Heartland
PAYMENT SYSTEMS®
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WaveRider Installation

INTERNAL MOUNTING

Speed Queen®

PULSE MODE

COIN & CARD

VISA **+** **MasterCard**

Laundry Machine Model Numbers

This document applies to the WaveReader installation process following Alliance/Speed Queen model numbers:

Washers

STEB77 (stack w/d)

Dryers

SSGT09

If you cannot locate the model number of the machine you require in the lists above, please contact MicroPayments Customer Service at:
Tel: 800-332-4835   Press 2

Required Tools & Installation Kit Contents

The tools required for the installation process are as follows:

- **#T-20 Pin-in-Star Torx Driver**

- **Phillips Head Screwdriver (medium)**

- **3/16" Drill Bit**

- **3/4" Drill Bit (or Step Drill bit to match)**

- **11/32" Nut Driver or Socket/Ratchet**

- **Electric Drill – Heavy Duty**

- **Jig-Saw (w/Bi-Metal blades)**

Optional
- **Hydraulic Punch with 3.0" Dia. Knockout**

This following tables list the required components for the installation process. If you cannot locate and/or identify any of the components listed above, please contact MicroPayments Customer Service at 800-332-4835 , then press 2.
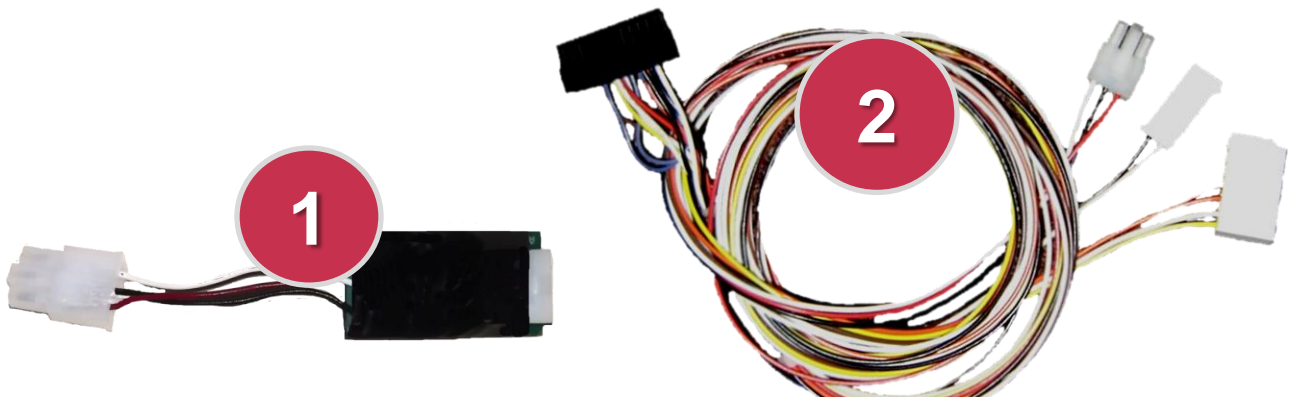
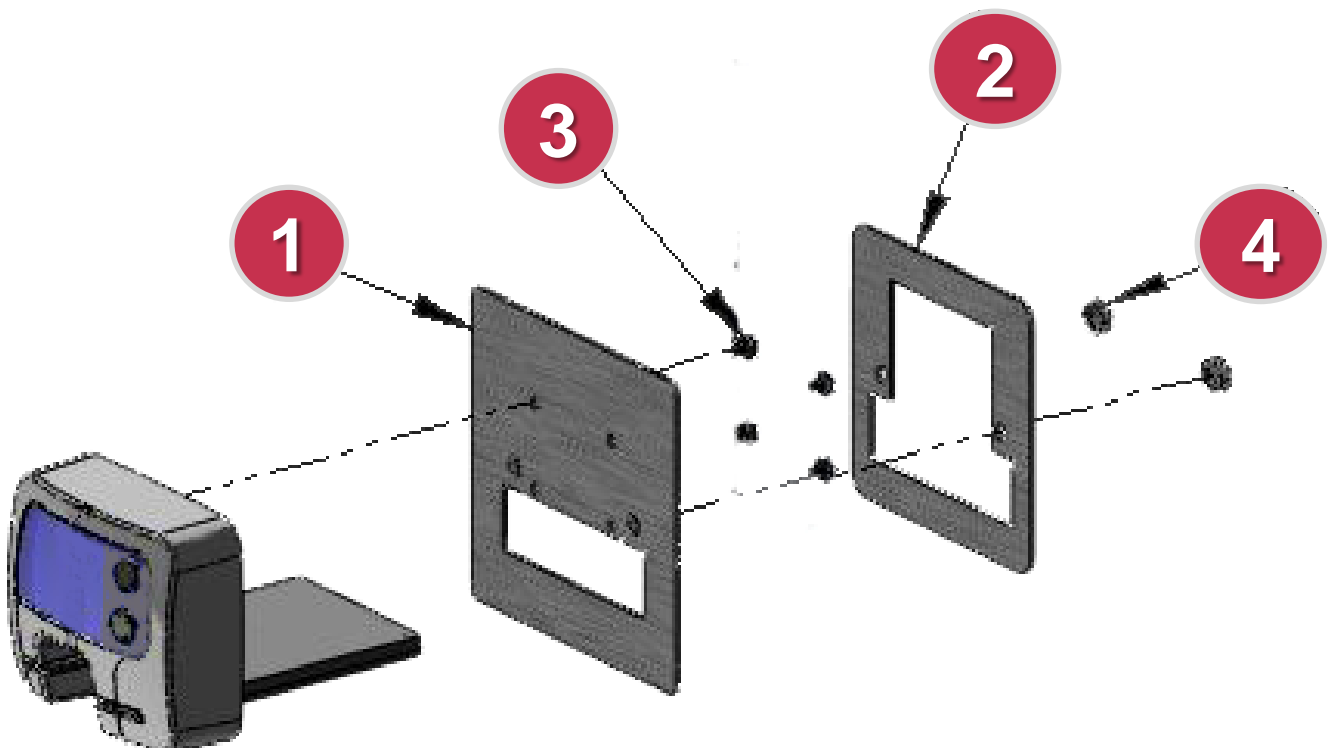## WaveReader

Item	Qty	Part Number	Description
1	1	WLAU-NNNNNN	WaveReader
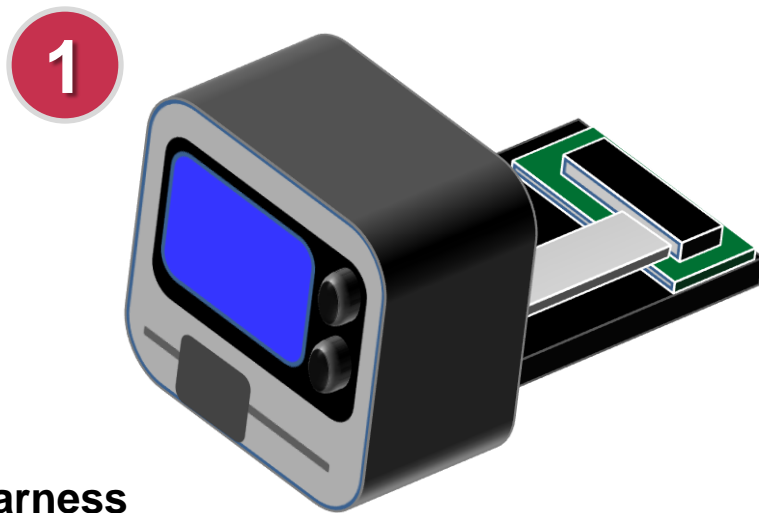
Interface Harness

KIT-HRN-050-6-012			Harness Kit for Speed Queen Coin & Card
Item	Qty	Part Number	Description
1	1	ASM-050-6-012	Stuffed Speed Queen Coin Drop board
2	1	AYS-050-6-009	Cable, Speed Queen Pulse for WR + Coin

Internal Mounting Trim Plate Kit

KIT-050-6-017	Bracket Kit for WaveReader Surface Mount		
Item	**Qty**	**Part Number**	**Description**
1	1	MFP-050-6-017-001	Surface Mount – Front Cover Plate
2	1	MFP-050-6-017-002	Surface Mount – Rear Backing Plate
3	4	NUT-8X32SHKEP	Nut, 8x32, Steel, Hex KEP
4	2	SRW-632X.125PM	Screw 6-32 Thread x 1/8" Pan-Head, Phillips

There are two methods of installing a WaveReader (internally) into a coin & card laundry machine. They are:

- **Internal Mounting – Trim Plate Kit**
- **Internal Mounting – Direct on Machine Panel**

Both methods are detailed in the following pages. You should decide which method works best for you.   Both methods require certain minimum clearances (**surface area** and **internal depth**) to accommodate the WaveReader. These minimum dimensions are detailed on the following page.
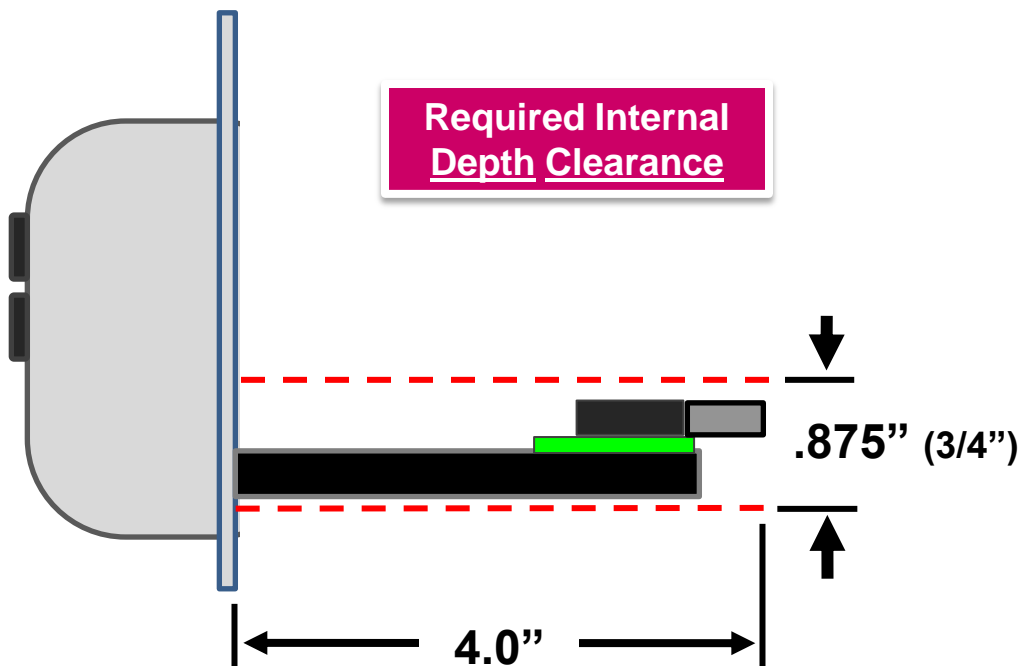
Internal Mounting
Minimum Required Dimensions
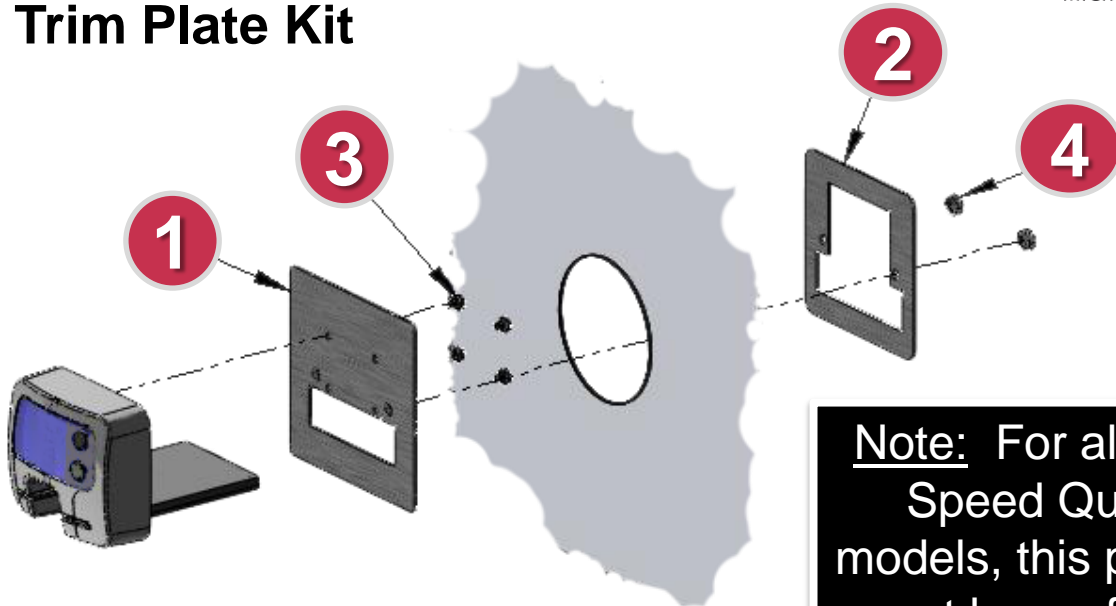
⌀0.150 THRU
4X

Required <u>Surface</u> Area and <u>Cutaway Openings</u>

■ = Required surface space

■ = Cut/Drilled Opening

4.00
2.791
1.875
1.729
1.603
0.768
0

4.00 3.385 3.165 2.750 1.250 0.835 0.615 0
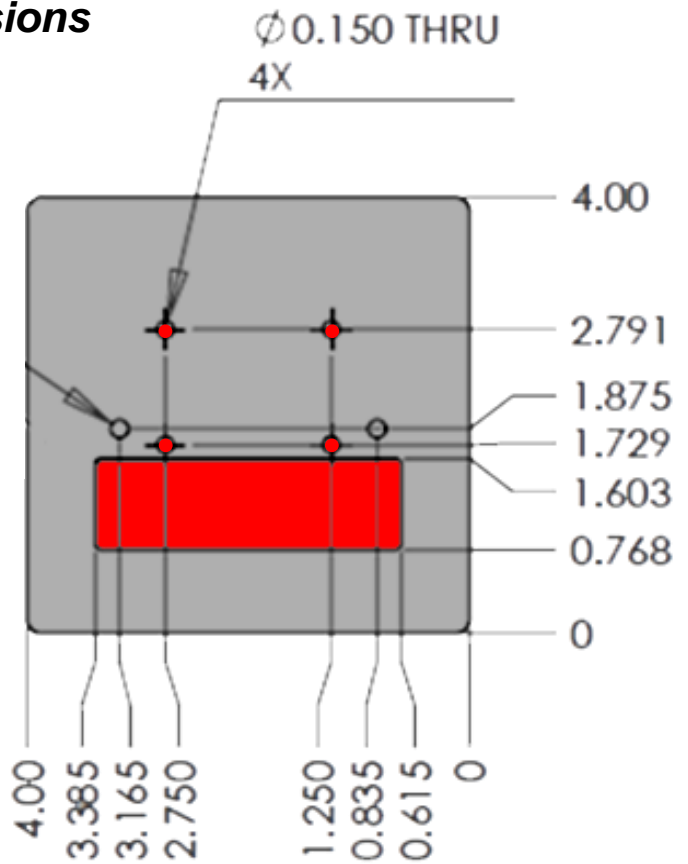
Required Internal <u>Depth Clearance</u>

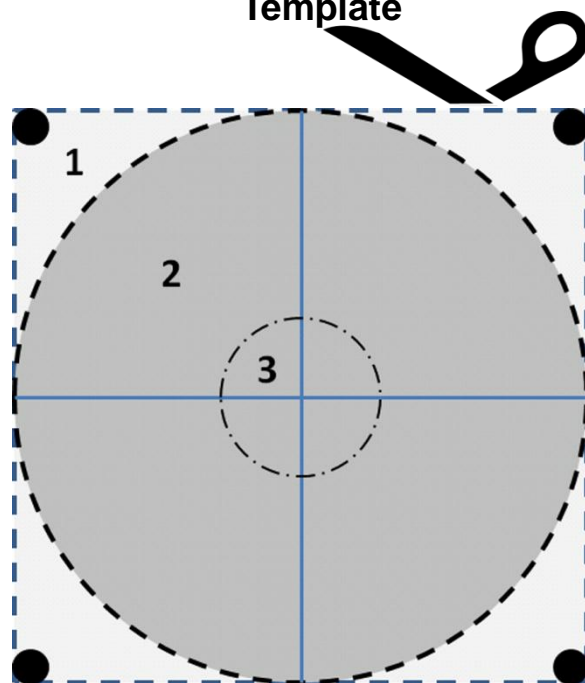.875" (3/4")

4.0"

Internal Mounting - Trim Plate Kit

For Internal mounting using the trim plate kit, please perform the following steps:
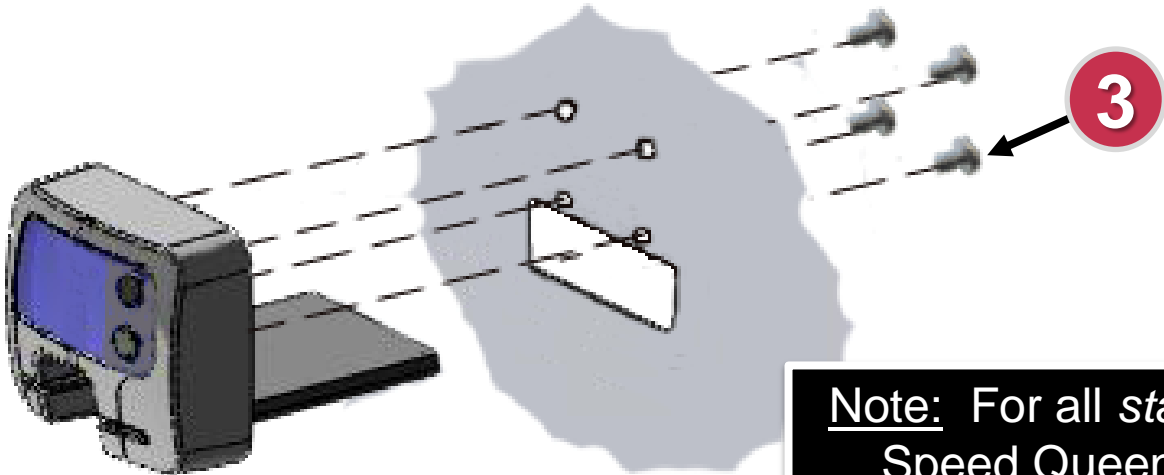
1. **Locate a space on the machine that will properly accommodate the WaveReader.**

2. Using the template supplied on this page, cut out the area inside the dashed lines **[1].** The opening should be **3" square** . The darker gray circles can be used a drill locations. After drilling, a jig-saw can be used to finish the cuts.

3. Alternatively, you can drill the center hole **[3]**, and use a **3" circular** punch to remove the area marked by the dashed, interior circle **[2]**.

4. After making the cut, attach the WaveReader to the Surface Mount Cover Plate **(1)** with the **four screws (3)** provided in the kit.

5. Insert the WaveReader & Front Plate through the opening.

6. Attach the **Rear Backing Plate (2)** with the **two nuts (4)** provided in the kit, and finger-tighten.

7. Make sure to **level the Wave Reader and Front Plate** on the machine and fully tighten the Rear Backing Plate nuts with a 11/32" Nut Driver or Socket.

> Note: For all *stack* Speed Queen models, this process must be performed TWICE per machine.
> *Make sure there is enough room to accommodate two readers!*

Trim-Plate Mounting Template

# Internal Mounting – Direct on Machine Panel

For Internal mounting directly onto the machine, please perform the following steps:

1. **Locate a space on the machine that will properly accommodate the WaveReader.**

2. Using the template supplied on this page, cut out the area inside the dashed lines. The opening is **2.75" wide and .75" high**. The dashed gray circles can be used as drill locations for the ¾" drill (or progressive) bit. After drilling, a jig-saw can be used to finish the cuts.

3. The black circles above the gray area should be drilled using the 3/16" bit.

4. Insert the WaveReader through the opening. The four drilled holes should line up with the mounting holes in the back of the WaveReader.

5. After making the cut and drilling the holes, attach the WaveReader to the machine with the **four screws (3)** provided in the kit. Do not fully tighten the screws.

6. Make sure to **level the Wave Reader** on the machine and fully tighten the mounting screws.

Note: For all *stack* Speed Queen models, this process must be performed TWICE per machine.
Make sure there is enough room to accommodate two readers!

Direct-on-Machine Template
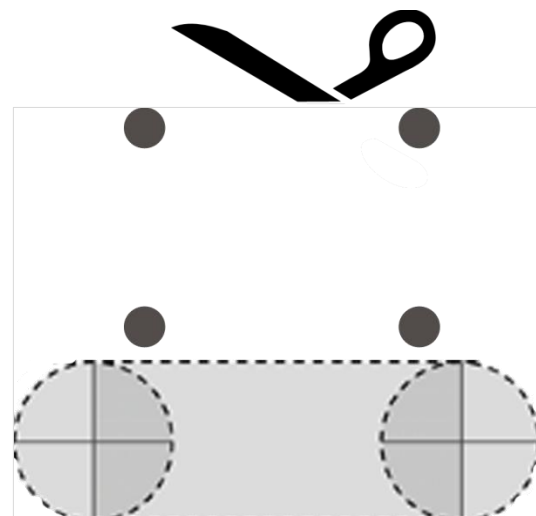
Preparation

Disconnect the laundry machine from all power sources before performing any of the following steps.

Only perform the following steps <u>after</u> the WaveReader has been physically installed in the machine.

1 Remove all screws and fasteners so that you can remove the front panel and access the inside of the machine and the control board

2 Physically install the WaveReader using one of the methods described on pages 7 or 8 of this manual. Make sure the machine is disconnected from all power sources and all metal fragments from the drilling and cutting are removed before reassembly.

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3 After physical installation, the reader should look like this (with the **Trim-Plate Kit**).

This a view from the side
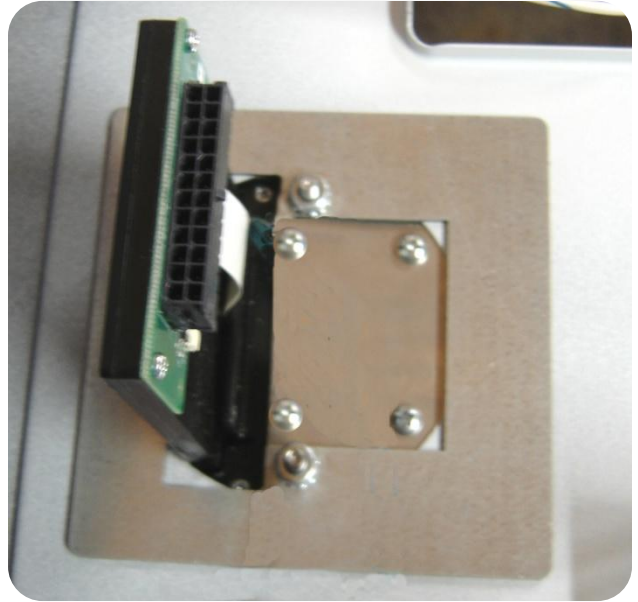
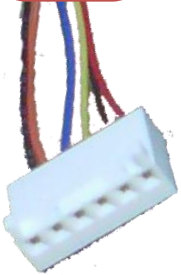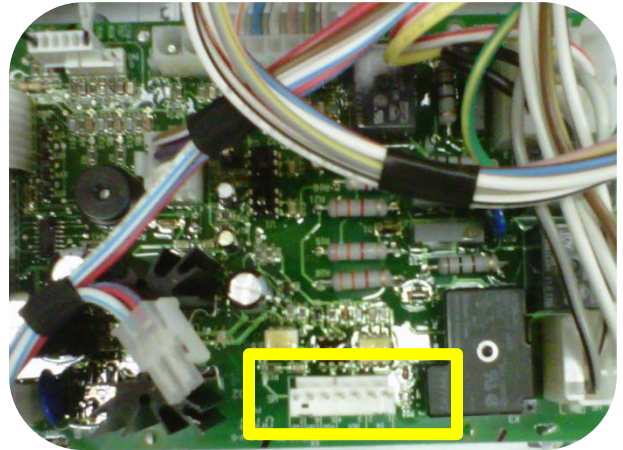**4** Connect **J1** of the interface harness back of the WaveReader.

J1
WaveReader

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On the main panel, connect **J3** of the WaveReader harness to the **H5** connector on the Speed Queen control board, in the yellow box. **On some Quantum control boards, the connector may be labeled H4.**
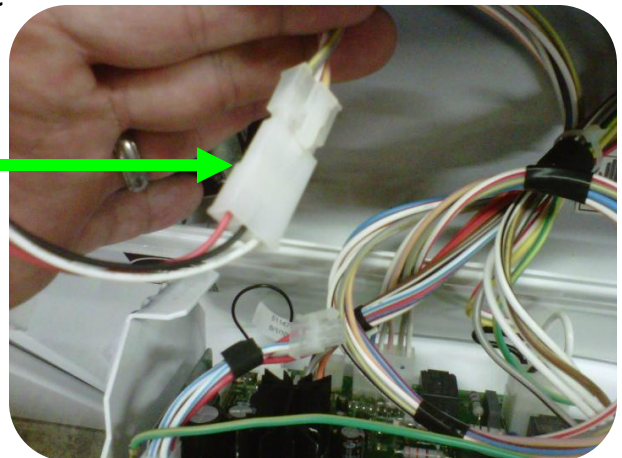
6

On the main panel, connect **J3** of the WaveReader harness to the **H1** connector on the Speed Queen control board, in the yellow box.
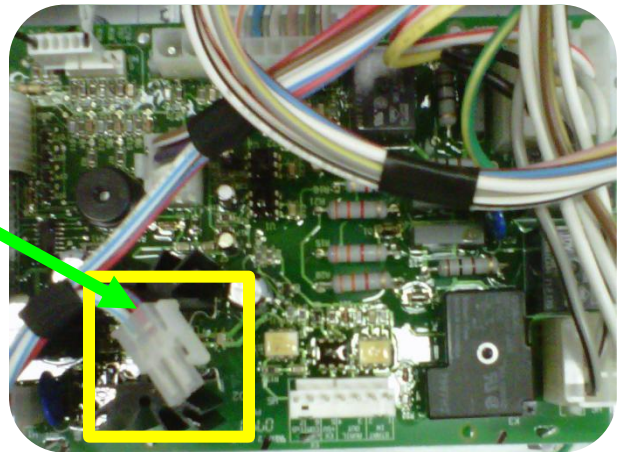
7

On the control board locate the plug where the **coin drop is connected**. It should be a small three (3) pin plug that routes out of the **H3** connector from the control board.
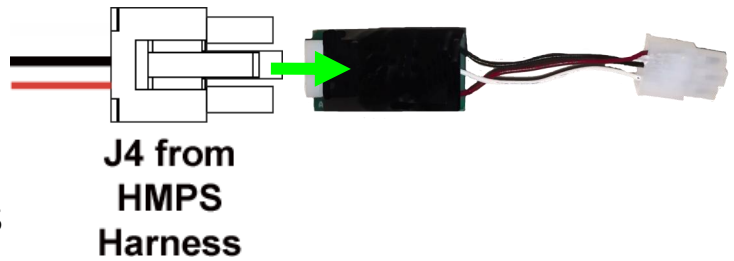
Disconnect it.

Installation

8 Locate the **Coin Adapter Board**. Connect **J4** of the WaveReader harness to the mating connector on the **Coin Adapter Board**.
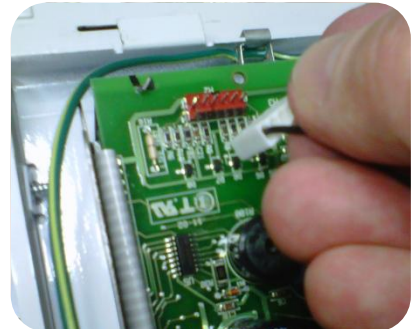
J4 from
HMPS
Harness

9 Connect the Coin Drop into the other side of the **Coin Adapter Board**.

From SQ
Coin Drop

J4 from
HMPS
Harness

10 Locate the **Serial Jumper** on the control board and remove it.

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The completed wiring assembly should look like this…

From SQ
Coin Drop

J4 from
HMPS
Harness

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Wiring Diagram

J1
WaveReader

J2
To the H3 connector on the SQ board

J3
To H5 on the SQ control board

J4
To mating connector on
COIN ADAPTER BOARD

J4 from
HMPS
Harness

From SQ
Coin Drop
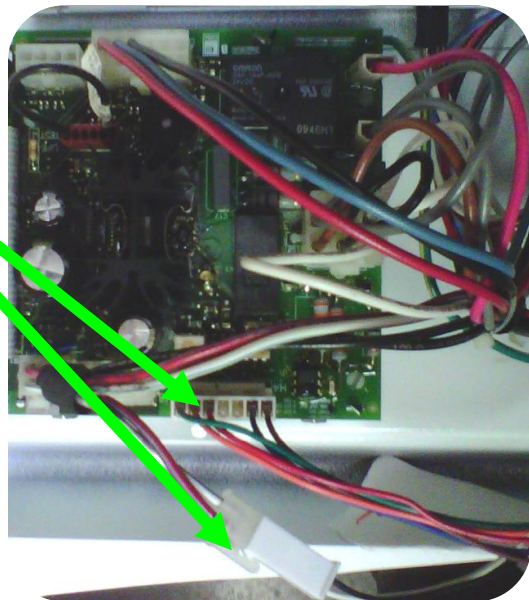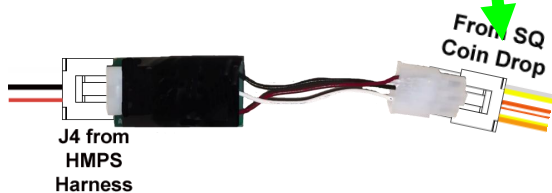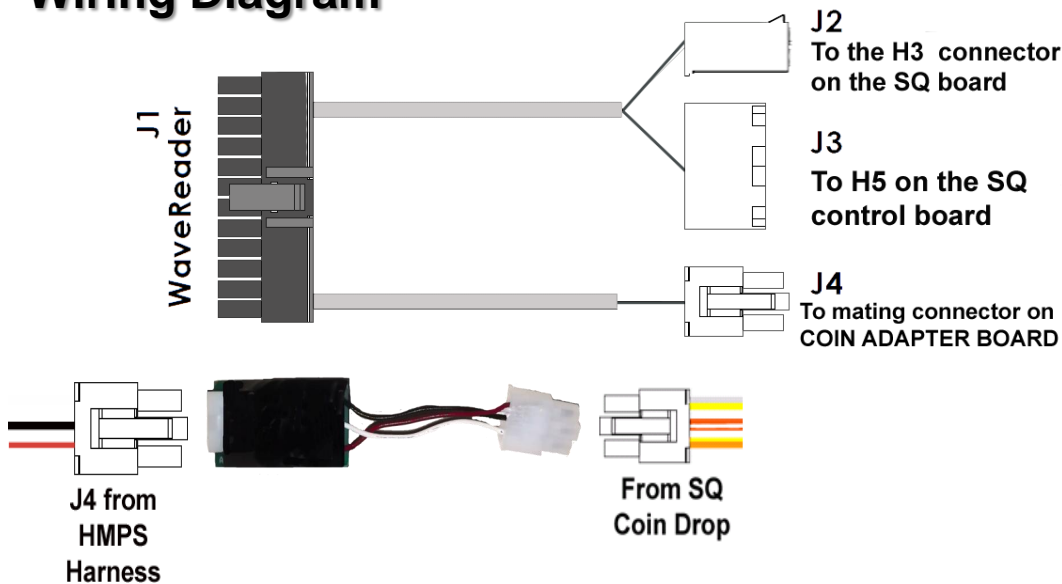
13

Using zip-ties, secure all wiring harnesses to prevent pinching, wire-strain, and chafing.

14

Finished assembly.

15

Apply the self-adhesive sticker that displays the accepted card brands (supplied) in a clearly visible location .

16 MDC style Speed Queen machines will require a few programming steps to ensure proper operation with a WaveReader.

1. The Serial Jumper on the control board <u>must be removed</u> for proper operation.

2. For **Quantum** style machines (operating in Pulse Mode), **all cycle prices must be set to the same value.**

3. The Start Value Pulse 'PLSE' must be set to the same coin value as the WaveReader's. Typically, this value is $.25. The programming steps for this are detailed in Step 23.

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PLSE Programming – special care should be paid to this setting. The *modified* excerpt below is from Speed Queen's **'MDC Frontload Washer Programming Manual'** and is provided for convenience. Please refer to your machine's manual for confirmation.

Programming MDC

4. Start Pulse Value "PLSE"

This option allows the owner to program the value of the start pulse with an aftermarket central card reader or pay system.

How to Program Start Pulse Value

1. Control must be in Manual Mode. Refer to **Entering the Manual Mode**.

2. Press the PERM PRESS/WARM (∧) or the DELICATES/COLD (∨) keypad until "PrOg" appears in the Four-Digit Display.
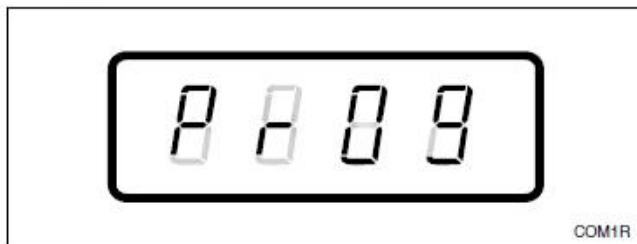

Figure 14

3. Press the START (enter) keypad and "AtS" will appear in the Four-Digit Display.

4. Press the PERM PRESS/WARM (∧) or the DELICATES/COLD (∨) keypad to scroll through the programmable options until "PLSE" appears in the Four-Digit Display.
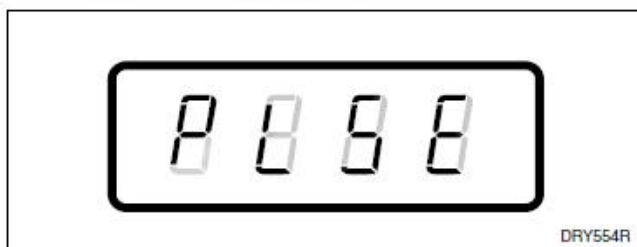

Figure 15

5. When "PLSE" appears in the Four-Digit Display, press the START (enter) keypad. There are four digits in Start Pulse Value, and the fourth digit will become the active digit. The active digit will flash one second on and one second off.

Figure 16

NOTE: The start pulse can be set from 1 to 9999.

6. Press the PERM PRESS/WARM (∧) or the DELICATES/COLD (∨) keypad to increase or decrease the value of the active digit and the START (enter) keypad to enter the value of the digit and advance to the next digit.

7. Repeat step 6 for each of the four digits. When the START (enter) keypad is pressed and the last digit is the active digit, the changes to the start pulse value will be saved into the memory. The next option, "CyCL", will appear in the Four-Digit Display.

NOTE: To program "CyCL" (Cycle Stages), refer to option 5. To program other options, refer to the appropriate section.
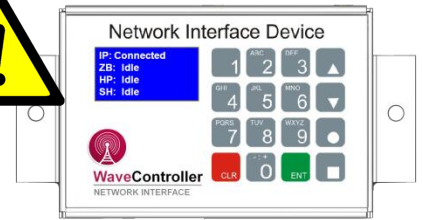
How to Exit Programming Feature

1. Be sure the control shows a programmable option, not a value.

2. While pressing and holding the NORMAL/HOT keypad with one hand, press the NORMAL/WARM keypad with the other hand. The control will revert back to the previous mode of operation.

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Once the unit has been reassembled, the entire WaveReader needs to be **tested** before being returned to service.

Network Interface Device

IP: Connected
ZB: Idle
HP: Idle
SH: Idle

WaveController
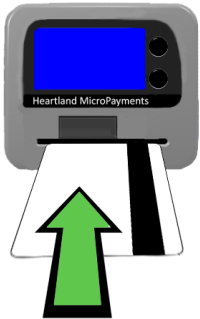NETWORK INTERFACE

IMPORTANT
*The **WaveContoller** has to be operating and the machines linked to it before testing can be performed.*

19

1. Drop 25c into the coin drop.

2. Verify that 25c is deposited into the machine

`25`

3. Swipe a card, wait for the transaction to be approved and then press START on the WaveReader

4. Verify that the balance of the funds have been deposited into the machine and it is ready to start.

`100`

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Reattach all machine panels.