



523 Series

Installation and Operator Manual





523 Series

April 2021

ComCo Systems, INC. A division of Communications Conveyor Company

P/N: 500508 Rev. C

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System Features

The Model 523 is an underground pressure/vacuum system that utilizes 4.5" tubes and carriers. The carrier travels from the teller unit to the customer unit under vacuum and returns under pressure. The blower unit is located inside the customer unit cabinet.

- The Model 523 is configured with two major subsystems:

1. 523 Teller Unit (TU) P/N: 201010
2. 523 Customer Unit (CU) P/N: 201009



Teller Unit (TU)
TU-523-201010

Manual operated door unit which is stationed on the ground, typically under a counter top.



Customer Unit (CU)
CU-523-201009

Fully automatic door operation with optional 2 way video unit.

Teller Unit

Model: ***TU-523-201010***



523 Teller Unit (TU) (P/N: 201010)

The manual teller unit utilizes a manually operated door. The teller unit's door *MUST* remain closed during a send or recall cycle for the system to function properly. The teller unit door will open automatically when the carrier arrives. The teller unit's auto-send feature automatically sends the carrier when the door is closed to start a SEND cycle. *Opening the door will cancel operation, to resume operation close door.*

Please note the reference guide in *Fig. 1.0*.

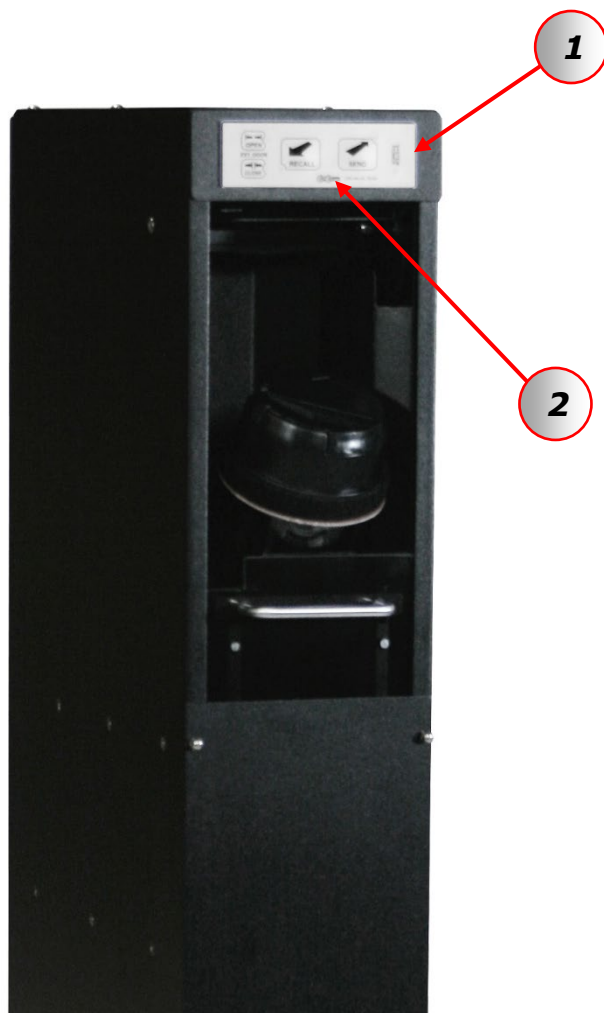
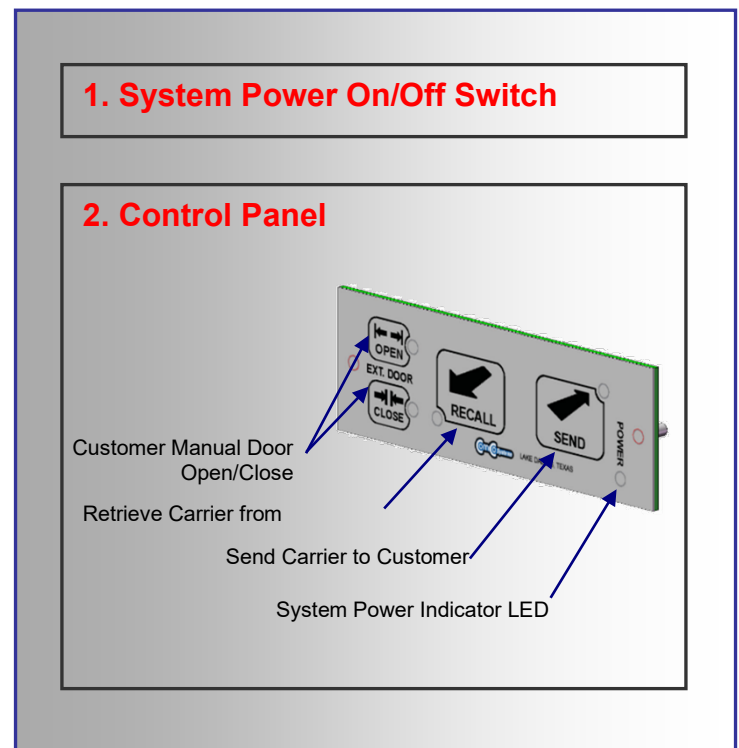


Fig. 1.0



523 Teller Unit (P/N: 201010) Switch Operating instructions

Fig. 2.0



ON/OFF

The power switch cycles the complete system (Inside Unit, Outside Unit with the Blowers). Power ON all lights will be present and opens the customer unit door. Power OFF complete system power down and closes the customer unit door. If installed it will power down the Customer Video Module (CVM).

DOOR OPEN Opens the customer unit door.

DOOR CLOSE Closes the customer unit door.

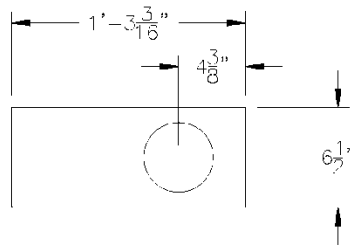
SEND Sends a carrier to the customer unit. The teller unit door can either be opened or closed to send a carrier to the customer unit.

RECALL Recalls a carrier from the customer unit. The teller unit door can either be open or closed to recall a carrier from the customer unit.

523 Teller Unit (P/N: 201010)

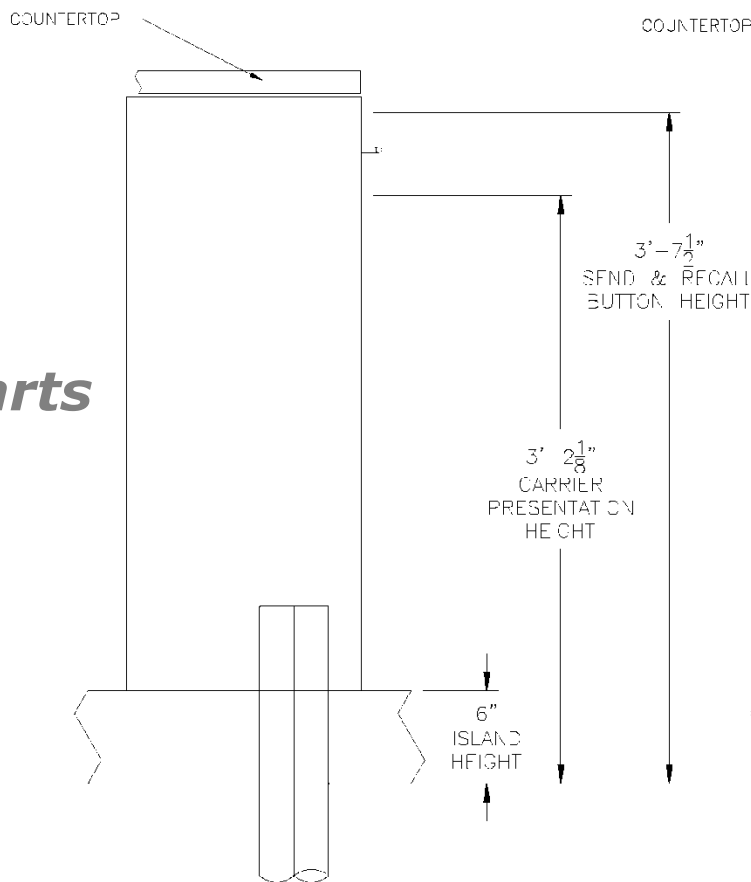
Dimensional & Electrical Specifications

Item	Measurements	Value
Teller Unit (TU-523-201010)	Nominal Voltage	24 VDC
	Current (max)	2 amps

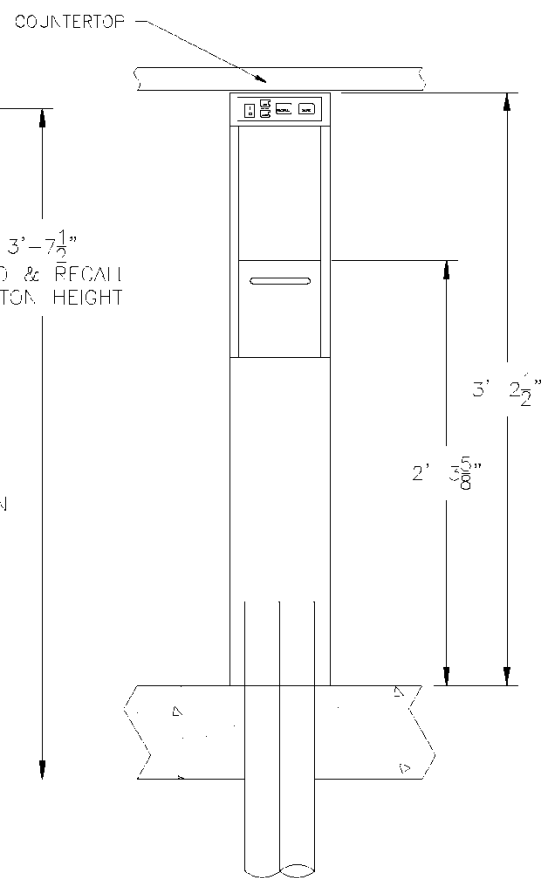


PLAN VIEW

Parts



SIDE VIEW



FRONT VIEW

Customer Unit

Model: CU-523-201009



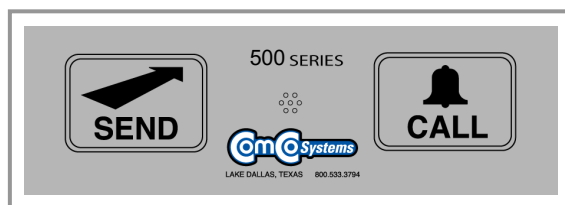
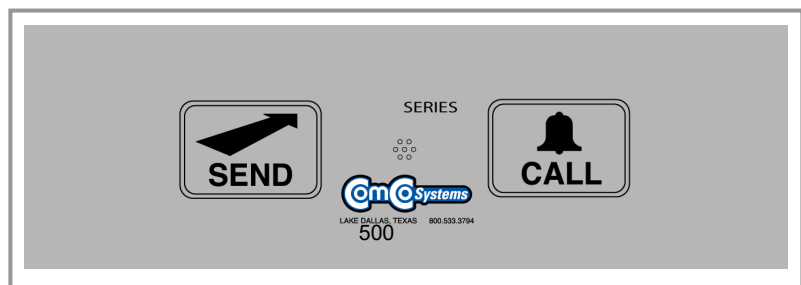
523 Customer Unit (P/N: 201009) Machine & Switch Operating Instructions

SEND Sends carrier to Teller Unit.
(*NOTE: DO NOT INSERT LOOSE ITEMS DIRECTLY INTO UNIT*)

CALL Generates audible tune at the Teller Center when pressed.



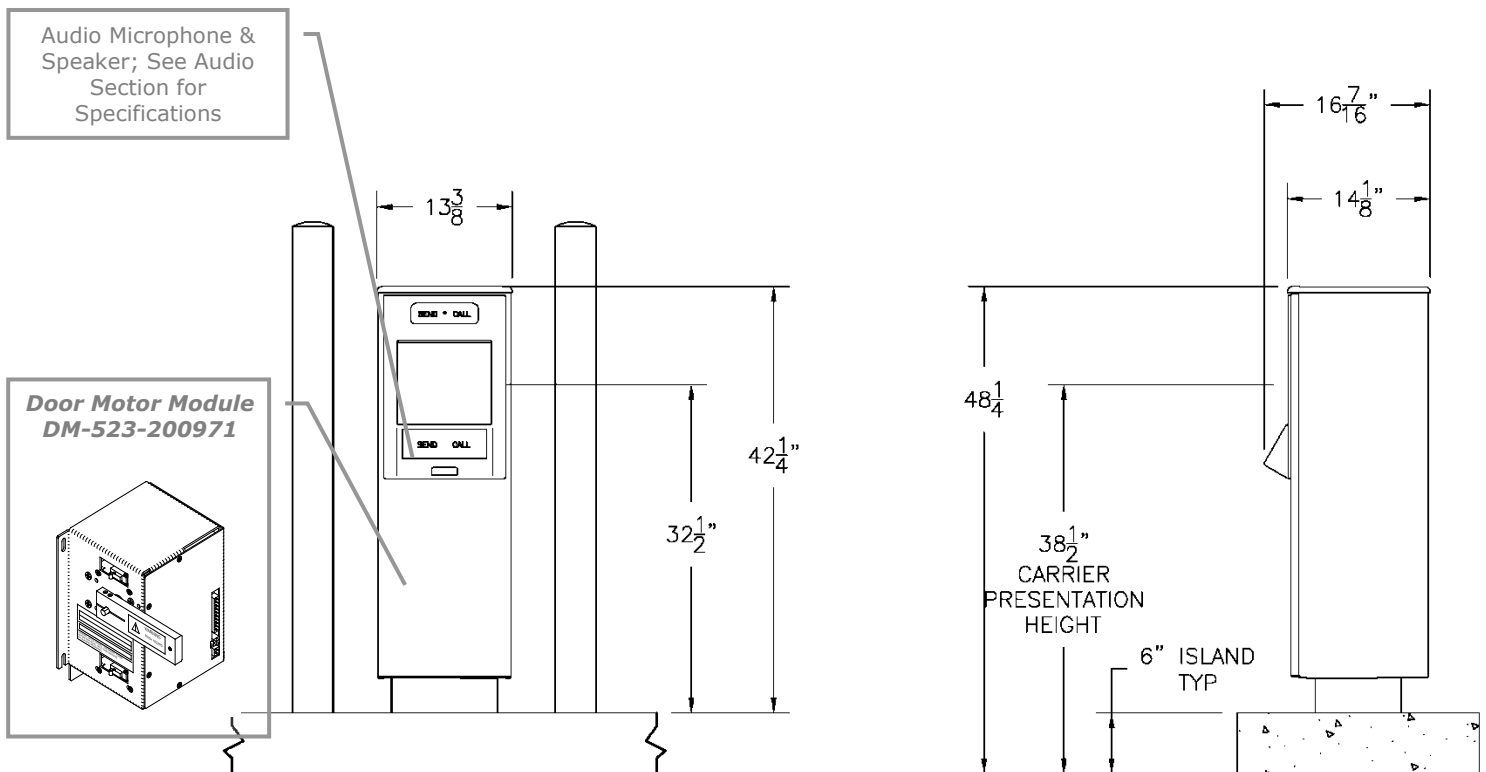
Switch Panel (P/N: 200379)



Instruction Panel (P/N: 200xxx)

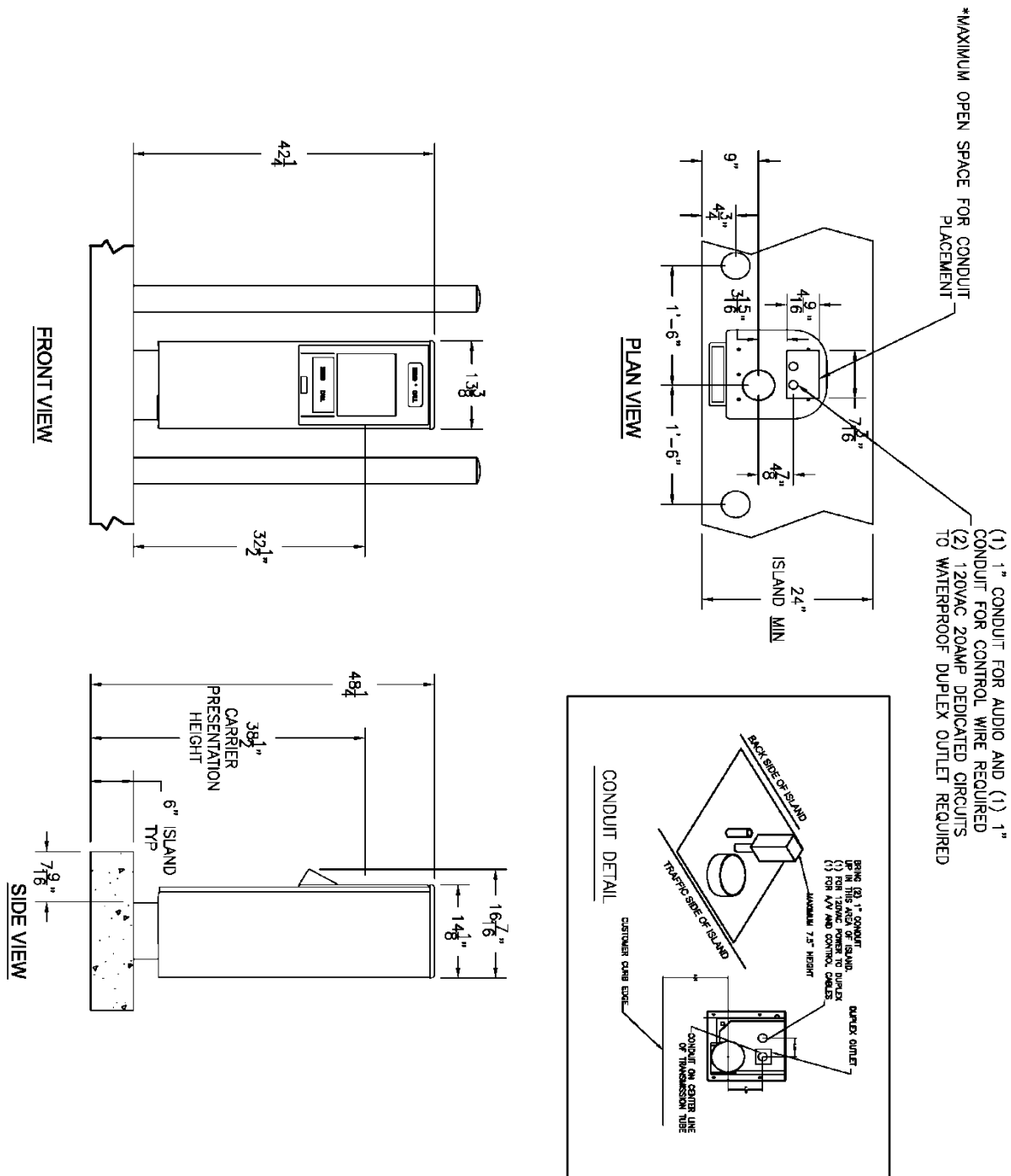
523 Customer Unit (P/N: 201009) Dimensional & Electrical Specifications

Item	Measurements	Value
Customer Video Module (CV-100-200203)	Nominal Voltage Current (max)	12 VDC 1.2 amps
Door Motor Module (DM-523-200971)	Nominal Voltage Current (max)	120 VAC, 60Hz 2 amps

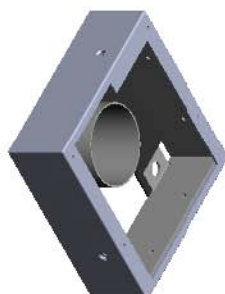
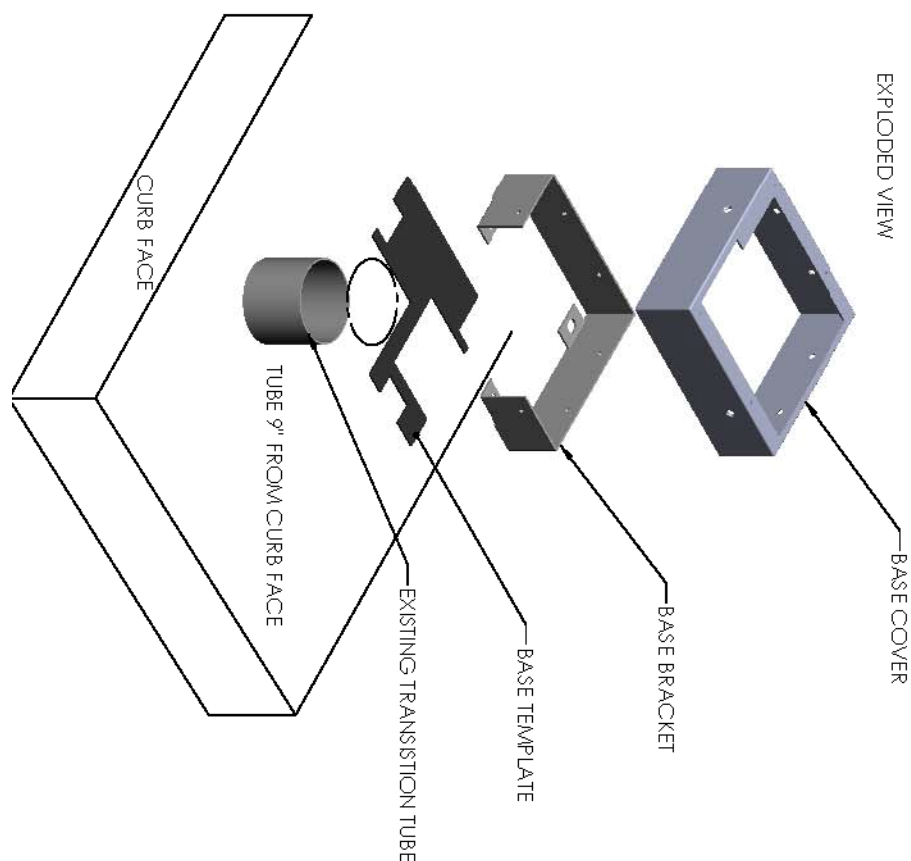


See Appendix A
For System Settings

523 Customer Unit (P/N: 201009) Dimensional & Electrical Specifications



523 Customer Unit (P/N: 201009) 523 Base Assembly Mounting Instructions



BASE TEMPLATE: PLACE OPEN CUT OUT AROUND TUBE AND KEEP FRONT SURFACE SQUARE WITH CURB.

BASE BRACKET: ALIGN MOUNTING TABS TO TEMPLATE AND USE WASHERS TO LEVEL.

BASE COVER: ALIGN MOUNTING HOLES TO HOLES IN BRACKET.

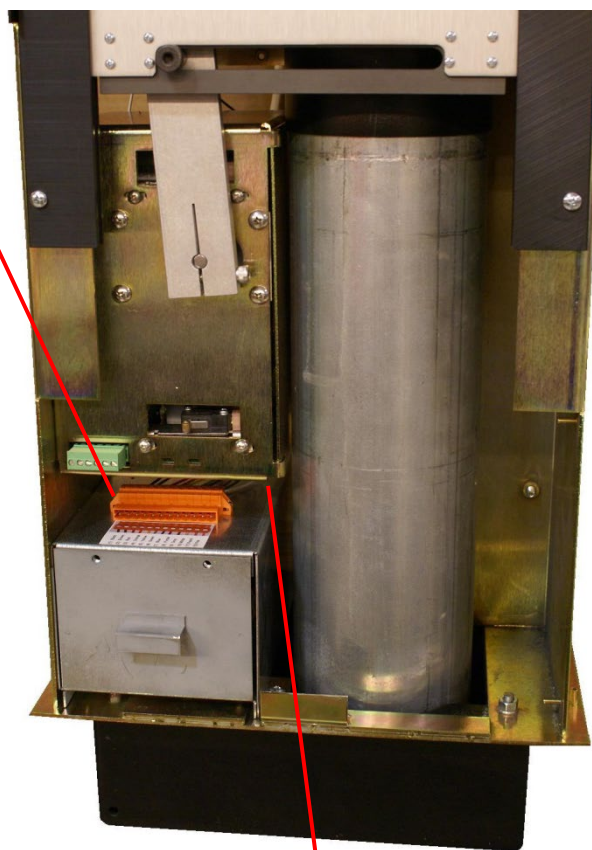
Customer Unit Door Motor Module (P/N: 200971)

Line Voltage Installation

WARNING: SHOCK HAZARD

Disconnect AC Power before Servicing Unit!

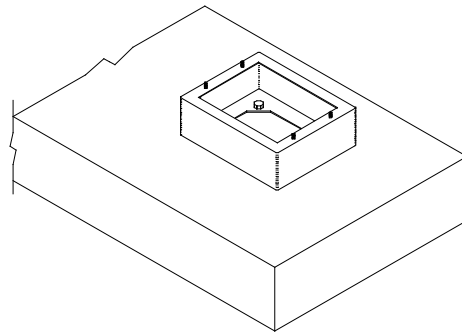
AC Service Disconnect for Unit is located at the readily accessible branch circuit protection All Line Power must be in compliance with the NEC 2005 Only by Authorized/Qualified Personnel.



Serviceable FUSE Location
Rating: 2A 250VAC Fuse
UL Listed Only

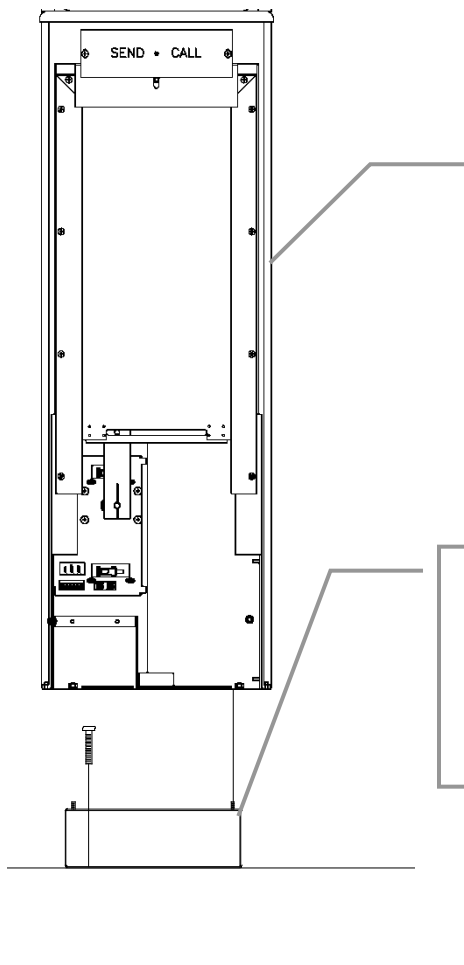
Note: You must remove the back cover for access to the power plug and fuse

523 Customer Unit (P/N: 201009) Mounting & Access



Base ISO View

Completed installation of base on a typical island



Remove front panel for
installation or service access.

Fasten Mounting Bracket to Island. Using
minimum 1/4" hardware position leading edge
of bracket "X" in. from edge of island and
shim level if needed.
("X" Distance see cut sheets for job site)

CU BLOWER PACK



Single Pack Blower Module (P/N: 200972)

Line Voltage Installation

WARNING: SHOCK HAZARD

Disconnect AC Power before Servicing Unit Only to be serviced by Qualified Personnel

AC Service Disconnect for Unit is located at the Main Junction Breaker Box

NOTE:

There must be 2-115VAC @ 20A dedicated circuit within 3.0 ft of the unit. All Line Power must be done in compliance with the NEC (National Electrical Code) by authorized/qualified personnel.

SHOCK HAZARD

Disconnect AC Power before Servicing Unit

AC Service Disconnect for Unit is located at the Main Junction Breaker Box



**2-115 VAC 10A
Resettable Fuse**

4 1/2 Carrier (P/N: 602035)

Carriers must be fully closed before they are inserted into either the teller unit or the customer unit. Carriers that are not fully closed may fail to leave the sending unit, may become lodged within the transmission tubing, or possibly lose their contents during transmission.

If coins are to be sent, it is recommended that they be rolled and placed in a pouch or bag. Loads that can shift during transmission may cause malfunction or damage to the carrier or system.

Carriers are not to exceed a gross weight of **4lbs**.

The contents of the carrier must be fully within the carrier and not caught between edges. Multiple transmissions should be used if a load is too large to fit within the single carrier.



Theory of Operation

Powering the System

The rocker switch at the top of the teller unit control panel controls power to the system. The adjacent red LED indicates “power on.”

NOTE: The power switch does *not* switch off 120VAC service to any component. It is only used to deactivate the system. Some components may remain energized and/or active when the system is “off.”

Power ON

1. Teller switches power on
2. Power indicator illuminates
3. If the teller unit door is closed when the unit is powered on the system will start an auto-send cycle.
(If this is not desired it is best to leave the teller unit door closed before power the system down)
4. *CVM Systems only:* Camera and monitor in CVM are powered on
5. System is now in ready state

Power OFF

1. Teller switches power off
2. Power indicator extinguishes
3. Customer Unit door closes
4. *CVM Systems only:* Camera and monitor in CVM are powered off
5. System is now off

The power switch may be used to recover from unusual system conditions simply by switching it off and on – this will reset the system.

Send cycle

1. Teller inserts carrier into teller unit
2. Teller is recommended to close the teller unit door and presses SEND
3. Send cycle begins
4. Vacuum blower activates
5. The valve in the Teller Unit opens releasing the catch mechanism carrier into the transmission tube below the unit
6. Carrier is propelled from Teller Unit into transmission tubing towards Customer Unit
7. Carrier arrives at Customer Unit
8. Vacuum blower deactivates
9. Customer Unit door opens
10. Send cycle ends; System is now in ready state

Recall cycle

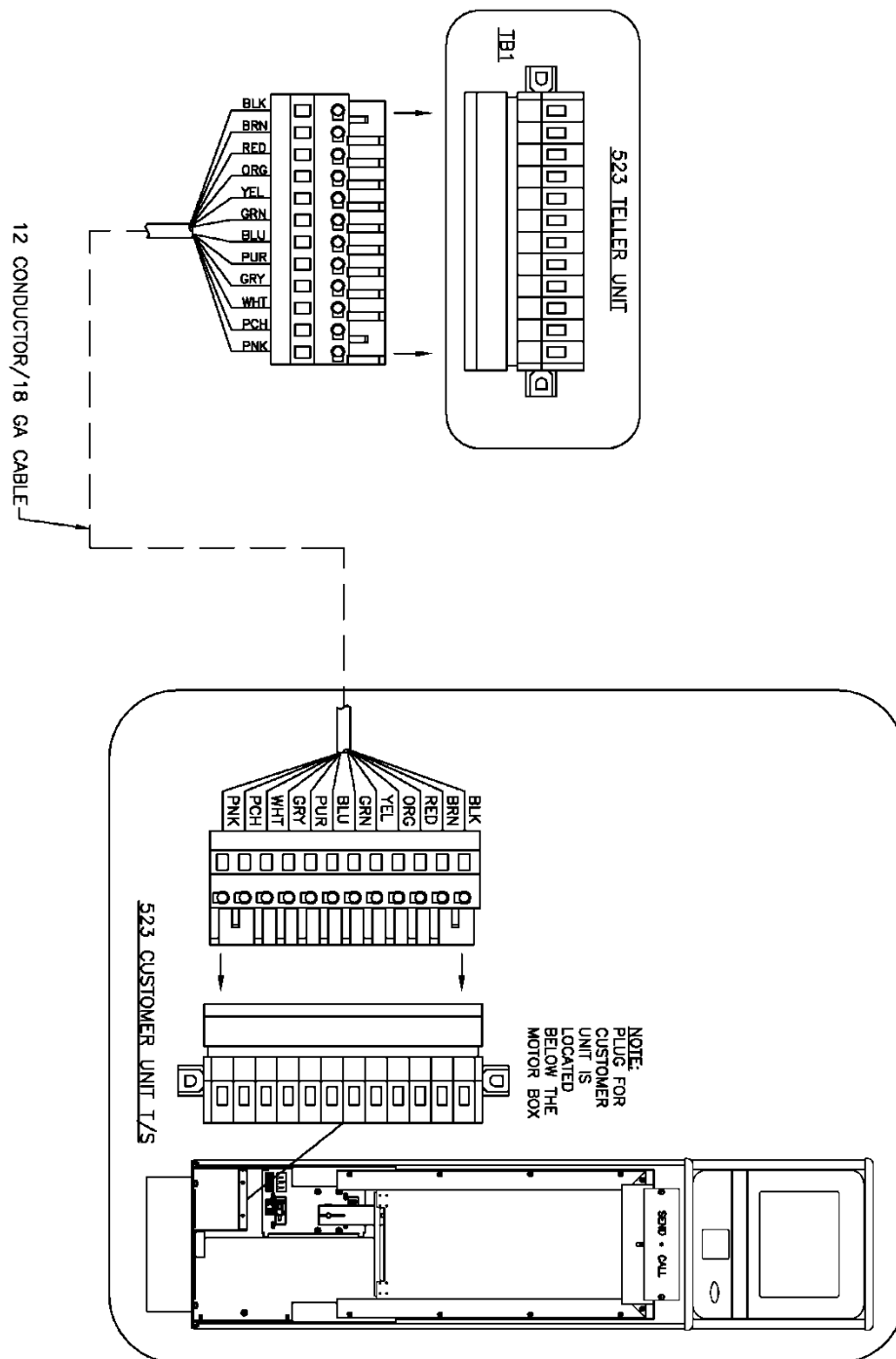
1. Customer inserts carrier into Customer unit
2. Customer presses SEND
3. Customer unit door closes (*Note: if the safety switch actuator at the top of the door is lifted when the door is closing, the door will reverse until the actuator is lowered*)
4. Recall cycle begins
5. Pressure blower activates
6. The valve in the above Customer Unit opens releasing the carrier into the transmission tube below the Customer Unit
7. Carrier is pushed from Customer Unit into transmission tubing towards Teller Unit
8. Carrier arrives at Teller Unit and the door opens and ends the cycle.
9. Recall cycle ends – system is now in ready state

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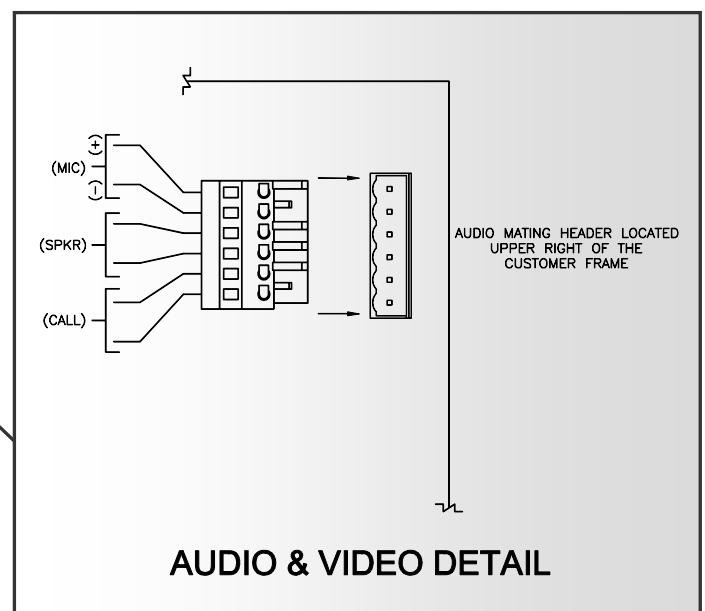
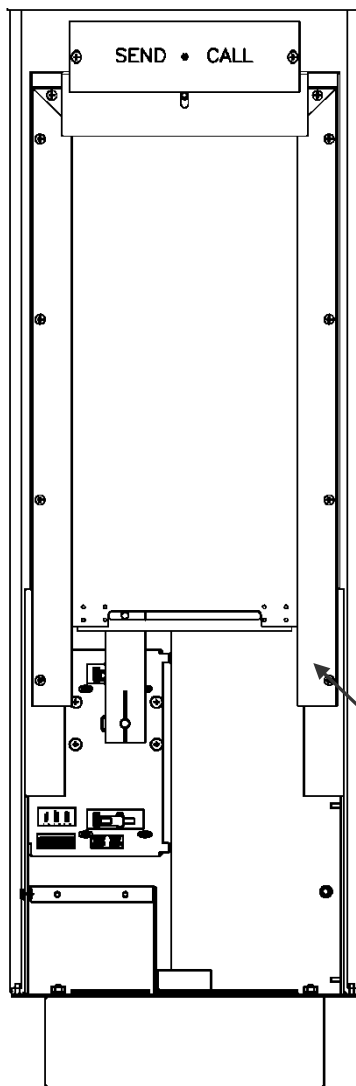
Installation 523 (CU) to 523 (TU)

Field Wiring Diagram (P/N: 500526)

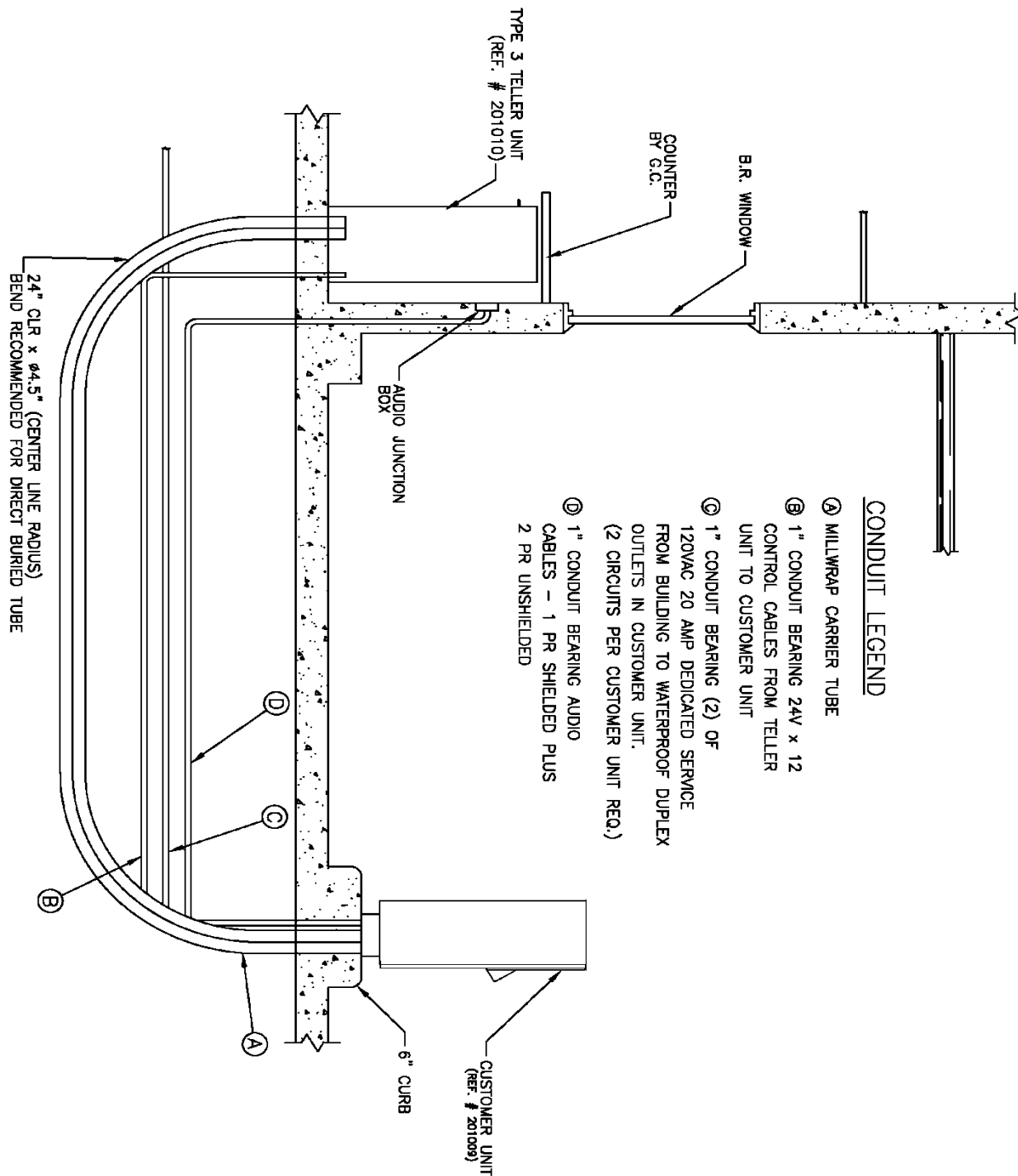
NOTE: All Class 2 interconnecting cabling must be done in compliance with the ARTICLE 800.33 (A) FPN No.2, exception No.2, of the NEC (National Electrical Code) by an authorized/qualified personnel.



Control/Audio Field Wiring Diagram

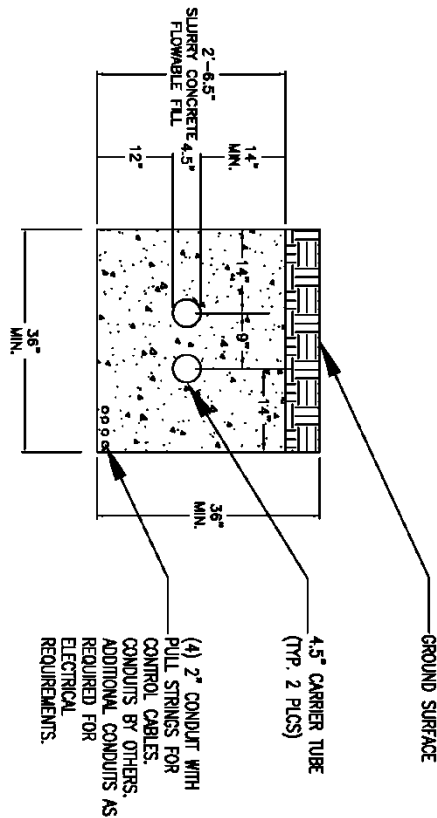


System Riser Diagram & Options



Trench Section Details

- NOTES:**
1. TRENCH WORK BY OTHERS PER OSHA REQUIREMENTS
 2. ALL BACK FILL SUPPLIED BY OTHERS
 3. ALL ELECTRICAL CONDUIT WITH PULL STRINGS BY OTHERS TO COMCO SPECS
 4. ALL VERTICAL TUBES PENETRATING THE SLAB MUST BE WRAPPED IN 1" ARMAFLEX 3' ABOVE AND 3' BELOW SLAB, BY COMCO
 5. LOCATION OF EXISTING UTILITIES BY OTHER.
 6. TRENCH DEPTH & DESIGN MUST BE PRE-APPROVED BY COMCO



NOTE:
TUBE MUST NOT BE TIGHT AGAINST SLAB OR ISLAND GRADE BEAM. CONCRETE POURED AROUND TUBE AT THESE LOCATIONS WILL FORCE TUBE TO KINK AND WILL PREVENT A CARRIER FROM PASSING. REPAIRS WILL BE MADE AT THE G.C.'S EXPENSE

SLURRY SPECS:
SLURRY SHOULD BE A 2 SACK FLOWABLE FILL. THE FIRST TRUCK SHOULD BE DELIVERED AS A 3" SLUMP TO BE USED AT EVERY 20 FEET OF TUBE TO WEIGHT THE TUBE DOWN TO PREVENT IT FROM FLOATING WHEN THE FLOWABLE FILL IS POURED. ALL REMAINING TRUCKS SHOULD BE 4"-5" SLUMP. FILL SHOULD BE DIRECTED BY COMCO.

- NOTES:**
1. WHEN TUBES ARE INSTALLED, PREVENT ANY FOOT TRAFFIC, STAKES, OR MACHINERY FROM COMING INTO CONTACT WITH BURIED TUBING. TUBING WITH DENTS OR DAMAGED WILL HAVE TO BE DUG UP AND REPLACED.
 2. COORDINATE TRENCH PREPARATION WITH COMCO. TRENCH NEEDS TO BE INSTALLED.
 3. ELECTRICAL CONTRACTOR TO PROVIDE PULL BOXES WHEN REQUIRED ON
 4. TRENCH PREPARATION AND BACK FILL MUST BE COORDINATED WITH THE BE OPEN MORE THAN 1 DAY PRIOR TO SCHEDULED INSTALLATION. ELECTRICAL INSTALLER SO THAT TRENCH MAY BE FILLED UPON COMPLETION OF FIELD TEST AND TRANSMISSION TEST)
 5. DELIVERY OF SLURRY FILL SHOULD BE COORDINATED & SCHEDULED WITH

Blower

Blower pack is suitable for maximum operating ambient temperature of 40C deg/104F deg.

Tubing

All tubing *must* be sealed properly. *Seal all joints* – especially those at the teller and customer units. All inside edges of tube joints *must be de-burred and ground to an angle* to prevent excessive wear on carriers.

Timer Adjustment

Adjust timer (T1) for approximately 5 seconds greater than the time required for an empty carrier to be recalled from the customer unit to the teller unit (this should be 2-3 seconds after the carrier lands at the teller unit). See Appendix A for switch settings and other timing settings.

Customer Video Module (CVM) Power Switches

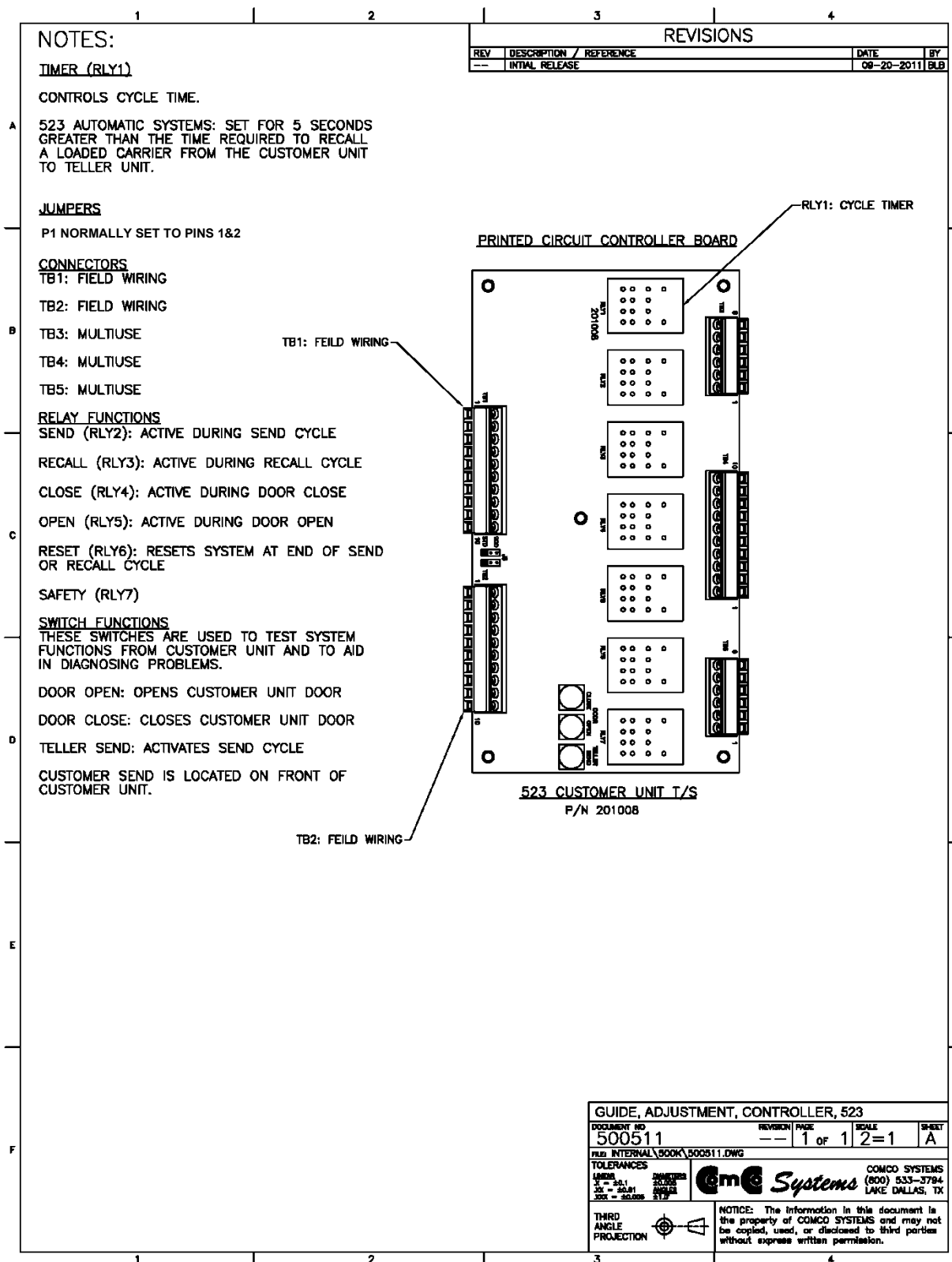
The CVM power switch is located on the front side of the Door Motor Control Module. Set Camera and Monitor functions independently from each other with SW1 and SW2. Switching the unit to 24/7 will leave the designated part powered on when the teller unit is turned off. Switching the unit to SW will turn the designated part off when the teller unit is turned off.

Maintenance

Carriers

Carriers should be inspected regularly for signs of wear. Carriers landing hard at either customer or teller unit may be a sign of worn wear bands on carrier.

Wear bands should be replaced regularly – usually every 3-6 months, depending on usage.



Return Material Authorization Procedure

Please follow the instructions below to return any items to ComCo Systems for repair.

- Call ComCo Systems at 800.533.3794 to request a Return Materials Authorization number (RMA#). EMAIL: Parts@comcosystems.com
- Please give the Customer Service Representative the following information;
 - Company Name and Phone Number
 - Company Contact
 - Store#
 - Component (s) being returned for repair
 - Description of problem
 - Serial number of product
- Send your return items to the following address;

ComCo Systems
306 W. Overly Dr.
Lake Dallas, TX. 75065

RMA# XXXX

All RMAs will be processed in the order they are received. ComCo Systems will not accept any returns that do not have an RMA# assigned.

To check on the status of an RMA call our Customer Service Representatives with your RMA#.

Appendix C

ComCo Systems

www.comcosystems.com

24/7 Toll Free Number

800.533.3794

Fax

940.222.2699

• **Customer Service & Technical Support**

service@comcosystems.com

800.533.3794 Option 1

support@comcosystems.com

• **Parts Orders**

parts@comcosystems.com

800.533.3794 Option 2

• **Equipment and System Sales**

sales@comcosystems.com

800.533.3794 Option 3

• **Project Management**

800.533.3794 Option 4

• **Accounting**

accounting@comcosystems.com

800.533.3794 Option 5

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