HME

HOSPITALITY & SPECIALTY COMMUNICATIONS

NEW INSTALLER TRAINING

EOS|HD Headset System

ZOOM Timer System

HME CLOUD

HME Leaderboard

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WELCOME!

1. This training is a full day
2. There will be breaks and a lunch break
3. Save phone calls or other distractions for breaks
4. Take notes, participate and ask questions

There will be a test at the end of the training used in the consideration of your HME certification!

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AGENDA

Drive Thru Audio

Drive Thru Optimization System (DTOS)

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HOW IT WORKS

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COMPONENTS

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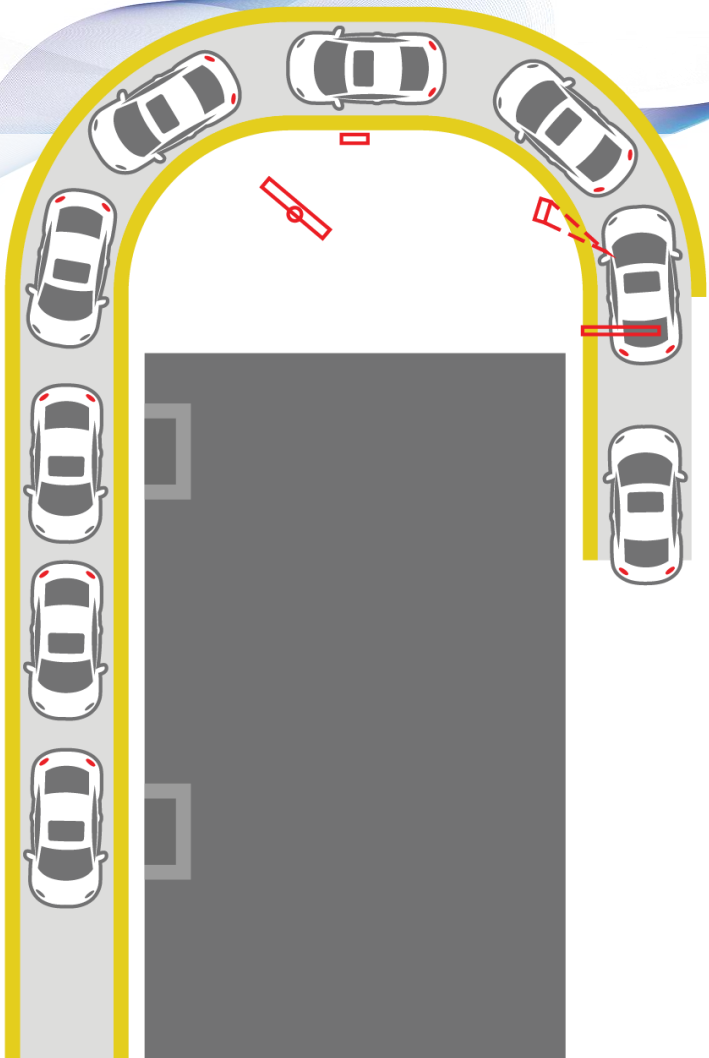
WHERE THEY GO

There are 3 areas that are involved in a headset system installation:

1. Outside the Store
   - Microphone, speaker and loop
2. In-Between
   - Cable pull
3. Inside the Store
   - Base, charger, VDB, batteries and headsets



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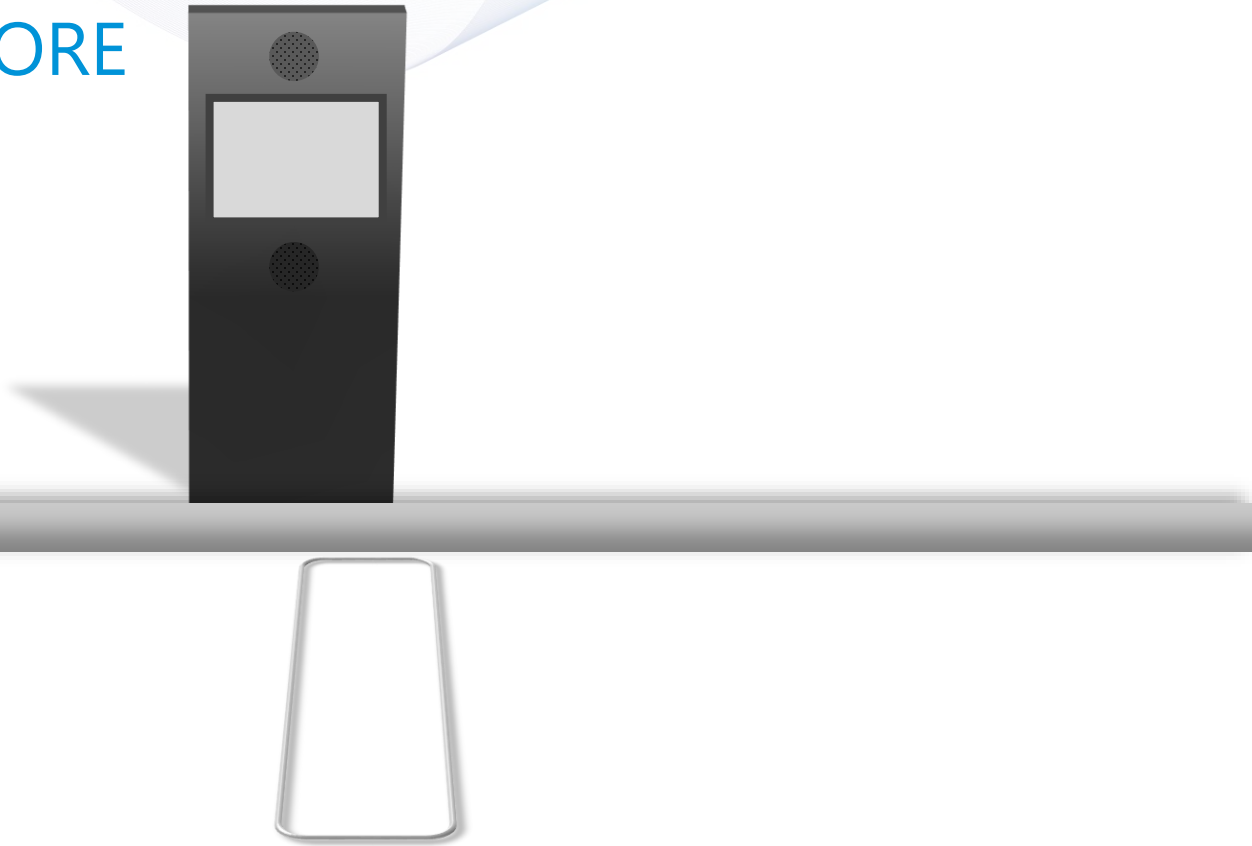
OUTSIDE THE STORE

1. Microphone
2. Speaker
3. Loop



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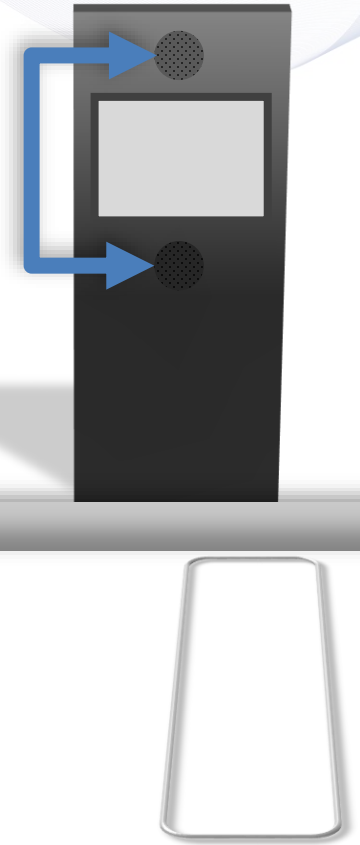
MOUNTING

1. Mic should be on top (eye level with customer
2. Speaker should be on the bottom
3. Minimum of 61cm (24”) of separation between the mic and speaker



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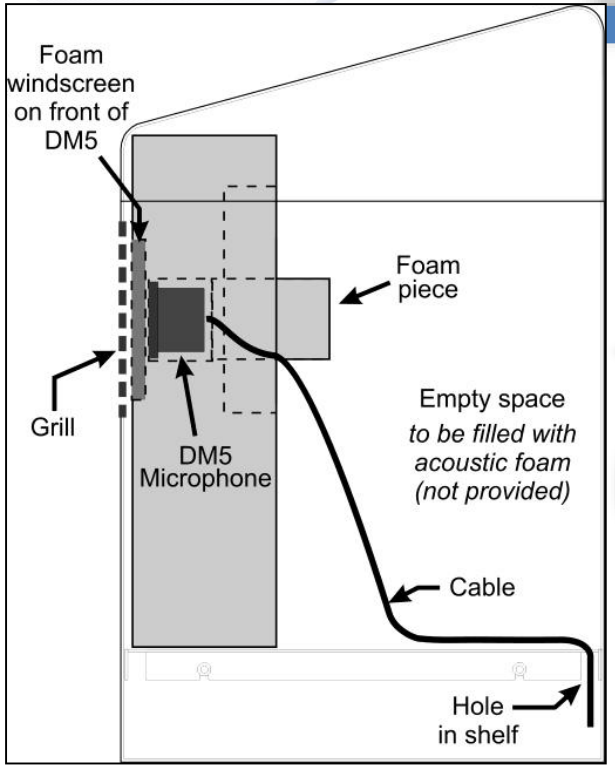
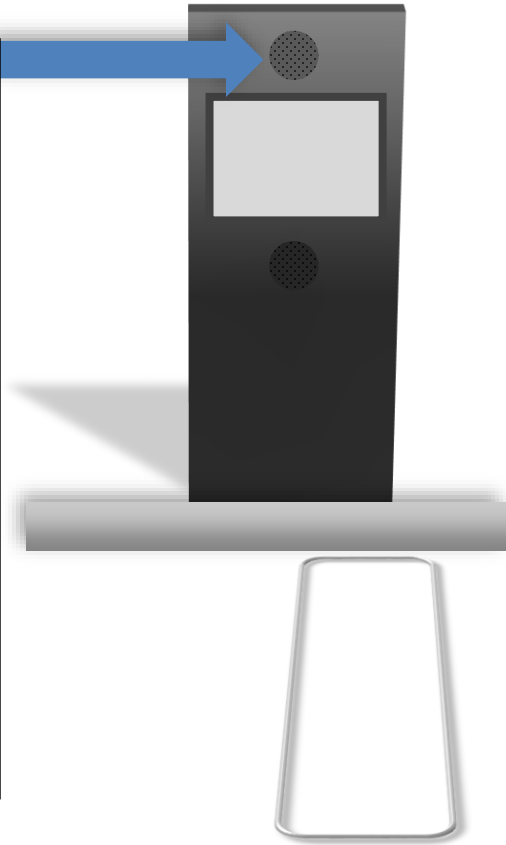
MICROPHONE

1. No physical or mechanical mounting
2. Completely float in acoustic foam
3. Push all the way forward
4. Use windscreen
5. Fill empty space with acoustic foam





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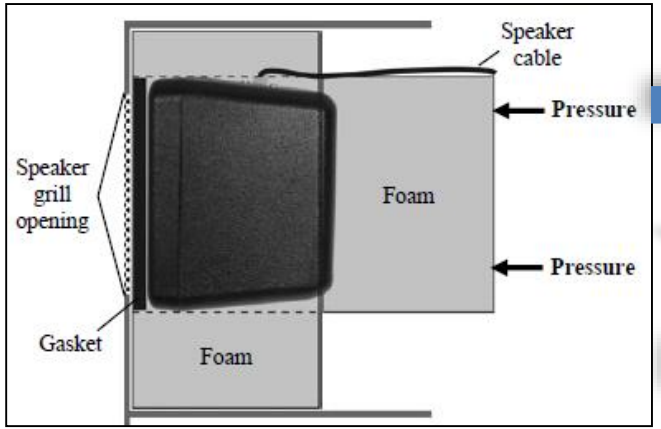
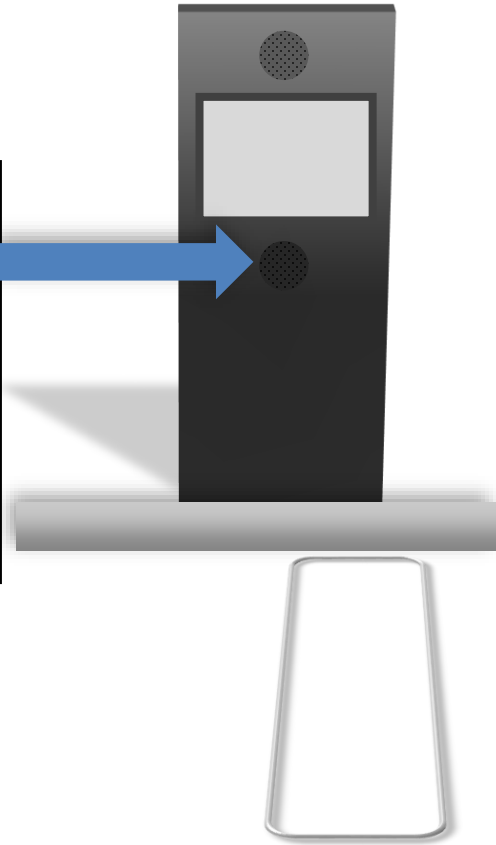
SPEAKER

1. No physical or mechanical mounting
2. Completely float in acoustic foam
3. Push all the way forward
4. Must use foam gasket
5. Fill empty space with acoustic foam





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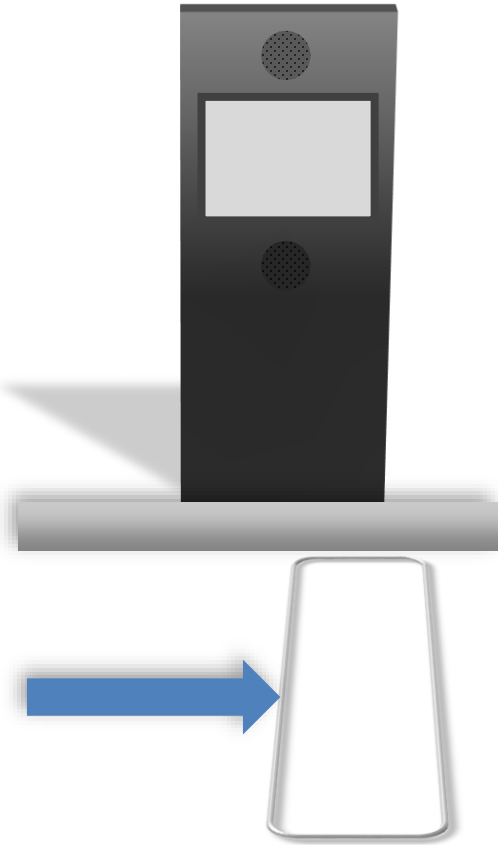
LOOP

HME headset and timer systems require the ability to detect when vehicles arrive at critical areas in drive thru for their normal operations. This will allow the headset system to let an order taker know when a vehicle has arrived at an order point and it allows the timer systems to track vehicle activity throughout the drive thru experience.



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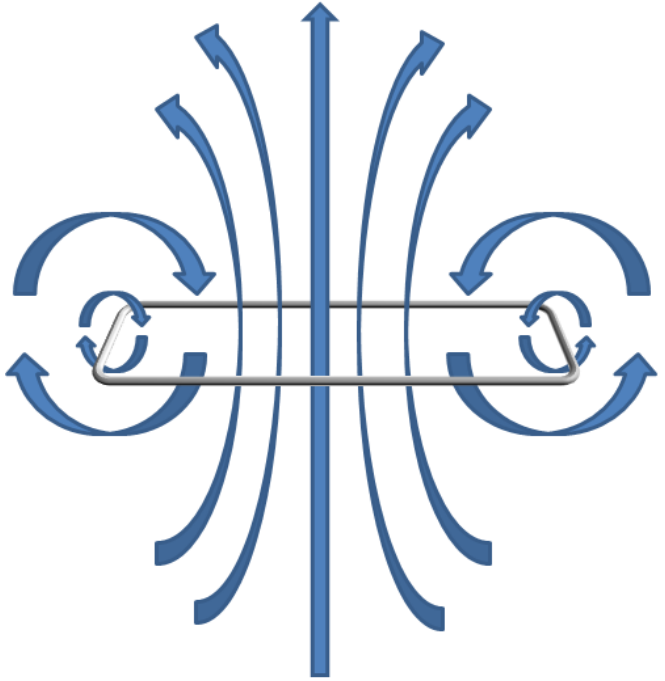
LOOP

The most common method of providing vehicle detection is by using an underground magnetic inductance “loop”. These sensors are essentially metal detectors that utilize an invisible magnetic field that change when a large enough mass of metal is near them.



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LOOP POSITION

1. Where should the loop go?
2. No metal within 3 feet of the loop
3. Positioned middle and forward
4. What's the effect of having the loop in other positions?

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LOOP POSITION

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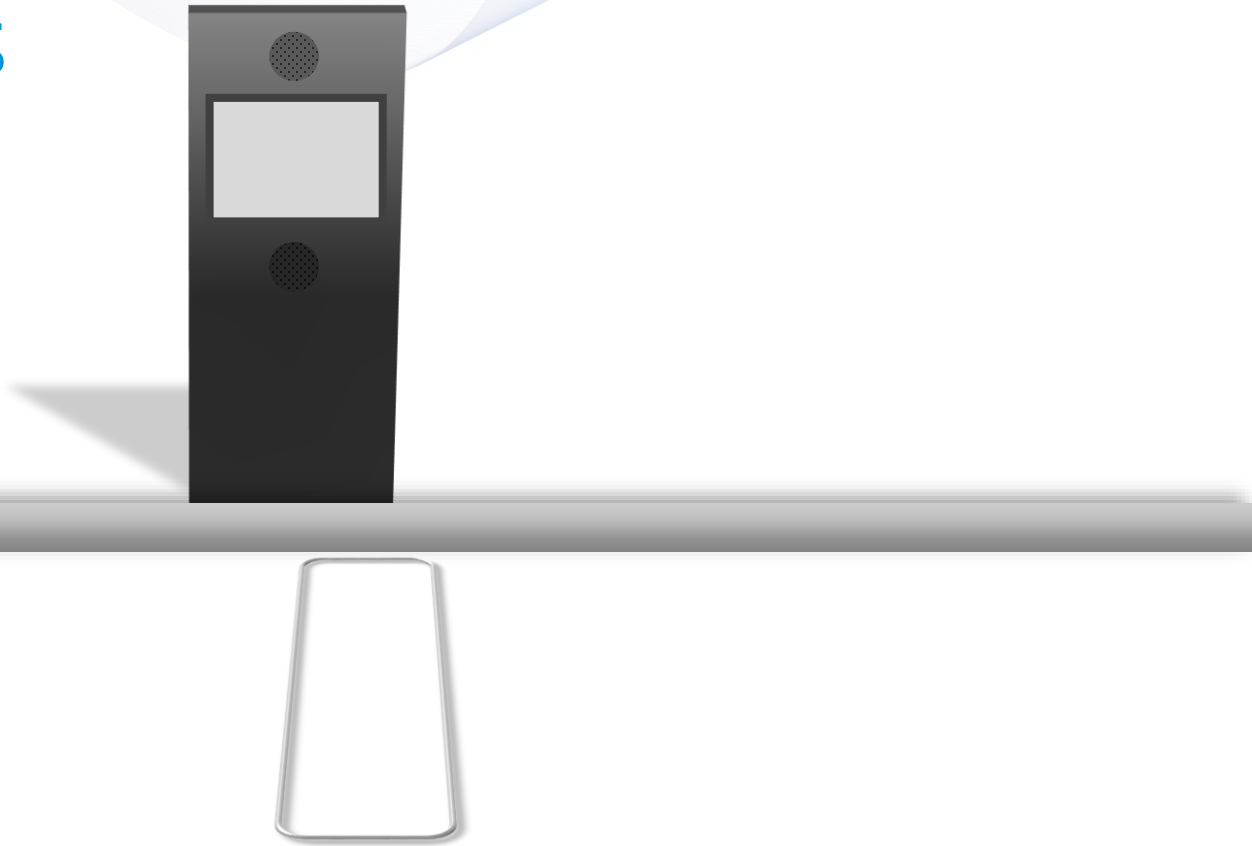
TYPES OF LOOPS

1. Sawcut
2. Prefab



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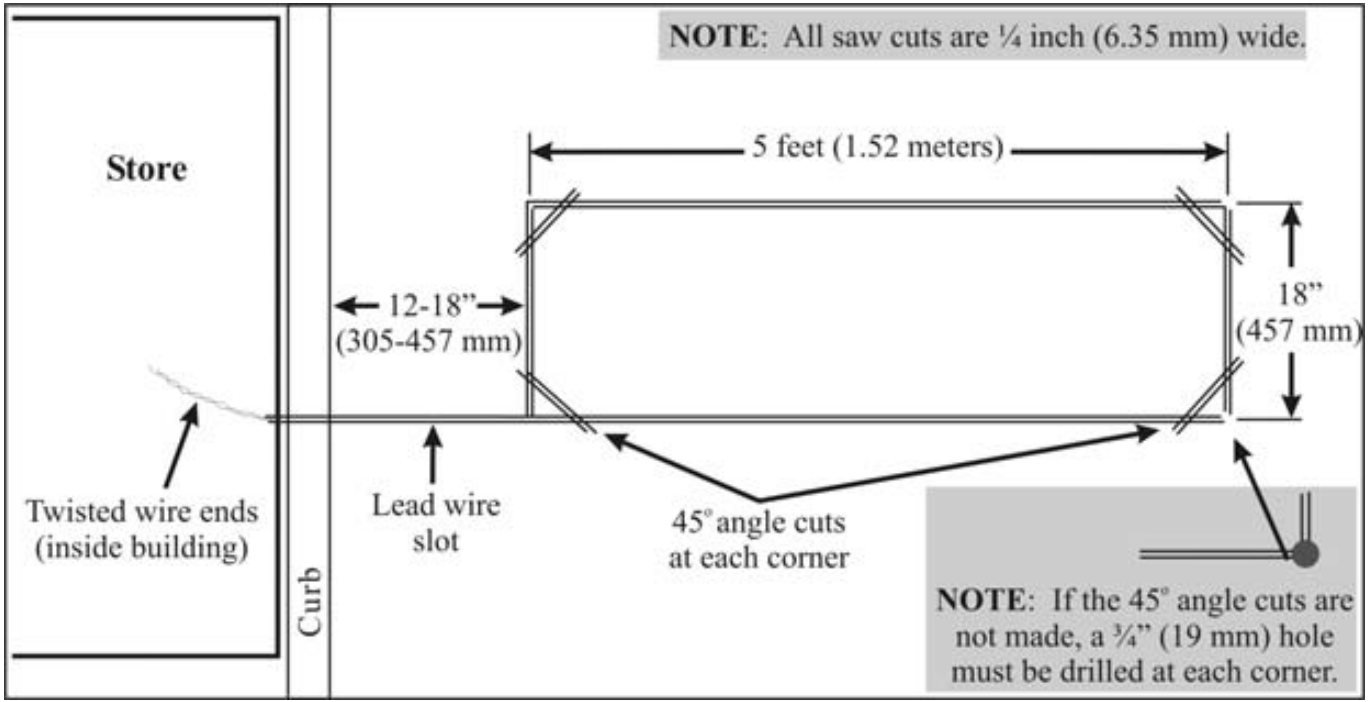
SAWCUT LOOP



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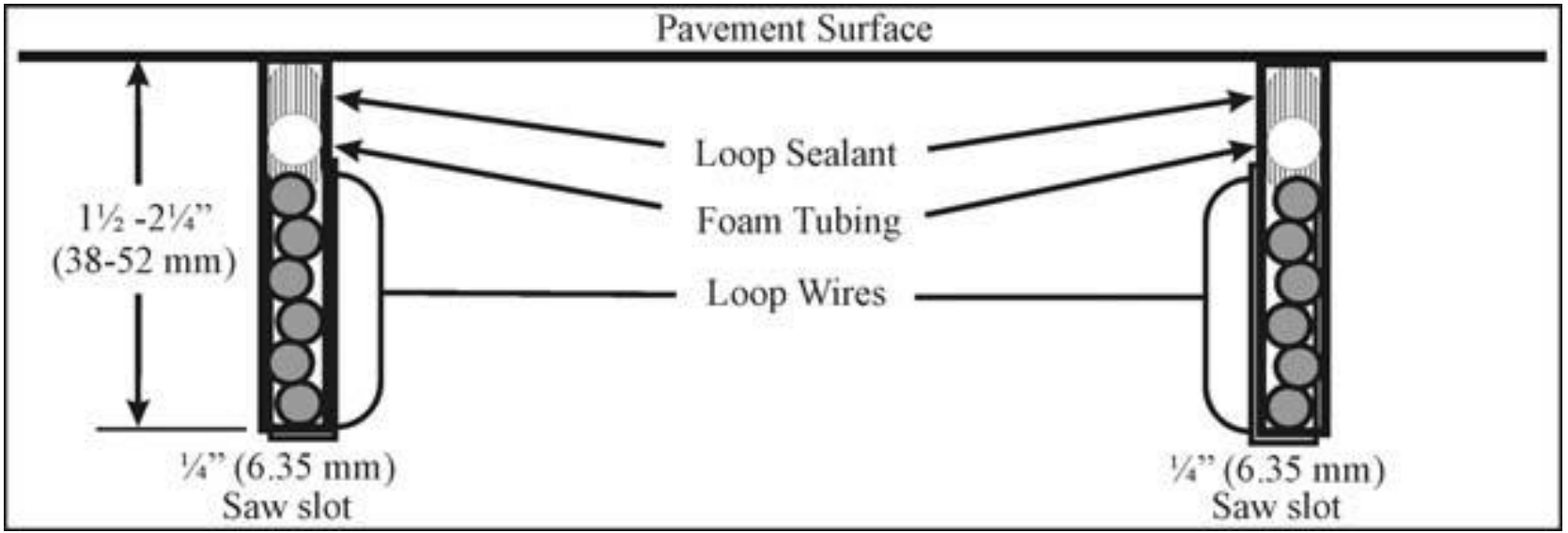
SAWCUT LOOP



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WHAT NOT TO DO

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POP QUIZ!

How many components are located outside the store?

3. Microphone, speaker and loop.

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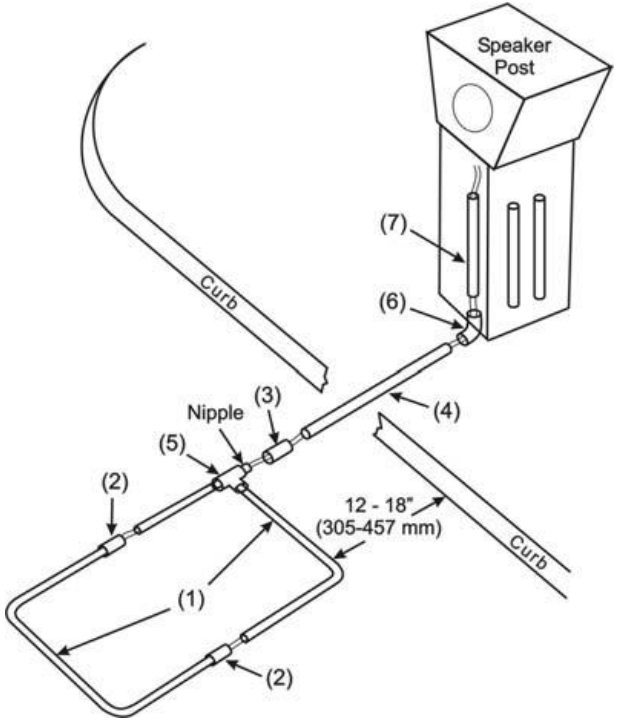
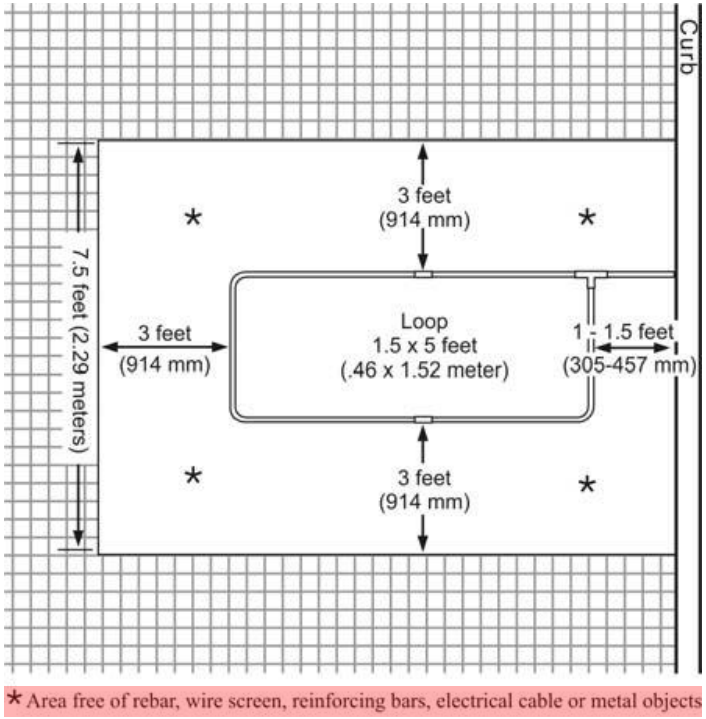
PREFAB LOOP





* Area free of rebar, wire screen, reinforcing bars, electrical cable or metal objects

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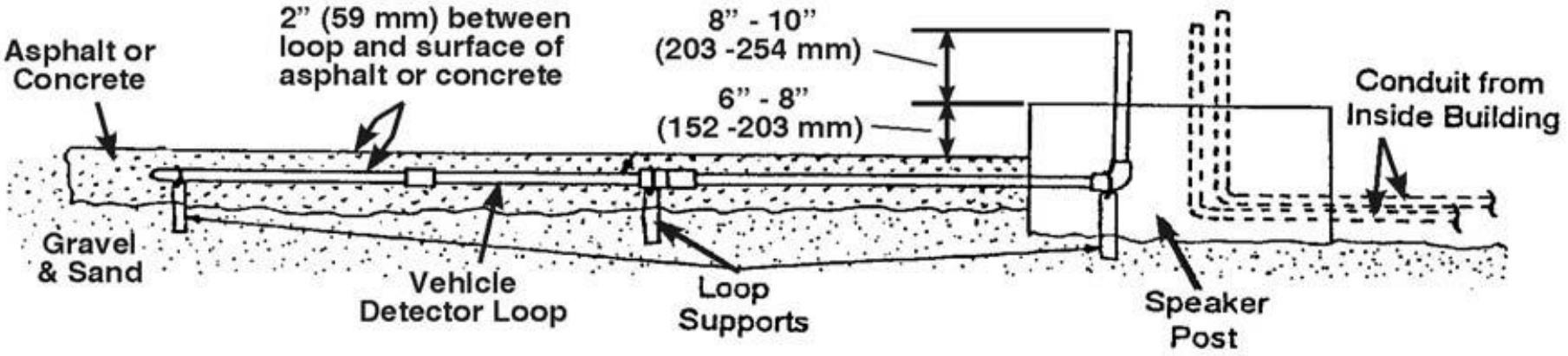
PREFAB LOOP



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METERING A LOOP

At the loop

- Microhenries (100 µH – 150 µH)
- Resistance (~1 Ω)
- Megohms (+50MΩ and steady)

At the VDB

- Microhenries (~+20 µH per 200')
- Resistance (~+1 Ω per 200')
- Megohms (do NOT meter here)

By comparing the microhenries and resistance readings at both locations, you can determine if there is a problem with the lead-in cable, the loop or both.

If you don't have the ability to get all required readings at the loop and at the VDB, do not accept any work orders until you purchase the appropriate meters.

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SUGGESTED METERS

Extech 380193

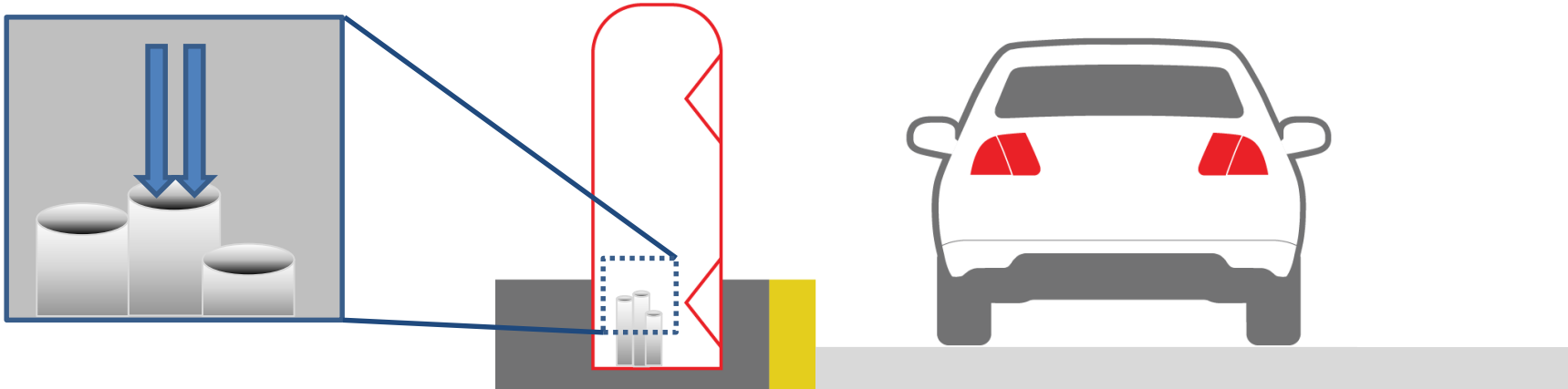
Passive Component LCR Meter
Inductance and Resistance

Extech 380360

Digital Megohmmeter
Megohms

OUTSIDE THE STORE

1. Only pull cable in unoccupied conduit
2. Use 2 HME cables (Belden 8723 ONLY). We ship 2, 200’ spools.
   - First cable: Microphone only (BLACK, RED and GROUND)
   - Second cable: Speaker (GREEN/WHITE) and Loop (RED/BLACK)



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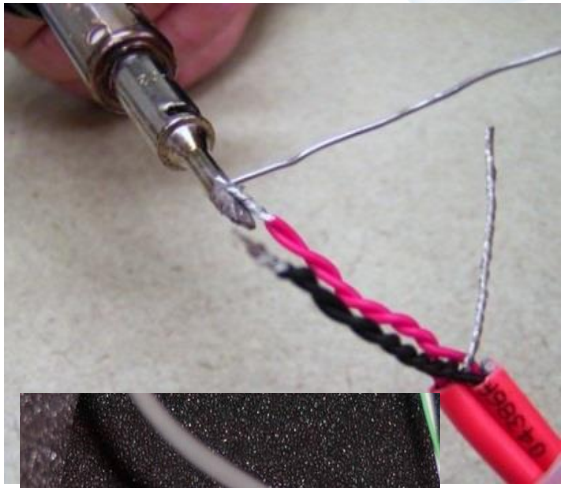
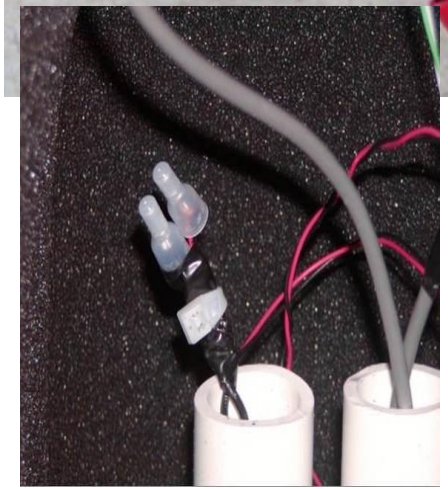
OUTSIDE THE STORE

3. Mic and Loop connections:
   - Soldered
   - Crimp capped (no wire nuts or taped connections)
   - Insulated with electrical tape
   - Tie wrapped for strain relief
   - Loop wires and connected loop wires must be twisted.
   - All unused ground/wires and foil must be clipped back





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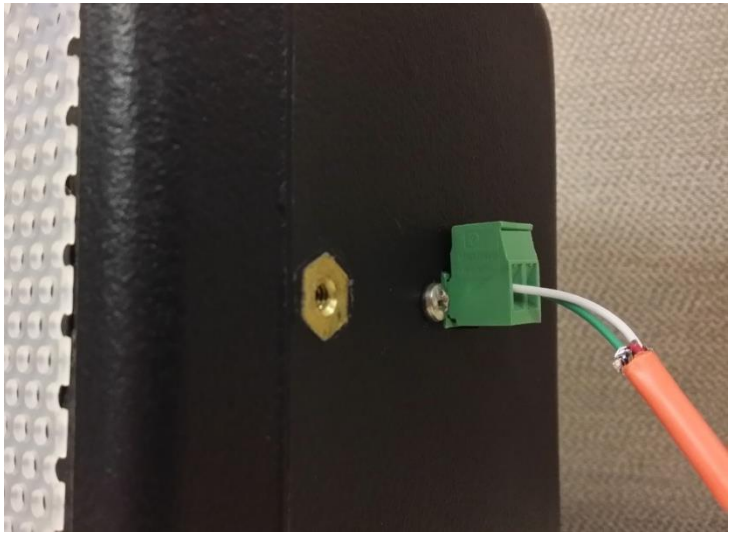
OUTSIDE THE STORE

4. Speaker connections:
   - Strip back the cable to have enough length to have green and white go to speaker and red and black go to the loop
   - Wires must be stripped back far enough to be terminated into the connector, but not so far back to expose wires
   - Screw down the wires tight enough so they don't easily come out
   - All unused ground/wires and foil must be clipped back



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POP QUIZ!

The speaker needs to be in its own cable. True or false? Why?

False. The microphone needs to be in its own cable.

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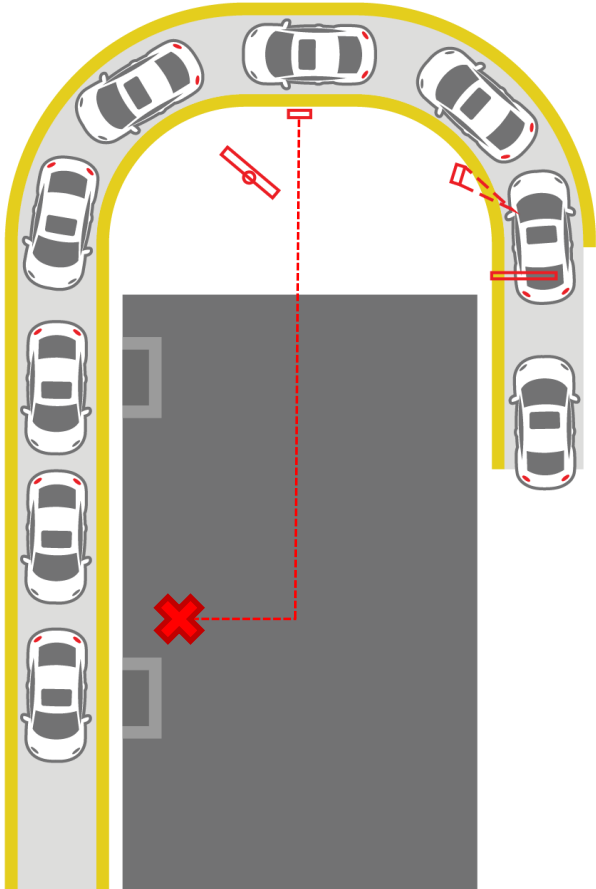
IN-BETWEEN

Cable pulling:

1. Coordinate your efforts with store manager or GC to have the smallest impact on operations
2. Determine the base station location for your cable pull destination
   - Commonly in the present window
3. Locate the entry point from the conduit outside and assess any potential cable pulling difficulties
   - Avoid possible sources of interference like electrical panels
4. Use pull string or existing cables as the pull string
   - Try to move it to determine condition of conduit
   - Silicone may be used to help pull cable in difficult situations
   - No movement might indicated crushed or blocked conduit. Contact your HME Install Coordinator for resolution.



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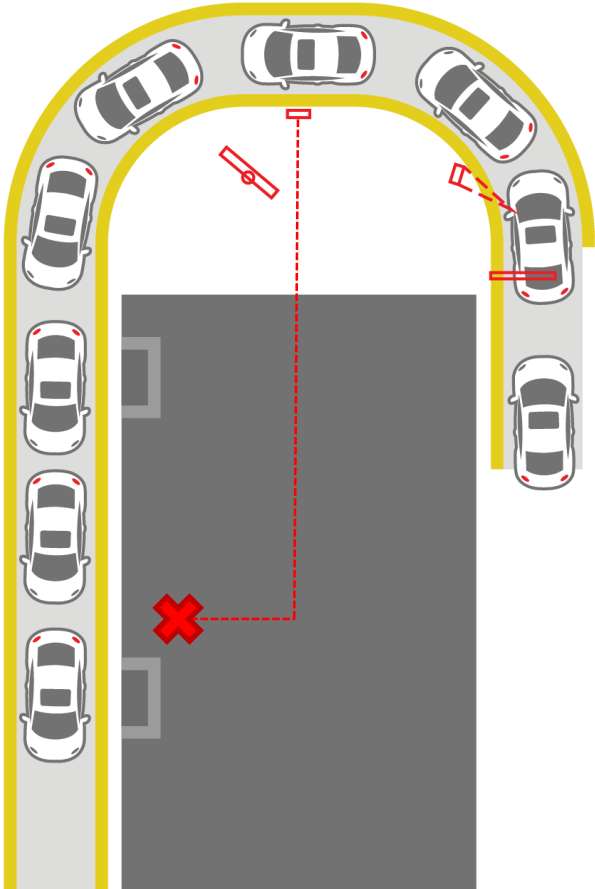
IN-BETWEEN

Cable pulling:

5. Do NOT create any splices on the cable run. Only homerun cable runs are allowed.
6. Don't leave large service loops. It will make another loop and cause detection problems.
7. Repeat this process for the second order point, if present.



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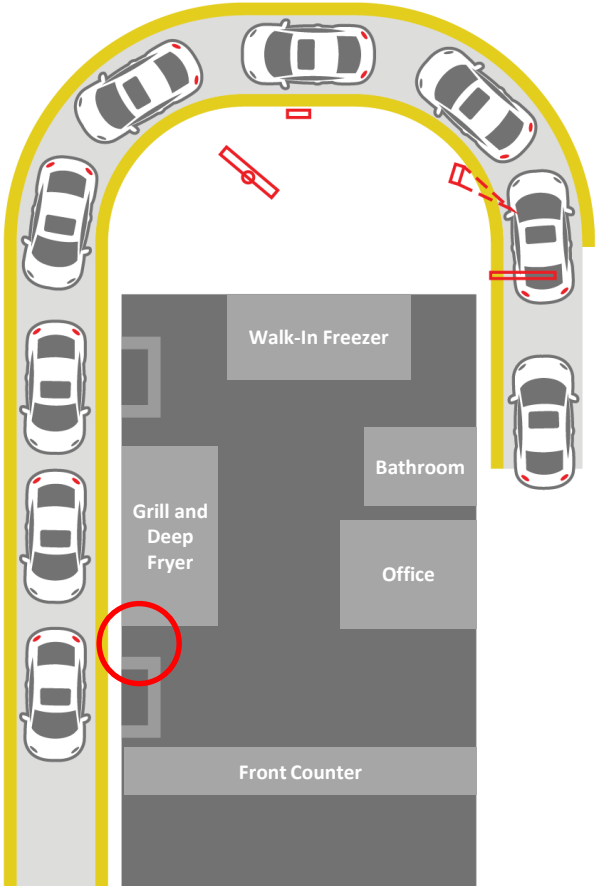
INSIDE THE STORE

Mounting the Base Station:

1. New installations or system upgrades: base station is commonly located in the present window. Customer requests should be considered as long their request would not impact the warranty or operation.
2. No higher than 72" from the ground, accessible and serviceable by store employees
3. Keep away from any possible sources of interference like Wi-Fi routers or other wireless equipment
4. Avoid sources of heat and being boxed in around stainless steel
5. All cables must be ran in the wall or in Panduit



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WHAT NOT TO DO

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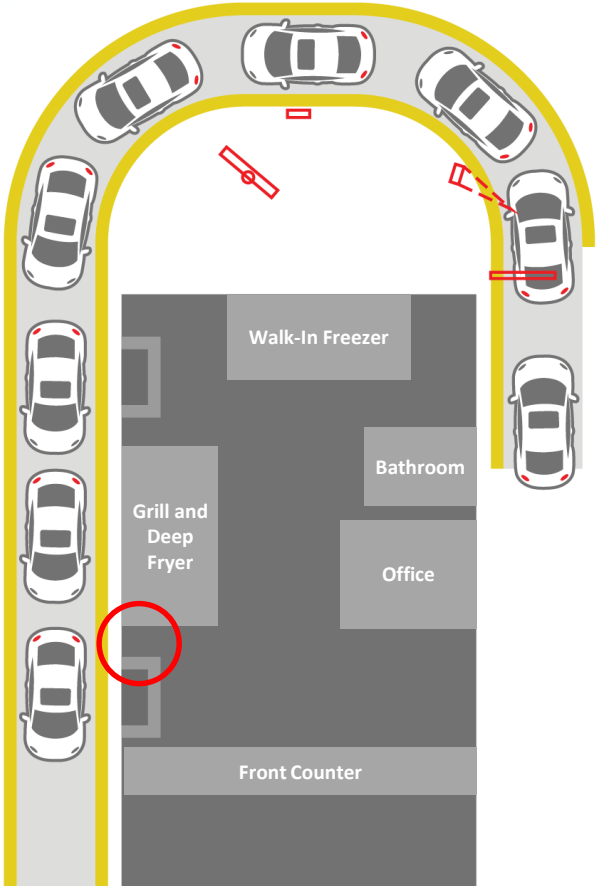
INSIDE THE STORE

Wiring the Base Station:

1. Clip all foil and any unused wires
2. Trim the foil and wires back far enough so that they can't accidently short or touch anything
3. Trim/strip/cut anything away from the board to prevent potential shorting
4. Strip back the cable only to the length of wire that you need
5. Strip back the wire far enough to terminate in the connector but not so far they have exposed wires coming out of the connector



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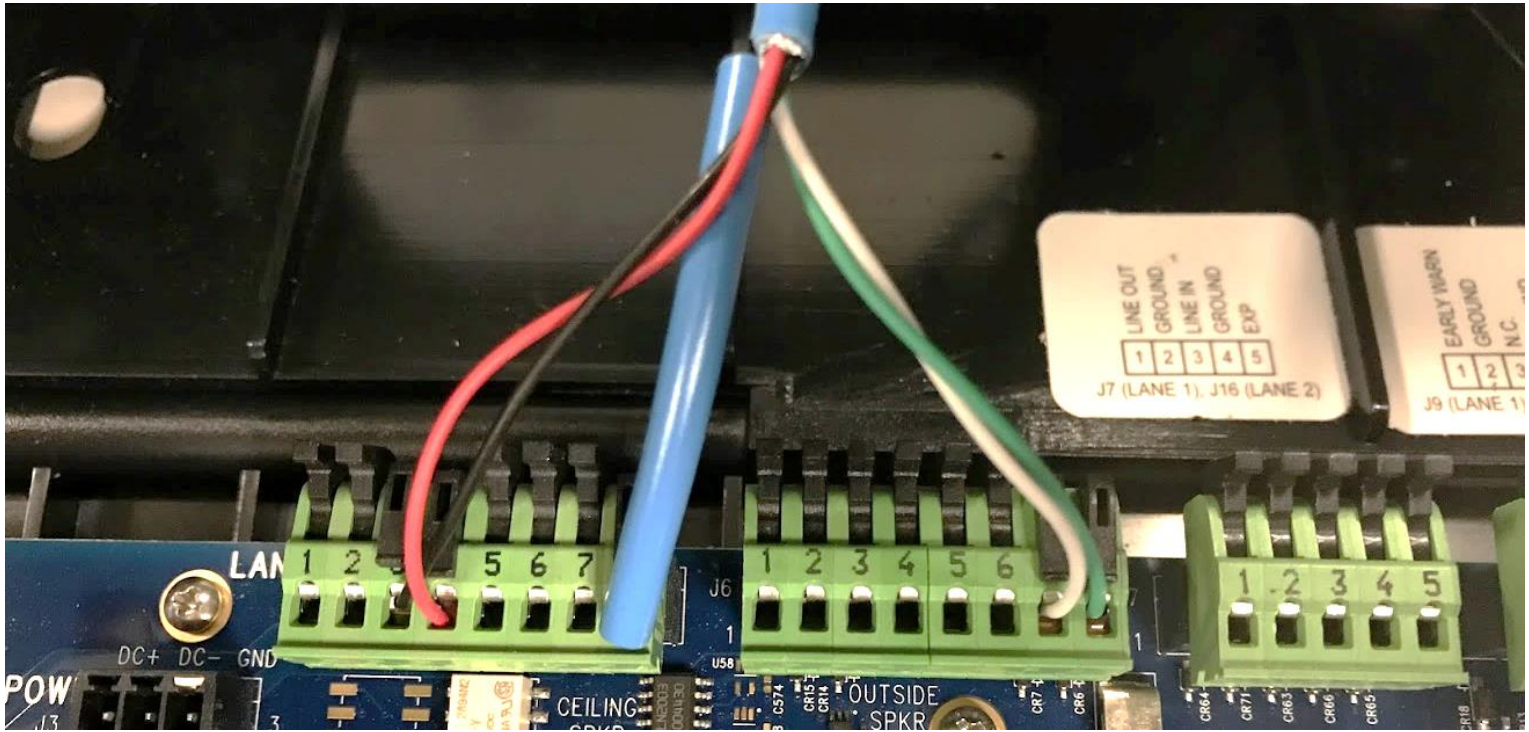
WHAT TO DO



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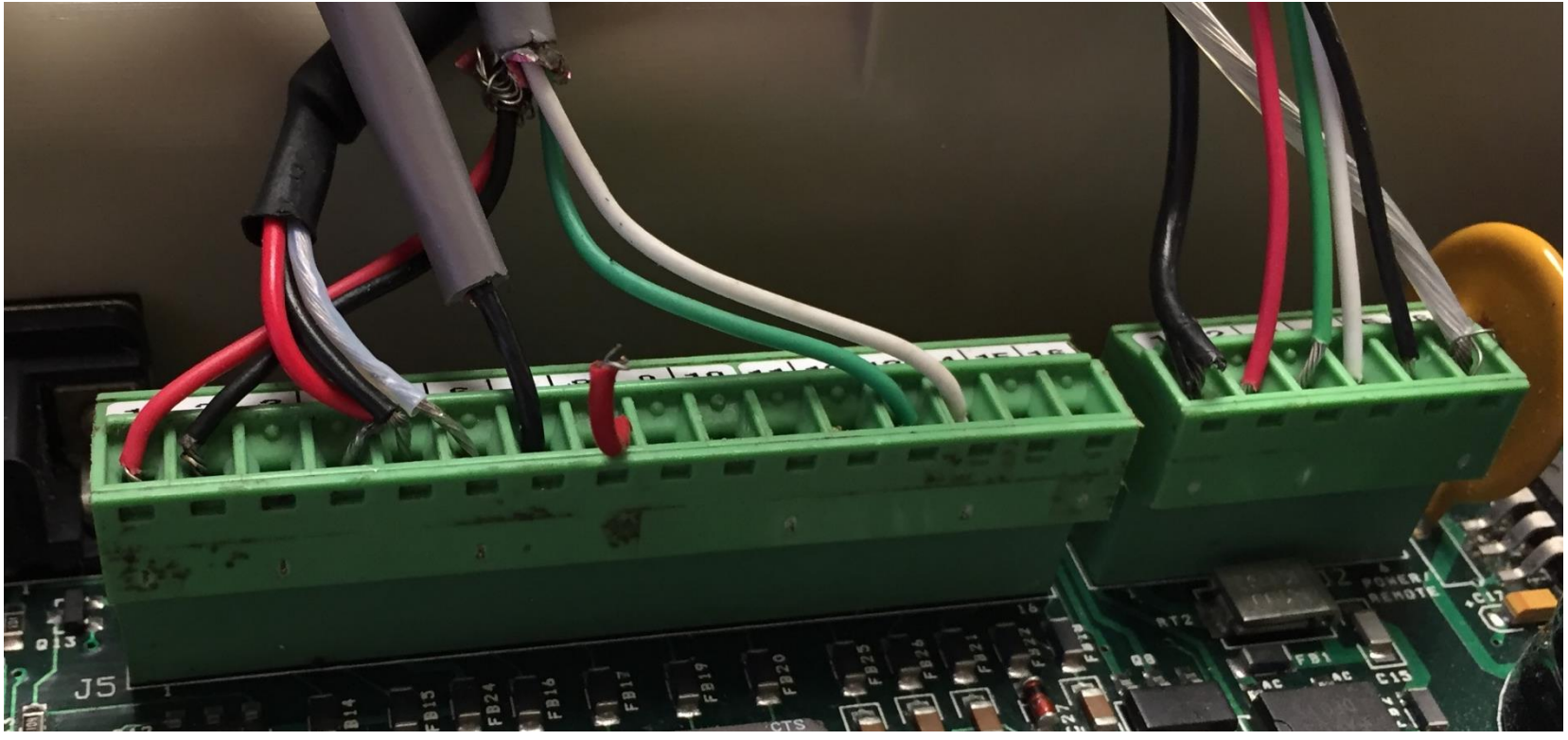
WHAT NOT TO DO



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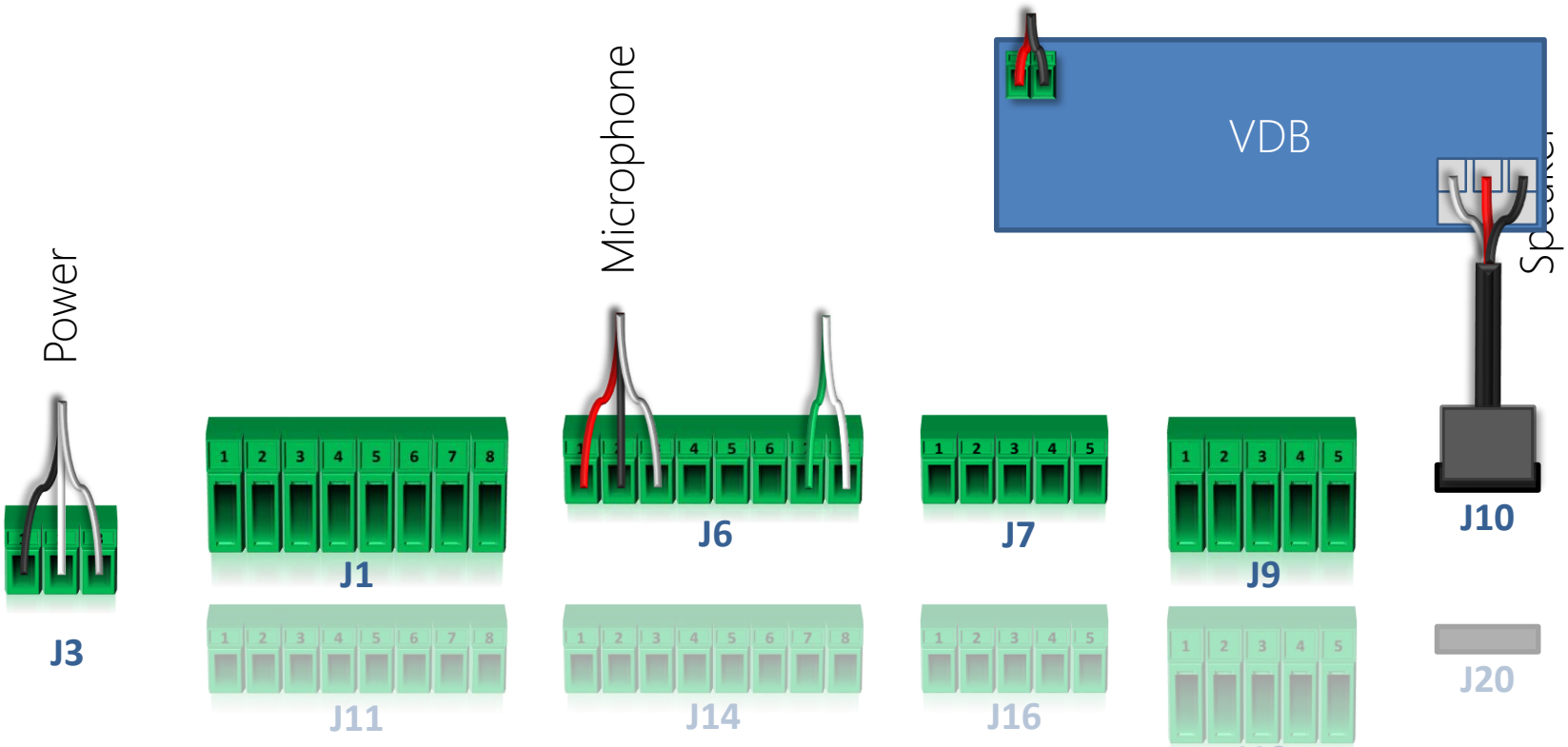
INSIDE THE STORE



EOS | HD

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CUSTOMER MESSAGES (TUE)
Message Ln Sched
All Day 1 1 No
All Day 2 1 No
Breakfast 1 2 No
Breakfast 2 1 Yes
Lunch 1 1 No
Lunch 2 2 Yes
Dinner 1 1 No
Up
Dn
Edit
A1 B1
A2 B2
HME
EOS | HD
A1
B
A2

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OVERVIEW

- HD Audio
- 2.4 Ghz operation (full, upper or lower spectrum)
- Non-HD mode for legacy headsets
- Registers up to 15 headsets
- 4 can talk at the same time (3 in dual lane/A2)
- All software driven adjustments
- Networkable (DHCP on by default)
- Message Center
- Extended antenna kits

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NAVIGATION

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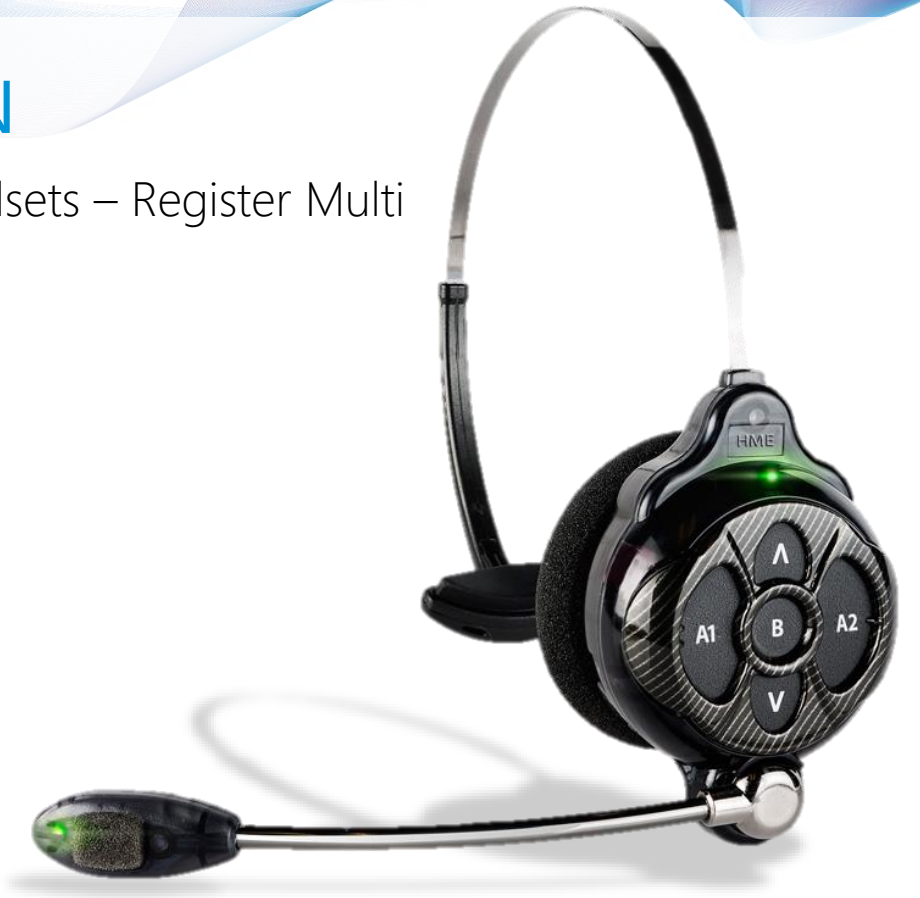
1) HEADSET REGISTRATION

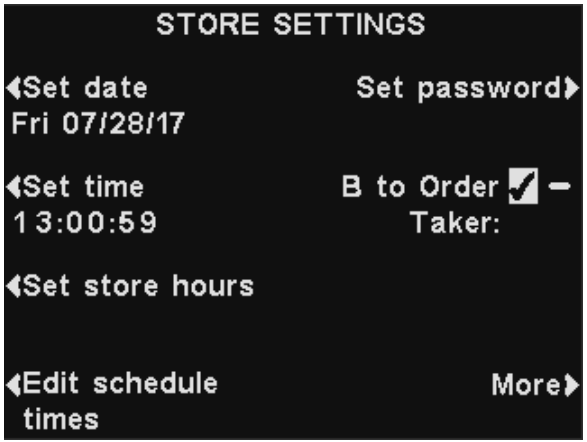
Menu – Register headsets – Register headsets – Register Multi



Push the Back button when completed.

2) DATE AND TIME

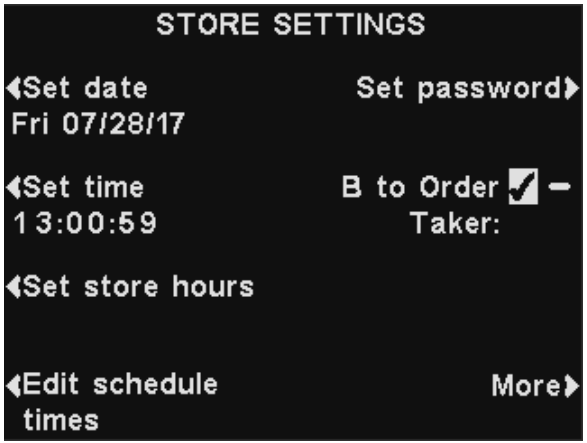
Menu – More – Store settings – Set date/Set time



Date format is month, day and year. Time format is 24-hour, not 12.

3) STORE HOURS

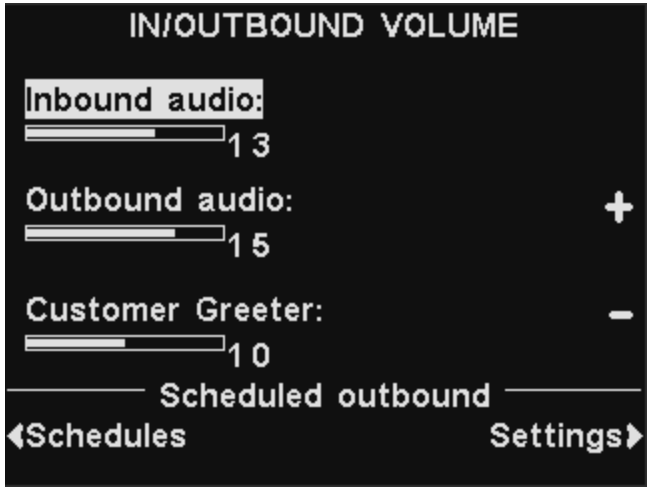
Menu – More – Store settings – Set store hours



If the store is programmed to close, the Store is Closed message will play outside during that time.

4) ADJUST INBOUND AND OUTBOUND

Menu – Volume adjust – In/Out-bound audio

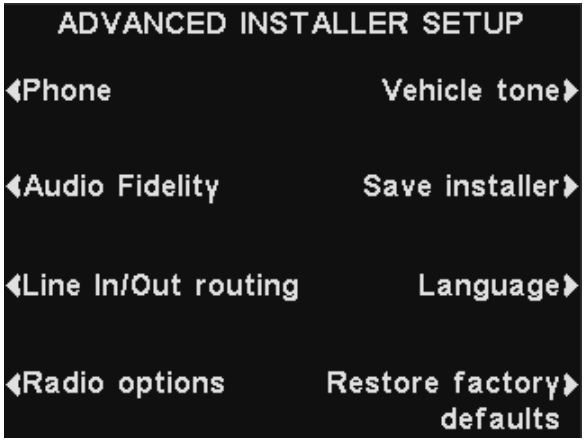


Power cycle a headset and listen to an order being taken by a store employee. Listen to the conversation between them and:

1. Adjust the inbound until the customer outside sounds similar in volume to the order taker.
2. Go outside and listen to the order taker at the speaker post while they're talking to the customer. Adjust outbound so it's loud enough to be similar to having a conversation with someone in front of you.

5) SAVE INSTALLER SETTINGS

Menu – More – Installer setup – Password B9B9 then Continue – More – Save installer



This will save a local default of your settings that the store can recall under:
Menu – More – Store settings – More – Restore installer settings

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ADDITIONAL TOPICS

In the handouts, you will find additional topics, such as:

1. Clearing Registration
2. Wiring Diagrams
3. Setting up the Message Center
4. Networking the Base Station
5. Extended Range Antennas
6. Advanced RF
7. Troubleshooting

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QUESTIONS?

The headset system quiz is next!

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AGENDA

Drive Thru Audio

Drive Thru Optimization System (DTOS)

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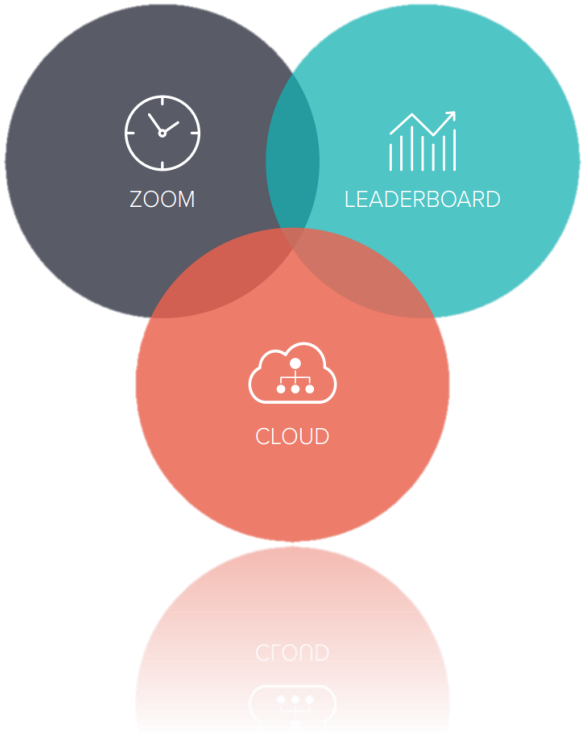
WHAT IT IS

HME's Drive-Thru Optimization System combines ZOOM, CLOUD, and Leaderboard to offer the industry's most comprehensive drive-thru management system. Whether a customer is identifying bottlenecks at the store level or comparing the performance of multiple stores, HME provides unparalleled visibility into a customer's entire enterprise.



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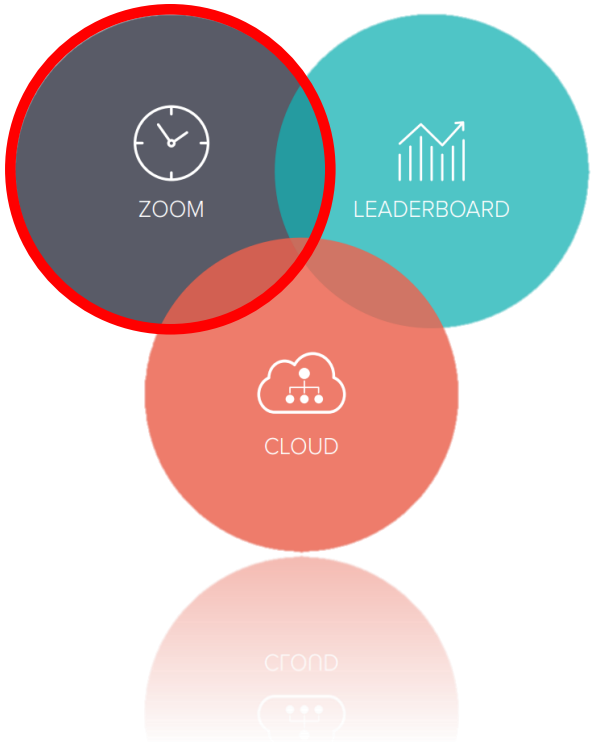
ZOOM DRIVE THRU TIMER

Real-Time Data For Immediate Results

- Provides a real-time picture of your entire drive-thru at the store level
- ZOOM's intuitive multi-color dashboard allows managers and crew members to instantly identify bottlenecks and take immediate action to speed things up



3:42
3:31
1:35
Presentr
Cashier
0:12
Hour Avg 0:42
0:15
Hour Avg 0:31
0:23
Hour Avg 0:20
0:21
Hour Avg 0:22
3:42
Hour Avg 2:56
59
Cars this Hour
Order
0:35
0:12
0:15
START
HME CLOUD
Drive-Thru Leaderboard™
Top 3 Stores
Current Rolling Hour
Current Day
Rank Store Goal Cars Avg % Cars Avg %
1 60825 03:30 48 02:01 94 945 03:17 71
2 University 03:30 89 02:04 99 1179 03:16 65
3 main st. 03:30 82 02:04 99 1268 02:51 77
Store 24042
Current Rolling Hour
Current Day
Rank Store Goal Cars Avg % Cars Avg %
13 90739 03:30 76 02:58 62 1190 02:57 76
14 6486 03:30 82 02:58 74 1199 03:11 65
15 24042 03:30 59 02:58 68 1094 03:04 69
16 24009 03:30 111 02:58 83 1408 03:12 67
17 82758 03:30 86 03:06 62 1056 02:48 77
Bottom 3 Stores
Current Rolling Hour
Current Day
Rank Store Goal Cars Avg % Cars Avg %
19 50621 03:30 66 03:35 45 1091 03:23 63
20 2156 03:30 76 04:10 41 1141 03:27 58
21 56549 03:30 53 04:22 47 836 03:31 59

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HOW IT WORKS

TSP50

The "eyes and ears" of the ZOOM system. All vehicle detector and greet signals are connected here. It sends all of this information to the CU to be processed.

CU50

The "brain" of the ZOOM system. It takes the data provided by the TSP to show the Dashboard and Leaderboard on connected monitors, connect to the HME CLOUD, email reports and other advanced features.

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ESSENTIAL CONNECTIONS

Any loops other than order points

USB Connection

ZOOM Dashboard

USB Mouse
Ethernet Network

Menu detection and greet from the Base Station

Microphone
Speaker
Loop

Leaderboard

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TSP50 HIGHLIGHTS

- Handles up to 8 sensor inputs
- Utilizes a direct, 15’ (4.6 meter) USB connection to the CU for power and data connection
- Contains a built-in VDB on the motherboard tied to V1
- Can install up to 3 additional VDBs
- No external power supply needed unless installing 2+ additional VDBs

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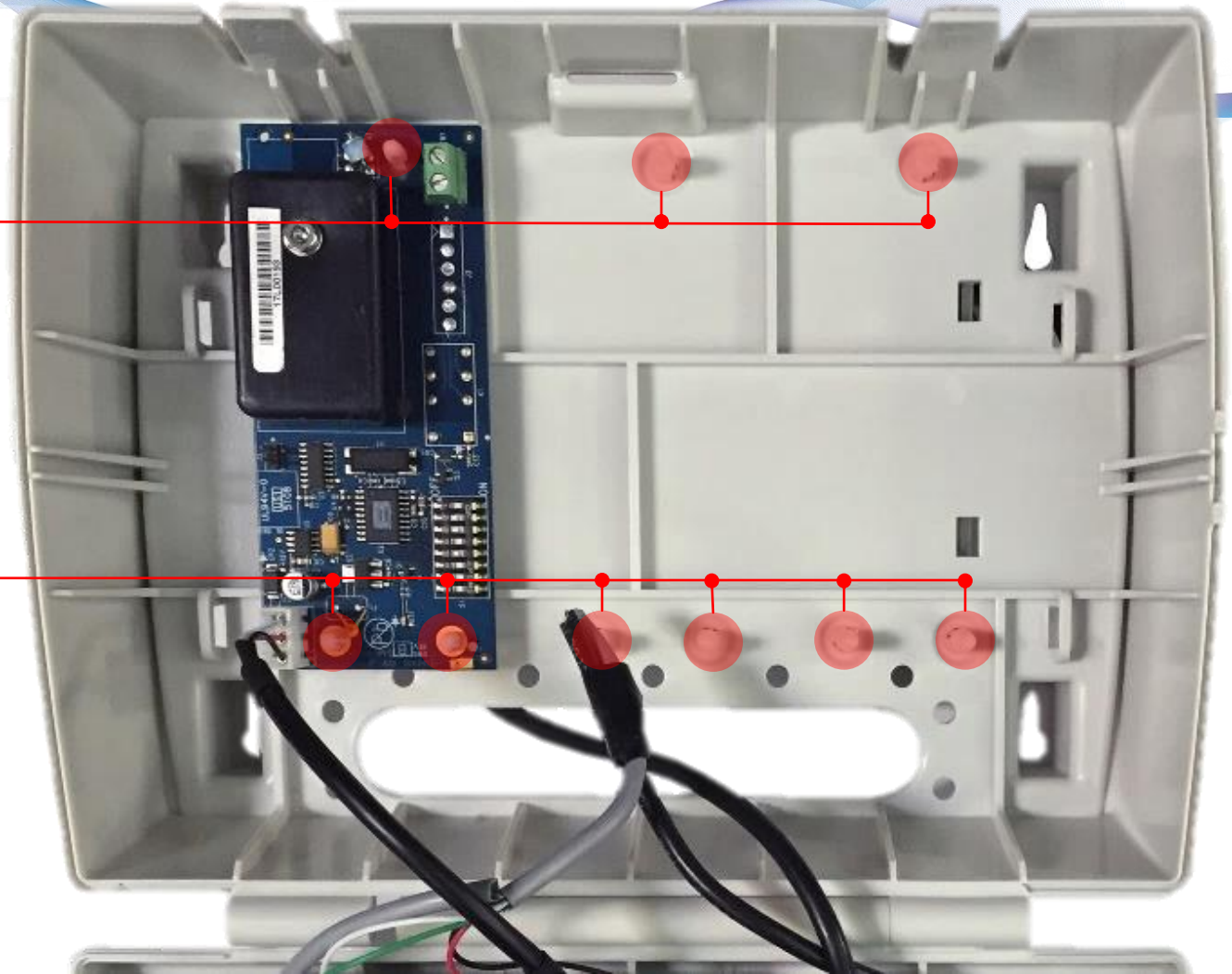
Top VDB Standoffs
(1 per VDB)

Bottom VDB Standoffs
(2 per VDB)



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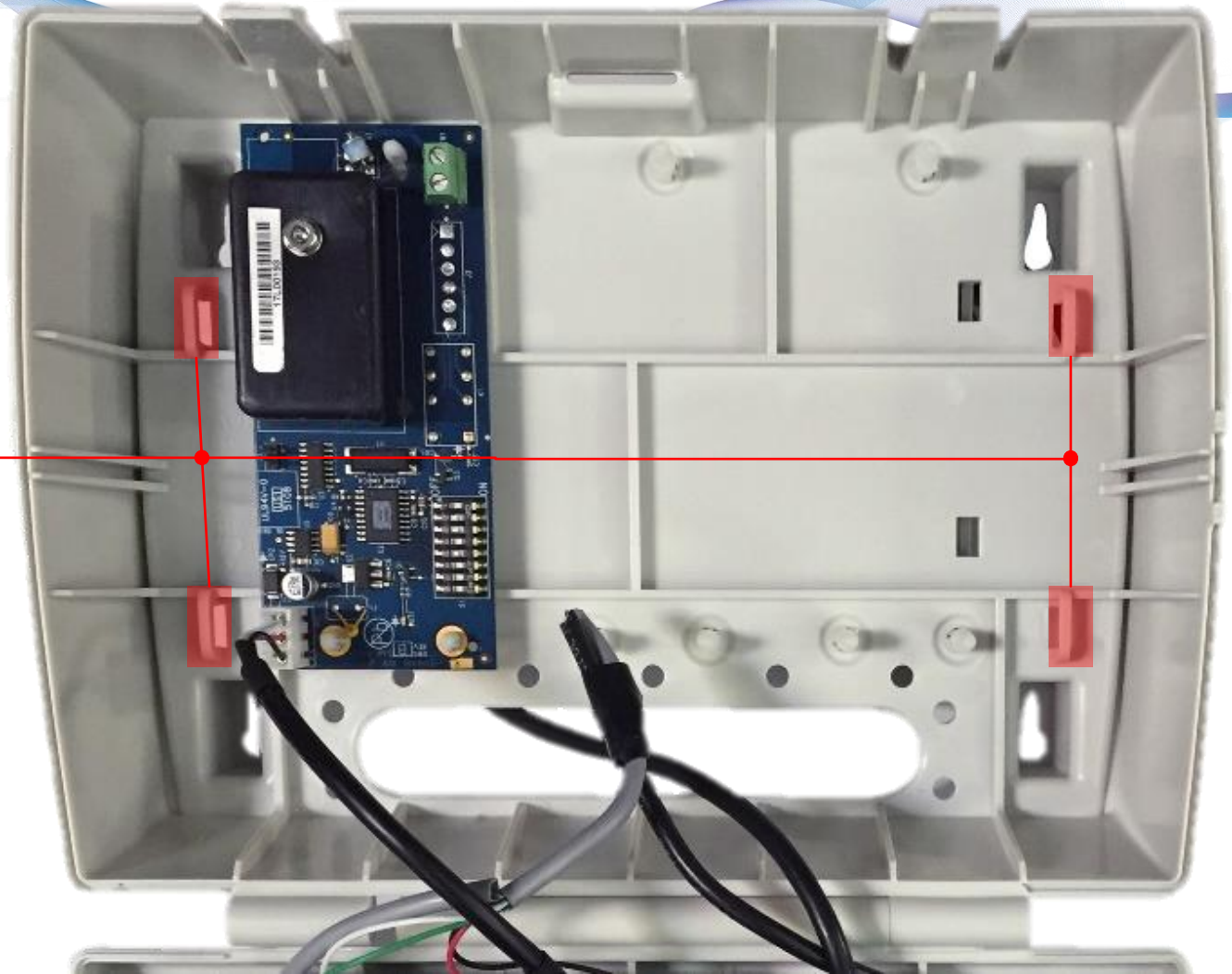
Cable management tie loops. Option to use a “zip tie” or tie wrap to assist in cable management.



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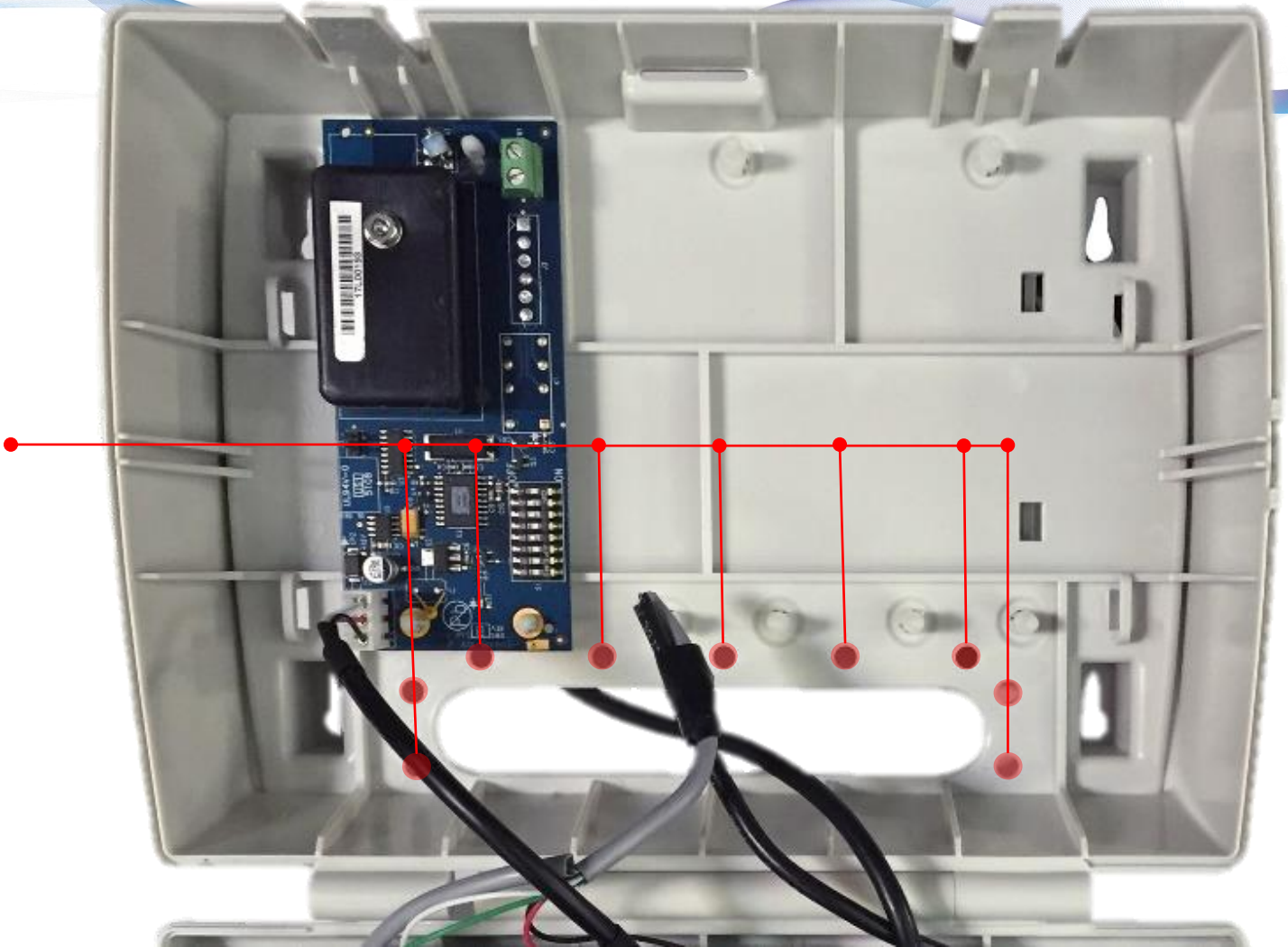
Cable management wrap holes. Option to use a "zip tie" or tie wrap to assist in cable management.



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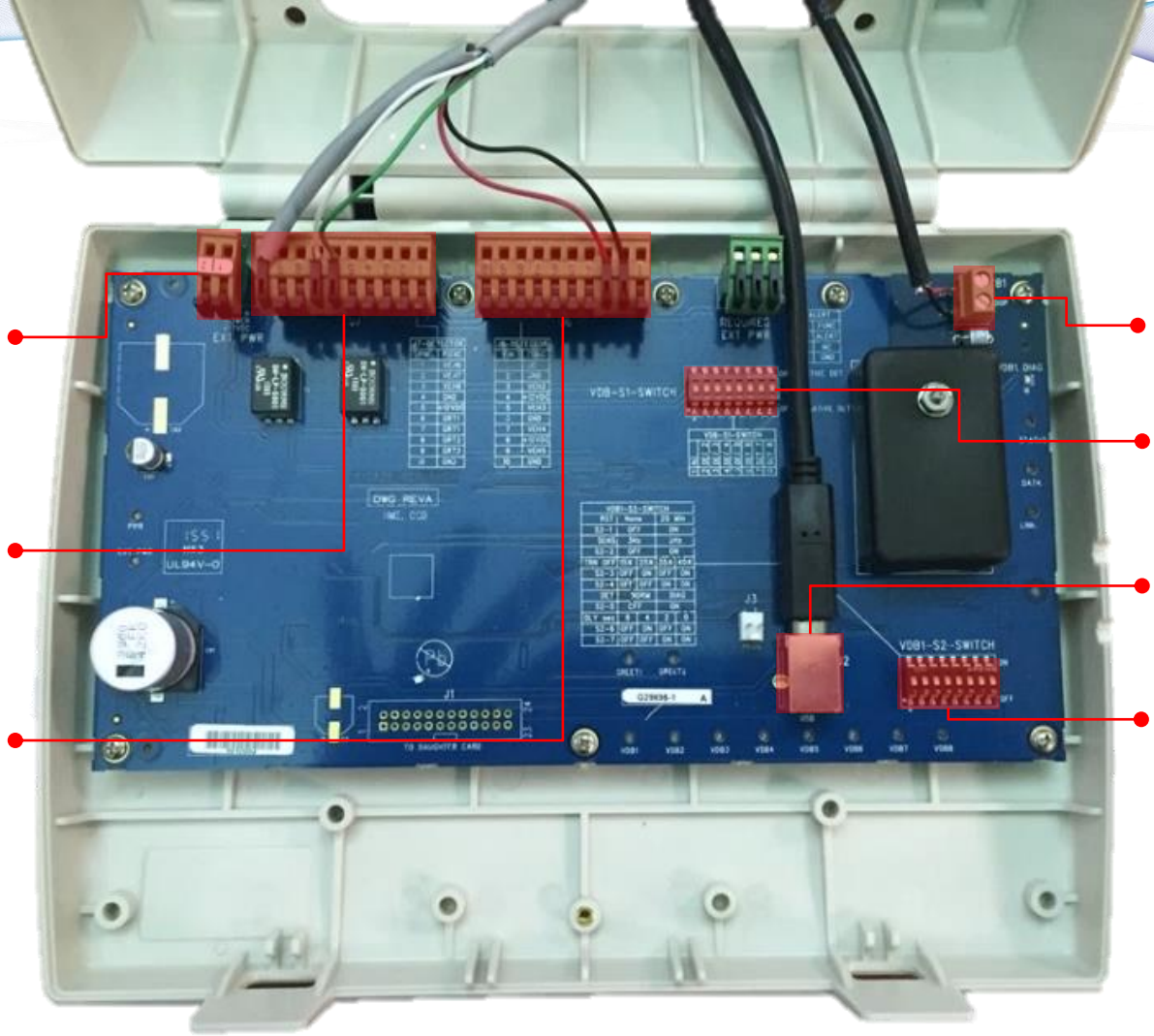

Ext Power Supply
(+12V supply only when installing 2+ VDB boards)

Vehicle 6-8, Greet A+B

Vehicle 1-5

Loop for Internal VDB

Detection Polarity
(All switches down)

USB to CU50

VDB Dip Switches
(Switches 2, 3 and 5 down)

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CU50 HIGHLIGHTS

- Linux operating system
- Small profile (5.5″ x 5.5″ x 2.5″)
- Wall mounted typically behind the monitor(s)
- External power supply
- Fanless design
- Solid-state HDD

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WALL MOUNT

1. Orient the wall plate to the back of the CU50 as seen to the picture to the right
2. Using the supplied 2 short screws, screw the wall plate to the back of the CU50
3. Use the 4 far corner holes to screw into the wall using the supplied mounting hardware

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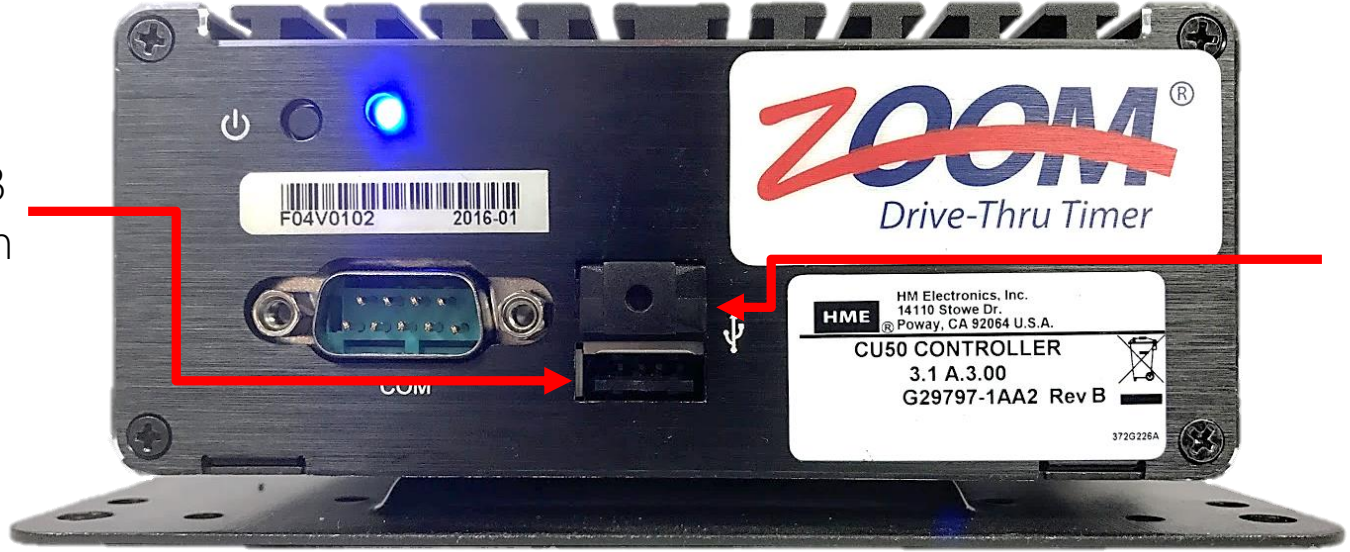
TSP50 USB Connection



Do not remove the top USB connection plug or utilize it for the TSP50 connection

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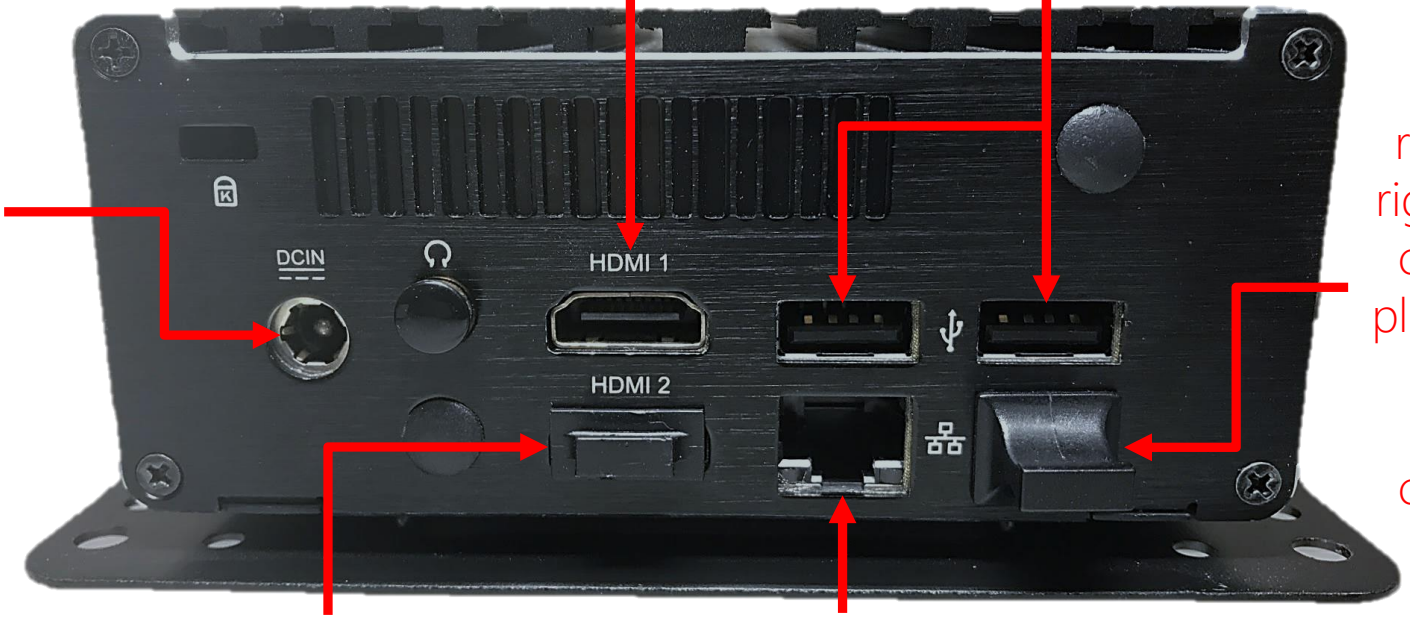
Dashboard

USB Mouse

Power



Do not remove the right network connection plug or utilize it for the network connection

Leaderboard
(plugged by default)

Network Connection

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FULLY WIRED

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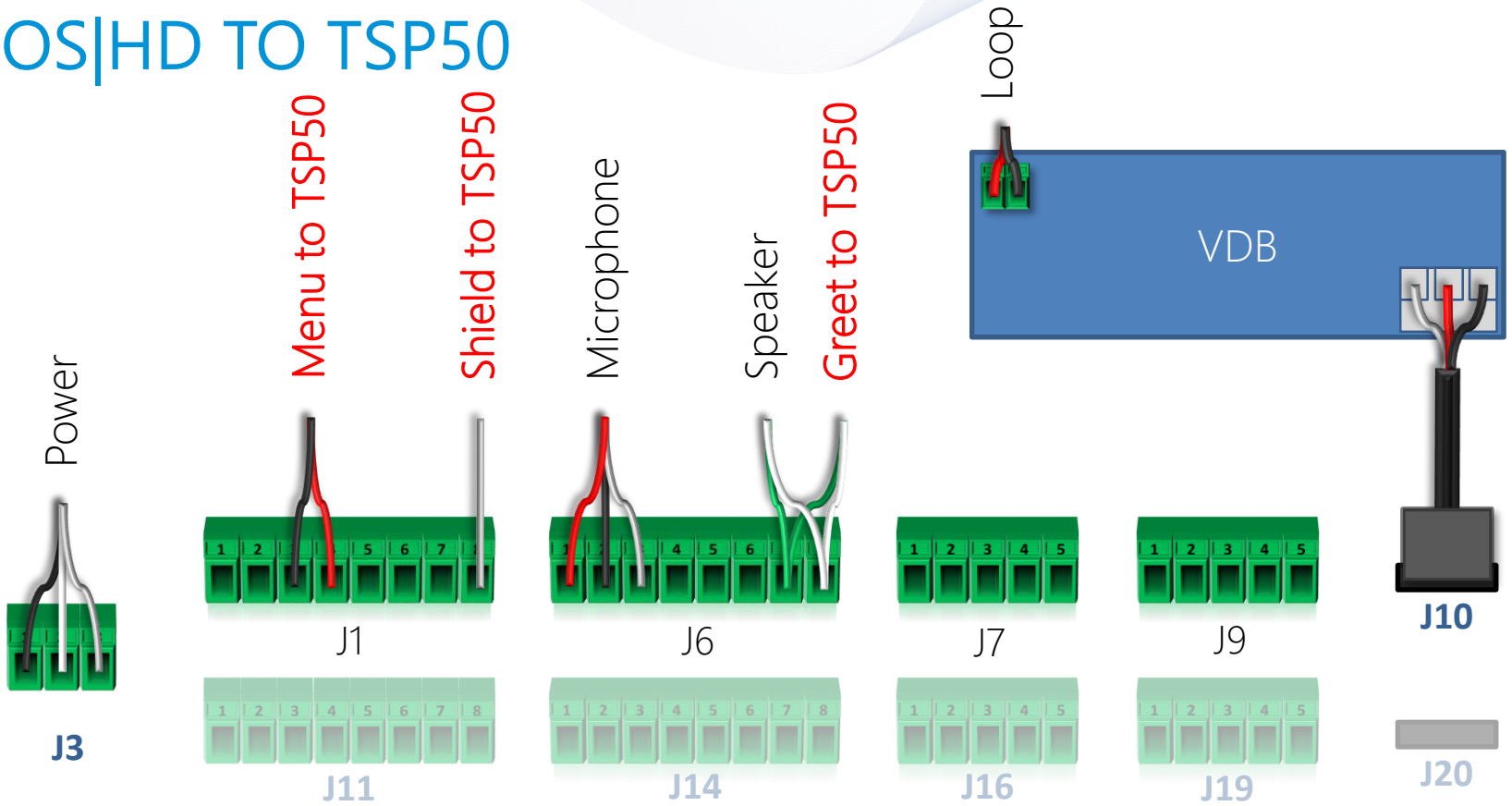
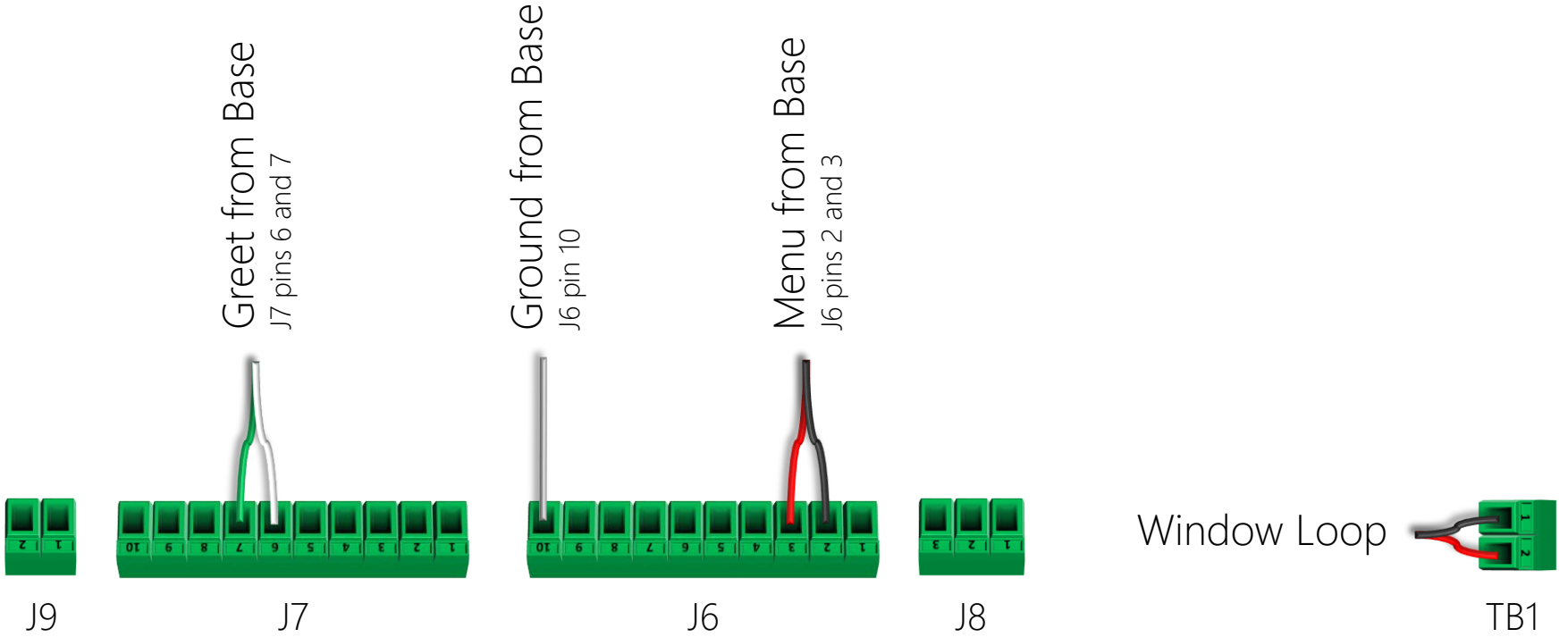
EOS|HD TO TSP50



TSP50 – SINGLE LANE, 1 WINDOW



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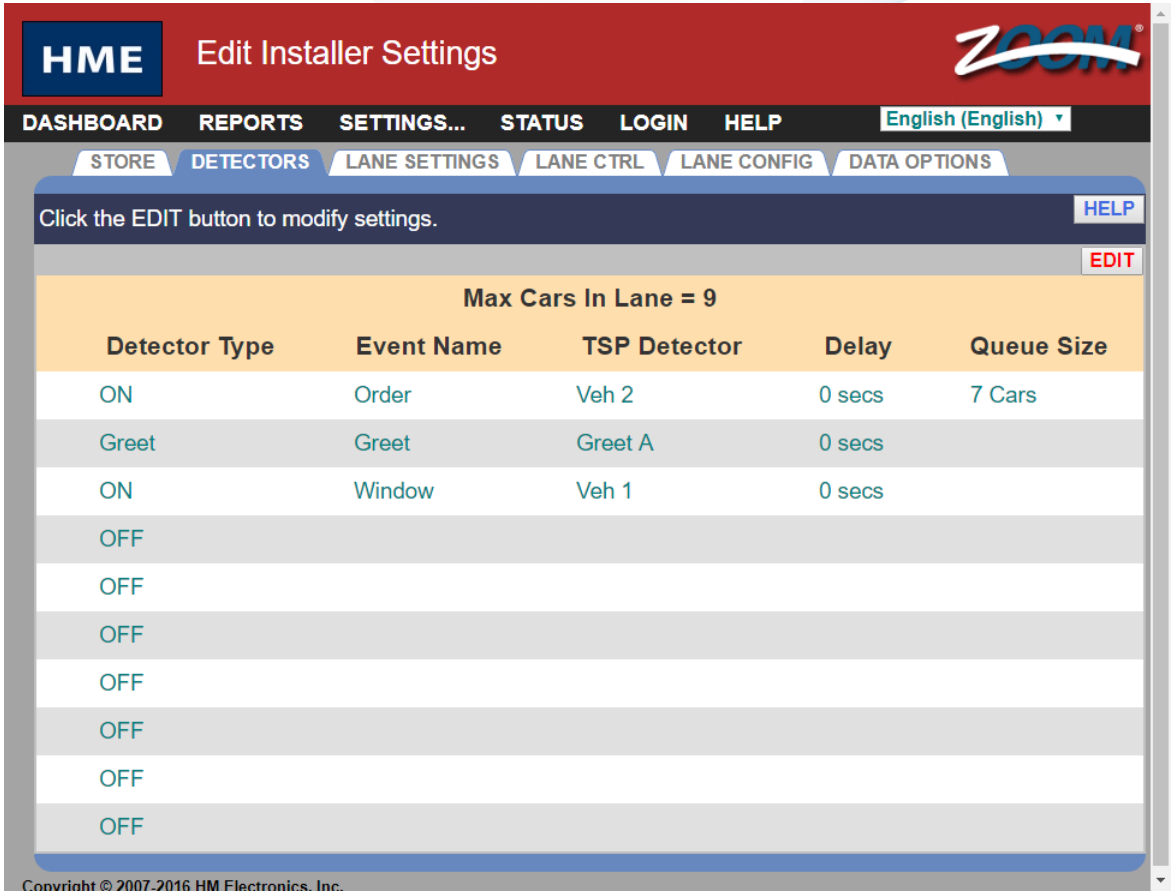

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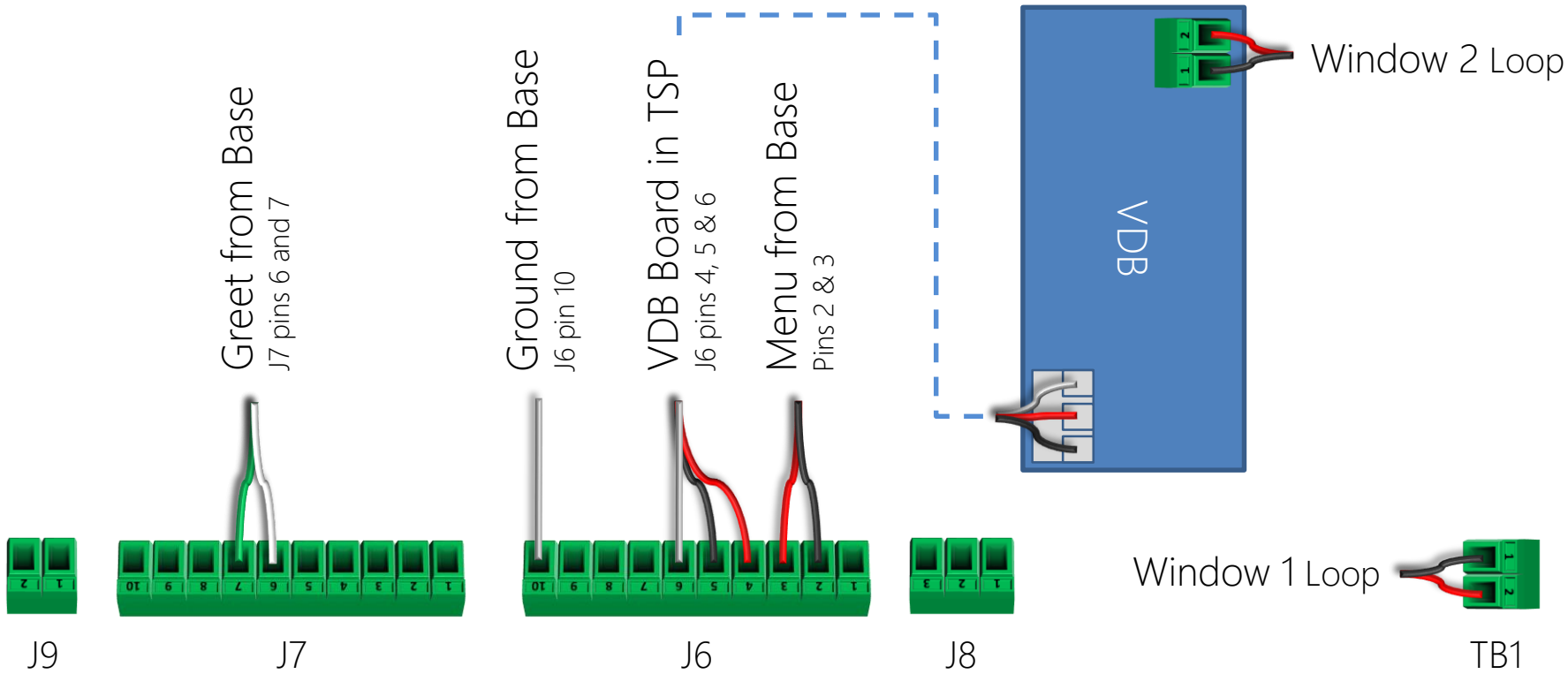
TSP50 – SINGLE LANE, 2 WINDOW



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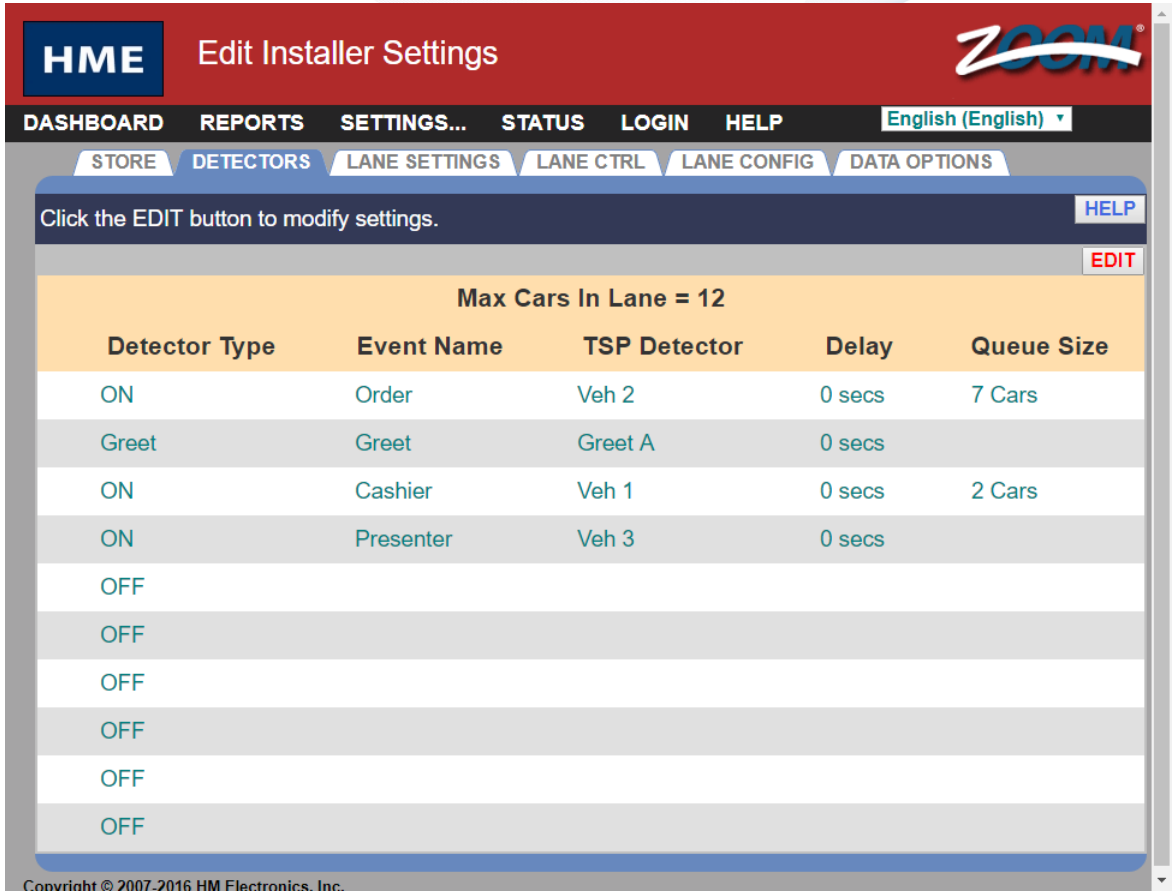

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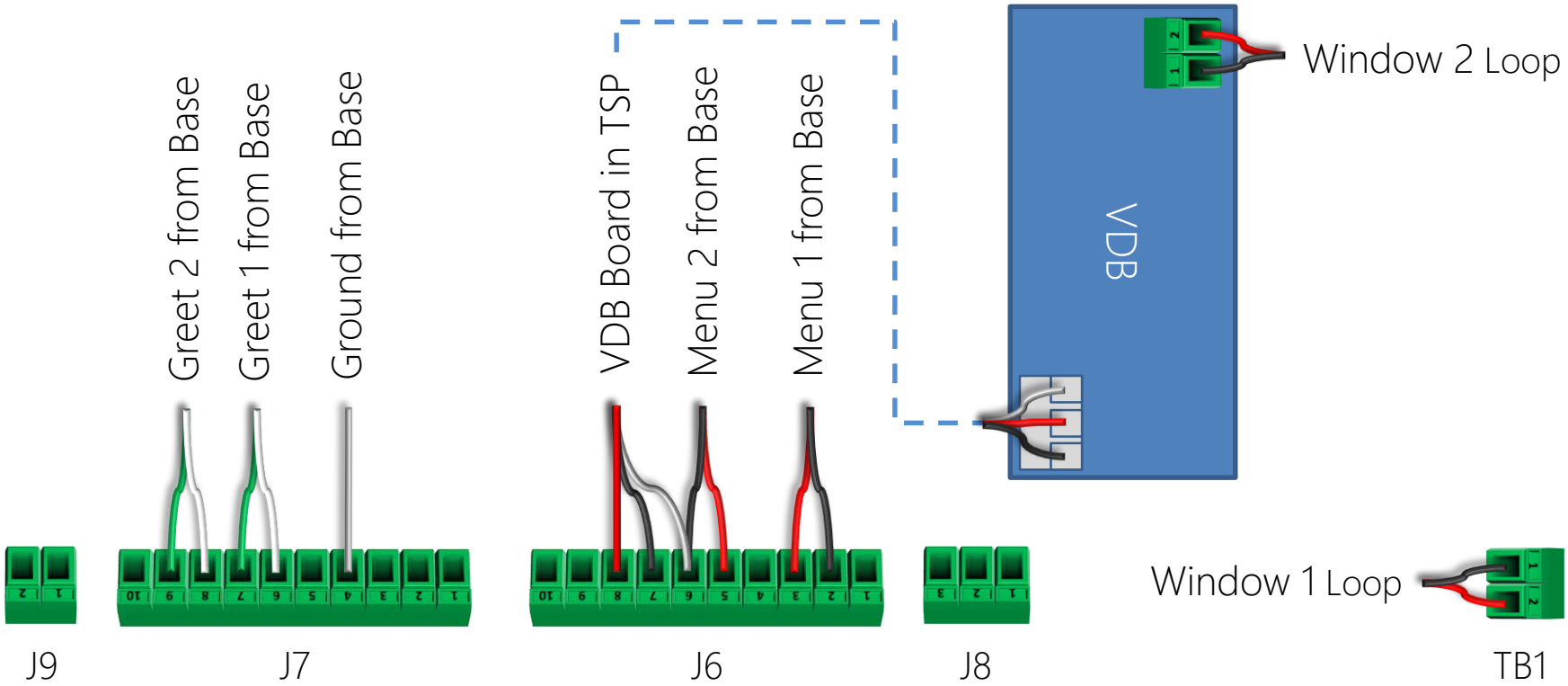
TSP50 – Y-LANE, 2 WINDOW



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HME
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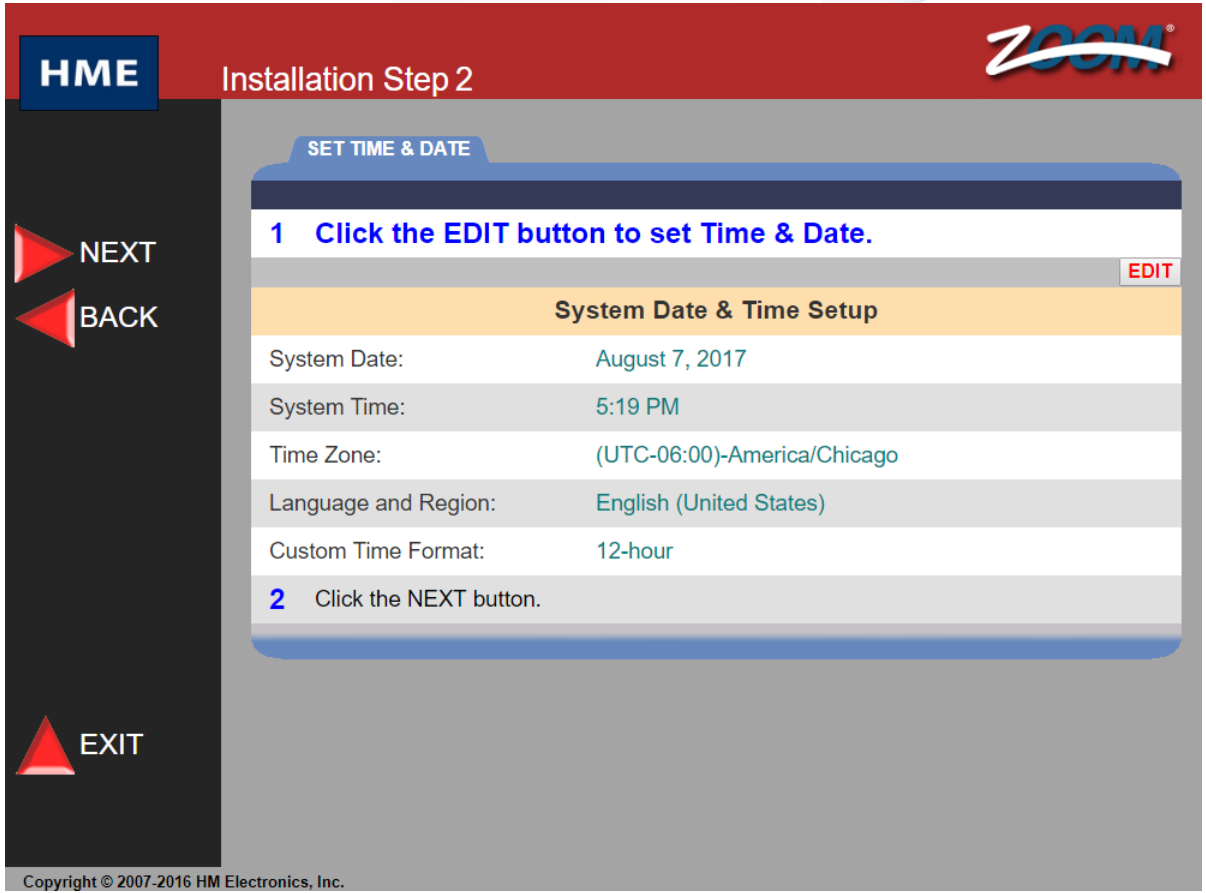

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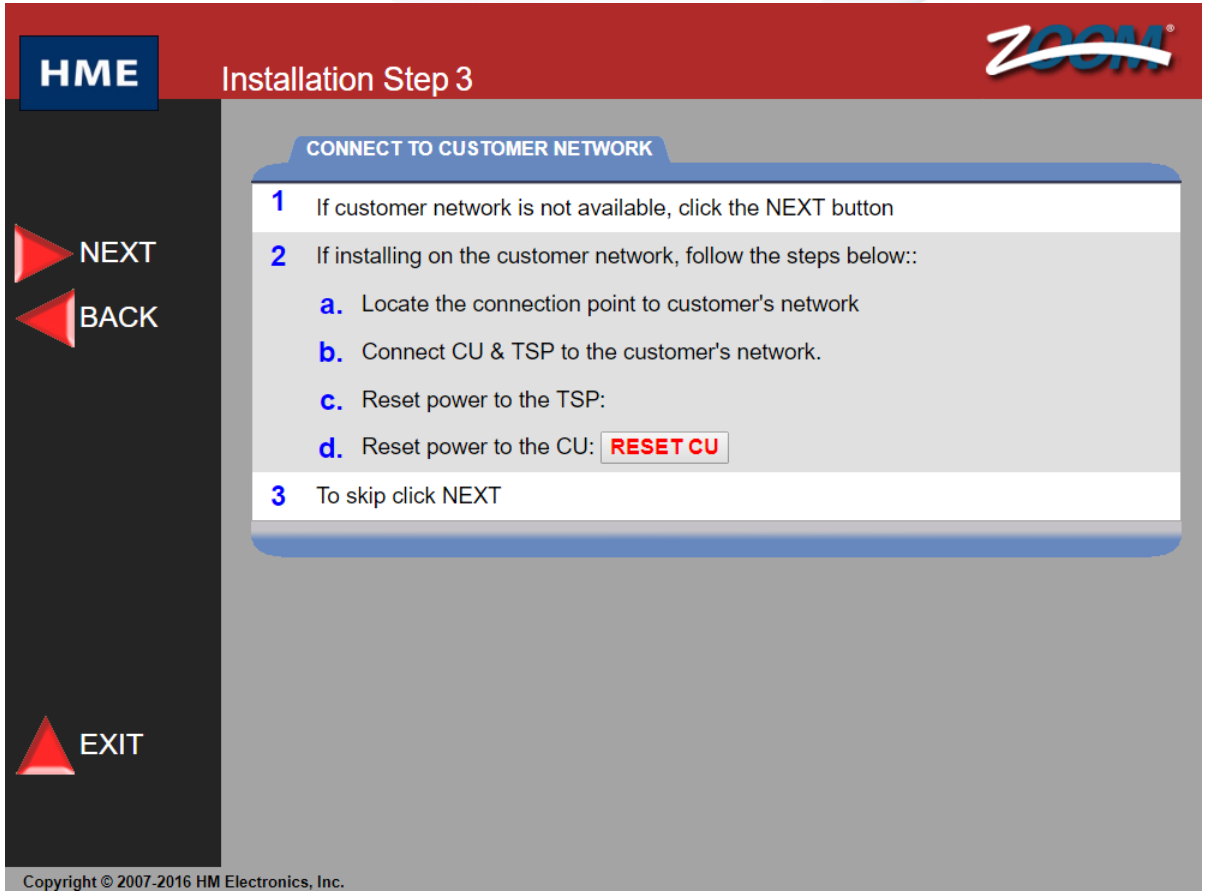

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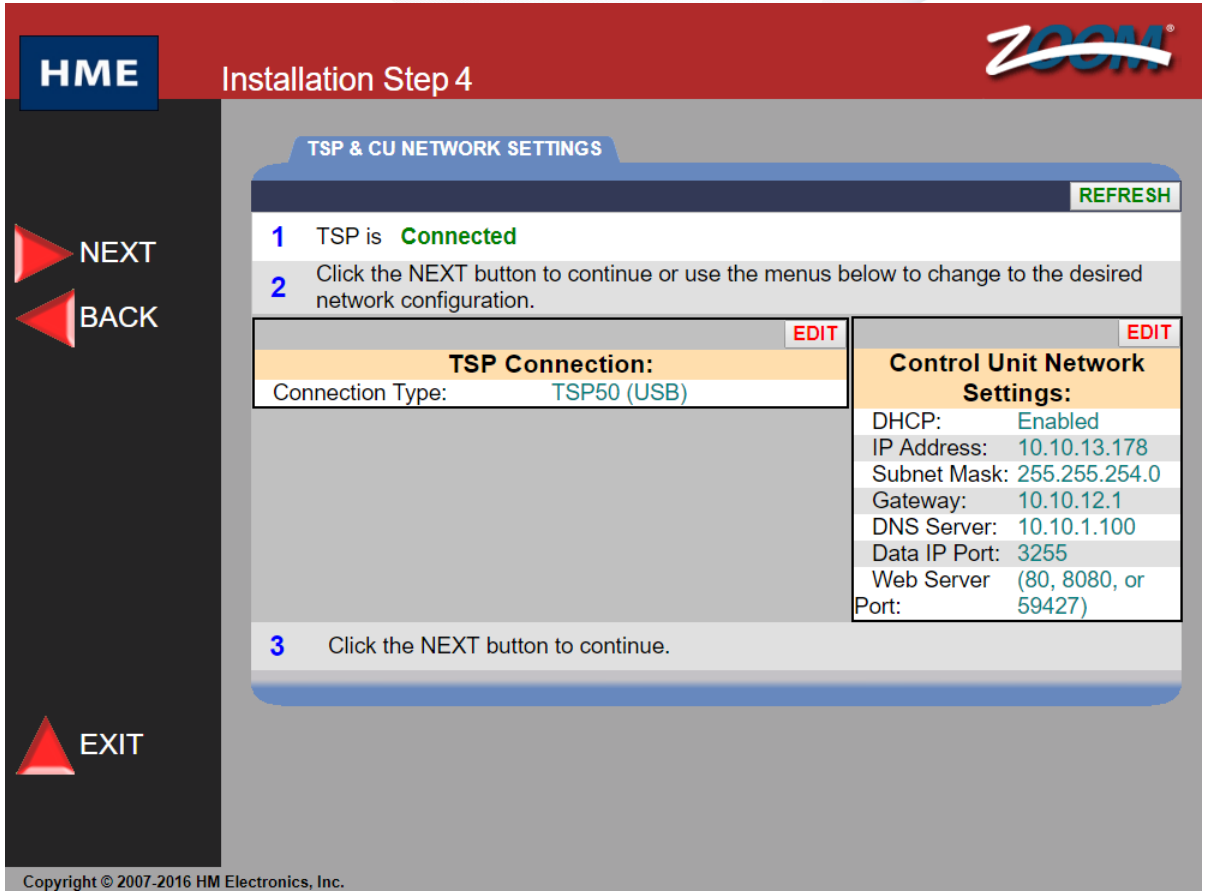

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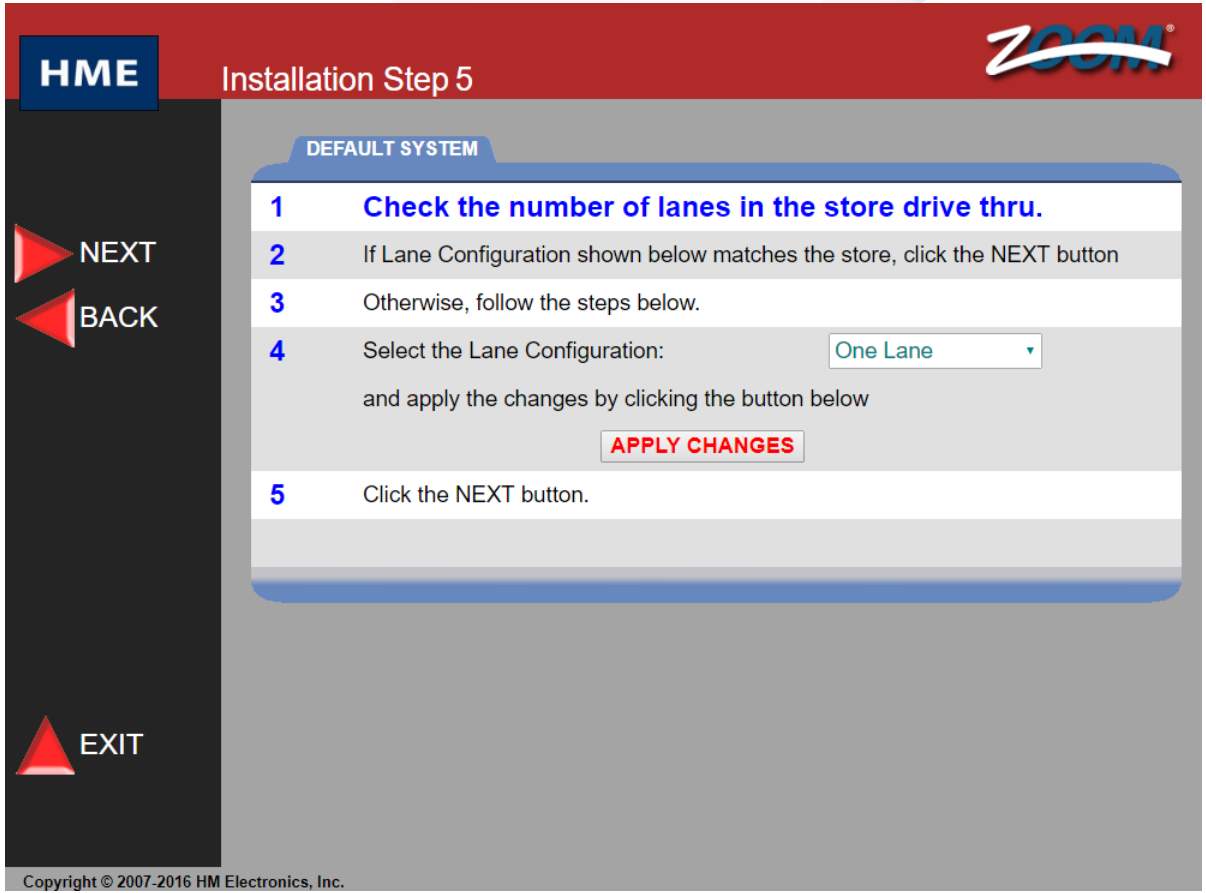

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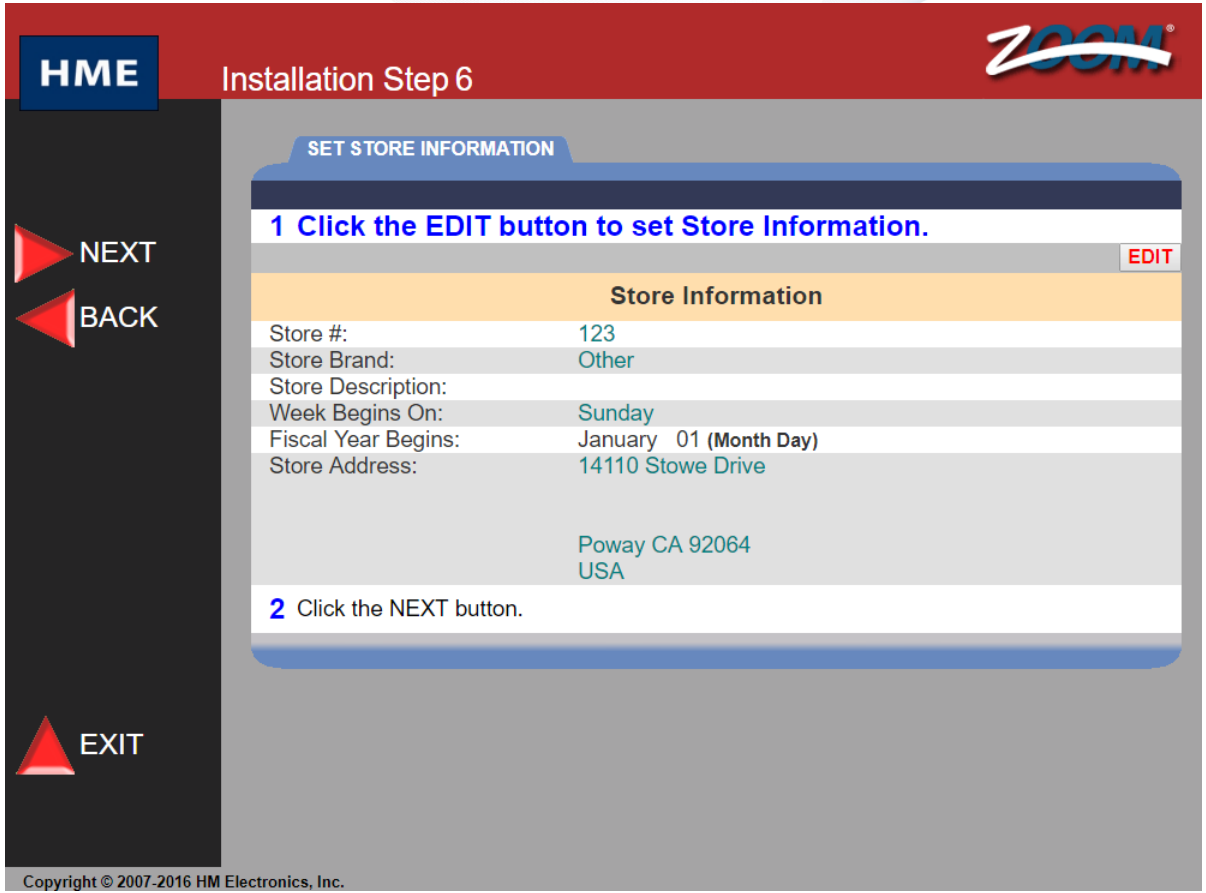

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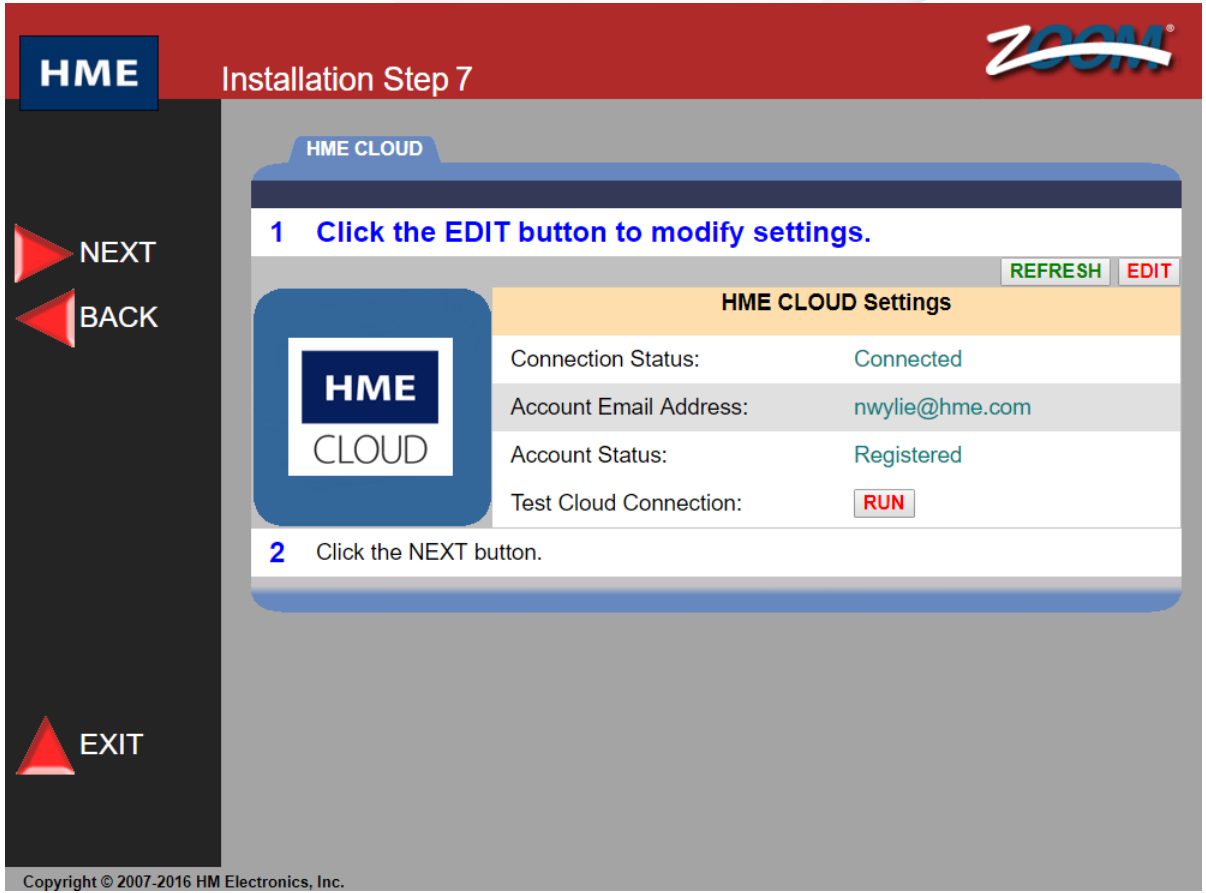

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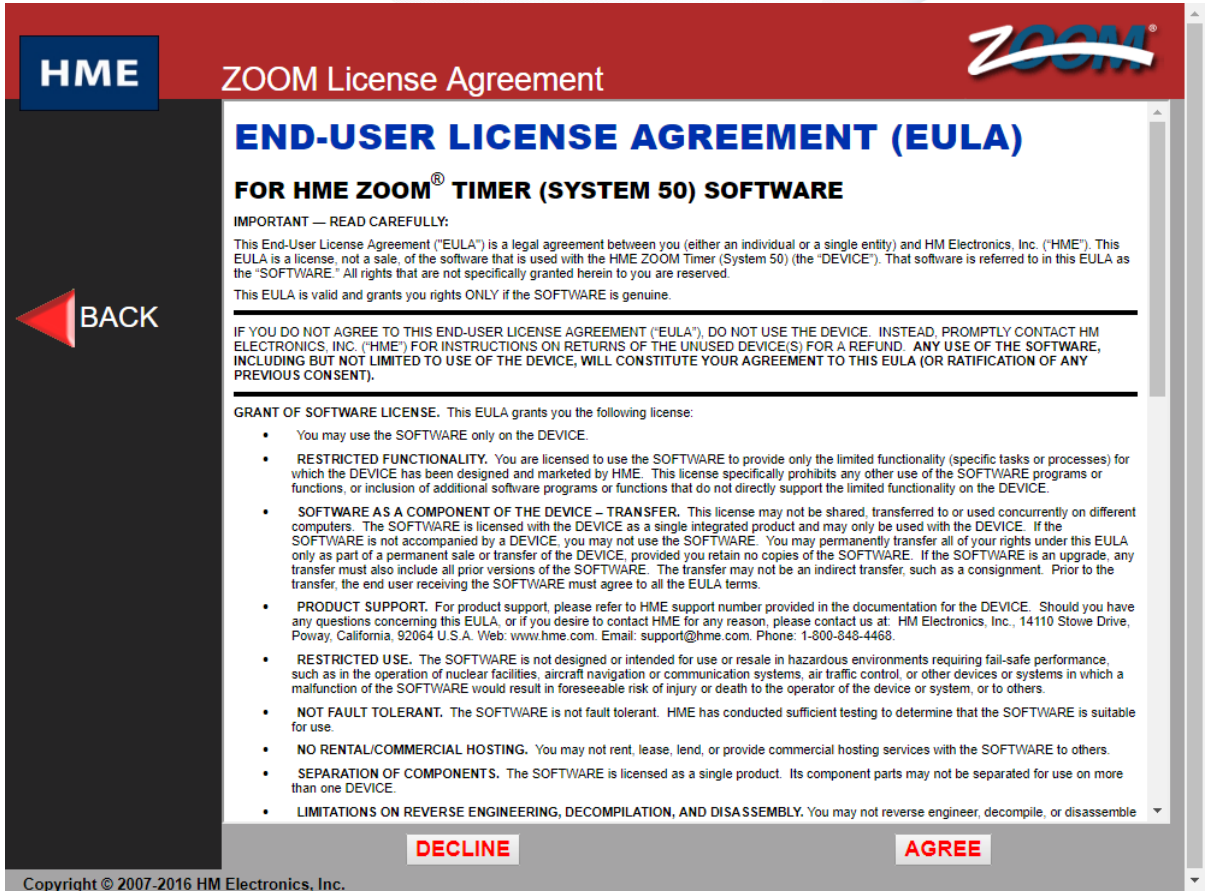

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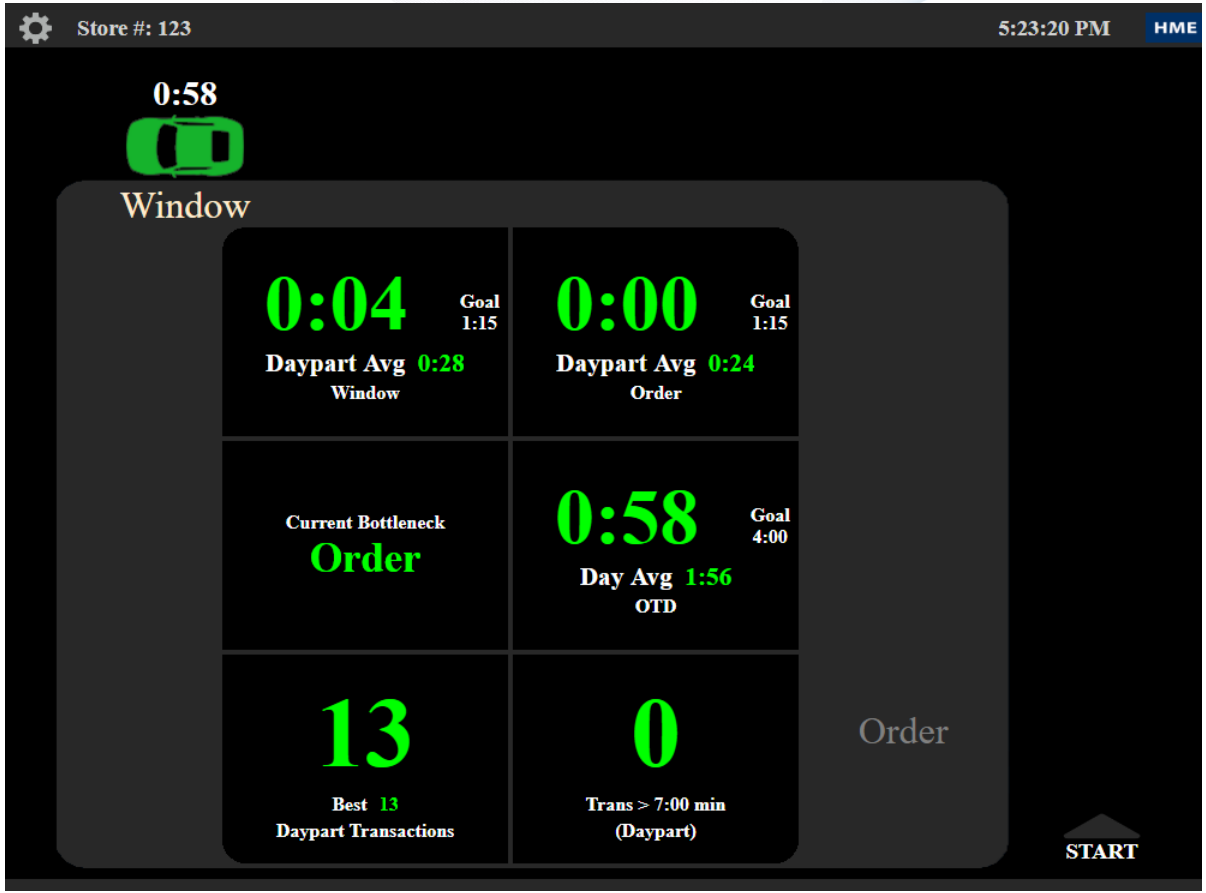

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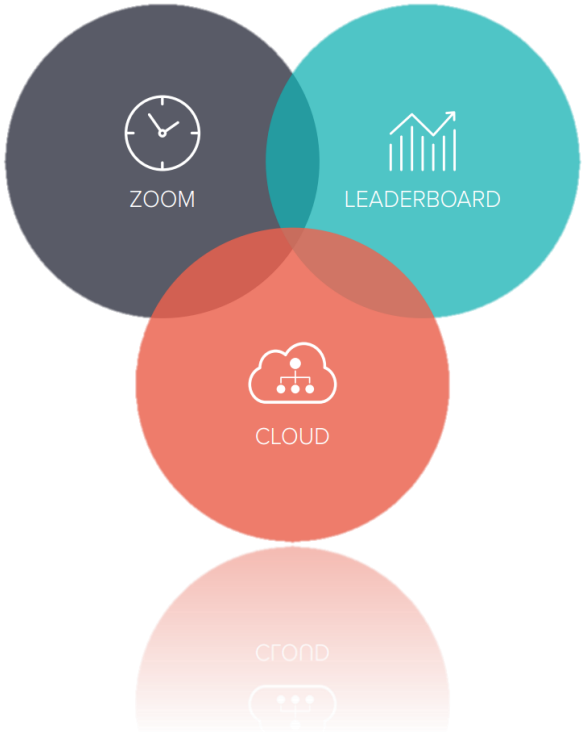
NETWORKING

For the ZOOM timer to connect to the HME CLOUD and the Leaderboard ranking to display, it needs to utilize an internet connection in the store. This internet connection must have certain rules and ports opened for these connections to work.



If the store cannot allow these, the DTOS system will not fully function.

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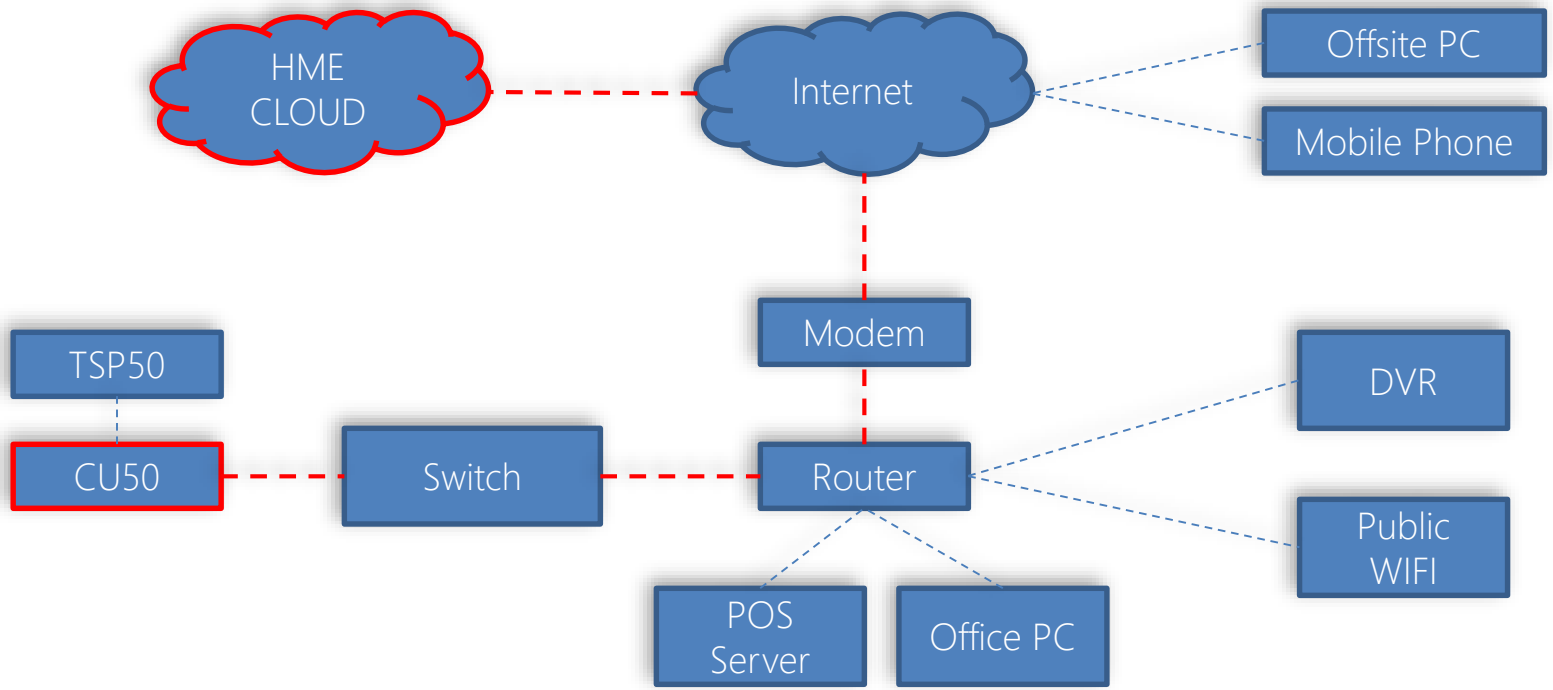
CU50 TO HME CLOUD PATHWAY



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NETWORKING

For ZOOM and Leaderboard to be fully operational in the store, the CU50 must be connected to an open port on the store's router/switch and the following network firewall rules must be allowed:

1. Destination Domain: **hmedtcloud.com**
2. Network ports:
   - Outbound, 18001, TCP
   - Outbound, 19000, TCP
   - Outbound, 443 (HTTPS), TCP
   - Outbound, 80 (HTTP), TCP
   - Ping requests to hmedtcloud.com
   - Outbound, 20000-29999 (inclusive) (HTTP), TCP

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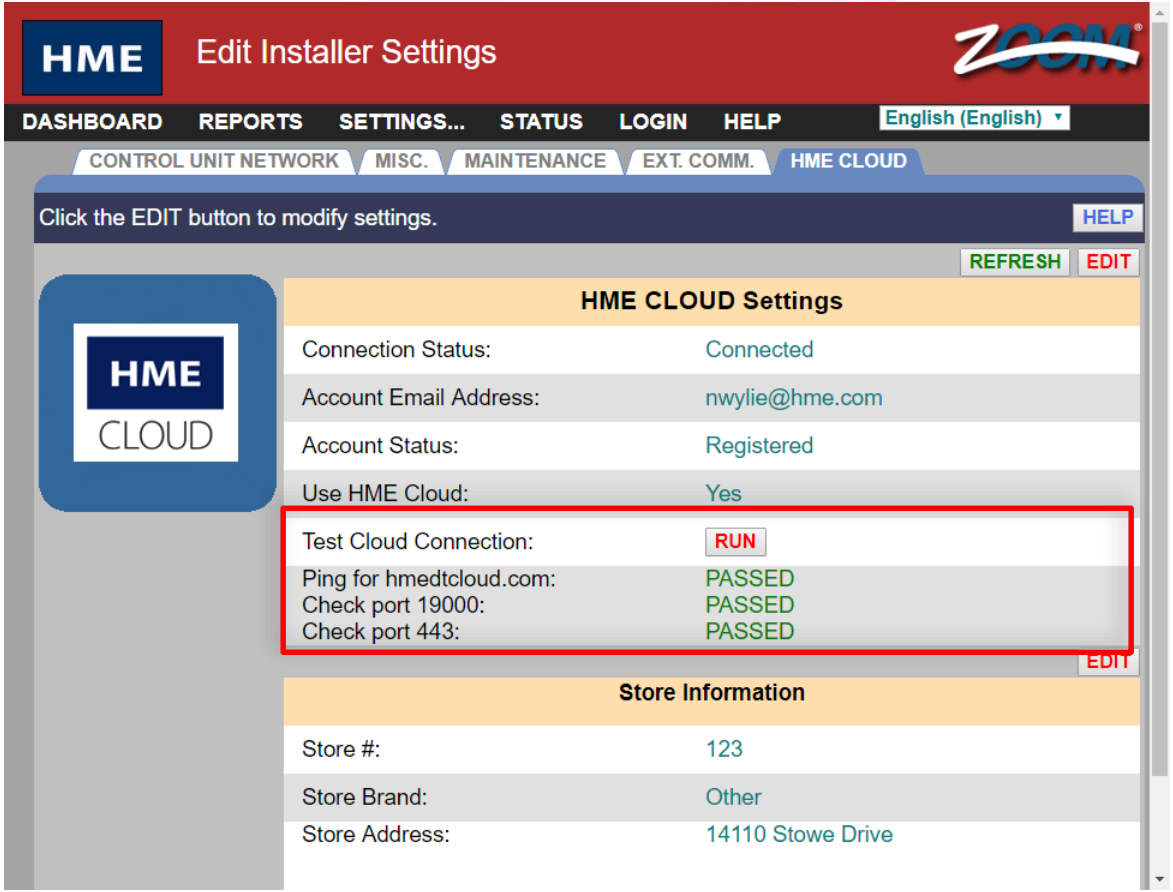

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BANDWIDTH

A broadband internet connection is required in order to use the HME CLOUD service. There is a minimum bandwidth requirement to ensure optimal operation:

1. Minimum Bandwidth Requirements
   - 250 Kbps download/upload
2. Recommended Bandwidth
   - 320 Kbps download/upload
3. HME recommends http://www.speedtest.net/ using a server on the west coast of the US

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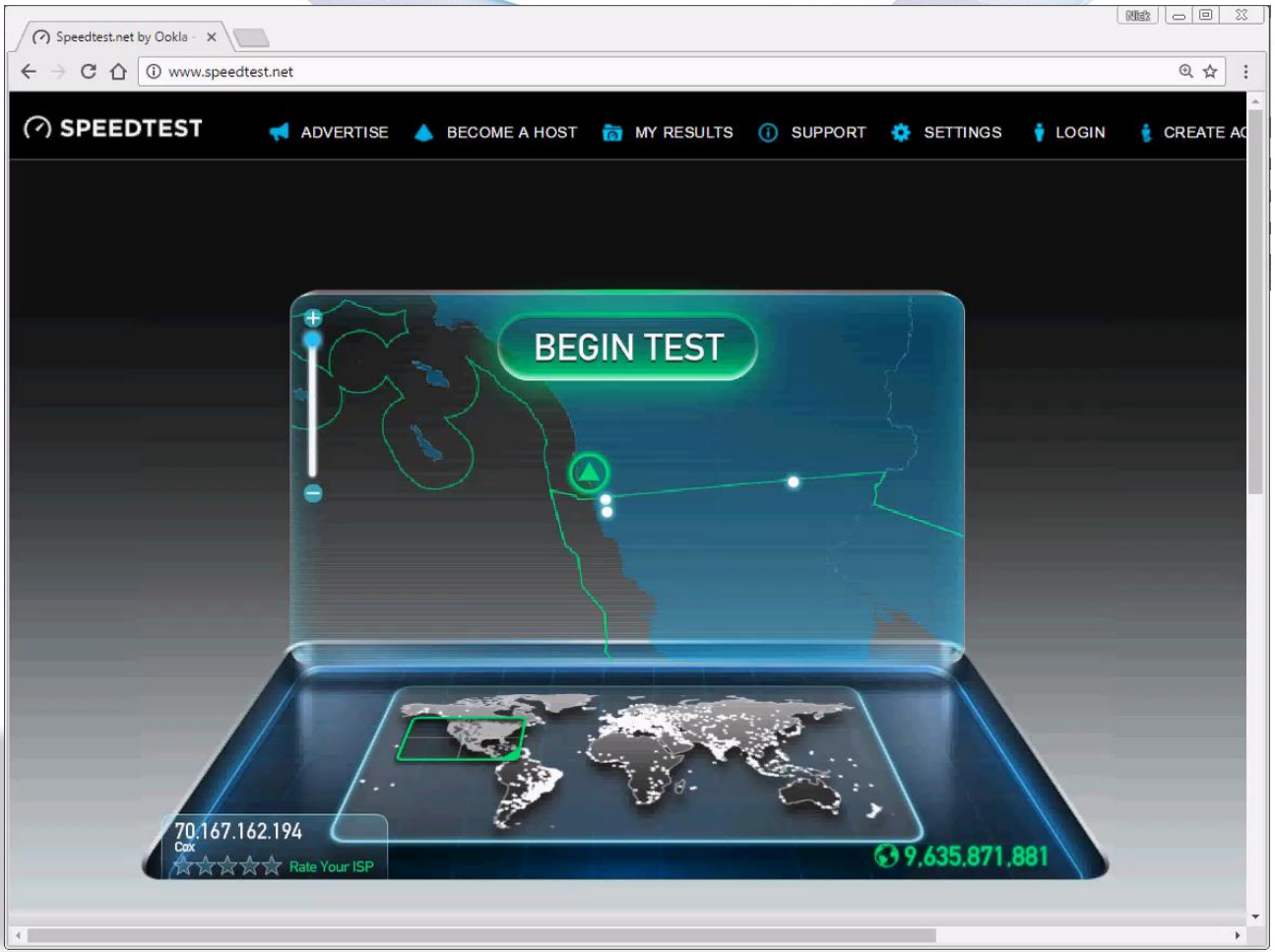

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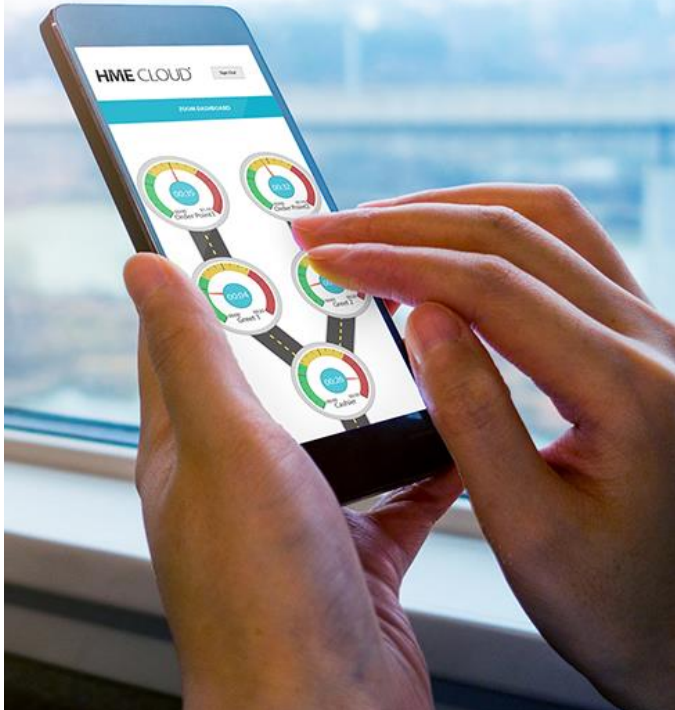
EMAIL

If the ZOOM system will be sending outbound email, either for scheduled reports or diagnostic purposes, the following network firewall rules must be allowed:

1. Destination Domain: api.mailgun.net
2. Network Port
   - Outbound, 443 (HTTPS), TCP
3. Destination Domain: smtp.mailgun.net
4. Network Port
   - Outbound 587 (SMTP), TCP



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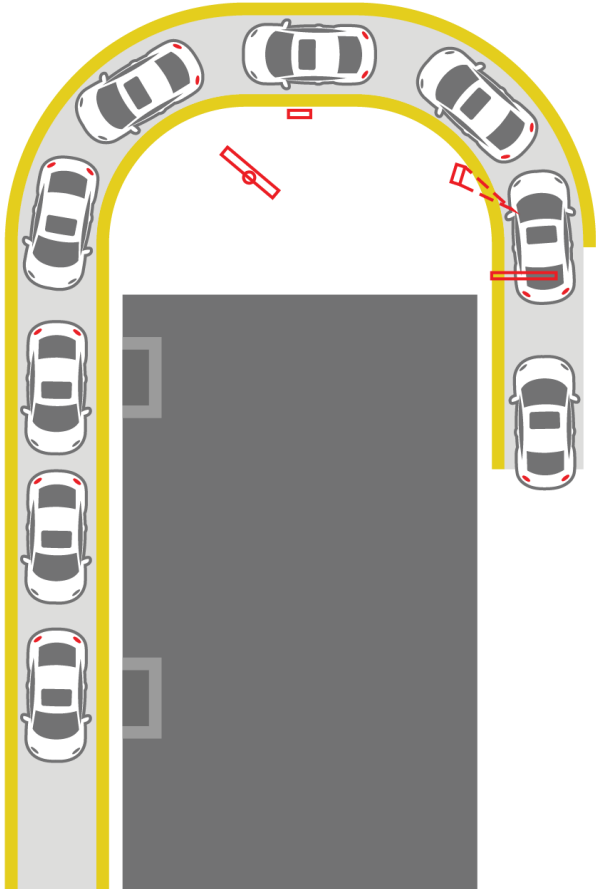
TIMER ACCURACY

What is accuracy in a timer?

- If a vehicle spends 3 minutes in a drive thru, the timer reports 3 minutes.
- If 1100 vehicles go through the drive thru lane, the timer reports times for 1100 vehicles
- There will NEVER be an exception to this.



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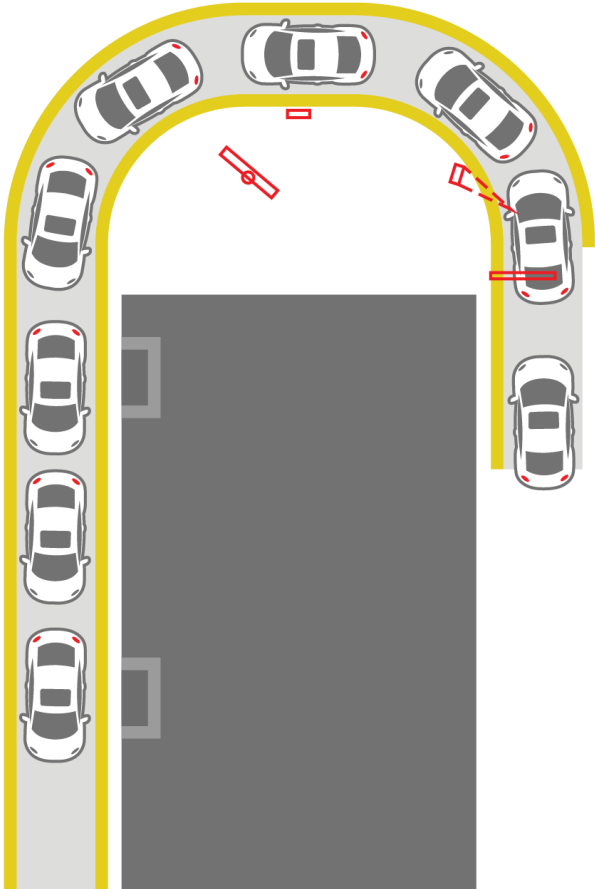
CONTROLLED CONDITIONS

A laboratory, classroom or other controlled environment would be able to perfectly simulate vehicle activity going through the drive thru lane. Every car would go through each detection point, in order. There would never be any false detections from stray metal (steel plated boots, metal trash carts, passing cars etc).

Unfortunately, an actual store is not a controlled environment.



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Menu

Cashier

Service

HME

HOSPITALITY & SPECIALTY COMMUNICATIONS

Menu

Cashier

Service

HME

HOSPITALITY & SPECIALTY COMMUNICATIONS

Welcome

Menu

Cashier

Service

HME

HOSPITALITY & SPECIALTY COMMUNICATIONS

Menu

Cashier

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HME

HOSPITALITY & SPECIALTY COMMUNICATIONS

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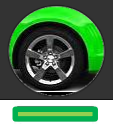
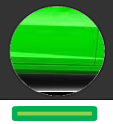
Menu



Cashier



Service

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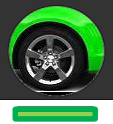
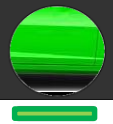
Menu



Cashier



Service

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HOSPITALITY & SPECIALTY COMMUNICATIONS

Menu

Cashier

Service

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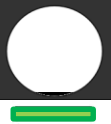
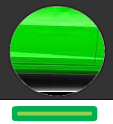
Menu



Cashier



Service

HME

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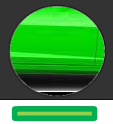
Menu

Cashier



Service

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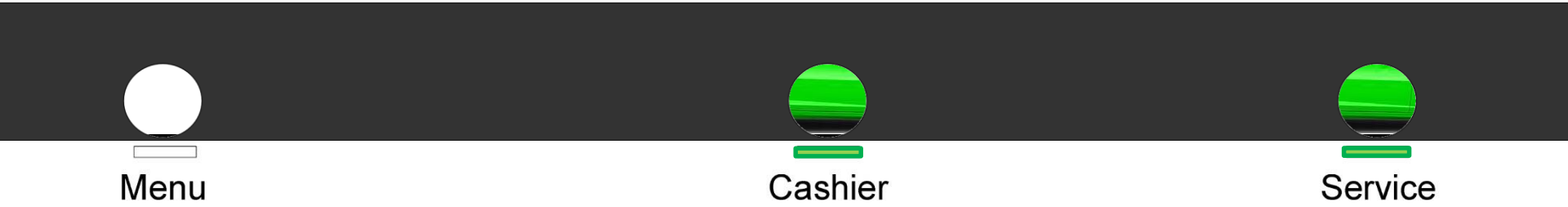

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HOSPITALITY & SPECIALTY COMMUNICATIONS

Menu

Cashier

Service

HME

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Cashier

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Service

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HOSPITALITY & SPECIALTY COMMUNICATIONS

Menu

Service

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QUESTIONS?

The DTOS quiz is next!

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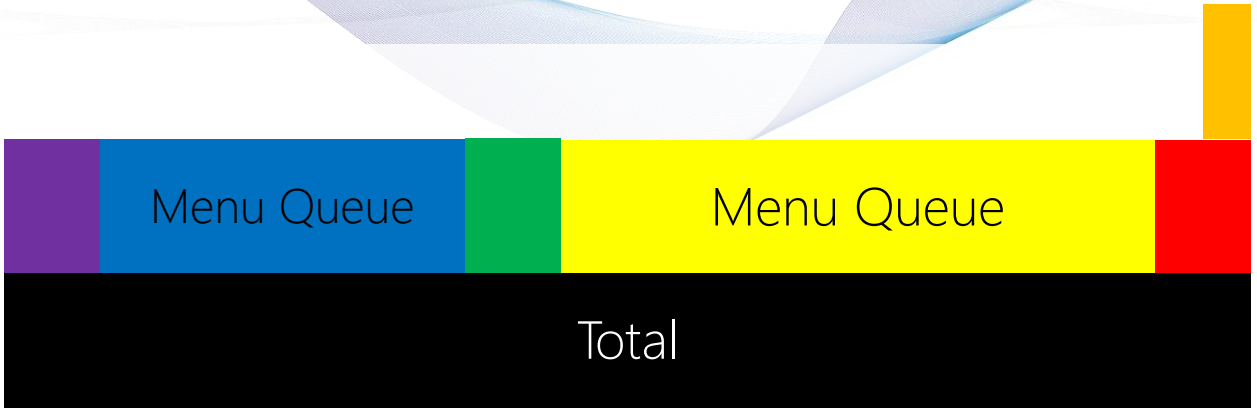
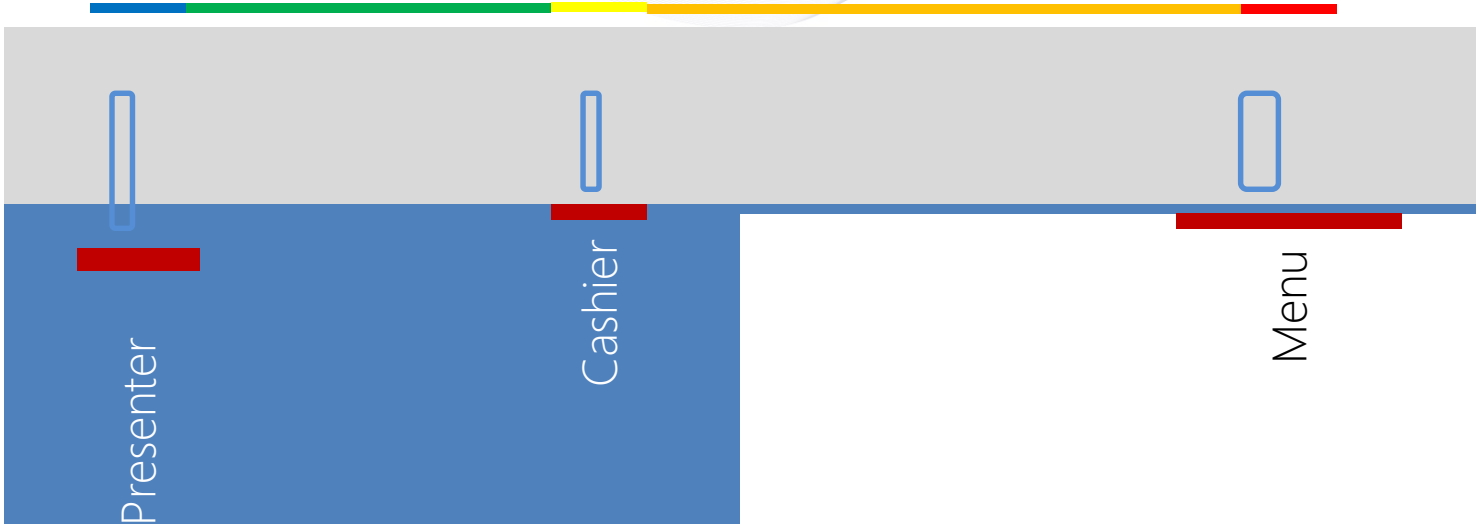
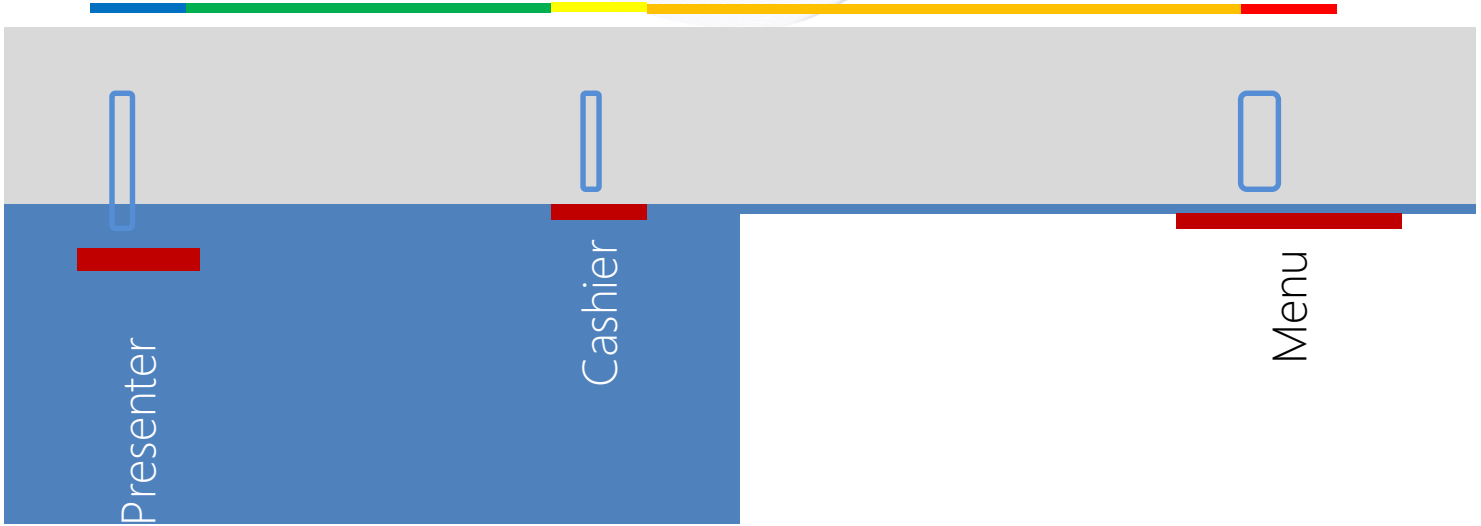
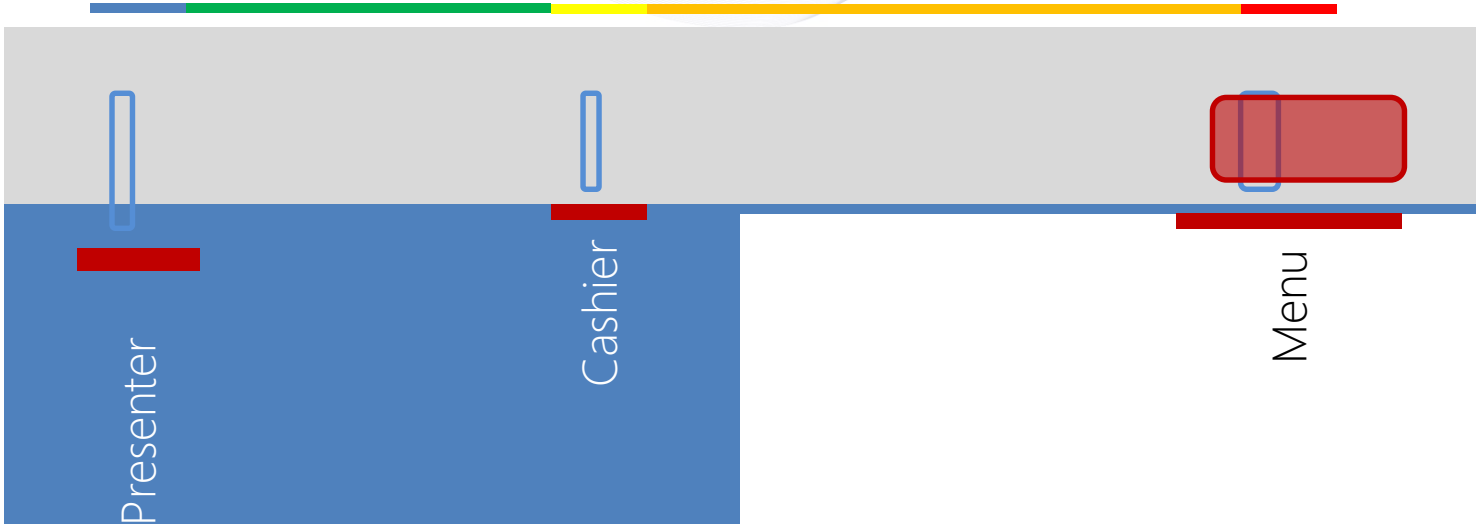




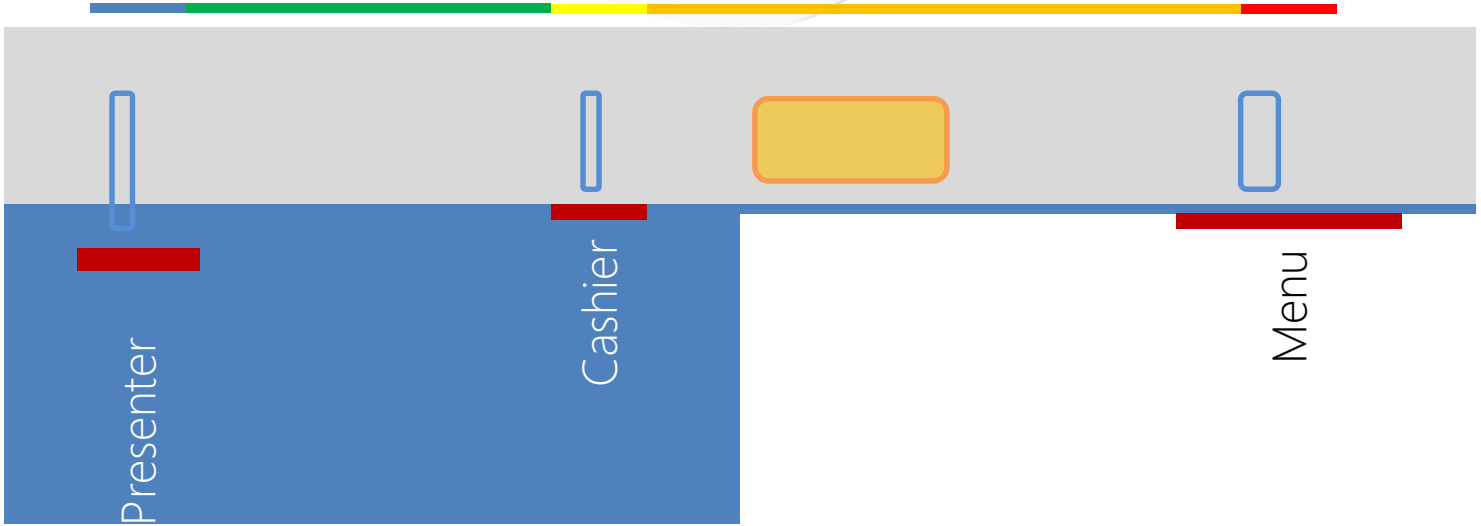
The timer is designed with a normal drive thru transaction in mind. For example, when the Menu loop activates and deactivates, the timer assumes that a car arrived at Menu and pulled forward to head to the Cashier window. There is never an exception to this.



Just imagine the drive thru lane experience is separated into segments that cars enter and leave. In this example, you have Menu, Menu Queue, Cashier, Cashier Queue and Presenter. If these are considered segments and are similar to stop watches with a clear start and stop.

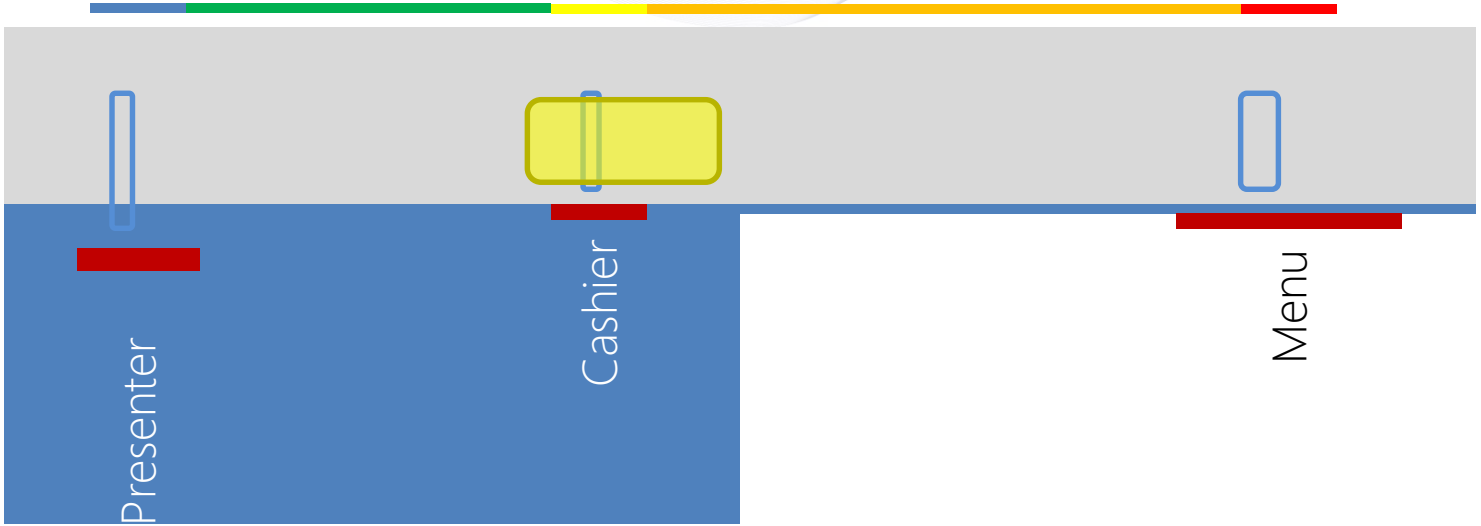


When the car approaches the first detection point,

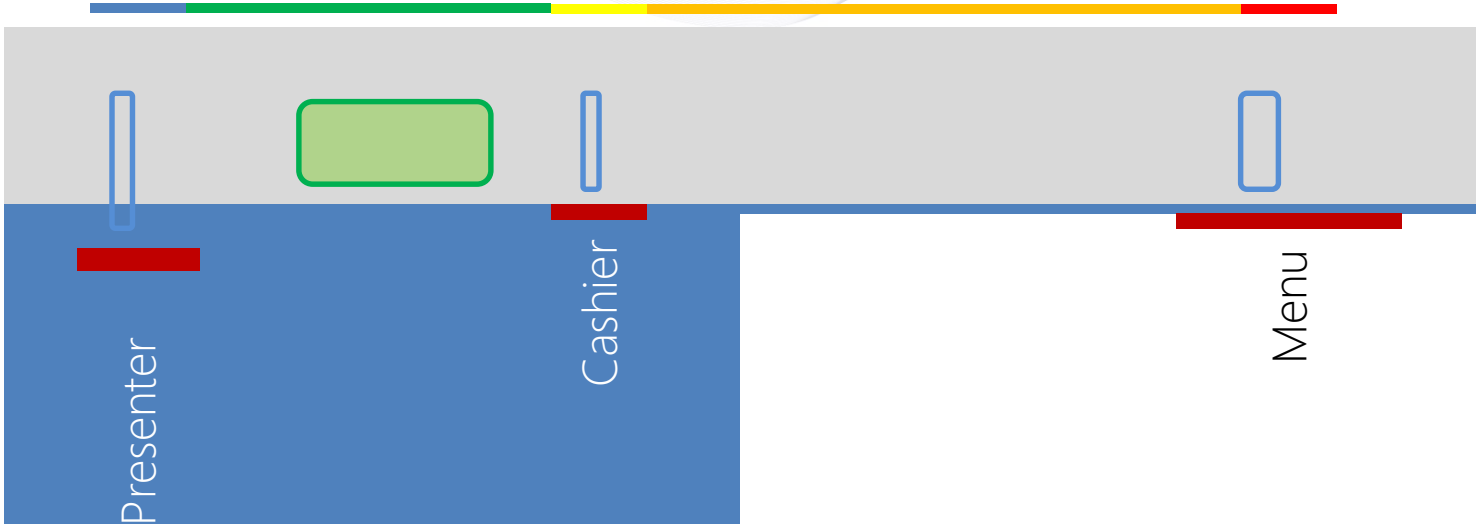


As the Menu sensor deactivates, the timer assumes the car is moving forward to the next part of the drive thru lane. In this case, the car moves into Menu Queue. The timer assumes the car is in the queue and will move it forward to Cashier once Cashier activates.

HME
HOSPITALITY & SPECIALTY COMMUNICATIONS



HME
HOSPITALITY & SPECIALTY COMMUNICATIONS



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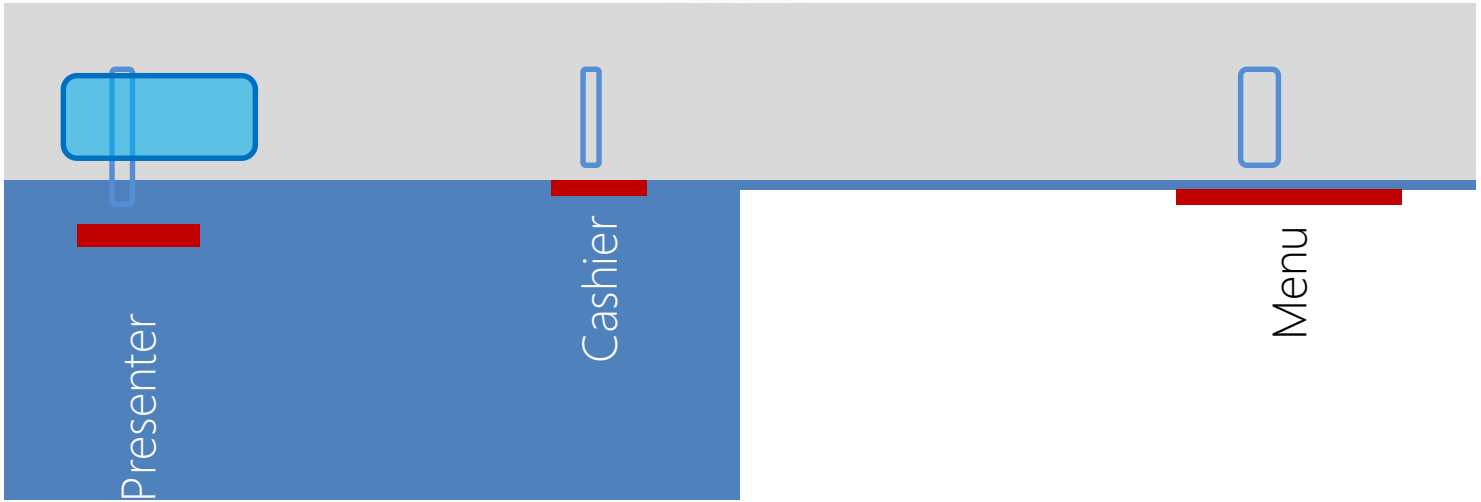
HOSPITALITY & SPECIALTY COMMUNICATIONS



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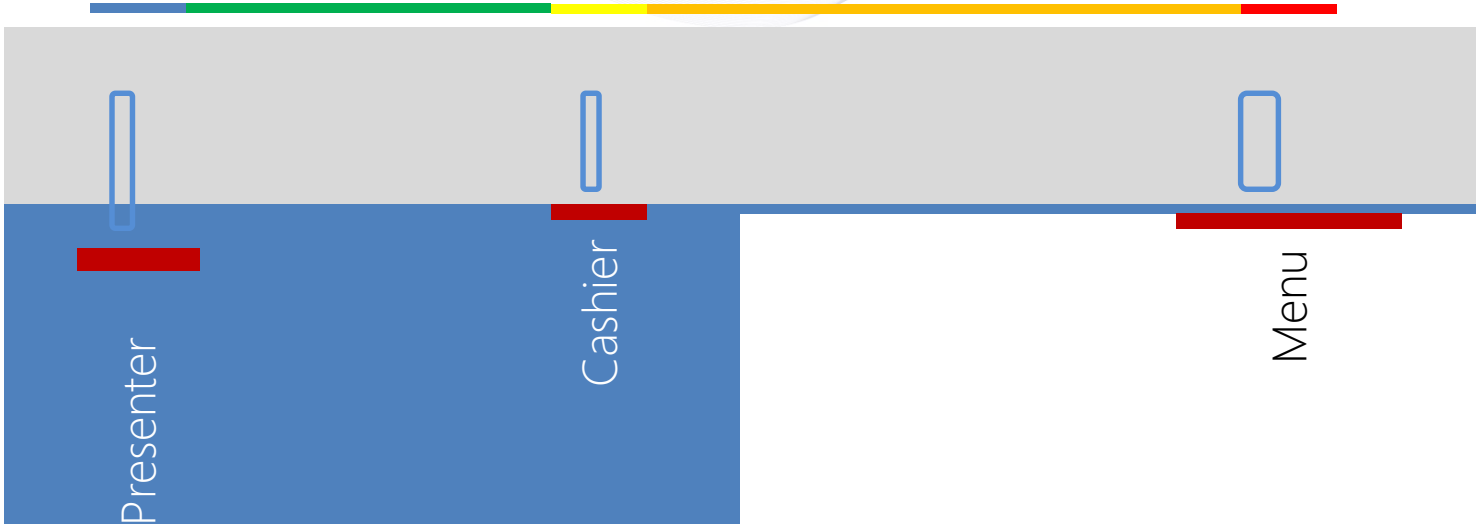
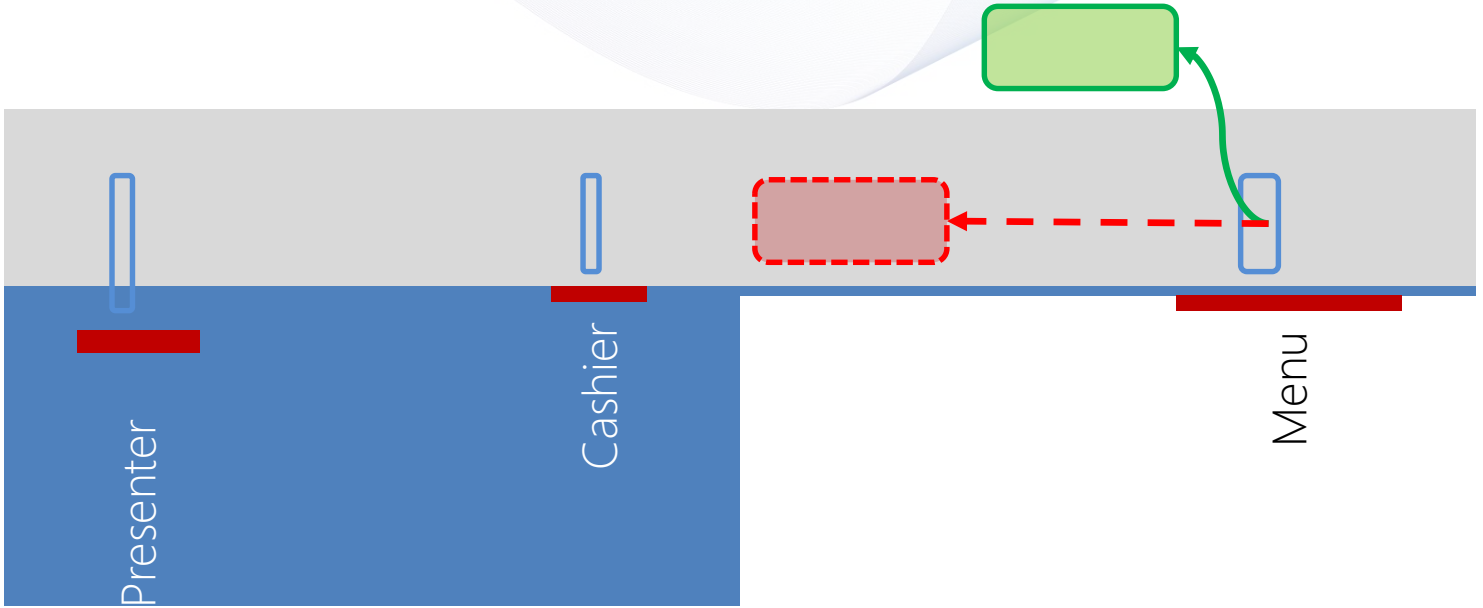
HOSPITALITY & SPECIALTY COMMUNICATIONS

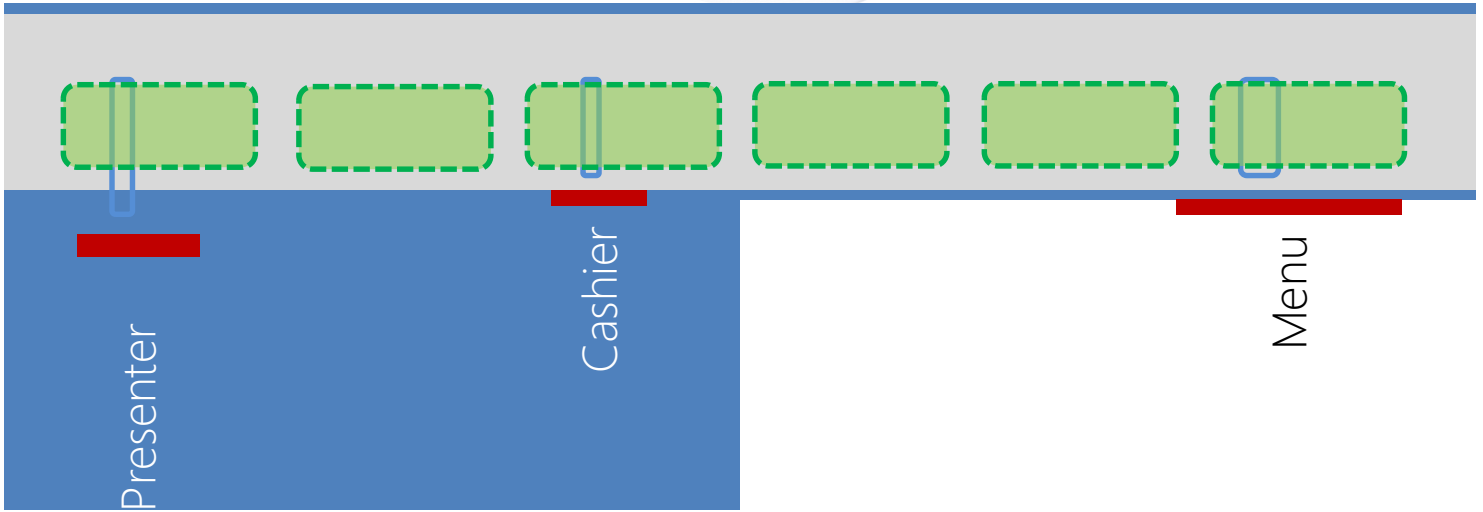


HME
HOSPITALITY & SPECIALTY COMMUNICATIONS

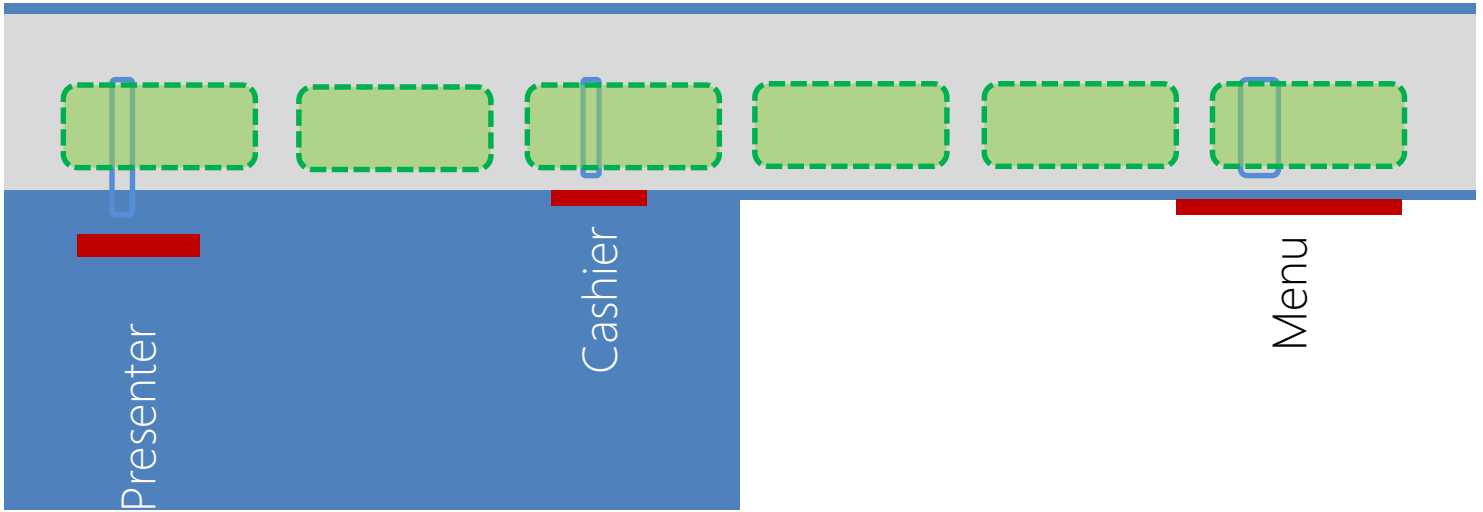
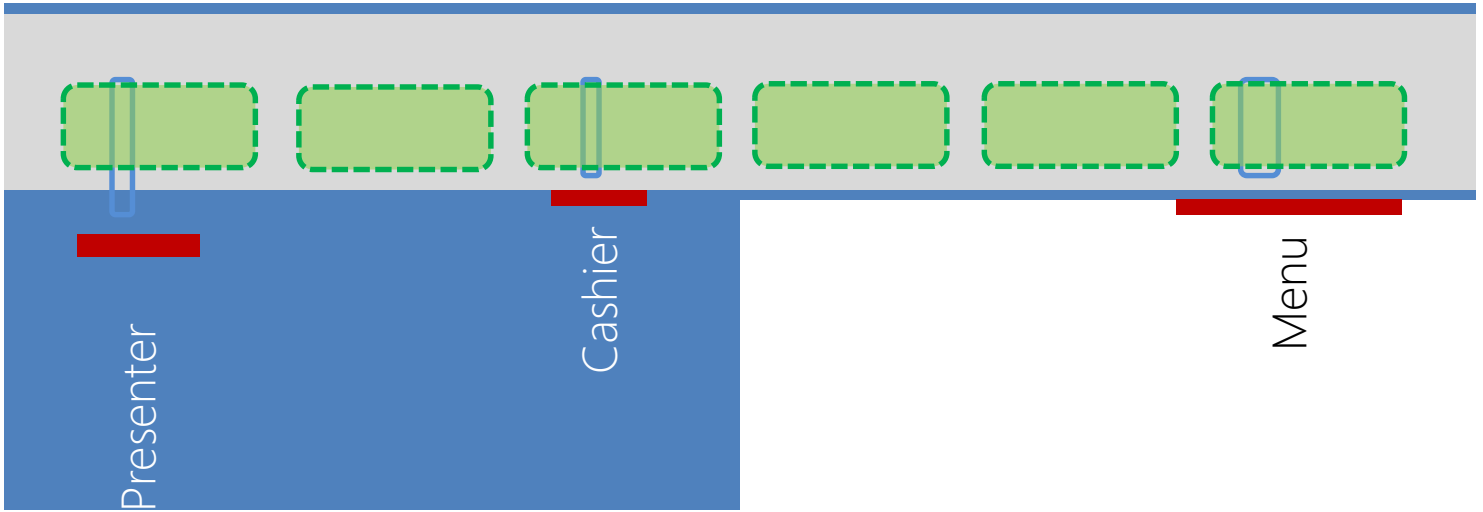


Testing

HME
HOSPITALITY & SPECIALTY COMMUNICATIONS



HME
HOSPITALITY & SPECIALTY COMMUNICATIONS



HME
HOSPITALITY & SPECIALTY COMMUNICATIONS