Operation Manual

Extended Holding Bin

General Market Series

ATTENTION: Read the instructions before using the machine.

LIMITED WARRANTY

This product is warranted to be free from defects in material and/or workmanship for a period of one year from date of original installation (with the exception of racks, pans, and covers). Any component which proves to be faulty in material and/or workmanship will be replaced or repaired (at the option of Prince Castle, Inc.) without cost to the customer for parts or labor. This warranty covers on location service (i.e. trip charges and/or mileage). Travel mileage is limited to 100 miles (200 kilometers -International) round trip (one trip warranty) from an authorized service agency or its sub-service agency.

This warranty is subject to the following exceptions/conditions:

- Use of any non-genuine Prince Castle parts voids this warranty.

- All labor shall be performed during regular work hours. Overtime premium will be charged to the buyer.

- Damage caused by carelessness, neglect, and/or abuse (e.g., dropping, tampering or altering parts, equipment damaged in shipment, by fire, flood or an act of God) is not covered under this warranty.

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PRINCECASTLE
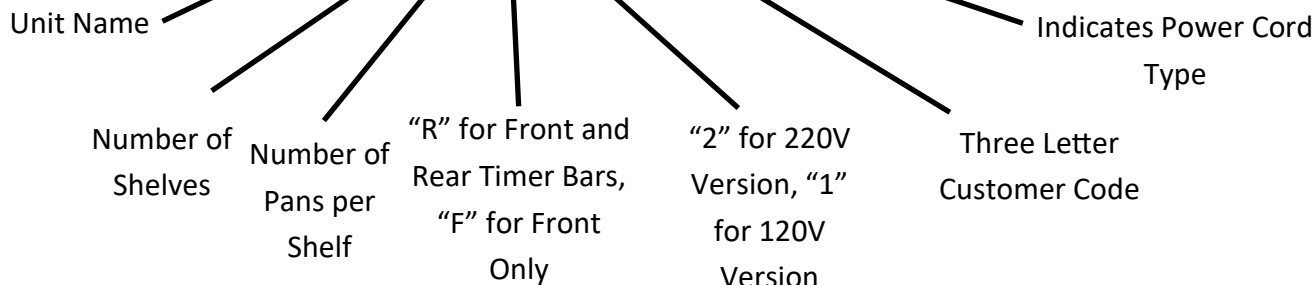MARMON FOODSERVICE TECHNOLOGIES
A BERKSHIRE HATHAWAY COMPANY

355 EAST KEHOE BLVD. ~ CAROL STREAM, IL, 60188, USA
PHONE: 630-462-8800 ~ TOLL FREE: 1-800-PCASTLE
FAX 630-462-1460 ~ WWW.PRINCECASTLE.COM

Model Identification

EHB24R2-GMS16

Unit Name

Number of Shelves

Number of Pans per Shelf

"R" for Front and Rear Timer Bars, "F" for Front Only

"2" for 220V Version, "1" for 120V Version

Three Letter Customer Code

Indicates Power Cord Type

Model Specifications

STYLE	MODEL NO.	WIDTH (mm)	HEIGHT (mm)	DEPTH (mm)	WEIGHT (kgs)	VOLTAGE	AMPS
2H X 2W	EHB22R1-GMSXX	19.7 (500)	11.4 (290)	14.1 (358)	35 lbs. (16.0)	110-120	6.5-7.0
2H X 2W	EHB22R2-GMSXX	19.7 (500)	11.4 (290)	14.1 (358)	35 lbs. (16.0)	208-240	3.8-4.4
4H X 2W	EHB42R1-GMSXX	19.7 (500)	20.6 (523)	14.1 (358)	57 lbs. (26.0)	110-120	13.1-14.0
4H X 2W	EHB42R2-GMSXX	19.7 (500)	20.6 (523)	14.1 (358)	57 lbs. (26.0)	208-240	7.7-8.8
2H X 4W	EHB24R2-GMSXX	33.2 (843)	11.4 (290)	14.1 (358)	55 lbs. (25.0)	208-240	9.0-10.4
3H X 4W	EHB34R2-GMSXX	33.2 (843)	18.1 (460)	14.1 (358)	94 lbs. (43.0)	208-240	13.6-15.7
2H X 3W	EHB23R2-GMSXX	27.2 (691)	11.4 (290)	14.1 (358)	45 lbs. (20.0)	208-240	13.6-15.7

NOTE: All Model Numbers above with "R" are for double-sided units (with auxiliary timer bars).

If unit above has "R" in part number, it can be substituted for an "F" to get the single-sided version.

NOTE: Weight (kgs) is shipping weight.

NOTE: See kits starting on Page 20 for power cord type.

NOTE: 110-120V SKUs are indicated with an "R1" or "F1" for use in US/CANADA. 208-240V SKUs indicated by "R2" or "F2".

Safety Information

⚠ **WARNING**

Indicates information important to the proper operation of the unit. Failure to observe may result in damage to the equipment and/or severe bodily injury or death.

⚠ **CAUTION**

Indicates information important to the operation of the unit. Failure to observe may result in damage to the equipment.
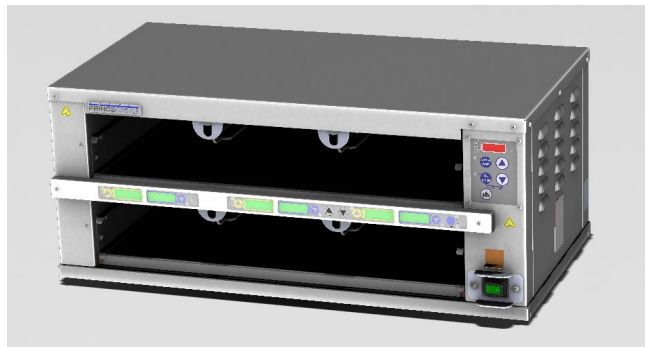
Important

Prince Castle reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment.
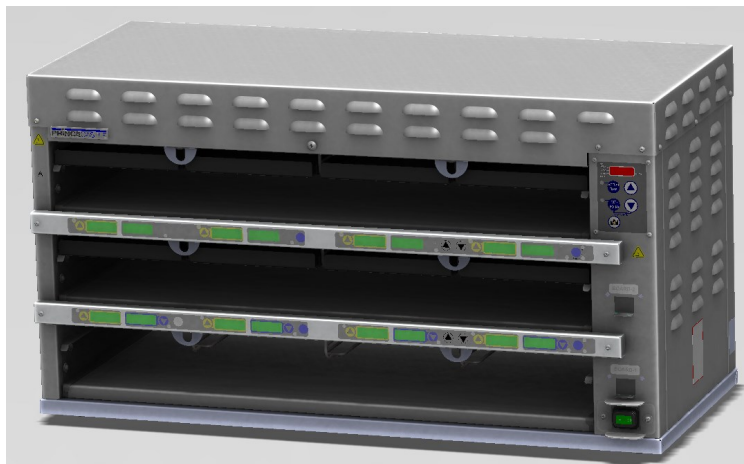
Configurations

EHB22

EHB23

EHB24

EHB42

EHB34

Extended Holding Bin

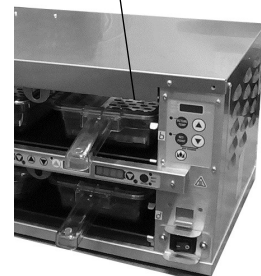# General Market Series

Product Identification

DISPLAY

Control Panel

Button Bar

Power
ON/OFF
Switch

PAN LIDS, ONLY used with MOIST products.
(CRISPY products DO NOT require lids)

LED TIMERS (tri-color)
(1 for each pan arrow button)

UP/DOWN ARROWS

Enter Button

Breakfast LED

EGGS   BACN   EGGS   BACN

PRINCE CASTLE
LOGO Button

PAN ARROW Buttons

(Start/Stop Timers)

UPPER PAN Display

LOWER PAN Display

Regular LED

Installation

1 Remove the unit from the carton and inspect for signs of damage. If there is damage to the unit:
• notify the carrier within 24 hours of delivery
• save carton and packaging materials for inspection purposes
• contact your local dealer, or if purchased directly, the Prince Castle Sales Department at 800-722-7853 or 1-630-462-8800 to arrange for a replacement unit.

NOTE: Plug the power cord into the proper electrical receptacle. All electrical connections must be in accordance with local electrical codes and any other applicable codes.
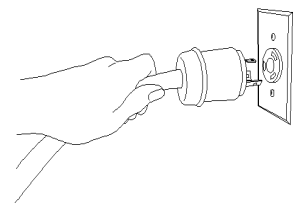
2 Place Holding Bin on flat surface.
Remove blue and/or white protective covering.

NOTE: When installing this unit, the ambient temperature at the mounting site should not exceed 100°F (38°C)

3 Plug unit into a grounded receptacle with a matching plug configuration.

⚠ **WARNING:**

All electrical connections must be in accordance with local electrical codes and any other applicable codes.
If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard.
To prevent an electric shock hazard this device must be bonded to equipment in close proximity with an equipotential bonding conductor. This device is equipped with a grounding lug for this purpose.

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Operation

⚠ **WARNING:** This application is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

1 To turn on the unit,
Turn Power On/Off switch (A) to **ON** position.

(A)

Allow 20 minutes for heaters to reach operating temperature. The button bar will read "WARM UP" as the unit warms up, they will display the product names.

NOTE: Load pan covers (if used) and insert pans into the unit.

2 Press all Pan Arrow buttons.
The Pan displays will show the assigned product name.

If no product is assigned, the display will be dim and show "----". Pressing the Pan Arrow button will not activate the timer if "----" is displayed. Pressing Pan Arrow button when product name is displayed will start timing cycle.

BKFT (Breakfast) or **REG** (Regular Menu) will be lit depending on pre-programmed menu.

3 LED Timing Status

LED TIMERS

RED (steady) = Ready for product
RED (flashing) = Discard product
GREEN (steady) = Oldest product, use first
GREEN (flashing) = Cook more product
YELLOW (steady) = Newer product, use green first
YELLOW (flashing) = Cook more product

4 When **LED** is steady **RED**, load product and press the Pan Arrow button.

If more than one pan is active for a product, the **LED** for the first pan loaded will turn from **RED** to **GREEN**.

If only one pan is active for a product, the **LED** will turn from **RED** to **GREEN.**

The **LED** for the 2nd pan loaded with the same product will turn from **RED** to **YELLOW**.

The **LED** timer can be stopped (cancelled) at any time by pressing and releasing the corresponding **PAN** Arrow button.

5 When any of the timer **LED** flash, cook more product or remove and discard product as indicated.

GREEN (flashing) = Cook more product
YELLOW (flashing) = Cook more product
RED (flashing) = Discard product

⚠ **WARNING:** HOT SURFACES

Setting Product Location

1 To change a menu selection for a specific pan cavity, use the following steps:

A. Press and hold the **PRINCE CASTLE LOGO** button for 6 seconds. All Pan displays will show *PROG*. All **LED** Timers will be **RED**.

C. Press the **UP** or **DOWN** Arrow button to scroll to the desired menu item.

D. Press the **ENTER** button to select the menu item.

B. Press a Pan Arrow button to change the menu. The **LED** Timer will change to **YELLOW** and the display will change from *PROG* to the assigned menu item.

E. Repeat steps A – D as required for other Pan displays. Press the PRINCE CASTLE LOGO button to exit the Program Mode.

NOTE: A pan may be set as "not used" by assigning "- - - -" as its product.

NOTE: Setting a pan to a particular product will automatically change the other pan in that zone.

2 To shut down the unit,
turn the Power On/Off switch (A) to **OFF** position.

(A)

Cleaning

⚠ **WARNING:**

Before performing any maintenance, turn the power switch to the OFF position and unplug the power cord from the electrical receptacle.

⚠ **CAUTION:**

This unit is not watertight. Do not clean with a water jet/jet spray.
Do not immerse the unit in water.
1. Turn the unit off and unplug the power cord from electrical receptacle.
2. Remove the pans and covers. Wipe all parts and unit with a damp cloth.
DO NOT use a green Scotch Bright pad cleaner, ice or water.

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Setting the Temperature

The unit has multiple shelves, each with an upper and lower heater for each zone.
The heaters follow the default set points of the preset products for each pan
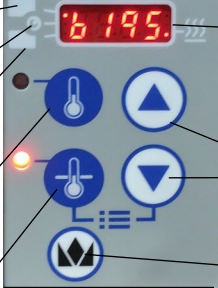Use the instructions below and the following steps to set the set point temperatures for each heater.

UPPER SHELF LED
This LED will be lit to indicate upper shelf is selected.

PROG LED
This LED will be lit to indicate unit is in Program Mode.

LOWER SHELF LED
This LED will be lit to indicate lower shelf is selected.

ACTUAL TEMP BUTTON and LED
Press to display actual temperature for the selected heater. LED will be lit when actual temperature is displayed.

SETPOINT BUTTON and LED
Press to display set point temperature of a selected heater. LED will be lit when set point temperature is displayed.

TEMPERATURE DISPLAY
A, B, C, D (E, F) = ZONES
Upper and Lower Heater

UP/DOWN ARROW BUTTONS
Used with other Buttons to scroll through heater and temperature selections.

CROWN BUTTON
Press to enter temperature selections.

⚠ **CAUTION:**

DISPLAYED TEMPERATURES ARE HEATER TEMPERATURES AND DO NOT INDICATE ACTUAL FOOD TEMPERATURES.

NOTE: To reset all calibrations to the factory settings, turn the unit off, then press and hold the UP and DOWN Arrow buttons simultaneously while turning the unit back on. A "P" will appear in the display and all calibrations will be reset to original factory settings.

1 The **SET PRODUCT TEMP** menu is used to change the Hold and Cook-More times.
Press and hold the **PRINCE CASTLE LOGO** button on the button bar, then immediately press and hold the **ENTER** button until the display shows one of six programming menus…..(hold for about 5 seconds)
Use the **UP** or **DOWN** Arrow button to scroll to the *PROD BURG* ↑↓ *ENTR* (Set Product Temperature) menu.

2 Press the **ENTER** button to enter the programming menu, the display should then read **SEL TEMP XXXX** ↑↓ **.** The **XXXX** is where the product abbreviation is displayed. Use the black **UP** and **DOWN** arrows to navigate to the desired product.

3 Press the **ENTER** button to select that product profile to update, the display will read **SET UPR XXXX ###s**↑↓ the **XXXX** is where the product abbreviation is displayed, and ### is the temperature. Use the **UP** and **DOWN** arrows to set the temperature of the upper heater of that zone. Confirm set point by pressing **ENTER**

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Setting the Temperature (Continued)

4 The display will now show **SET LWR XXXX ###s ↑ ↓**. Use the **UP** and **DOWN** arrows to set the temperature of the Lower heater of that zone. Press **ENTER** to confirm setpoint temperature.

**5** Press PRINCE **CASTLE LOGO BUTTON** to save the setpoints. Repeat steps 2-5 for all necessary profile upgrades.

NOTE: Setpoints are displayed on the front display board, and should be updated according to the product at this point.

Calibrating Heaters

1 Use the following steps to calibrate the individual heaters

Press the **UP** or **DOWN** Arrow button until the desired shelf **LED** and upper or lower heater is selected.

NOTE: Allow sufficient amount of time for temperatures to stabilize before starting calibration. (approx. 30 mins.)
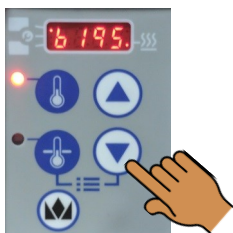
2 Take a temperature reading within the shelf near the center of each heater surface.

⚠ **WARNING: HOT SURFACES** Use caution when taking temperature readings within the shelf.

NOTE: Use an independent Temperature meter (not supplied).
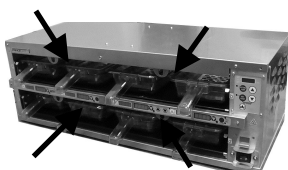
3 Press and hold the **CROWN BUTTON** and **ACTUAL TEMP** buttons for 5 seconds. The colon (:) LED indicator will light. The temperature displayed is the actual heater temperature sensed by the controller. To clear any offset readings, press the **SETPOINT** button.

4 Press the **UP** or **DOWN** Arrow button until the temperature displayed matches the reading obtained in Step 2. Press the **CROWN BUTTON** to save the temperature value and exit the Calibration Mode.
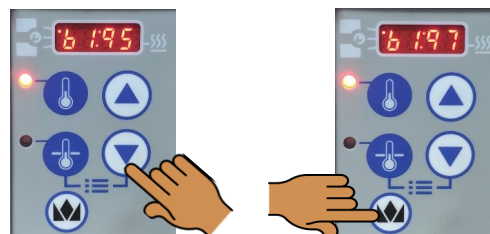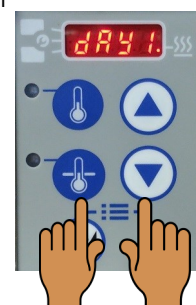

Selecting Day Part

1 Press and hold the **SETPOINT** button and the **DOWN** Arrow button for 3 seconds, the current day part will begin flashing on the screen.

Use the **up/down** arrows to select day part 1 through 3 and the **Prince Castle Crown** button to confirm your selection.

NOTE: Whenever a bin is powered ON it defaults to DAY PART 1 no matter what time of day it is.

Changing the Hold and Cook-More Times

1 The **SET PRODUCT TIME** menu is used to change the Hold and Cook-More times.
Press and hold the **PRINCE CASTLE LOGO** button on the button bar,
then immediately press and hold the **ENTER** button until the display shows one of six programming menus.
Use the UP or DOWN Arrow button to scroll to the *PROD TIME ↑↓ ENTR* (Set Product Time) menu.

2 Press and release the **ENTER** button to enter the Set Product Time menu. The display will show *EGGS TIME ↑↓ ENTR*.
Use the **UP** or **DOWN** Arrow button to scroll through the list of products.
When the desired product is displayed, press the **ENTER** button to select it.

NOTE: Holding the UP or DOWN Arrow button for longer than 2 seconds will cause the product list to automatically scroll up or down.

3 The display will show *240 ↑↓ ENTR*.

Use the **UP** or **DOWN** Arrow button to scroll to the desired Hold time. When the desired Hold time is displayed, press the **ENTER** button to save the desired Hold time.

NOTE: Hold time cannot be reduced to less than the Cook-More time plus one minute. NOTE: All times are displayed in minutes only. For example, 2 and half hours is displayed as 150.

4 The display will show *COOK 30 ↑ ↓ ENTR*.

Use the **UP** or **DOWN** Arrow button to scroll to the desired Cook-More time. When the desired Cook-More time is displayed, press the **ENTER** button to save it.

NOTE: Cook-More time cannot be increased to more than the Hold time, minus one minute.

5 The display will show *EGGS TIME ↑ ↓ENTR*. Repeat Steps 2 – 4 for any other product.
Press and release the **PRINCE CASTLE LOGO** button at any time to exit the Program Mode and return to the Run Mode.

NOTE: If the ENTER button has not been pressed to save any changes, the program will revert to the original values.

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Changing Product Names

1 The **EDIT PRODUCT NAME** menu is used to change a default product name to one of your own choosing.
Press and hold the **PRINCE CASTLE LOGO** button on the button bar,
then immediately press and hold the **ENTER** button until the display shows one of six programming menus.
Use the **UP** or **DOWN** Arrow button to scroll to the *PROD NAME ↑↓ ENTR* (Edit Product Name) menu.

NOTE: The default menu items and names are listed on page 13.

2 Press and release the **ENTER** button to enter the Edit Product Name menu.
Use the **UP** or **DOWN** Arrow button to scroll through the list of products.
When the desired product is displayed, press the **ENTER** button to select it.
The first letter (in this case, the *E*) will start blinking.

3 To change the blinking *E*, use the **UP** or **DOWN** Arrow button to scroll to the desired letter/number/symbol.
When the desired selection is displayed, press the **PAN** Arrow button to move to the next digit. Repeat for all digits.

NOTE: Holding the UP or DOWN Arrow button for longer than 2 seconds will cause the display to automatically scroll.

4 When all four digits have been changed, press the **ENTER** button to select the new name.

5 The display will show **PROD NAME ↑↓ ENTR**. Repeat Steps 2 – 4 for any other product.
Press and release the **PRINCE CASTLE LOGO** button at any time to exit the Program Mode and return to the Run Mode.

NOTE: If the ENTER button has not been pressed to save any changes, the program will revert to the original names.

Changing Temperature Scale

1 The **SET F/C** menu is used to change the temperature scale.
Press and hold the **PRINCE CASTLE LOGO** button on the button bar,
then immediately press and hold the **ENTER** button until the display shows one of six programming menus.
Use the **UP** or **DOWN** Arrow button to scroll to the *SET F/C XXXX* ↑ ↓ *ENTR*   (Edit Product Name) menu.

2 Press the **ENTER** button to enter the menu.
Bar will display **SET DEGR F/C** ↑ ↓ **ENTR** and either the **F** or **C** will be blinking.

Use the **UP** and **DOWN** arrows to select the desired temperature mode (the selected mode will blink)
Press the **ENTER** button to confirm the selection. Press the **PRINCE CASTLE LOGO** button to save the setting.

Adjusting Alarm Volume

1 The **SET VOLUME** menu is used to change the alarm volume.
Press and hold the **PRINCE CASTLE LOGO** button on the button bar,
then immediately press and hold the **ENTER** button until the display shows one of six programming menus.
Use the **UP** or **DOWN** Arrow button to scroll to the **SET VOL** ↑ ↓ *ENTR* (Set Volume) menu.

NOTE: Only applicable in stand-alone mode when not connected to Product Management system.

A timer alarm is included to sound after a hold timer is complete. The volume is adjustable from level 0 to 3.

Once the menu is on the bar, press ENTER . Scroll to the desired volume setting and press ENTER to accept.

Choosing a Language

1 The **SET LANGUAGE** menu is used to change the language. English is the only language offered unless otherwise noted.
Press and hold the **PRINCE CASTLE LOGO** button on the button bar, then immediately press and hold the **ENTER** button until the display shows one of six programming menus.
Use the **UP** or **DOWN** Arrow button to scroll to the **SET LANG ↑ ↓ ENTR** (Set Language) menu.

2 Use the black arrow buttons to select **ENGLISH** or another option, if applicable (see example below).

Press the **ENTER** button when desired language is selected. Press the **Prince Castle** button to exit the settings menu.

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Default Menu Items

Product Number	Description	Display Name	French Display	Moist or Crispy	F	C	F	C	Cook More (min)	Hold (min)	Lid
1	Burger	BRG1	BRG1	Moist	240	116	210	99	3	60	Yes
2	Burger	BRG2	BRG2	Moist	240	116	210	99	3	60	Yes
3	Crispy Chicken	CHX1	POU1	Crispy	250	121	225	107	3	60	No
4	Crispy Chicken	CHX2	POU2	Crispy	250	121	225	107	3	60	No
5	Crispy Chicken	CHX3	POU3	Crispy	250	121	225	107	3	60	No
6	Chicken Wings	WING	AILE	Crispy	250	121	225	107	3	60	No
7	Fish Sticks	FSTX	BATP	Crispy	225	107	195	91	3	60	No
8	Scrambled	SCRM	OEUF	Moist	225	107	200	93	3	75	Yes
9	Sausage	SAUS	SAUC	Moist	225	107	200	93	3	60	Yes
10	Bacon	BACN	BACN	Crispy	225	107	200	93	3	60	No
11	Ham	HAM	JAMB	Moist	225	107	200	93	3	60	Yes
12	Popper	POP	JALP	Crispy	225	107	195	91	3	60	No
13	Mozzarella	MOZ	MOZZ	Crispy	250	121	200	93	3	60	No
14	Onion Rings	ORNG	OIGN	Crispy	225	107	195	91	3	40	No
15	Mushroom	MUSH	CHAM	Crispy	225	107	195	91	3	40	No
16	Chicken Nuggets	NUGG	NUGG	Crispy	250	121	225	107	3	60	No
17	Spicy	SPCY	EPCE	Crispy	250	121	225	107	3	60	No
18	French Toast	TOST	PAIN	Crispy	250	121	225	107	3	60	No

Default Menu Items (Continued)

Product Number	Description	Display Name	French Display	Moist or Crispy	F	C	F	C	Cook More (min)	Hold (min)	Lid
19	Chicken	STRS	LPOU	Crispy	250	121	225	107	3	60	No
20	Large	LRGB	GRND	Moist	240	116	210	99	3	60	Yes
21	Fish Patty	FISH	PSSN	Crispy	250	121	225	107	3	60	No
22	BBQ	BBQ	BBQ	Moist	240	116	210	99	3	60	Yes
23	Grilled Chicken	GCHK	GPOU	Moist	240	116	210	99	3	60	Yes
24	Strips	STRP	LANR	Crispy	250	121	225	107	3	60	No
25	Special #1	SPC1	SPC1	Crispy	250	121	225	107	3	60	No

Zones

All bin configurations are set up with zones, which correspond to a set of heaters that work together to hold the product. A single product can be programmed into each zone.

The timer bars are equipped with this knowledge. If the product in one slot of a zone is changed, the other slot will automatically change to that product as well.

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Dayparts

Daypart 1

2x2			2x3			2x4			3x4			4x2	
HAM	BACN		HAM	BACN	SCRM	HAM	BACN	SCRM	SCRM	HAM	HAM	SCRM	SCRM	SAUS	SAUS

2x2:
HAM	BACN
SAUS	SAUS

2x3:
HAM	BACN	SCRM
SAUS	SAUS	SCRM

2x4:
HAM	BACN	SCRM	SCRM
SAUS	SAUS	SCRM	SCRM

3x4:
HAM	HAM	SCRM	SCRM
BACN	BACN	SCRM	SCRM
SAUS	SAUS	SCRM	SCRM

4x2:
SAUS	SAUS
BACN	BACN
HAM	HAM
SCRM	SCRM

Daypart 2

2x2:
BRG1	BRG1
BRG1	BRG1

2x3:
BRG1	BRG1	BRG1
BRG1	BRG1	BRG1

2x4:
BRG1	BRG1	BRG1	BRG1
BRG1	BRG1	BRG1	BRG1

3x4:
BRG1	BRG1	BRG1	BRG1
BRG1	BRG1	BRG1	BRG1
BRG1	BRG1	BRG1	BRG1

4x2:
BRG1	BRG1
BRG1	BRG1
BRG1	BRG1
BRG1	BRG1

Daypart 3

2x2:
CHX1	CHX1
CHX2	CHX2

2x3:
CHX1	CHX1	CHX3
CHX2	CHX2	CHX3

2x4:
CHX1	CHX1	FISH	WING
CHX2	CHX2	CHX3	CHX3

3x4:
CHX1	CHX1	CHX3	CHX3
CHX2	CHX2	WING	WING
CHX3	CHX3	FISH	FISH

4x2:
CHX1	CHX1
CHX2	CHX2
CHX3	CHX3
WING	WING

Daypart 4

2x2:
CHX1	CHX2
WING	WING

2x3:
CHX1	CHX2	MOZ
WING	WING	MOZ

2x4:
WING	WING	MOZ	MOZ
CHX2	CHX1	POP	POP

3x4:
CHX1	CHX1	MOZ	MOZ
CHX2	CHX2	POP	POP
WING	WING	POP	POP

4x2:
FISH	FISH
POP	POP
MOZ	MOZ
MUSH	MUSH

Daypart 5

2x2:
CHX1	CHX3
CHX2	WING

2x3:
CHX1	CHX2	CHX3
WING	WING	POP

2x4:
CHX1	CHX3	MUSH	ORNG
CHX2	WING	POP	POP

3x4:
CHX1	CHX3	POP	POP
CHX2	CHX2	MUSH	MUSH
WING	WING	ORNG	ORNG

4x2:
POP	POP
ORNG	ORNG
MOZ	MOZ
MUSH	MUSH

Daypart 6

2x2:
SCRM	SCRM
SCRM	SCRM

2x3:
SCRM	SCRM	HAM
SCRM	SCRM	BACN

2x4:
SCRM	SCRM	HAM	BACN
SCRM	SCRM	SAUS	SAUS

3x4:
SCRM	SCRM	HAM	HAM
SCRM	SCRM	SAUS	SAUS
SCRM	SCRM	BACN	BACN

4x2:
SCRM	SCRM
HAM	HAM
BACN	BACN
SAUS	SAUS

Troubleshooting

⚠ **WARNING:** To avoid personal injury and possible damage to the unit, troubleshooting and repair of electrical equipment should be performed by qualified service personnel. This unit should be unplugged when servicing. Except when electrical tests are required. Use extreme caution during electrical circuit tests as live circuits may be exposed.

Problem	Probable Cause	Solution
No Power	Power switch is turned off, Power cord is not plugged in.	Turn power switch to ON position, Ensure power cord is connected to proper receptacle
Unit will not heat up	Wrong power cord, loose connection on power switch and/or heater	**CALL TECH SUPPORT** **1-800-722-7853**
Unit heats up but timer bars do not work	Timer bar wiring disconnected, timer bar is defective	**CALL TECH SUPPORT** **1-800-722-7853**
Unit under/over heats	Check temperature settings	**CALL TECH SUPPORT** **1-800-722-7853**
Display flashes **OPN** and **REL**	Open relay, circuit or heater inoperable	**CALL TECH SUPPORT** **1-800-722-7853**
Display flashes **SHR** and **REL**	Shorted relay, circuit inoperable, open heater, unplugged ribbon cable	**CALL TECH SUPPORT** **1-800-722-7853**
Display shows **HHH** for extended period and heater surface temperature is hot	Temperature is above 300 F (149 C), Abnormal operation	**CALL TECH SUPPORT** **1-800-722-7853**
Display shows **HOLD**	Only displayed on a 3X4 Bin display board, when the operator changes the bin address or during calibration	**HOLD** message means the 2 PC boards in the bin are communicating, wait until the message disappears
Display shows **WAIT**	When in stand alone mode and the operator makes change to the product profile	Wait until the message disappears
Display shows **INIT**	When switching from Kitchen Minder to stand alone mode	Bin is learning Kitchen Minder menus, wait for message to disappear
Timer bar displays **COMM DOWN**	Bin is not communicating with Kitchen Minder	Refer to Kitchen Minder setup manual

For all technical support in North America, please contact **PRINCE CASTLE LLC 1-800-722-7853**
For technical support worldwide, contact your local service representative / installer.

Diagnostics

DIAGNOSTICS

For all diagnostic messages on the holding bin, the message will appear on the timer bar located at the pan that is triggering the message.

The message is a two-word message that will cycle through on the timer bar in addition to the product name at that pan location.

1. WARM | UP | XXXX – When turning on holding bin the warm up message will appear until heaters reach within 15°F set point.
   a. Cleared when within 15°F of the set point.
2. HTR | OFF | XXXX – Heater off message appears when both the upper and lower heaters are off.
   a. Cleared when heater is turned on.
3. HTR | LOW | XXXX – Heater low appears if the temperature falls 15°F below the set point.
   a. Cleared when temperature is back in range. If not cleared, would require a service technician to repair.
4. HTR | HIGH | XXXX – Heater high appears if the heater is above 285°F for 20 minutes.
   a. Cleared when temperature is back in range. If not cleared, would require a service technician to repair.
5. RLY | SHRT | XXXX – Relay short error occurs when there is a thermocouple or heater problem.
   a. Bin requires service to further troubleshoot and repair.
6. RLY | OPEN | XXXX – Relay open error occurs when there is a thermocouple or heater problem.
   a. Bin requires service to further troubleshoot and repair.
7. COMM | DOWN | XXXX – Communication down error occurs when the temperature data is not being properly communicated.
   a. Check that the Kitchen Minder/Visor/Sicom system is connected properly. Requires service technician to troubleshoot.

USB Update Procedure

1. First, un-plug any communication cables from the holding bin. These devices will interfere with the timer bar boot loading process.
2. Place the update files on the USB flash drive in the main directory (Do not put them in a folder on the flash drive).   There are five files that you will need to put on the drive. Two for the controller board, **mainbin.hex** and **DHBFWBIN.TXT**. Three for the timer bars, **mainbar.hex**, **auxbar.hex** and **DHBFWBAR.TXT**.
3. Once all files are on USB drive, turn power off to bin and place the USB drive with the files into USB port on the front of the bin.
4. While holding down crown button on front right side of the bin, above the power switch, turn the power to the bin on.
5. Keeping the crown button pressed, wait for the "BL" (boot load) message to appear on the screen. Release the button approx. 5 seconds after the "BL" message appears or once the USB stick light begins to flash.
6. Wait for the display to show:
   a. (blank while upgrading main bin firmware)
   b. BL00 (searching for timer bars to upgrade)
   c. BL04 (4 timer bars left to upgrade)
   d. BL03 (3 timer bars left to upgrade)
   e. BL02 (2 timer bars left to upgrade)
   f. BL01 (1 timer bar left to upgrade)
   g. BL00 (0 timer bars left to upgrade)
   h. BN04 (4 timer bars detected and done with programming)
7. You can check the version number on the timer bars by pressing the Prince Castle logo button and the down button on timer bar.

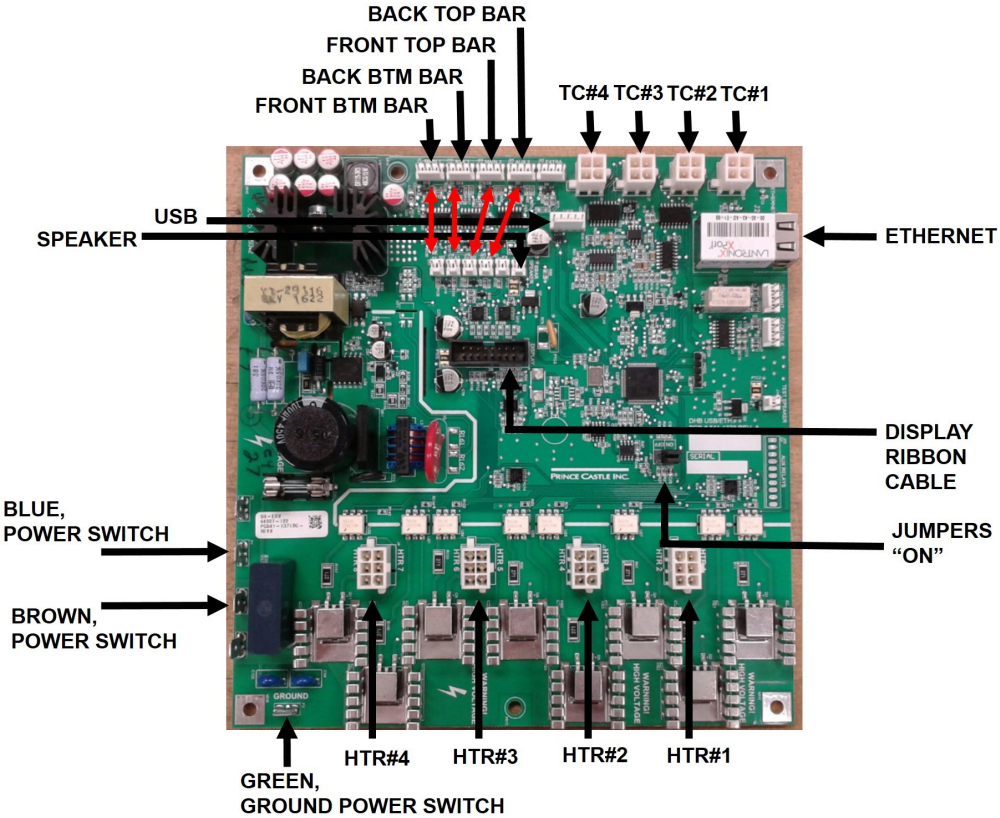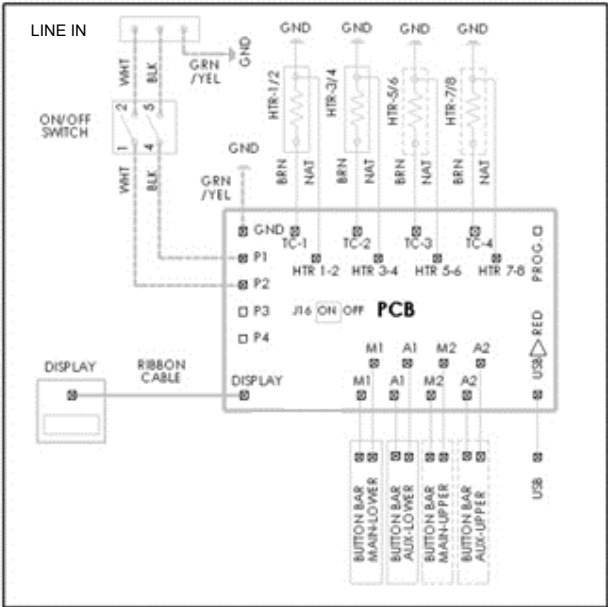   *EHB34XX requires **seven** files. The two additional to those listed are **mainbar2.hex** and **auxbar2.hex**

Extended Holding Bin

General Market Series

PRINCE CASTLE
MARMON FOODSERVICE TECHNOLOGIES
A BERKSHIRE HATHAWAY COMPANY

Wiring Diagrams

This Wiring diagram is used in all configurations except the 3X4

Wiring Diagrams

This wiring diagram is used in the 3X4 configuration only
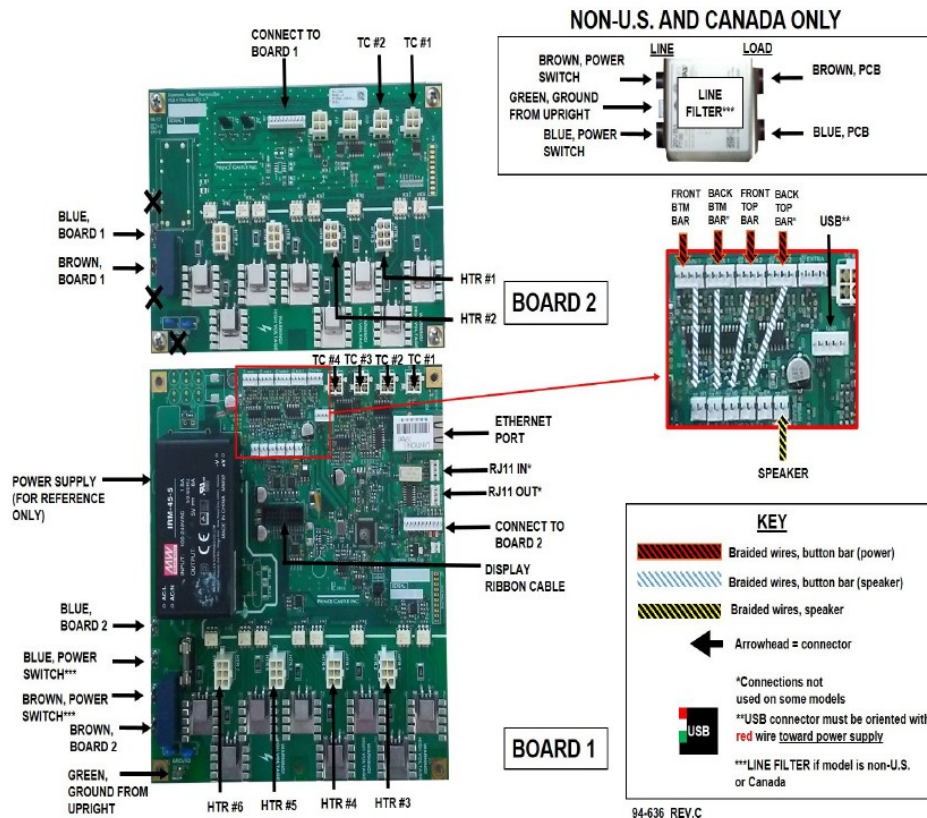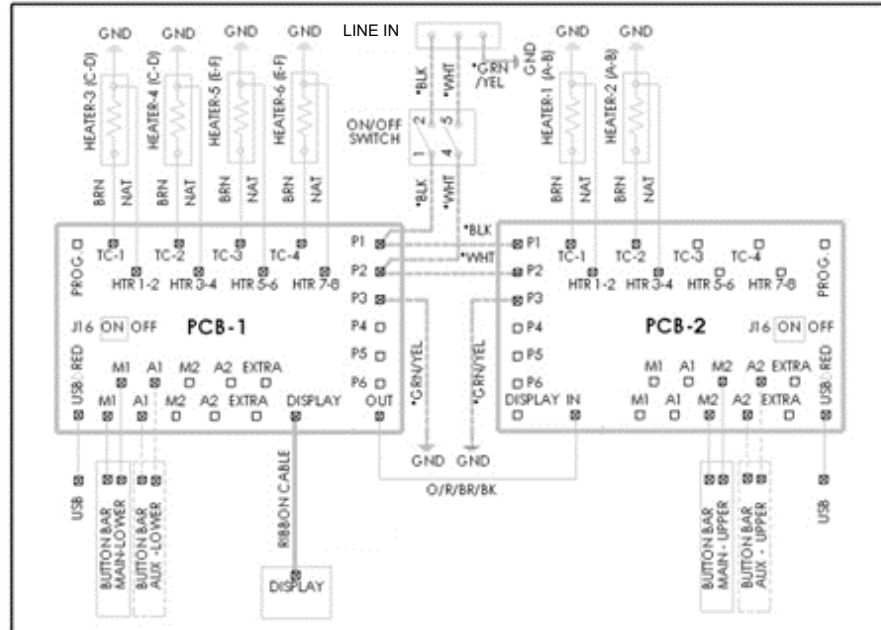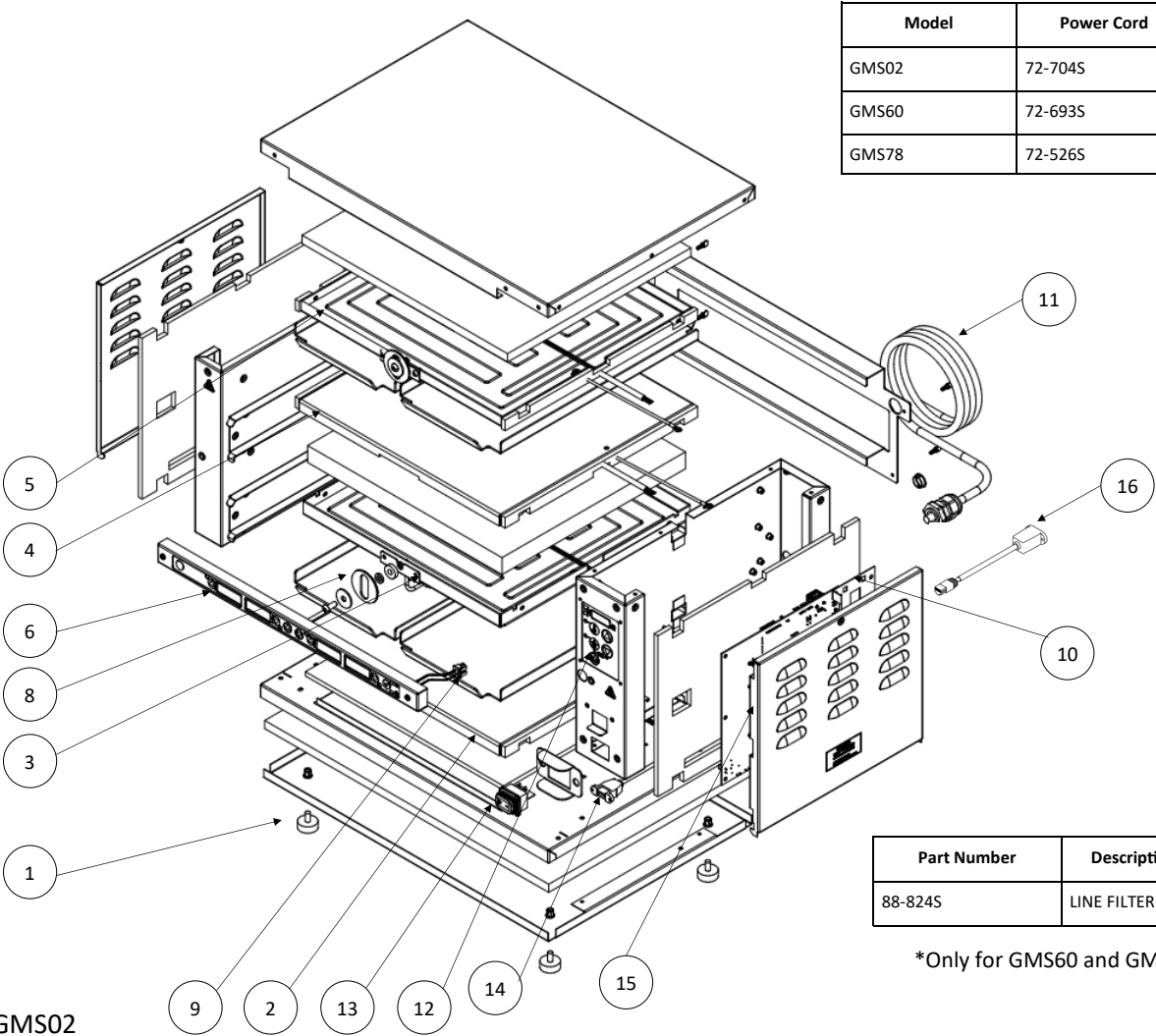
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A BERKSHIRE HATHAWAY COMPANY

Exploded View

Model	Power Cord
GMS02	72-704S
GMS60	72-693S
GMS78	72-526S

Part Number	Description
88-824S	LINE FILTER*

*Only for GMS60 and GMS78

EHB22F1-GMS02

ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION
1	197-232S	FOOT, 4 PACK	4*	540-1111S	HEATER ASSY, LOWER TOP SHELF 2W, 220V	11	POWER CORD	SEE CHART ABOVE
2*	540-1233S	HTR, BOTTOM SHELF, LOWER, 120V	5*	540-1120S	UPPER HEATER TOP SHELF, 220V	12	540-1215S	OVERLAY AND DISPLAY
3*	540-1234S	HTR, CENTER SHELF, UPPER, 120V	6	510-520S	4 CH MAIN BAR KIT	13	78-184S	POWER SWITCH
4*	540-1235S	HTR, CENTER SHELF, LOWER, 120V	7	510-521	4 CH AUX BAR KIT	14	94-1819S	USB CORD
5*	540-1236S	HTR, TOP SHELF, UPPER, 120V	8	540-1158S	LATCH, CATCH	15	541-1750S	EHB GM 2x2 5500 PCB KIT
2*	540-1107S	HEATER ASSY LOWER SHELF, 2W, 220V	9	540-1251S	LID, 4 PACK	16	95-2011S	ETHERNET CONNECTOR
3*	540-1108S	HEATER ASSY, UPPER, 2W, 220V	10	88-709-2-11S	SPEAKER			*2-5 DEPENDENT ON VOLTAGE OF UNIT

Exploded View

Model	Power Cord
GMS16	72-705S
GMS60	72-693S
GMS78	72-526S

Part Number	Description
88-824S	LINE FILTER*

*Only for GMS60 and GMS78
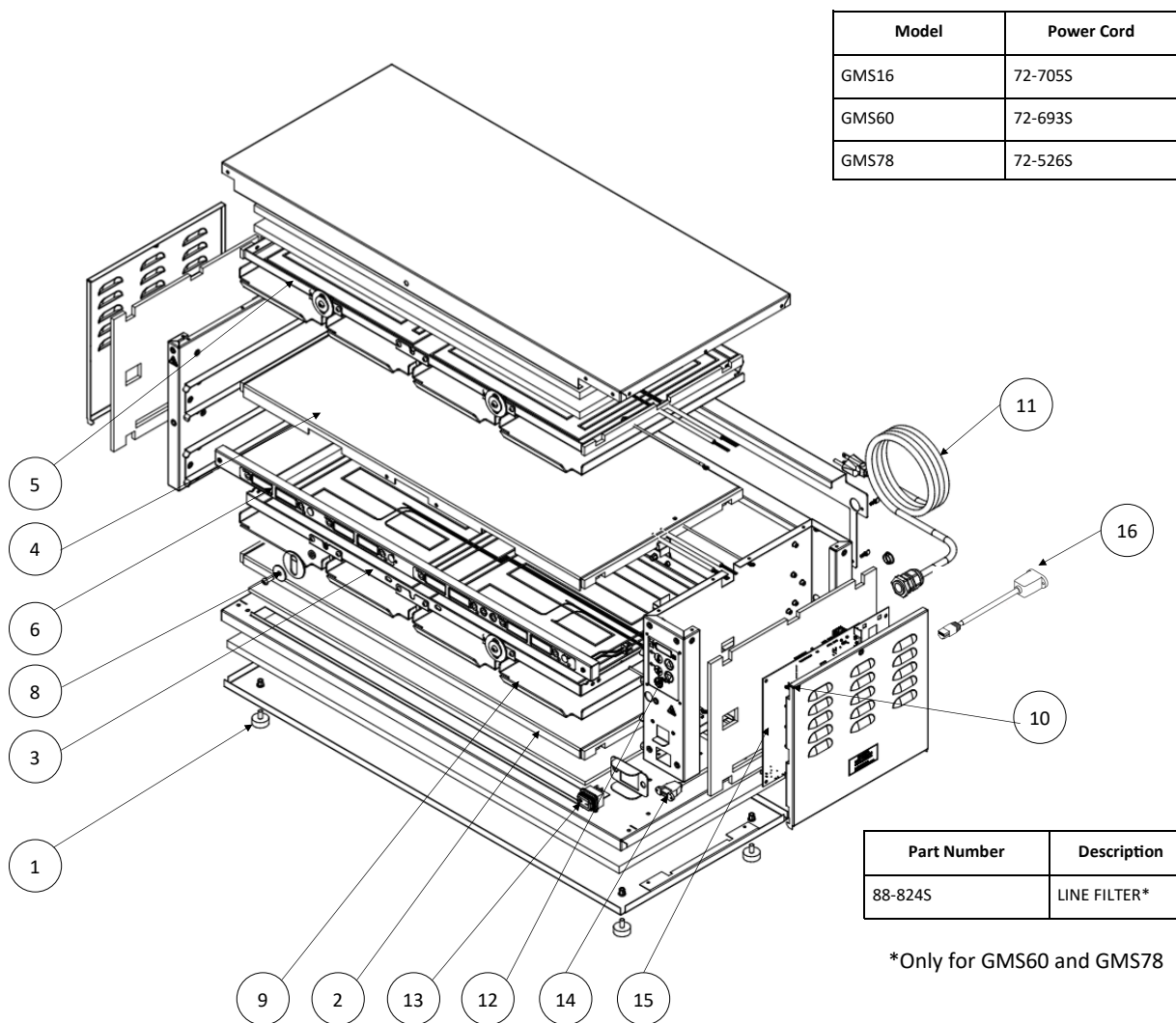
EHB24F2-GMS16

ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION
1	197-232S	FOOT 4 PACK	7	510-525S	8CH AUX BAR KIT	13	78-184S	POWER SWITCH
2	540-1072S	LOWER HEATER BASE	8	540-1158S	LATCH, CATCH	14	95-1819S	USB CORD
3	540-1226S	HEATER ASSY LOWER CAVITY, UPPER 4W	9	540-1251S	LID, 4 PACK	15	541-1752S	GM 2x4 5500 PCB KIT
4	540-1224S	HEATER ASSY, UPPER CAVITY, LOWER HTR 4W	10	88-709-2-11S	SPEAKER	16	95-2011S	ETHERNET CONNECTOR
5	540-1222S	HEATER ASSY, UPPER 4W	11	POWER CORD	SEE CHART ABOVE			
6	510-524S	8CH MAIN BAR KIT	12	540-1215S	OVERLAY AND DISPLAY			

PRINCECASTLE

MARMON FOODSERVICE TECHNOLOGIES
A BERKSHIRE HATHAWAY COMPANY

Exploded View

Model	Power Cord
GMS02	72-704S
GMS60	72-693S
GMS78	72-526S

EHB42F1-GMS02

Part Number	Description
88-824S	LINE FILTER*

*Only for GMS60 and GMS78

* Items 2-5 Dependent on Voltage

ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION	ITEM NO.	PART NUMBER	DESCRIPTION
1	197-232S	FOOT 4 PACK	4*	540-1111S	HEATER ASSY, LOWER TOP SHELF 2W, 220V	11	POWER CORD	SEE CHART ABOVE
2*	540-1233S	HTR, BOTTOM SHELF, LOWER, 120V	5*	540-1120S	UPPER HEATER TOP SHELF, 220V	12	540-1215S	OVERLAY AND DISPLAY
3*	540-1234S	HTR, CENTER SHELF, UPPER, 120V	6	510-526S	4 CH MAIN BAR KIT	13	78-184S	POWER SWITCH
4*	540-1235S	HTR, CENTER SHELF, LOWER, 120V	7	510-527S	4 CH AUX BAR KIT	14	95-1819S	USB CORD
5*	540-1236S	HTR, TOP SHELF, UPPER, 120V	8	540-1158S	LATCH, CATCH	15	541-1753S	GM 4x2 5500 PCB KIT
2*	540-1107S	HEATER ASSY LOWER SHELF, 2W, 220V	9	540-1251S	LID, 4 PACK	16	95-2011S	ETHERNET CONNECTOR
3*	540-1108S	HEATER ASSY, UPPER, 2W, 220V	10	88-709-2-11S	SPEAKER			

Exploded View

Model	Power Cord
GMS02	72-704S
GMS60	72-693S
GMS78	72-526S

EHB23R2-GMS16

ITEM NO.	PART NUMBER	DESCRIPTION
1	197-232S	FOOT 4 PACK
2	540-1118S	HEATER ASSY LOWER SHELF, UPPER 3W
3	540-1123S	HEATER ASSY, TOP SHELF LOWER 3W
4	540-1116S	HEATER ASSY, UPPER TOP 3W
5	540-1122S	LOWER HEATER BASE
6	510-522S	6CH MAIN BAR KIT

ITEM NO.	PART NUMBER	DESCRIPTION
7	510-523S	6CH AUX BAR KIT
8	540-1158S	LATCH, CATCH
9	540-1251S	LID, 4 PACK
10		
11	POWER CORD	SEE CHART ABOVE
12	540-1215S	OVERLAY AND DISPLAY
13	78-184S	POWER SWITCH

ITEM NO.	PART NUMBER	DESCRIPTION
14	95-1819S	USB CORD
15	541-1751S	GM 2x3 5500 PCB KIT
16	95-2011S	ETHERNET CONNECTOR
17	88-824S	LINE FILTER*
18	88-709-2-11S	SPEAKER

*Only for GMS50

PRINCECASTLE™

MARMON FOODSERVICE TECHNOLOGIES
A BERKSHIRE HATHAWAY COMPANY

Exploded View

Model	Power Cord
GMS17	72-705S
GMS50	72-404S
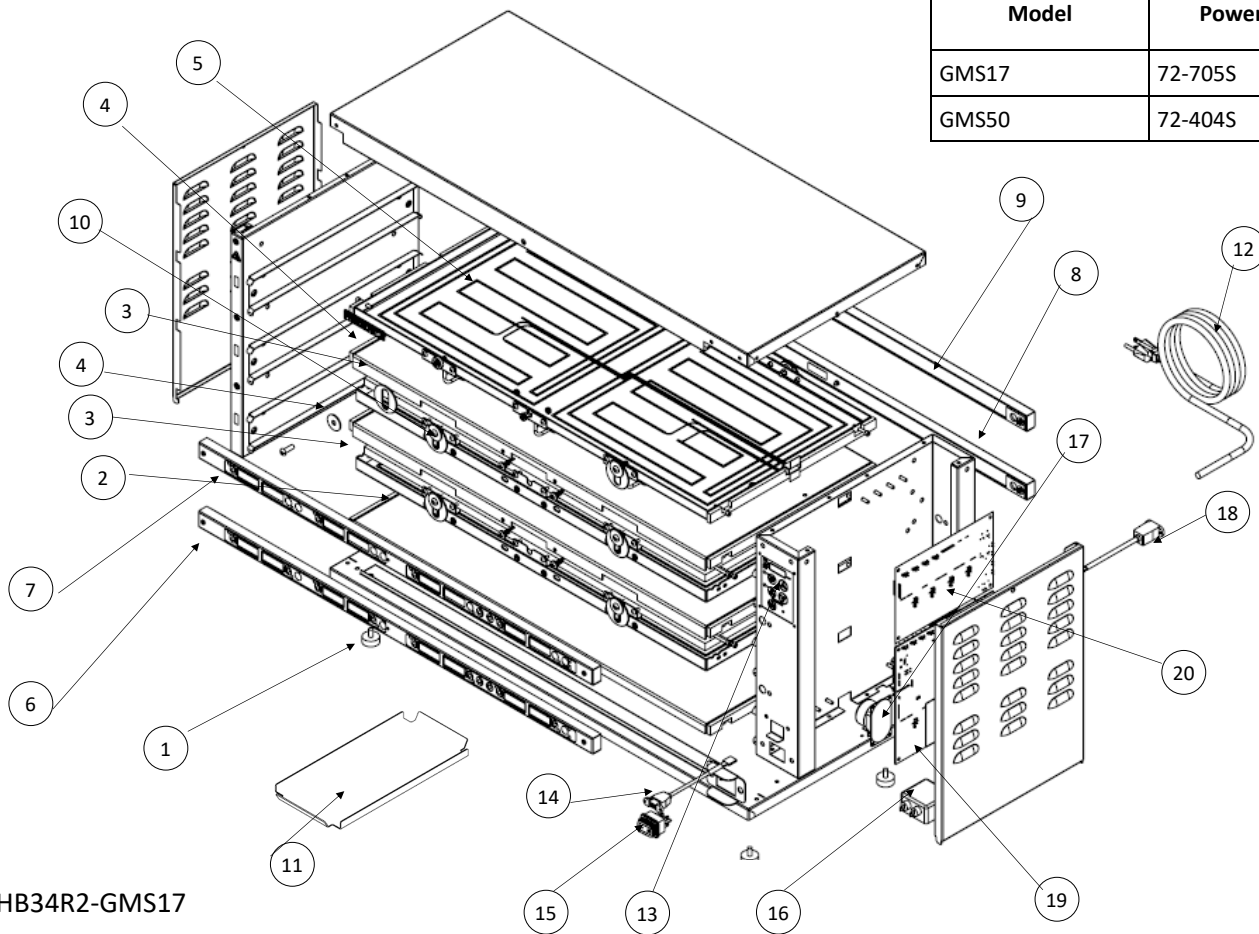
EHB34R2-GMS17

ITEM NO.	PART NUMBER	DESCRIPTION
1	197-232S	FOOT 4 PACK
2	540-1198S	HEATER ASSY, LOWER PANEL, BOTTOM SHELF
3	540-1230S	HEATER ASSY, LOWER SHELF, UPPER 3x4
4	540-1228S	HEATER ASSY, UPPER SHELF, TOP 3x4
5	540-1229S	HEATER ASSY, UPPER SHELF BOTTOM 3x4

ITEM NO.	PART NUMBER	DESCRIPTION
6	510-528S	8 CH MAIN BAR KIT
7	510-529S	8CH MAIN TOP BAR KIT
8	510-530S	8CH AUX BAR KIT
9	510-531S	8 CH AUX TOP BAR KIT
10	540-1158S	LATCH, CATCH
11	540-1251S	LID, 4 PACK
12	POWER CORD	SEE CHART ABOVE

ITEM NO.	PART NUMBER	DESCRIPTION
13	540-1215S	OVERLAY AND DISPLAY
14	95-1819S	USB CORD
15	78-184S	POWER SWITCH
16	88-824S	LINE FILTER*
17	88-709-2-11S	SPEAKER
18	95-2011S	ETHERNET CONNECTOR
19	541-1754S	GM 3x4 5500 PCB Kit
20	541-1755S	GM 3x4 Expansion PCB Kit

*Only for GMS50