

**HAMILTON AIR  
MODEL HA-33  
COMMERCIAL REMOTE  
DRIVE-UP**

OPERATING INSTRUCTIONS  
INSTALLATION & SERVICE INFORMATION

## HA-33 Commercial Remote Banking System

The Hamilton Model HA-33 was designed to accommodate large heavy transactions typically required by commercial customers. It uses 10 inch Diameter steel tubing and tube bends with a centerline radius of 33 inches.

Past units designed by several manufacturers have all been very complicated machines, which were failure prone. Hamilton has designed the HA-33 as a less complicated machine that maintains the ease of operation. In surveying other units it was found that the highest service problems centered on the automatic opening and closing of the carrier. The HA-33 has a manually operated carrier door thereby eliminating dozens of components without compromising usability.

The HA-33 use many components and designs introduced in the reliable HA-1000 drive up unit.

### Operation:

The teller station has three operator controls:

1. Teller Send
2. Teller Recall
3. Night Lock

The teller presses the send switch to send the carrier to the customer station. In addition, when the customer door has closed after a three-minute period of no activity, pressing the send button will reopen the customer door and present the carrier to the customer.

The teller can press the recall switch to bring the carrier to the teller station. The teller recall switch will stop the carrier if it is in transit to the customer and return it to the teller station.

The night lock switch is pressed to bring the carrier to the teller station but keeping both the teller door and customer door closed. This switch maintains it position when pressed. To remove the night lock the switch is again pressed (switch button extends out) and the teller door is opened. The send and recall switches on the teller station are disabled when the switch is depressed.

The customer station has two operator controls:

1. Send Carrier
2. Teller Call

The customer presses the Send switch to return the carrier to the teller.

The customer presses the Call switch to ring the teller call tone on the intercom system.

The Customer send and call switch are disabled when the night lock switch is activated.

If either the teller or customer fails to close the carrier door the door will strike a safety plate reopening the door and canceling the send function. The door can be closed and the send button pressed again to resume operation.

### Motor run timers

The HA-33 has a maximum run time on each motor to prevent system damage. The system stops if any motor exceeds a preset time. The times exceed the normal time required to operate properly.

#### Maximum Run Times:

Door Motors	10 seconds
Turbine	180 seconds

After the system shuts down due to maximum run time it can be reset by pressing the teller Send /switch.

## Service Information

Two Digital I/O Controllers (DIOC) control the HA 33. Each control switch provides 12 Volts DC to the DIOC to signal an event. Door Open; Door Closed; carrier present ... etc.  
The switches on the HA 33 are as follows

### Teller Unit

#### Operators Control

Teller Send

Teller Recall

Night Lock

SW-1 (ON) Turns on Service Mode This enable you to use the send and recall buttons (on teller) and the send and call buttons (on customer) to run door in and out.

SW-1 (OFF) Normal run Mode.

SW-2 should be off at all times and has no extra function.

SW-3 (ON) Teller mode. With interconnect unplugged powering the unit up with this switch on will close the door and with switch off and power up, it will open door.

SW-3/SW-4 Turbine Mode. If turbine is connected at the teller end. Press and hold SW-4 and turn on SW-3 and you can

#### Operational Control

Door Open

Door Closed

Carrier Present

Door Safety

### Customer Unit

#### Operators Control

Customer Send

Call Teller

SW-1 on will set the time of the unit. With carrier in customer unit turn switch on. Press and hold customer send until the carrier trips the teller carrier arrival switch. Unit will turn off than let go of the send switch and turn sw-1 off unit is timed. You can also hold sw4 (carrier recall) in and turn this sw-1 on and then use the customer send and call button or the teller send and recall (depending which unit the turbine is plugged in) to operate the vacuum and pressure motors.

SW-2 stagger starts the turbine This must be on to operate all turbine motors. No added features.

SW-3 Is off in run mode. With interconnect unplugged powering the unit up with this switch on will close the door and with switch off and power up, it will open door.

SW-4 This is a carrier recall at the customer unit to simulate teller send.

#### Operational Control

Door Open

Door Closed

Carrier Present

Door Safety

#### Service Control

Carrier Recall from Teller

A DIOC controls each end. The DIOC's are connected to each other by a CAT5 cable. This cable is used for the two boards to communicate to each other. When the switch is operated it signals the DIOC and a light corresponding to the input is lighted.

The DIOC has outputs to control external devices these outputs are relay closure and when an output is active a corresponding light is lighted

Troubleshooting is greatly aided by observing the input/output lights.

The following is a list of the input and outputs used in the HA 33.

## HA-33 Commercial Remote Banking System

Inputs are numbered 3 thru 12

Input #	Condition when Lighted
3	Door is Open (Light is out when Open)
4	Door is Closed & Sealed( Light is out when closed)
5	Carrier Present is operated
6	Not Used
7	Night Lock Switch is on
8	Door Safety is not operated
9	Call/Recall Button Pressed
10	Send Button Pressed
11	Input for optional auto door close when jumper is on 2 left pins of J4
12	Not Used

Output #	Operation When lighted
1	Open Door
2	Close Door
3	Start Pressure Motor
4	Start Vacuum Motor
5	Air kit
6	Video
7	Lane Status (open/closed)
8	Not used
9	Mute microphone on turbine run
10	Teller Call Tone to audio matrix

### The Control Board in the Customer & Teller Units have the following components installed

Component	Function
Fuse FL1	3 amp slow blow for customer door motor
Fuse FL2	3 amp slow blow for Transformer
Digital I/O Control Board	Controller
Motor Contactor M1	Door Motor Thermal Overload
Motor Capacitor	Run capacitor for Door Motor
Toggle Switch	Main Power to Board
Terminal Strip TS1	110V Power In
Terminal Strip TS2	Door motor connections
Terminal Strip TS3	Control out to Turbine
24 Volt transformer	Low voltage control power

### The Turbine Control Panel Located above the Customer Unit

Motor Contactor M1	Vacuum turbine Motors
Motor Contactor M2	Pressure turbine Motors
Fuses F1 thru F4	20 amp slow blow for pressure motors
Turbine Power input terminals	2 circuits of 120 volt 30 amp
	OR
	1 circuit 240 volt 30 amp with neutral

3 Conductor Low voltage control cable

Turbine Assembly  
Located Above the Customer unit

230 Vac 30 Amp with neutral or  
2 circuits of 120 Vac 30 amp each

Building Power Panel

120 Vac  
10 Amp

120 Vac  
10 amp

Customer Unit

CAT 5 Control Cable

Teller Unit

6 conductor  
Audio Cable

Audio Matrix

Power Requirements

Teller Unit:	120 Volt AC 10 Amp
Customer Unit:	120 Volt AC 10 Amp
Turbine Unit:	2 Circuits 120 Volt AC 30 Amp each or 1 circuit 230 Volts AC 30 Amp with neutral

Low Voltage & Audio Cables

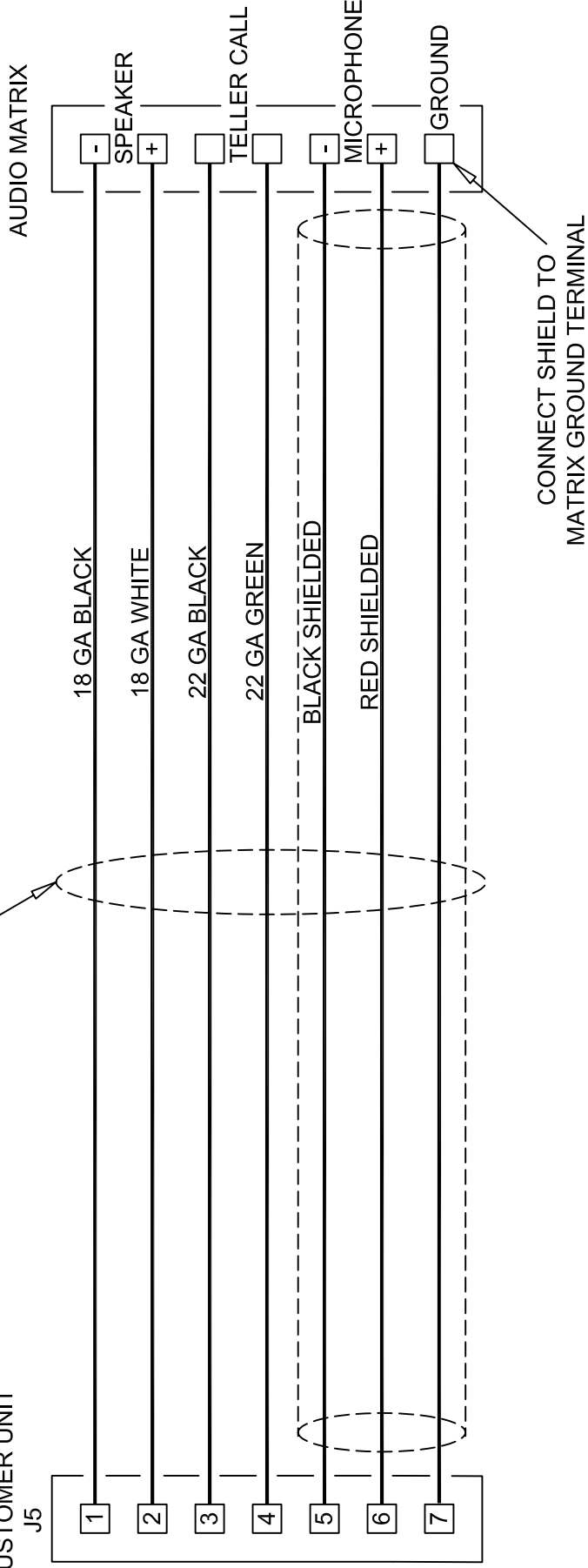
- 1 each 12 conductor 18 ga control
- 1 each 3 conductor 18 ga control
- 1 each 6 conductor Audio
- 1 each 4 conductor Audio\*
- \* use 4 conductors of a 6 conductor cable

1/29/07

HA-33 Power  
and  
Cable Details

AUDIO CABLE  
HAMILTON P/N E0680

HA33 CUSTOMER UNIT  
J5



DATE: --	--
DATE: --	--

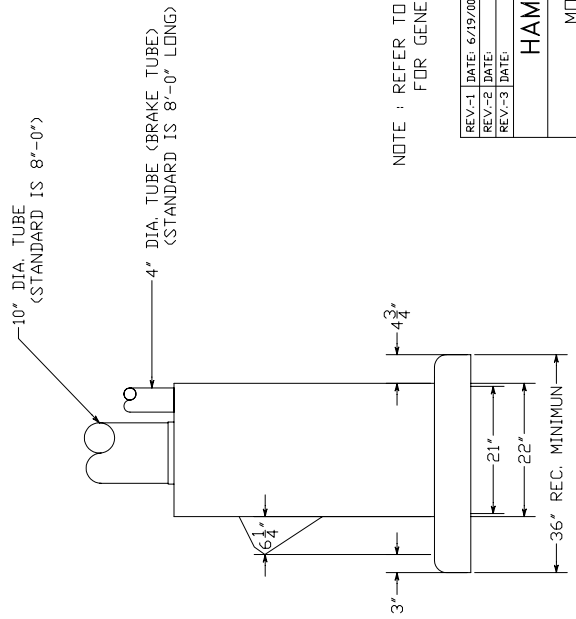
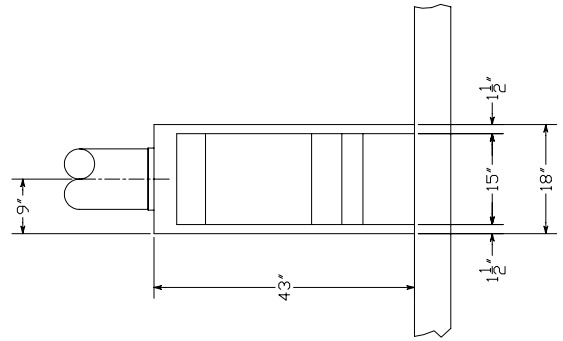
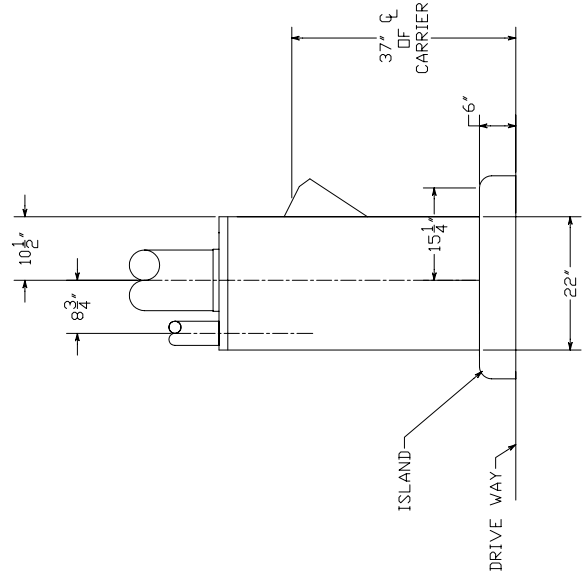
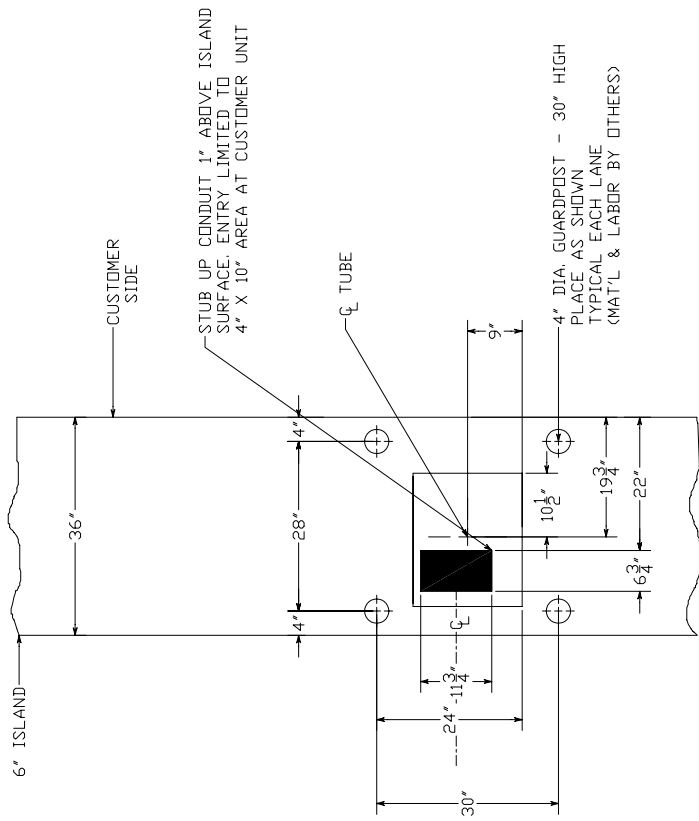
### HAMILTON AIR

MODEL HA-33

AUDIO CABLE CONNECTIONS

Drawing Number : 99-969

Date : 1/2/08



LEFT SIDE ELEVATION

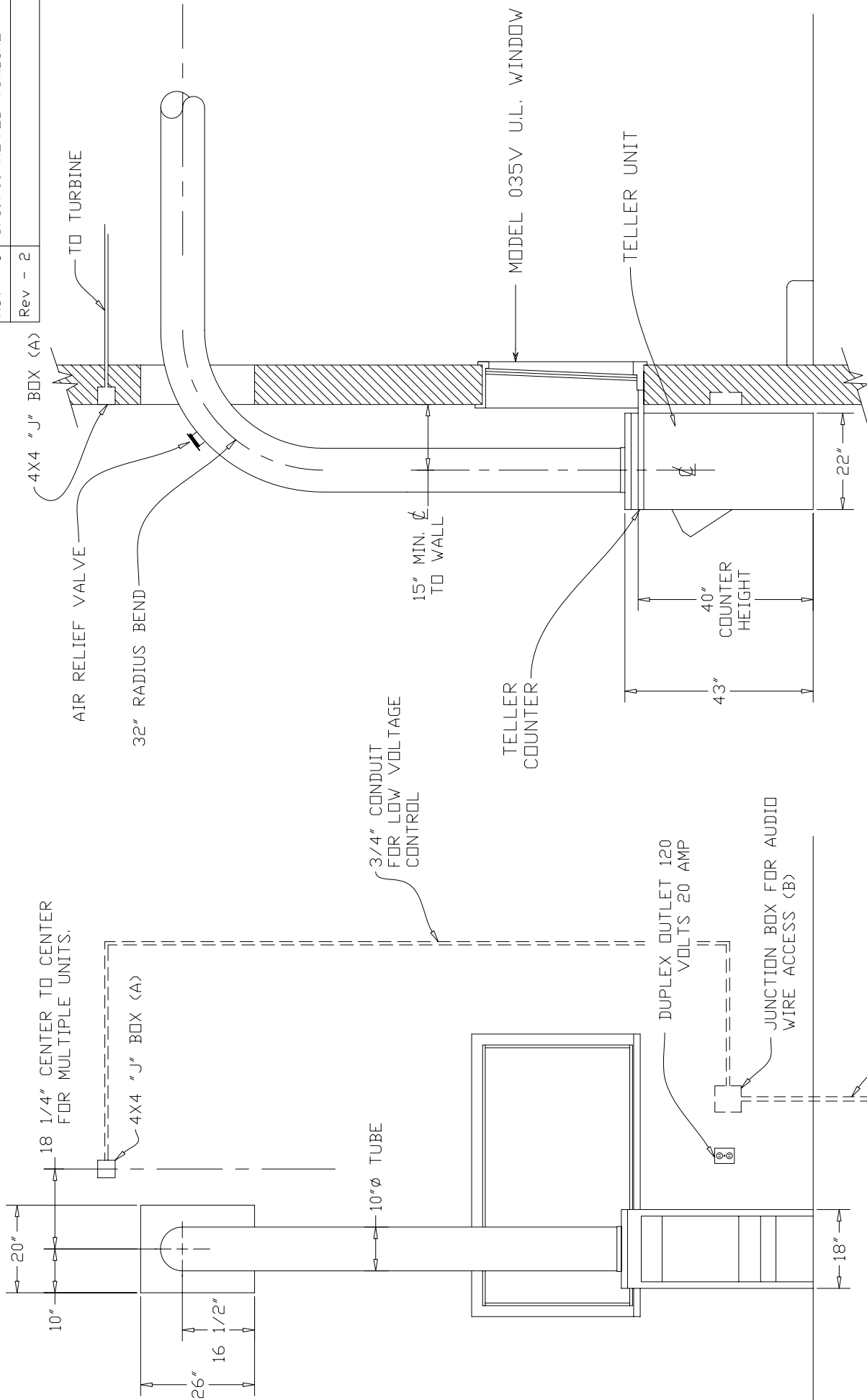
FRONT ELEVATION

RIGHT SIDE ELEVATION

NOTE : REFER TO DRAWING No 99-719 FOR GENERAL SPECIFICATIONS.

REV.-1	DATE: 6/19/00	MOVED TURBINE PLACEMENT
REV.-2	DATE:	
REV.-3	DATE:	

<b>HAMILTON AIR</b>	
MODEL HA-33	
UPSEND CUSTOMER UNIT (10" TUBE SYSTEM)	
Drawing Number : 99-721	Date : 11-9-99



SECTION

INTERIOR ELEVATION

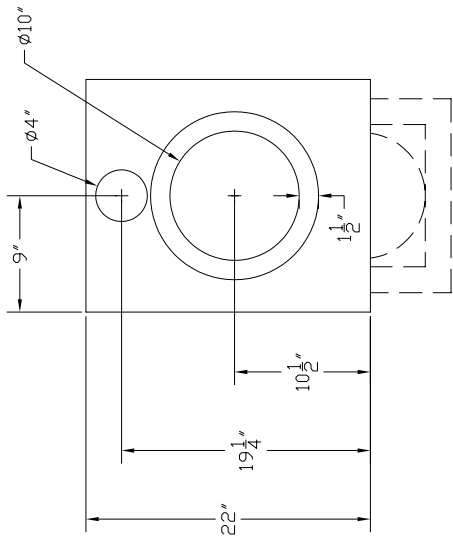
HAMILTON AIR

MODEL HA-33  
UPSEND TELLER UNIT  
(10" TUBE SYSTEM)

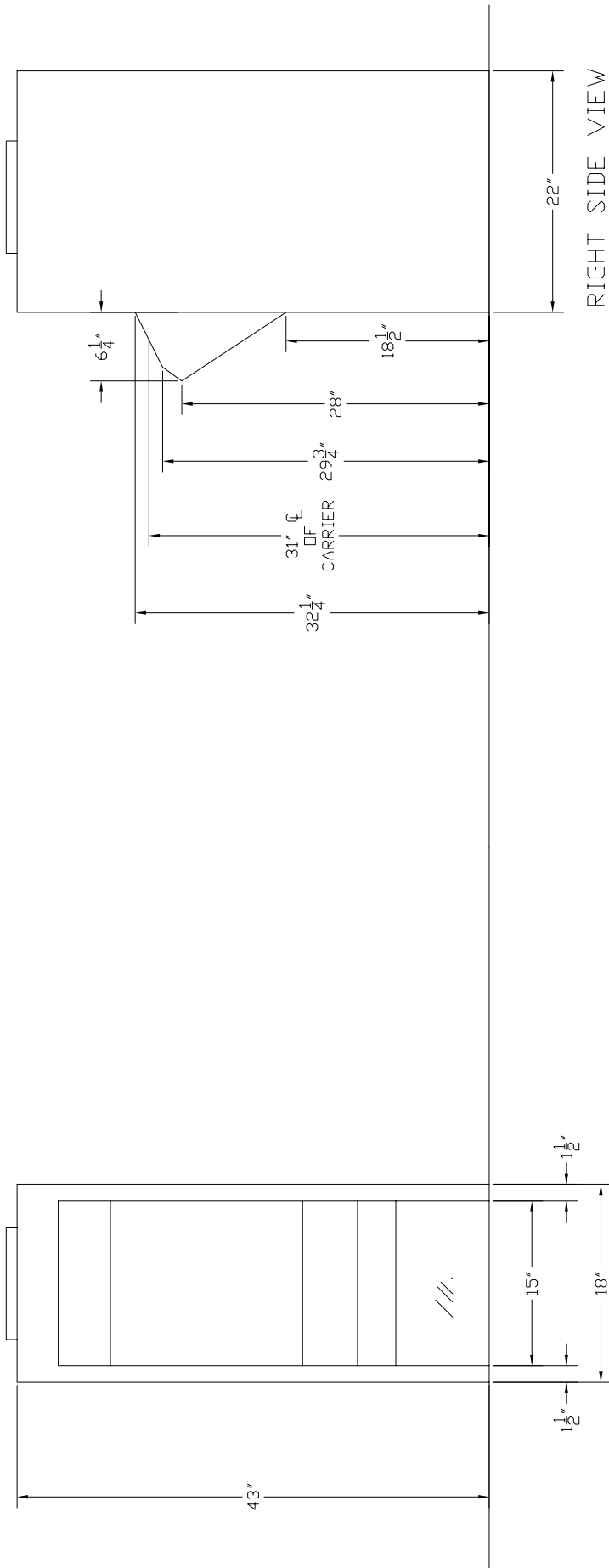


Rev - 1 6/19/00 MOVED TURBINE

Rev - 2 REV2



TOP VIEW



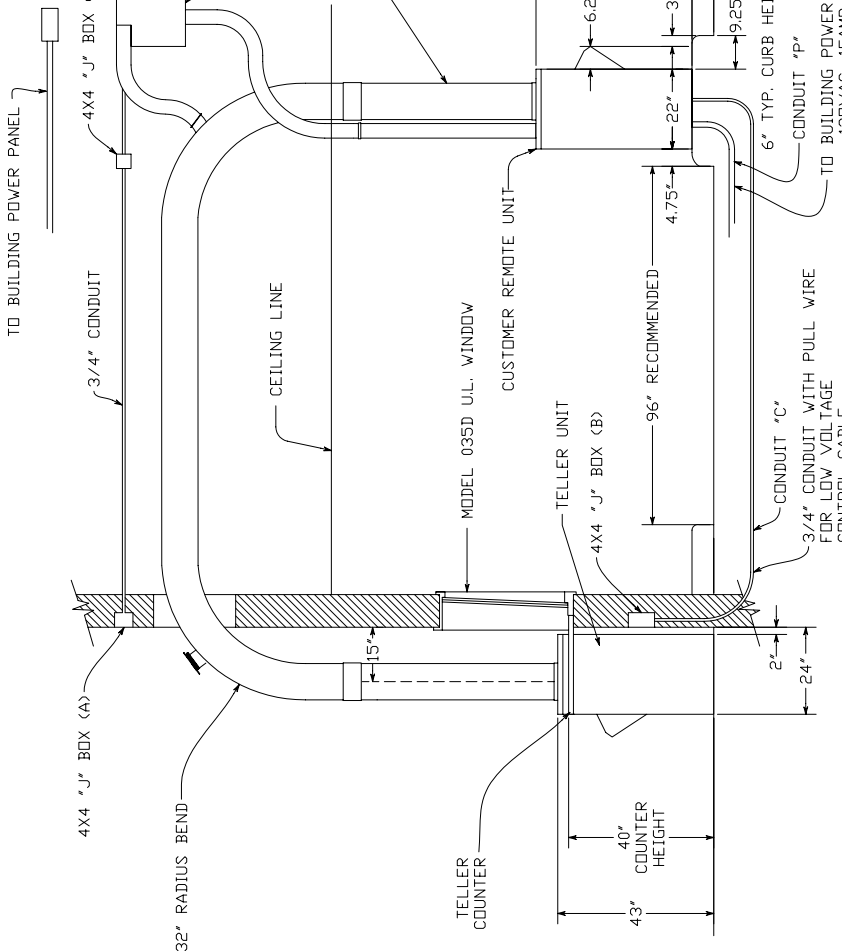
RIGHT SIDE VIEW

HAMILTON AIR

MODEL HA-33  
UPSEND CUSTOMER UNIT  
(10" TUBE SYSTEM)

Drawing Number : 99-719 Date : 11-9-99

230V, 60HZ, 30AMP  
WITH NEUTRAL  
OR (2) 120V, 60HZ, 30AMP

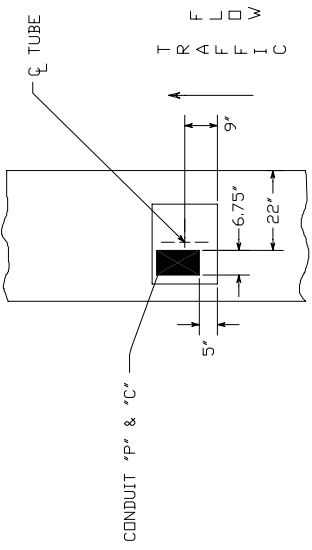


(REFERENCE DRAWING NUMBER # 99-719)

SECTION

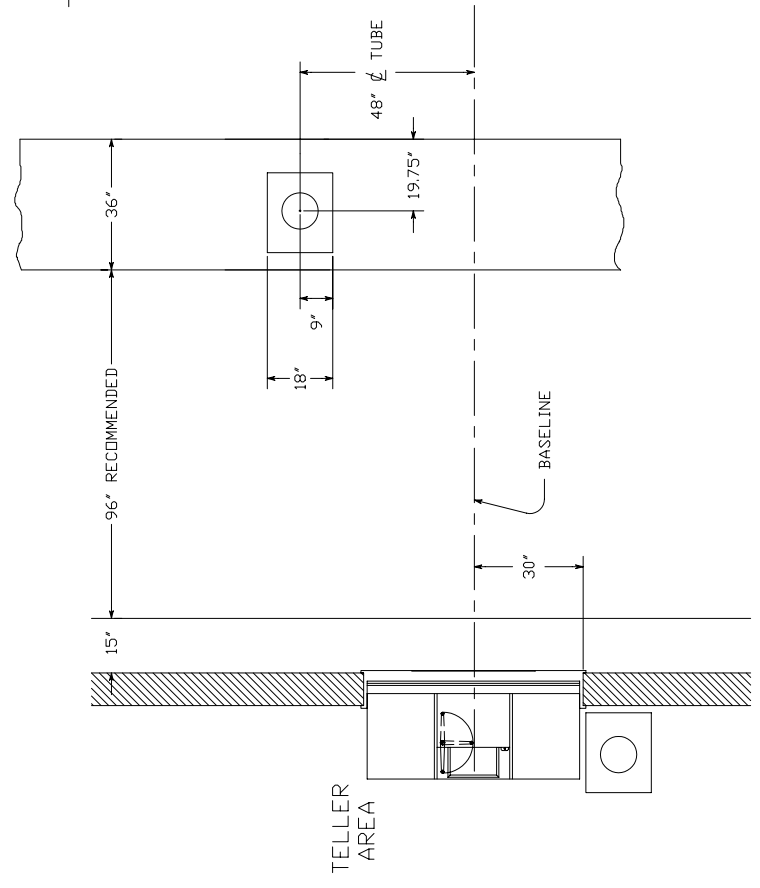
CONDUIT REQUIREMENTS

- 1 - 3/4" WITH PULL WIRE FROM A TO C IN CANDY
- 1 - 3/4" TO BUILDING POWER PANEL (230V AC 30AMP)
- 1 - 3/4" FROM A TO B (TELLER STATION)
- 1 - 3/4" FROM B TO CUSTOMER UNIT (UNDERGROUND) (CONDUIT C)
- 1 - 3/4" FROM CUSTOMER UNIT TO BUILDING POWER (CONDUIT P) 120V AC 15AMP

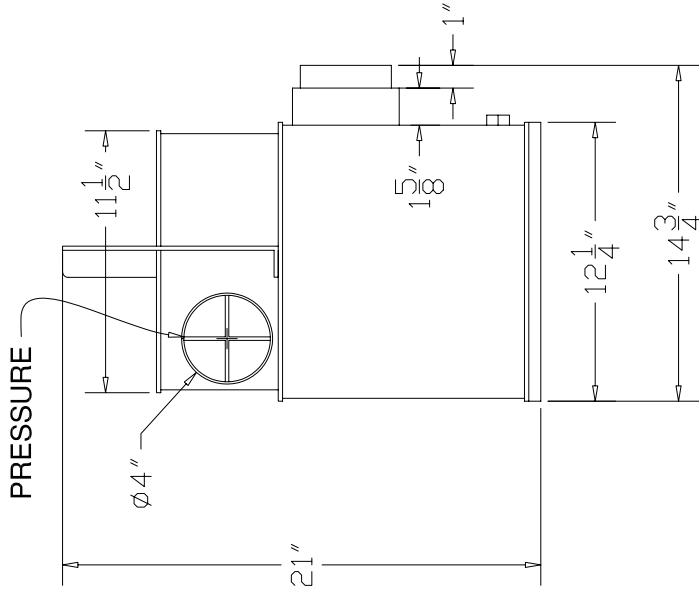
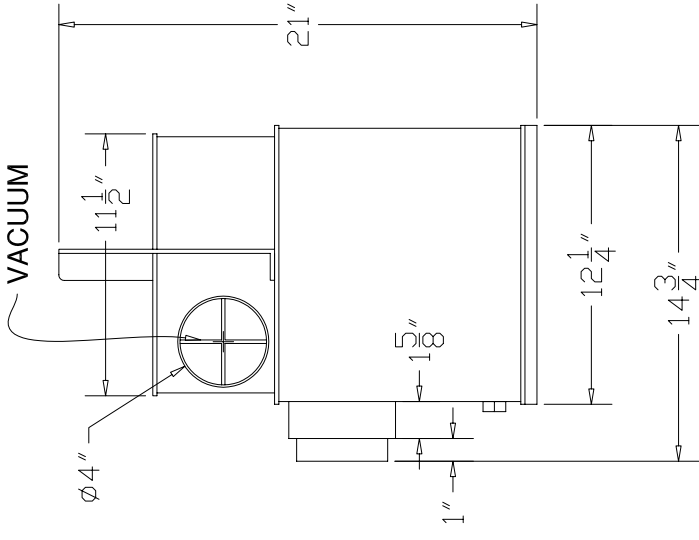
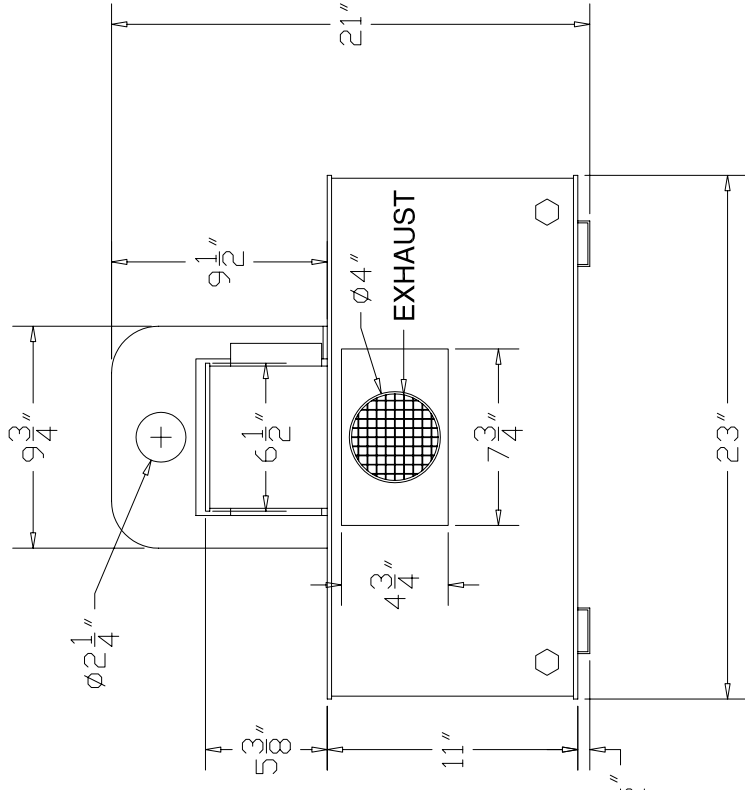


ISLAND DETAIL

(REFERENCE DRAWING NUMBER # 99-721)

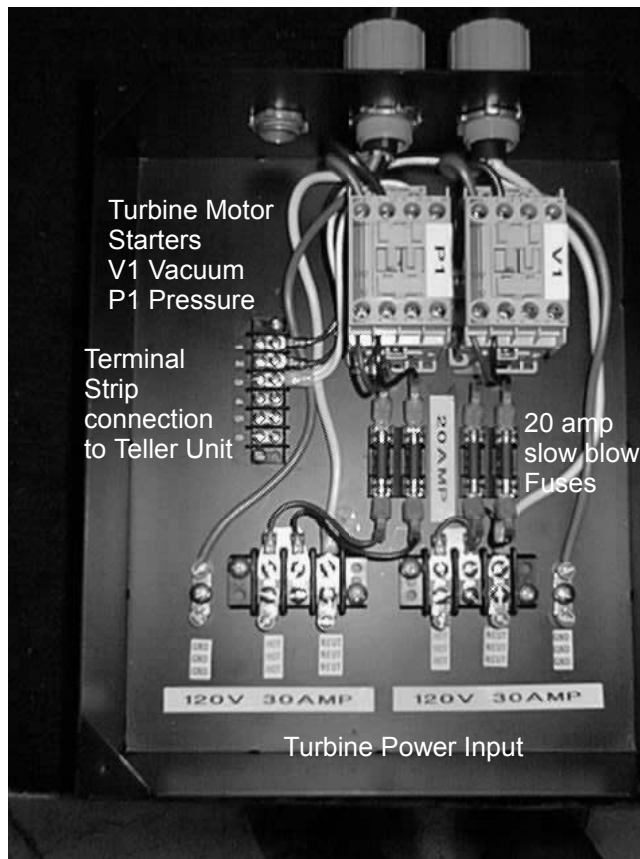


REV-1	DATE: 6/19/00	MOVED TURBINE PLACEMENT
REV-2	DATE: 10/4/00	ADDED NOTE
REV-3	DATE:	
<b>HAMILTON AIR</b>		
MODEL HA-33		
111 SYSTEM - UPS/END (10" TUBE SYSTEM)		
Drawing Number : 99-720	Date : 11-9-99	



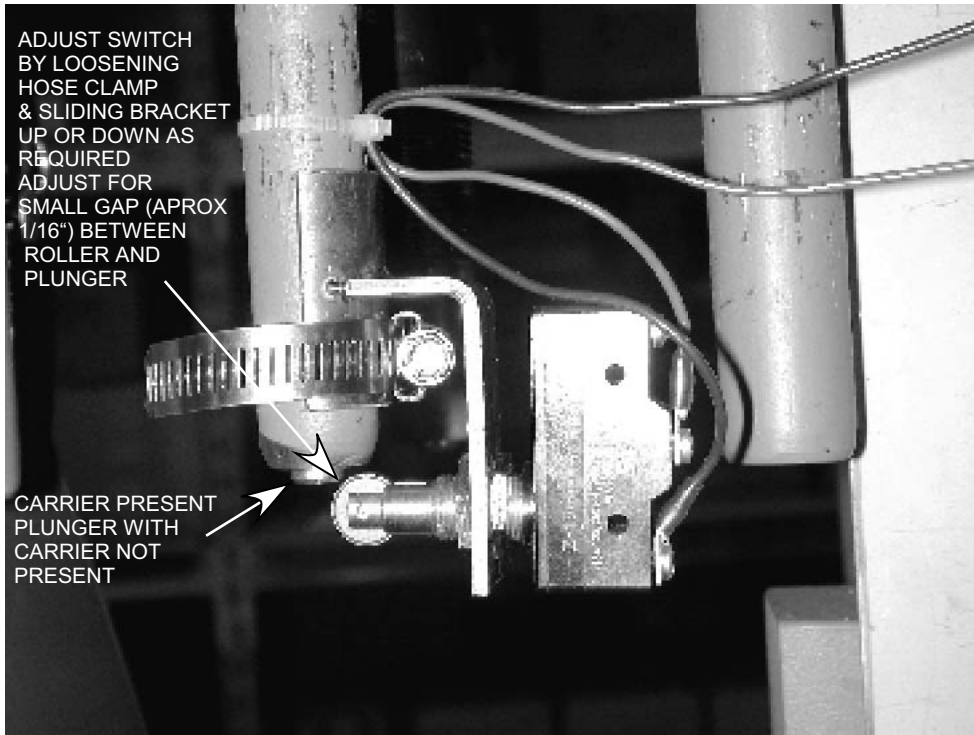
REV.-1	DATE:
REV.-2	DATE:
REV.-3	DATE:
<b>HAMILTON AIR</b>	
MODEL HA-33	
TURBINE PACK	
(10" TUBE SYSTEM)	
Drawing Number : 99-830	Date : 7/10/02

## HA-33 Mark 2 Turbine Control Panel

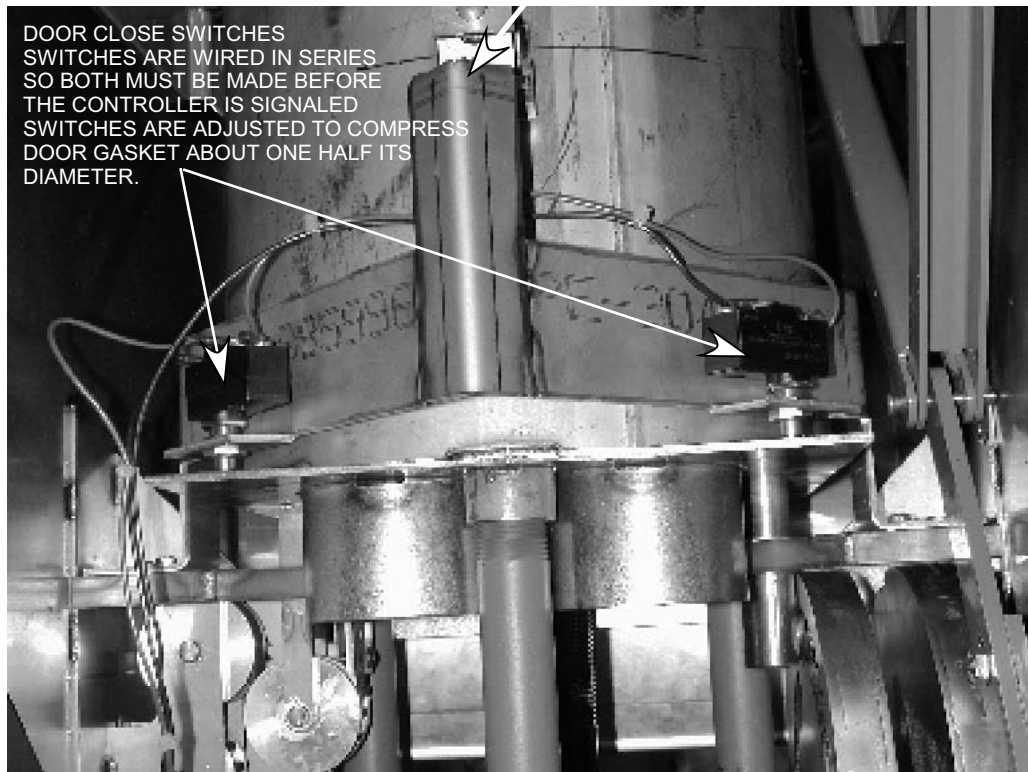


Note: In Vacuum mode (Teller Send) the Vacuum motor starter V1 pulls in first followed one second later by the pressure motor starter P1.

In pressure mode (Customer send) the pressure motor starter pulls in first followed one second later by the vacuum motor starter.



CARRIER CAPTURE PLUNGER RELEASE LEVER  
PRESENT ON CUSTOMER UNIT ONLY

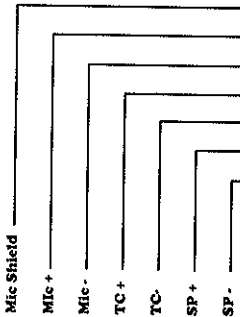


DOOR CLOSED AND CARRIER ARRIVAL SWITCHES

# HA33-SERVICE OPTIONS

<b>Teller</b>			
Fuction	SW-3	SW-2	SW-1
			Description
Run Mode	ON	OFF	OFF
Door Service Mode	ON	OFF	ON
Turbine Mode	ON	OFF	*ON
Normal Operating Mode			
Allows you to operate door in and out with send and recall buttons			
* Allows you to operate pressure and vacuum motors with the send and recall buttons			
* You must have turbine connected at teller, carrier at teller, door open and hold in SW-4 when turning on SW-1 to enter this mode			
<b>Customer</b>			
Fuction	SW-3	SW-2	SW-1
			Description
Run Mode	OFF	ON	OFF
Door Service Mode	ON	ON	ON
Turbine Mode	OFF	ON	*ON
Timing Mode	OFF	ON	**ON
Normal Operating Mode			
Allows you to operate door in and out with send and call buttons			
* Allows you to operate pressure and vacuum motors with the send and recall buttons			
* Allow you to set the timing of the unit by pressing and holding the customer send button until carrier arrives at teller and unit turns off than turn SW-1 OFF and the unit is timed.			
* You must have turbine connected at Customer, carrier at Customer, door open and hold in SW-4 when turning on SW-1 to enter this mode			
** You must have, carrier at customer, door open before entering Timing mode by turning SW-1 on.			
Auto door closing after 3 min. Apply a jumper to J4 right 2 pins. Note: This is installed from factory.			
<b>Set all switches back to run Mode to exit any other mode.</b>			

**Audio**

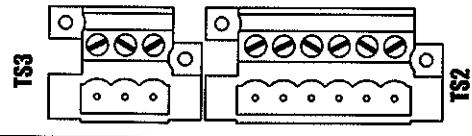
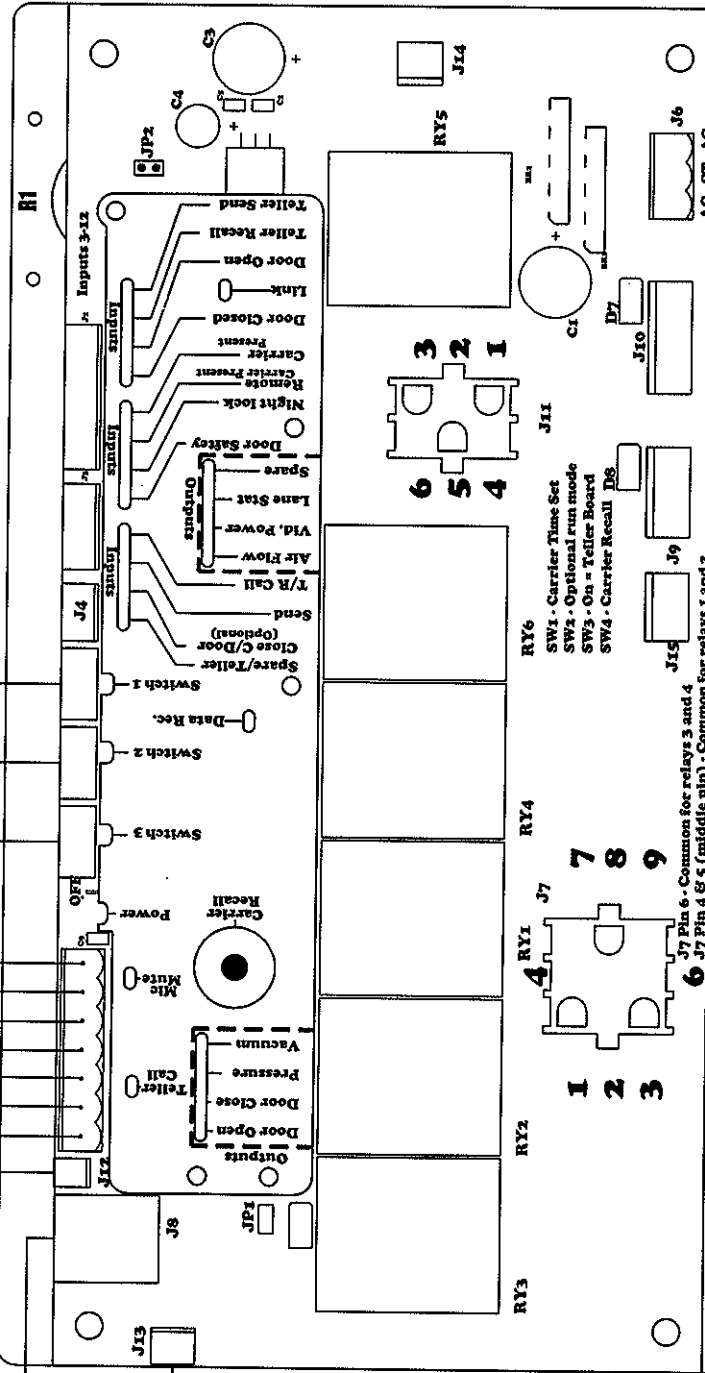


At Teller end This Switch is ON to make it a Teller Board  
 At Customer end This Switch is OFF to make it a Customer Board  
 At Teller end this switch is not used and should be OFF on a HA33  
 At Customer end this switch is on to set the right Turbine mode For HA33  
 At Teller end this is your service switch to operate the doors in and out. (Should be off in normal use).  
 At Customer end this is for setting the timing of the lane.

**Speaker Connection**

**RJ45 Interconnect connection**

**Mic Connector**



**Remote Turbine**

**Motor**

