check the voltage at the motor. If you do not have DC voltage, check the motor harness for continuity. If you still do not have voltage, replace the control board. If you have voltage, replace the drive assembly.

# Maintaining the Reverse TransTrax<sup>®</sup>

## Overview

The Reverse Captive Carrier TransTrax<sup>®</sup> was designed to require very little maintenance; however, what is required is critical in order for the unit to operate as trouble free as possible.

## Weekly Maintenance

Weekly, or even daily, the Reverse Captive Carrier TransTrax<sup>®</sup> should be wiped down on both the customer and inside end to remove road grime and other environmental contaminants.

## NOTE

**Cleaning is the single most important aspect of the Reverse Captive Carrier TransTrax<sup>®</sup> maintenance.**

One may also notice a light gray to black dust. This material is produced by the Reverse Captive Carrier TransTrax<sup>®</sup> in its process of self-lubrication. It is normal for this dust to form. However, it should be removed in the cleaning process.

## CAUTION

**The Reverse Captive Carrier TransTrax<sup>®</sup> does not require any form of lubrication as part of any maintenance. Do not put oil, grease, WD-40 or any other form of lubrication on any component of the TransTrax<sup>®</sup>. Doing so voids all warranties on the product.**

## Annual Maintenance

Annually, we recommend replacement of the drive tape and inspection of the drive sprocket and drive surround. At that time we also recommend a complete cleaning of the track system with the tape removed.

Under plant conditions, the drive tape lasts between 60,000 and 100,000 cycles in the Reverse Captive Carrier TransTrax<sup>®</sup>. However, conditions of the "real world" may be harsher than the environment found in our plant. Given the relative low cost of tape replacement on a scheduled basis compared to the cost of unpredictable down time and loss of customer service, we recommend the tape be replaced annually.

If the tape is run until the point of failure, there is a danger that either the drive sprocket or the drive surround will be damaged.

## **Other Components**

The motor is designed to provide in excess of 600,000 cycles under plant conditions. Actual life under "real world" conditions will vary. Since the Reverse Captive Carrier TransTrax<sup>®</sup> uses a totally enclosed non-vent DC motor, the failure after its rated life is caused by worn out brushes. While it is possible to re-brush the motor, it is not recommended, nor does the factory support it.

The other drive components are designed to outlast the motor; however, they can be damaged during a tape failure. It is, therefore, recommended that the annual tape replacement practice be followed.

## **User Instructions**

### **Carrier Movement**

Once the power button has been pressed and the Power LED is illuminated, pressing the SEND button sends the carrier out to the customer end of the unit. Pressing the RECALL button brings the carrier back into the inside end of the unit.

### **Overloaded Carrier**

If a carrier is overloaded by a customer, there are two possible outcomes when the carrier is sent in toward the inside end:

#### **Carrier Does Not Move**

If the carrier does not move when the send or recall button is pressed by either the customer or inside, remove the contents from the carrier. Send it into the inside and then return it to the customer end. The Reverse TransTrax<sup>®</sup> is now ready for use.

#### **Carrier Does Not Arrive Inside**

If an overloaded carrier box has been sent into the pharmacy and has not arrived at the inside station, there are two options:

##### **1. Press the button again**

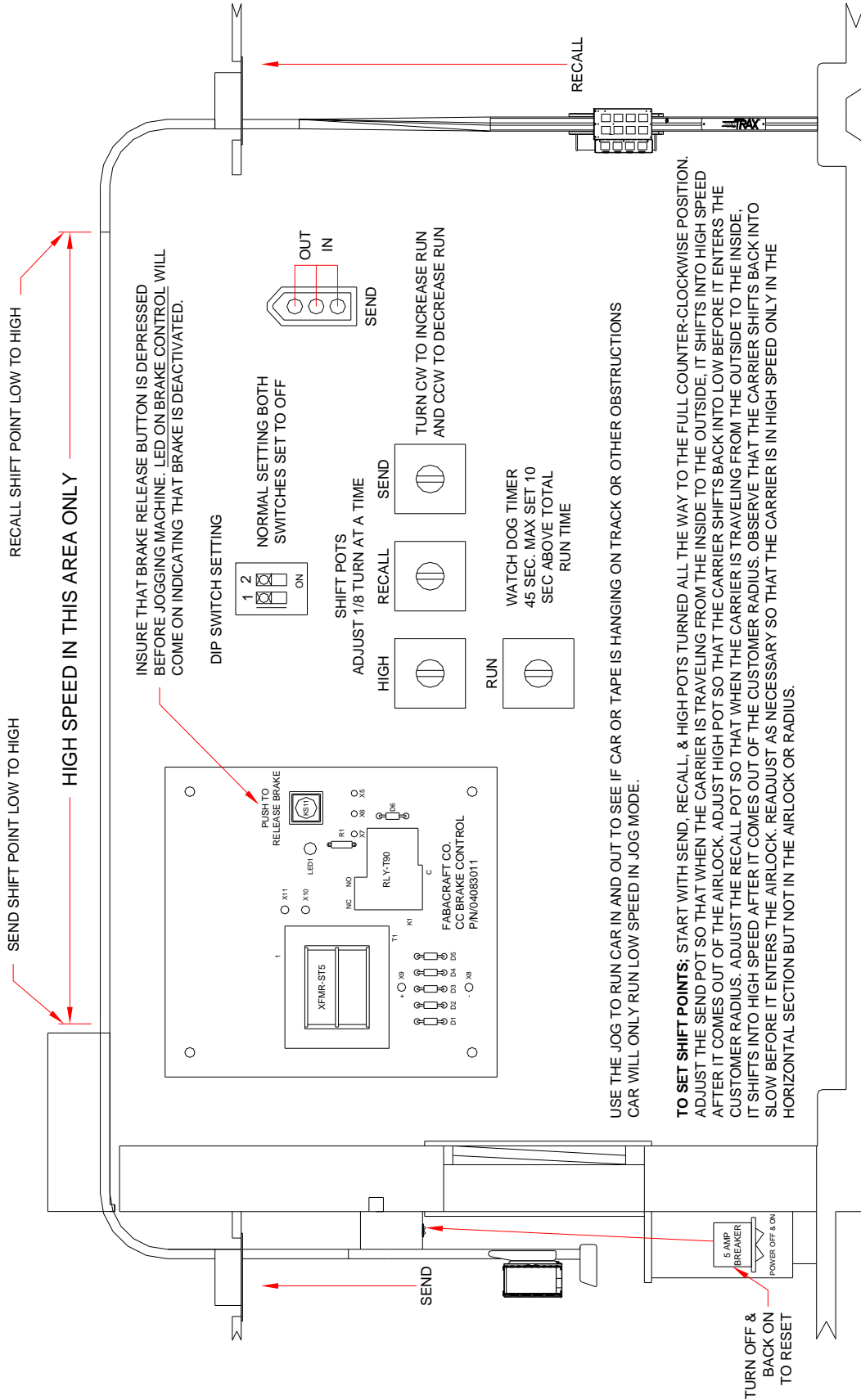
(Press the recall button repeatedly until the carrier arrives. If, after several attempts, this does not work, consult the factory.)

##### **2. Remove contents and then retrieve the Carrier**

(Have a serviceperson get to where the carrier is located. Remove the contents and then have a user press the recall button. The carrier should move to the inside end and upon arrival be ready for normal use.)

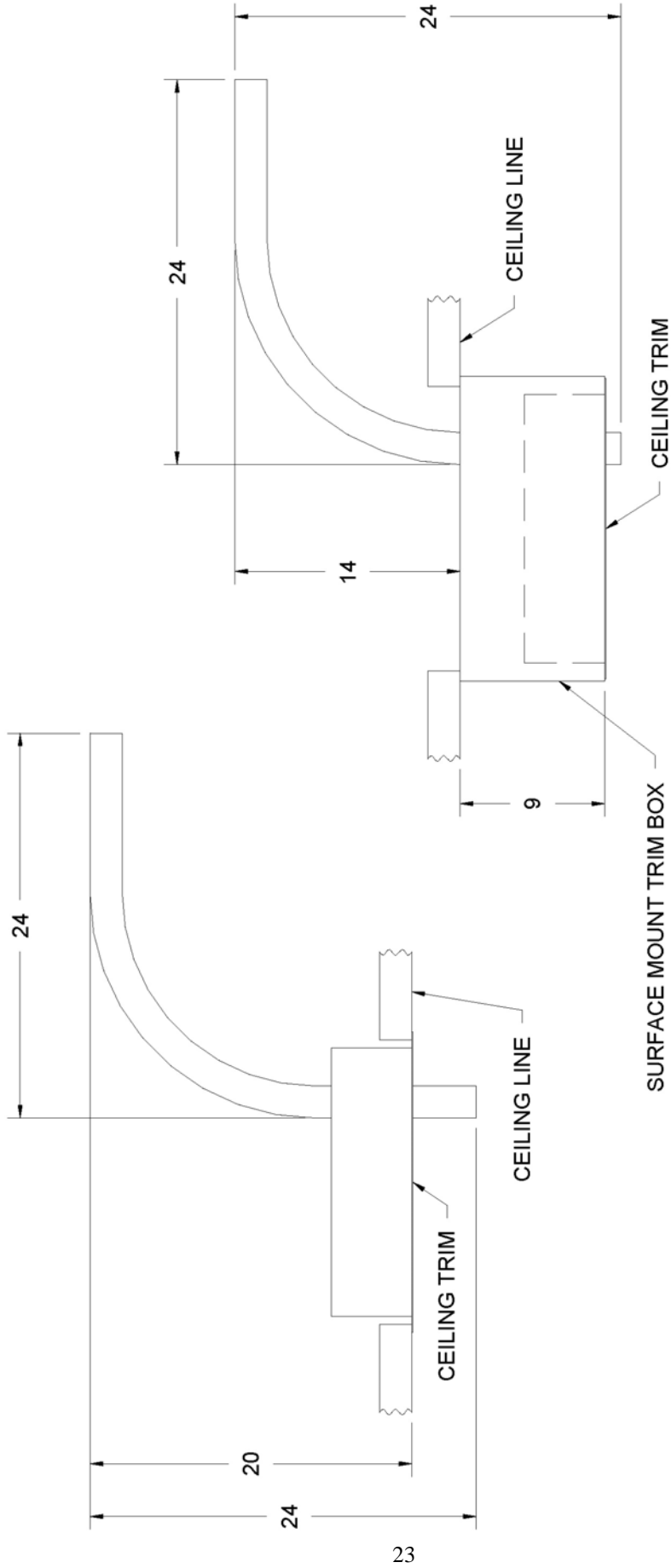


# CC Shift Points and Switch Setting Diagram



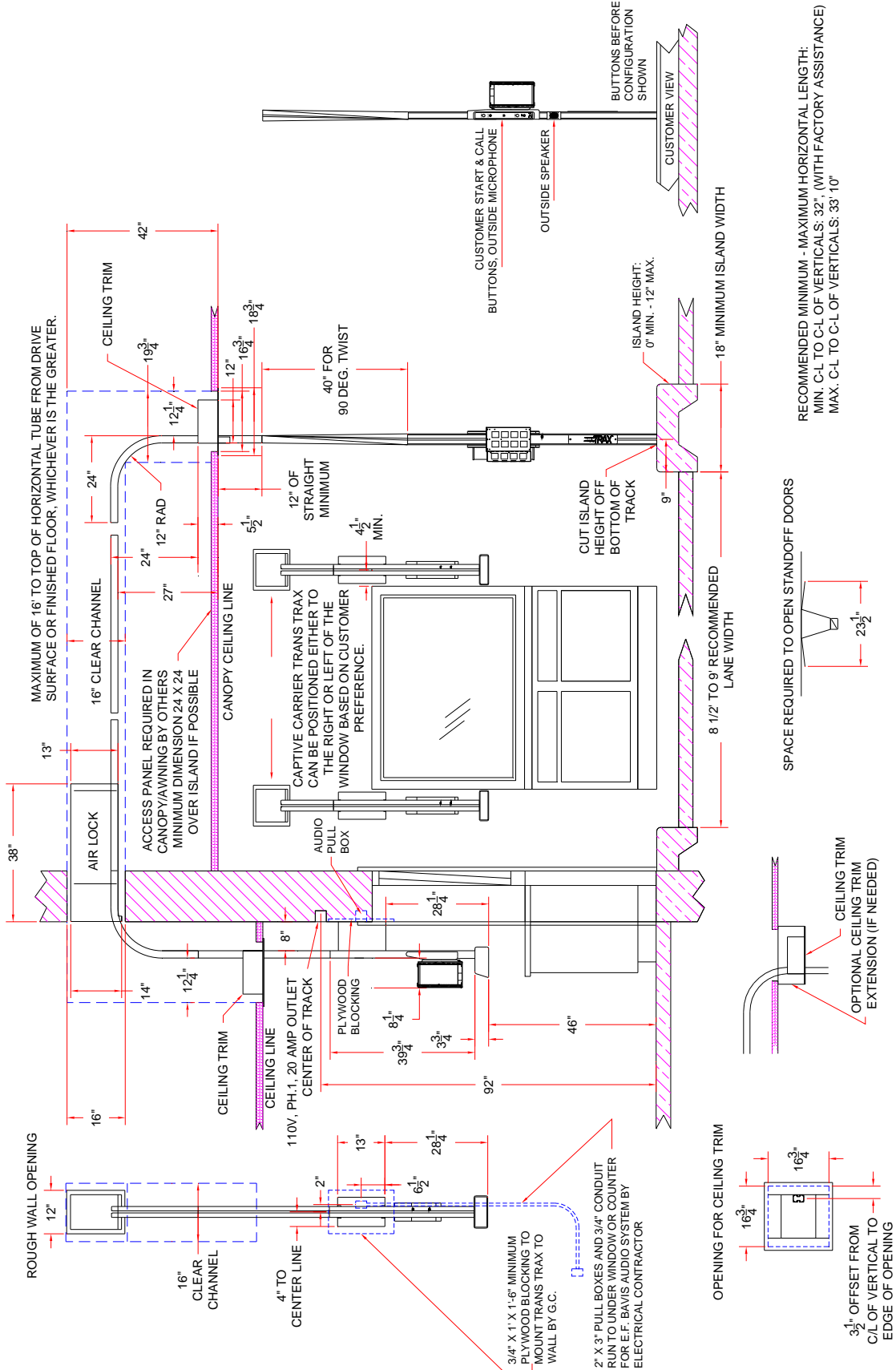


# Radius Surface Mount Trim Box Diagram

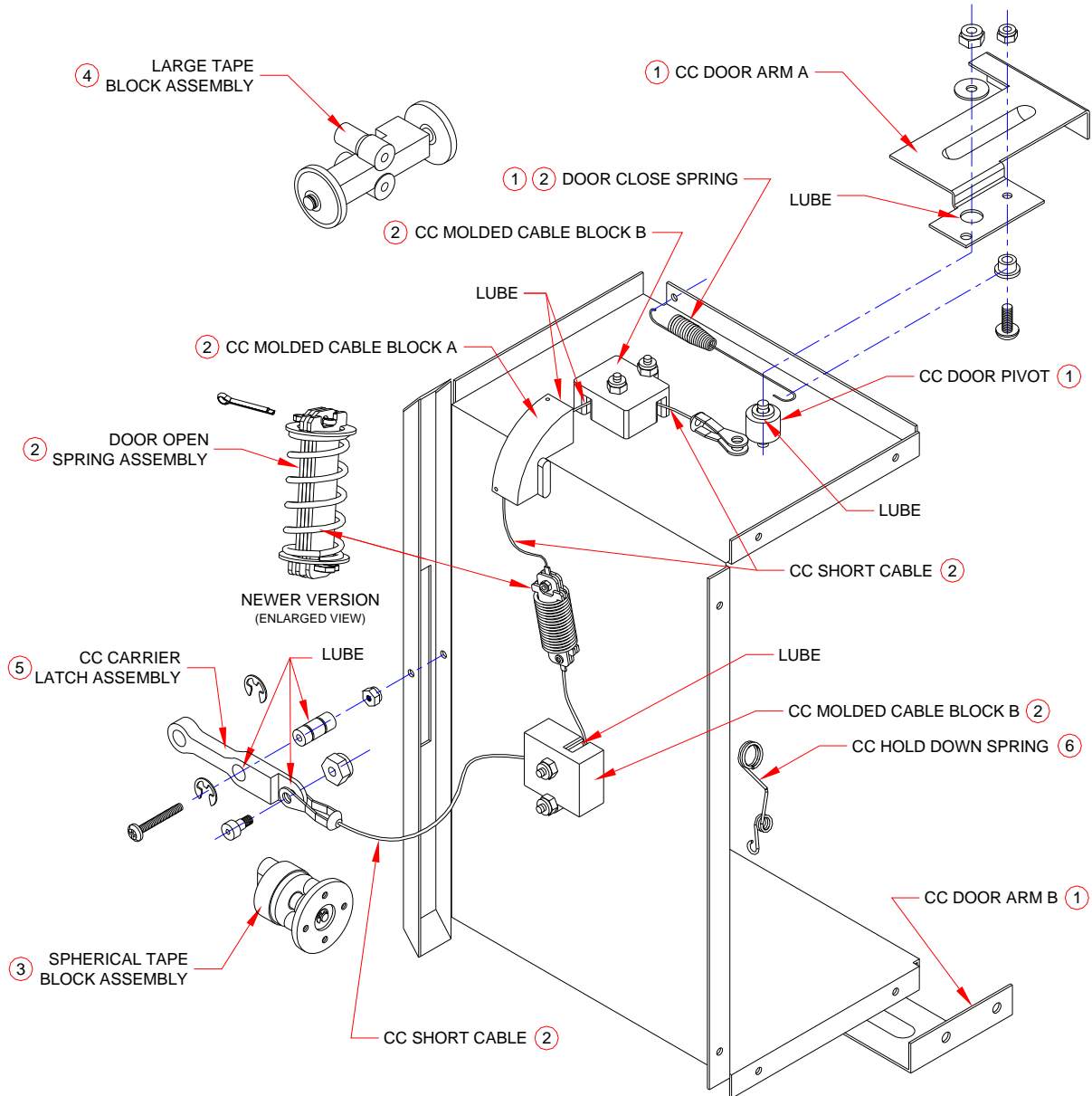


NOTE: TWO SURFACE MOUNT TRIM BOXES  
CAN BE JOINED FOR 18" DROP OR  
A SOFFIT CAN BE BUILT.

# Reverse Captive Carrier Typical Diagram



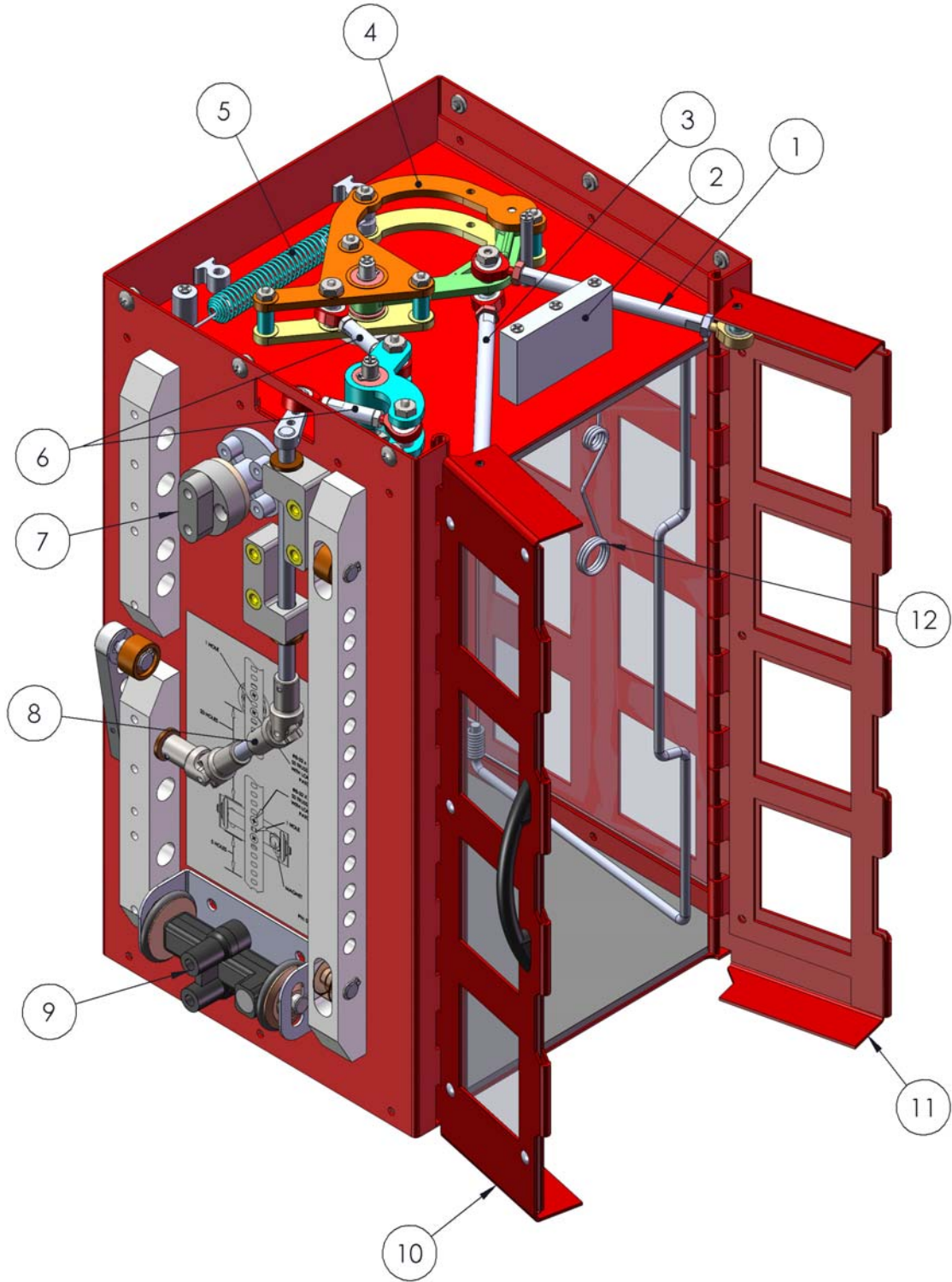
# Reverse Grey Carrier Diagram



## Reverse Grey Carrier Replacement Parts

NUMBER	PART #	DESCRIPTION	USE
1	04358991	CC DOOR CLOSE SPRING (CC DOOR CLOSE SPRING KIT)	REPLACES A BENT OR STRETCHED SPRING
2	04068012	MOLDED CABLE BLOCK B	REPLACES A WORN OUT CABLE BLOCK
3	04340992	MOLDED CABLE BLOCK A (CC REVERSE CABLE KIT)	REPLACES THE A BLOCK AND CABLES
4	04221071	CC DOOR ARM A (CC CARRIER DOOR KIT)	REPLACES THE DOOR ARMS
5	04221071	CC DOOR ARM B (CC CARRIER DOOR KIT)	REPLACES THE DOOR ARMS
6	04105021	CC HOLD DOWN SPRING	REPLACES A BENT OR BROKEN SPRING
7	04340992	CC SHORT CABLE (CC REVERSE CABLE KIT)	REPLACES THE SHORT AND REVERSE CABLES
8	04340992	CC REVERSE CABLE (CC REVERSE CABLE KIT)	REPLACES THE SHORT AND REVERSE CABLES
9	04367991	SPHERICAL TAPE BLOCK ASSEM. (SPHERICAL TAPE BLOCK KIT)	REPLACES A BLACK SPHERICAL TAPE BLOCK ASSEMBLY
10	04221011	CC CARRIER LATCH ASSEMBLY (CC CARRIER LATCH KIT)	REPLACES A BENT OR WORN CARRIER LATCH
11	04340992	DOOR OPEN SPRING ASSEMBLY (CC REVERSE CABLE KIT)	REPLACES THE DOOR OPEN SPRING AND BOTH CABLES
12	04203991	LARGE TAPE BLOCK ASSEMBLY (LARGE TAPE BLOCK KIT)	REPLACES A STRIPPED OUT LARGE TAPE BLOCK

# Reverse G-Car Diagram



## Reverse G-Car Replacement Parts

NUMBER	PART #	DESCRIPTION	USE
1	04105021	CC HOLD DOWN SPRING	REPLACES A BENT OR BROKEN SPRING
2	04203991	LARGE TAPE BLOCK KIT	REPLACES A STRIPPED OUT TAPE BLOCK
3	04304121	GC LEFT DOOR ASSEMBLY	REPLACES A DAMAGED LEFT DOOR
4	04304211	RGC RIGHT DOOR ASSEMBLY	REPLACES A DAMAGED RIGHT DOOR
5	04338011 04338021	GC BAIL TOP SPRING GC BAIL BOTTOM SPRING	REPLACES THE BAIL SPRINGS. SO IN SETS ONLY.
6	04317021	GC DOOR CLOSE SPRING	REPLACES A STRETCHED OR BROKEN DOOR SPRING
7	04367991	SPHERICAL TAPE BLOCK KIT	REPLACES A BROKEN OR STRIPPED OUT TAPE BLOCK
8	04088041	GC LINER BACK	REPLACES A WORN OUT LINER
9	04088051	GC LINER TOP AND BOTTOM	REPLACES WORN OUT LINERS
10	04394991	RGC MAGNETIC OVER RUN KIT	REPLACES A BROKEN MAGNETIC OVER RUN
11	04370996	RGC LEFT PUSHROD ASSEMBLY	REPLACES A BROKEN LEFT PUSHROD
12	04304211	RGC RIGHT DOOR PUSHROD ASSEMBLY	REPLACES A BROKEN SOLID RIGHT PUSHROD WITH A SOLID ONE



# Reverse Captive Carrier Shipping Manifest

## Bill of Materials

Qty.	Description	Part Number
1	Reverse Red Carrier	04500991
1	Reverse Grey Carrier	04059993
1	CC Reverse Customer Vertical Assembly	04015599
1	CC Inside Vertical Assembly	04013596
1	Inside Vertical Extension	04013195
2	10' Horizontal Section	04005591
2	Hard coated CC Radius	04016333
1	CC Horizontal Harness	04143012
1	46' Drive Tape Cut to Length	06820191
1	CC Airlock Assembly	04017113
2	CC Ceiling Trim Assemblies	04021224
1	CC BavSonic Manual	00601013
1	TT Twist Right	04016113

## Installation Accessories

1	Customer Base	04023011
1	CC Splice Plate Pack 24	04058992
1	Power Cord	02926031
2	8-32 x 15/16 Phillips Truss With Locking Patch	93152724
2	8-32 x 1-1/4 Phillips Truss With Locking Patch	93202723
6	1" Corner Brace	01008492
1	Bag of Splice Plate Screws	04224011
1	Romex Connector	06926011
2	9/64 Short Drill Bit	55555237
1	Dremel Cutter Bit	01081021
12	#8 x 5/8 Pan Head Screw	93101621
1	Electrical Tape	22016011

