

**All-Bottle 704
Installation/Service and
User Manual**

June 2004

BERG COMPANY, LLC

FCC Information:

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and, (2) this device must accept any interference received including interference that may cause undesired operation.

Note: The user is cautioned that any changes or modifications not expressly approved by the party responsible for FCC compliance could void the user's authority to operate the equipment.

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SECTION

1

Getting Started

The general guidelines provided in this section can help you take the necessary steps to make each **All-Bottle 704** installation run as smoothly as possible.

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System Components

The **All-Bottle 704** is a compact and affordable liquor dispensing system that is simple and easy to use. The system is composed of the following components.

| | |
|--|--|
| ECU (Electronic Control Unit) | The compact, lightweight console that controls pouring operations. One unit provides free-pouring style control for an unlimited number of brands using seven different price codes and four portion sizes. The LCD panel on the front of the ECU displays the price code and portion size of each pour and the total number of pours at each price code and portion size. Security is maintained through a keylock. |
| Activator Ring | A circular receiver attached to the ECU that reads the electronic price information on coded pourers. It sits in a holder when not in use and easily slips over the top of a bottle for pouring. |
| Coded Pourer | Specially designed pourers inserted and sealed into each liquor bottle. Metal coding bands in seven different combinations electronically identify price and portion information to the ECU. |
| ECR Interface | A parallel interface provided through a 15-pin D-sub connector on the back of the ECU. This provides a unique, predefined PLU for each pourer code and size from a base PLU which you select. |
| POS or Printer Interface | A serial interface provided through a 9-pin D-sub connector on the back of the ECU. Several POS protocols are supported. The POS interface provides a unique, predefined PLU for each pourer code and size from a base PLU which you select. The printer interface supports the printing of pour totals on a serial printer. |



All-Bottle 704 ECU

Activator Ring



Printer Interface



Coded Pourers

OR



POS System Interface



ECR Interface

Installation Game Plan

Berg offers the following checklist to expedite your installation of the **All-Bottle 704**. The sequence of steps follows the order tasks appear in this manual. To help you locate information quickly and easily, related tasks are grouped throughout the manual.

Getting Started 1. Gather the customer's setup information.

For more information about interfacing with a sales terminal, Berg authorized dealers are invited to go to the dealer area of the Berg web site, www.berg-controls.com.

- 2. Submit order for **All-Bottle 704** (Berg PN9008705) to Berg. If the system will be interfaced with a POS sales terminal, make sure the sales terminal supports Berg LDS. Include the sales terminal interface cable with your order. *Often there are setup requirements for the sales terminal Berg knows nothing about. Berg strongly suggests you develop a good working relationship with a local representative of the sales terminal company. This will enable you to test the POS interface before quoting or installing at a customer site.*

- 3. Set an installation date and assemble required materials.

Installation 4. Install the ECU mounting bracket.

- 5. Install the All-Bottle coded pourers.
- 6. For an ECR, attach a cable between the ECU and ECR.
- 7. For a printer or POS interface, attach a cable between the ECU and printer or POS system.
- 8. Secure the ECU to the mounting bracket.
- 9. Set up ECR, POS or Printer options and pouring options using the Setup menu.
- 10. For an ECR or POS interface, verify the correct PLUs are entered at the ECR or POS.
- 11. Calibrate portion sizes.

System Operation and Maintenance 12. Demonstrate pouring procedure.

Maintenance

- 13. View pour totals.
- 14. Print pour totals (if applicable).
- 15. Demonstrate cleaning procedures.
- 16. Go over financial controls.

Gather Customer Setup Information

Determine exactly what is needed for the installation to save time and surprises later.

ECU Pour Settings Find out which features to enable at the ECU. See the *ECU Setup* section for a description of each option.

Portion Sizes Record the correct portion amounts for Size 1-4 for each Code on the **All-Bottle 704 Setup Worksheet**. Use these amounts when you calibrate the pourers.

Categories of Liquor One example of organizing liquor by price codes is the following:

Code 1 Well Liquor

Code 2 Call Liquor

Code 3 Premium Liquor

Code 4 Domestic Cordials

Code 5 Premium Cordials

Code 6 Sherry

Code 7 Cognac

Free Poured Brands Some brands will continue to be free-poured and should not be entered on the list. They include Bailey's Irish Cream (and substitutes), Triple Sec, Galliano, Sweet Vermouth, Dry Vermouth, Creme de Cassis and Creme de Noya.

These items are used like orange juice in a Screwdriver. They are mixers and have no retail value. However, if customers frequently order any of these brands on the rocks or up, you should plan to lock them up with the appropriate pourers and enter them on the list.

Number of Pourers Needed Use the **All-Bottle 704 Setup Worksheet** to determine the quantity of each pourer needed. List the number of bottles of each brand used in the racks and reserve cabinets (par stock).

Include enough pourers to avoid having the bar restocked in mid-shift. Typically, you should have enough liquor locked up with coded pourers for twenty-four hours of operation.

For example, if there are three speed racks with one bottle of bar vodka in each plus eight bottles in the par stock for backup, the quantity of pourers needed for bar vodka would be eleven.

All-Bottle 704 Setup Worksheet

Pour Settings

- Portion Size Reset
- Restart Pour Delay _____ seconds
- Disable Portion Sizes
 - S R L X
- Default Portion Size
 - S R L X

ECR Settings

- Base PLU _____
- ECR Sense

POS Settings

- Base PLU _____
- Protocol
 - Berg Generic
 - Berg Basic
 - Micros 8700
 - Infogenesis
- Pour Function
 - POS (wait for release)
 - Always (always pour)

Print Settings

- Off
- Print

Pour Total Settings

- Life Totals
- Current Totals
- Enable Bartender Zero

| Code & Size | PLU | Name | oz/ml | Price |
|---------------|-----|------|-------|-------|
| Code 1 Size 1 | | | | |
| Size 2 | | | | |
| Size 3 | | | | |
| Size 4 | | | | |
| Code 2 Size 1 | | | | |
| Size 2 | | | | |
| Size 3 | | | | |
| Size 4 | | | | |
| Code 3 Size 1 | | | | |
| Size 2 | | | | |
| Size 3 | | | | |
| Size 4 | | | | |
| Code 4 Size 1 | | | | |
| Size 2 | | | | |
| Size 3 | | | | |
| Size 4 | | | | |
| Code 5 Size 1 | | | | |
| Size 2 | | | | |
| Size 3 | | | | |
| Size 4 | | | | |
| Code 6 Size 1 | | | | |
| Size 2 | | | | |
| Size 3 | | | | |
| Size 4 | | | | |
| Code 7 Size 1 | | | | |
| Size 2 | | | | |
| Size 3 | | | | |
| Size 4 | | | | |

All-Bottle 704 Setup Worksheet

Inserts Needed

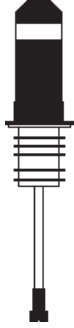
_____ Undersize inserts (PN 9007281)

_____ Oversize inserts (PN 9007282)


_____ Standard size inserts (PN 9007122)

_____ Extra large inserts (PN 9008799)

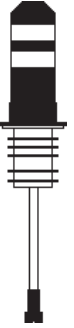
Pourers Needed

| Brand | Rack Bottles | Reserve Bottles | |
|----------------------|--------------------------|----------------------------|---|
| _____ | <input type="checkbox"/> | <input type="checkbox"/> |  |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
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| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| Total Pourers | <input type="checkbox"/> | + <input type="checkbox"/> | = <input type="checkbox"/> |

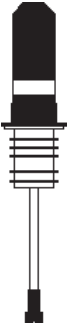
1

| Brand | Rack Bottles | Reserve Bottles | |
|----------------------|--------------------------|----------------------------|---|
| _____ | <input type="checkbox"/> | <input type="checkbox"/> |  |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
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| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| Total Pourers | <input type="checkbox"/> | + <input type="checkbox"/> | = <input type="checkbox"/> |

2

| Brand | Rack Bottles | Reserve Bottles | |
|----------------------|--------------------------|----------------------------|---|
| _____ | <input type="checkbox"/> | <input type="checkbox"/> |  |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
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| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| Total Pourers | <input type="checkbox"/> | + <input type="checkbox"/> | = <input type="checkbox"/> |


3


| Brand | Rack Bottles | Reserve Bottles | |
|----------------------|--------------------------|----------------------------|---|
| _____ | <input type="checkbox"/> | <input type="checkbox"/> |  |
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| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| Total Pourers | <input type="checkbox"/> | + <input type="checkbox"/> | = <input type="checkbox"/> |


4

All-Bottle 704 Setup Worksheet

Pourers Needed (cont.)

| Brand | Rack Bottles | Reserve Bottles | |
|---------------|--------------------------|----------------------------|---|
| _____ | <input type="checkbox"/> | <input type="checkbox"/> |  |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
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| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| Total Pourers | <input type="checkbox"/> | + <input type="checkbox"/> | = <input type="checkbox"/> |

| Brand | Rack Bottles | Reserve Bottles | |
|---------------|--------------------------|----------------------------|---|
| _____ | <input type="checkbox"/> | <input type="checkbox"/> |  |
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| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| Total Pourers | <input type="checkbox"/> | + <input type="checkbox"/> | = <input type="checkbox"/> |

| Brand | Rack Bottles | Reserve Bottles | |
|---------------|--------------------------|----------------------------|---|
| _____ | <input type="checkbox"/> | <input type="checkbox"/> |  |
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| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| _____ | <input type="checkbox"/> | <input type="checkbox"/> | |
| Total Pourers | <input type="checkbox"/> | + <input type="checkbox"/> | = <input type="checkbox"/> |

Tools and Materials Required

Berg offers the following list to help in your preparation for an **All-Bottle 704** installation.

Tools Required

- Phillips screwdriver
- Heat gun (if using heat shrinkable seals)
- Pressure release tool
- Graduated cylinder (for calibration)
- Software CD with support tools and manual

Equipment Preparation

Make sure the **All-Bottle 704** equipment arrives at your shop a few days before you plan to install the system. Open the boxes and check to see you have everything you need. Also, verify nothing was damaged during shipping.

ECU Modes of Operation

A Bartender key and a Manager key maintain security at the ECU. These keys are used to access the five modes of ECU operation.

Bartender Key

The bartender key can access three modes of the key switch: **OFF**, **OPERATE**, and **READ**.

OPERATE Mode

Use this mode to pour drinks.



■ To access OPERATE mode:

1. Insert either key in the ECU's front key slot and turn to the OPERATE position.

READ Mode

Use this mode to view or print pour totals.



■ To access READ mode:

1. Insert either key in the ECU's front key slot and turn to the READ position.

OFF Mode

Use this mode to disable all ECU functions.



■ To access OFF mode:

1. Insert either key in the ECU's front key slot and turn to the OFF position. Wait a few seconds while the ECU is disabled.

Manager Key

The manager key can access all modes of the key switch: **OFF**, **OPERATE**, **READ**, **CAL** and **SETUP**.

CAL Mode

Use this mode to calibrate portion sizes.



■ To access CAL mode:

1. Insert the Manager key in the ECU's front key slot and turn to the CAL position.

SETUP Mode

Use this mode to enter all setup options.



■ To access SETUP mode:

1. Insert the Manager key, press "S" and turn the key to the CAL position.



SECTION

2 Installation

It's best to install the system early in the week, giving the bartenders a few days to operate the system before a busy weekend. It's also best to install the system early in the morning before any bartenders arrive. Refer to this section for help with the following tasks:

| | |
|--|------|
| Install the ECU | 2-2 |
| Install the All-Bottle Coded Pourers | 2-4 |
| Connect the ECU to an Electronic Cash Register | 2-6 |
| Connect the ECU to a POS System | 2-8 |
| PLU Table | 2-10 |
| Connect the ECU to a Printer | 2-12 |

Install the ECU

The **All-Bottle 704** ECU is designed for easy installation under the bar. It should be mounted 1/4 inch to 3/4 inch (.6 cm to 1.6 cm) back from the front edge of the bar to help protect it from liquid damage. Install the ECU as far away from sinks, dishwashers and other sources of water or steam as is practical.



Mounting bracket



Power supply

■ To install the ECU:

1. Select a location for the ECU within 5 1/2 feet (1.7 meters) of a properly grounded 110 VAC (or 220 VAC) electrical outlet.
2. Install the ECU mounting bracket securely under the bar using the four wood screws provided.
3. Attach any cables to the back of the ECU before mounting the ECU to insure ease of access. See *Connect the ECU to a Printer*, *Interface the ECU to an ECR* or *Interface the ECU to a POS System* in this section.
4. Secure the ECU to the mounting bracket with the two machine screws provided.
5. Mount the activator ring holder to the right of the ECU using 4 wood screws. Mount the holder to a secure surface where it will be within the bartender's convenient reach.
6. Attach the cable that connects the 12-volt DC power supply to the ECU.
7. Plug the power supply into the electrical outlet.
(Safe electrical practice is to always make all other connections before connecting to the electrical outlet.)

Caution

Operating Environment

The components that comprise the **All-Bottle 704** system have been designed to perform well in a typical bar, restaurant, or stadium environment. However, as with all electronic equipment, certain guidelines should be followed in locating the components. For the ECU a protected, dry and clean location is required. The operating temperature range for this component is from 5° C to 40° C (41° F to 104° F).

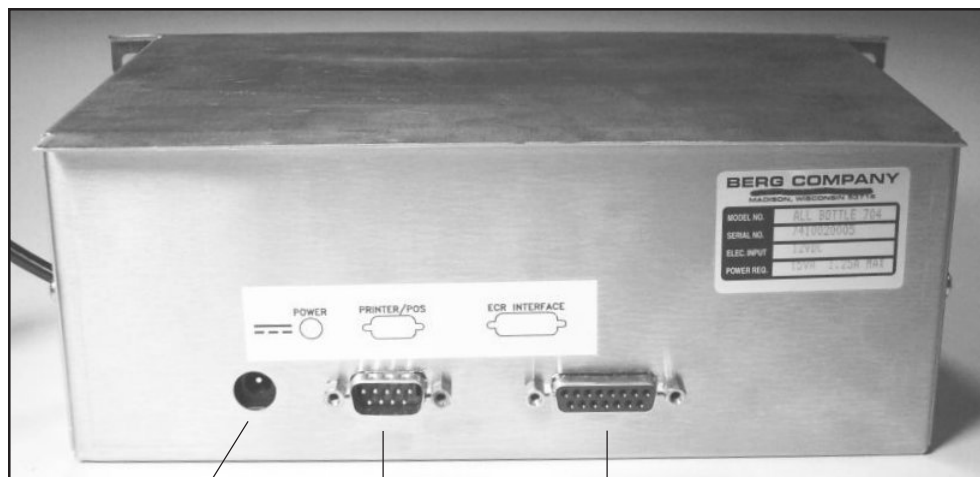
All-Bottle 704 ECU



Activator ring holder



ECU back panel



Attach
power cable

Attach POS
or printer
cable

Attach ECR
cable

Install the All-Bottle Coded Pourers

To insure a perfect fit in each liquor bottle, Berg offers inserts (the part of the coded pourer that fits in the bottle) in four sizes. To complete an **All-Bottle 704** installation, be sure to have an ample supply of varying sizes of inserts, an appropriate number of each of the seven price coded pourers and a box of security seals.

■ To install the All-Bottle coded pourers:

1. Select the appropriately coded pourer for the liquor bottle and attach the right size insert. Remove a numbered seal and mylar tab from the box of security seals.
2. Firmly insert the pourer into the bottle. Use the pressure release tool (Berg PN 9008733) to prevent liquor being forced out of a full bottle. To use the tool, insert half the length of plastic cord in the bottle. Insert the pourer completely and pull out the tool with an upward motion while maintaining hold of the pourer and bottle.
3. Slide the opening in the mylar tab over the top of the pourer with the adhesive side down. Align the notch in the mylar tab with the notch in the pourer. Pull both tab ends down tight onto the neck of the bottle.

Wrap a numbered seal around the neck of the bottle and the mylar tab ends. Make sure you can still read the number on the seal. The lower edge of the seal should be even with the lower edge of the mylar tab ends.

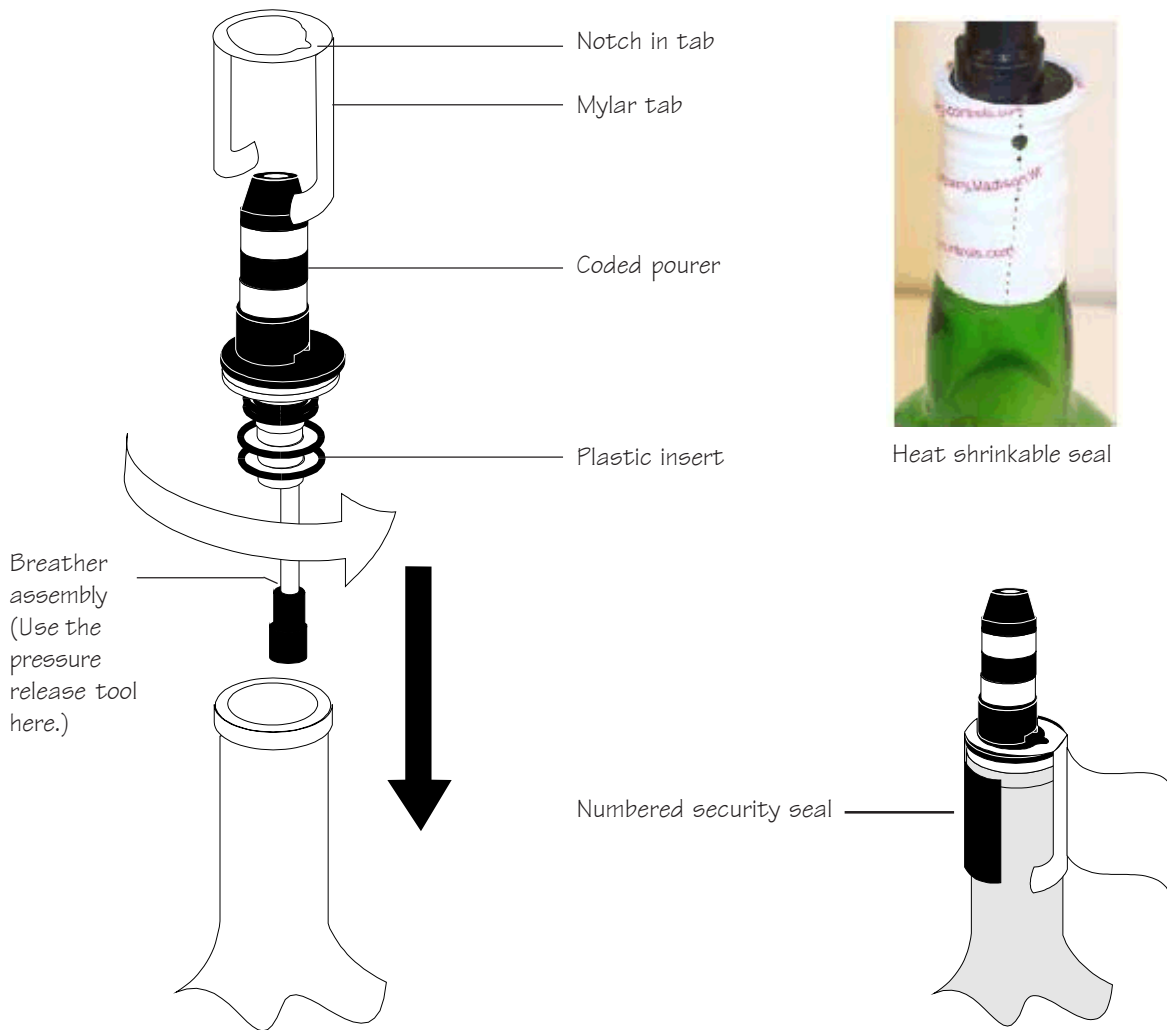
OR

Slide the heat shrinkable preformed seal over the pourer and apply heat evenly to shrink the seal to the bottle.

4. Repeat steps 1-3 for each liquor bottle.

■ To change an insert on the All-Bottle coded pourers:

1. Remove the current insert by pulling and twisting it from the coded pourer.
2. Select a new size insert. Choose from an undersize insert (Berg PN 9007281), a standard size insert (Berg PN 9007122), an oversize insert (Berg PN 9007282) or an extra large insert (Berg PN 9008799).
3. Push the new insert onto the coded pourer.



Note

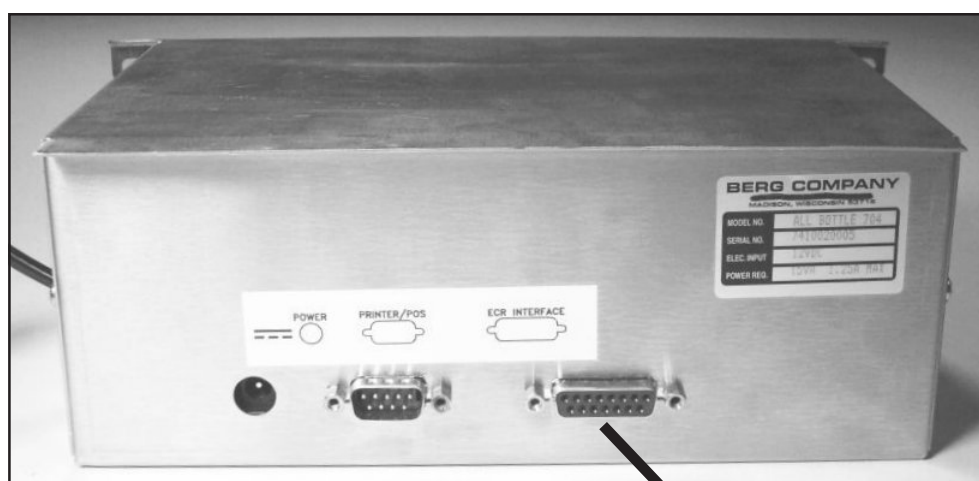
- ❑ It's essential to clean coded pourers when they're removed from empty bottles. See *Clean the Coded Pourers* in the *Maintenance* section.

Connect the ECU to an Electronic Cash Register

In addition to making the necessary hardware connections for communication between the ECU and cash register, you need to select ECR setup options.

■ To connect the ECU to an ECR:

1. An interface board must be installed in the cash register. Arrange for this well in advance of the install date. If your cash register representative is not familiar with the Berg ECR interface, contact your Berg dealer for more details about obtaining the required interface hardware.
2. Connect the interface cable from the cash register to the back of the ECU using the 15-pin ECR Interface port. Tighten the connecting screws.

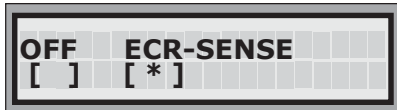


ECU back panel

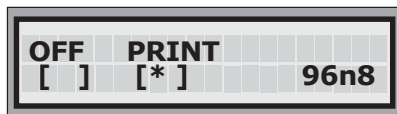
Attach ECR cable



Electronic cash register



⋮



■ **To set up the ECR interface:**

1. Access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.

2. Press the "R" button to select the ECR interface.

Press

3. To enable the ECR-Sense feature, press the "R" button.

This feature checks for a valid ECR connection before initiating a pour. If an ECR is not detected, the ECU will not pour. If you don't have an ECR interface that supports this feature, press the "S" button to select "OFF" or you will not be able to pour.

Press

4. Select the base PLU by pressing "S" or "R". Press "L" to see the next choices.

The number you select is the base for assigning a PLU to every size of every pourer code. See the *PLU Table* in this section. To define your own PLU base, select the last choice (12345...). Define the base using an ECU setup file. See *Edit an ECU Setup File* in the *Files & Cloning* section.

Make sure you enter matching PLUs at the ECR.

Press

5. To enable printing of pour counts, press the "R" button. See *Connect the ECU to a Printer* in this section.

6. When you're ready to exit SETUP mode, turn the key to a different mode.

Note

- ☐ All changes are saved as you make them.

Connect the ECU to a POS System

In addition to making the necessary hardware connections for communication between the ECU and POS system, you need to select POS setup options.

■ To connect the ECU to an POS system:

1. Connect the interface cable from the POS system to the back of the ECU using the 9-pin Printer/POS port. Tighten the connecting screws.



ECU back panel

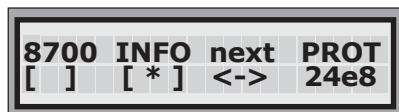
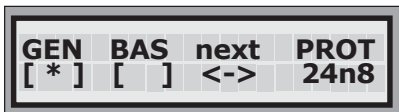
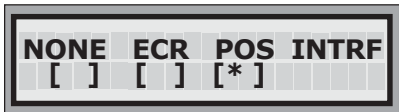
Attach POS cable



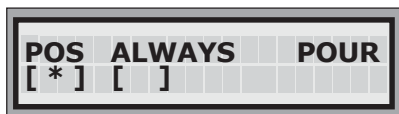
POS System

POS Protocol

- **Berg Generic**
2400 baud, no parity, 8 bits
- **Berg Basic**
9600 baud, no parity, 8 bits
- **Micros 8700**
9600 baud, even parity, 7 bits
- **Infogenesis**
2400 baud, even parity, 8 bits



⋮



■ **To set up the POS interface:**

1. Access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.

2. Press "L" to select the POS interface.



3. Select a POS protocol. See the *POS Protocol* sidebar.

Press "S" to select the **Berg Generic** protocol.

Press "R" to select the **Berg Basic** protocol.

(Press "L" to see the other 2 protocol choices.)

Press "S" to select the **Micros 8700** protocol.

Press "R" to select the **Infogenesis** protocol.



4. Select the base PLU by pressing "S" or "R". Press "L" to see the next choices.

The number you select is the base for assigning a PLU to every size of every pourer code. See the *PLU Table* in this section. To define your own PLU base, select the last choice (12345...). Define the base using an ECU setup file. See *Edit an ECU Setup File* in the *Files & Cloning* section. The Infogenesis protocol only uses 100, 150, 200 as a base PLU.

Make sure you enter matching PLUs in the POS system.



5. Select a POS pour function.

Press "S" to enable Wait For POS. This means the ECU waits for a valid POS response before initiating a pour. If a response is not detected, the ECU will not pour.

Press "R" to enable Always Pour. This means the ECU always pours without waiting for a valid POS response.

6. When you're ready to exit SETUP mode, turn the key to a different mode.

Note

- ☐ All changes are saved as you make them.

PLU Table

When the ECU sends pour information to an ECR or POS system, it uses the 28 pre-defined PLUs from one of these columns. Use the setup menu to select a base PLU.

| PLU Base | PLU-0 100 | PLU-1 150 | PLU-2 200 | PLU-3 250 | PLU-4 300 | PLU-5 350 |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Code 1, Size 1 | 101 | 151 | 201 | 251 | 301 | 351 |
| Code 2, Size 1 | 102 | 152 | 202 | 252 | 302 | 352 |
| Code 3, Size 1 | 103 | 153 | 203 | 253 | 303 | 353 |
| Code 4, Size 1 | 104 | 154 | 204 | 254 | 304 | 354 |
| Code 5, Size 1 | 105 | 155 | 205 | 255 | 305 | 355 |
| Code 6, Size 1 | 106 | 156 | 206 | 256 | 306 | 356 |
| Code 7, Size 1 | 107 | 157 | 207 | 257 | 307 | 357 |
| Code 1, Size 2 | 111 | 161 | 211 | 261 | 311 | 361 |
| Code 2, Size 2 | 112 | 162 | 212 | 262 | 312 | 362 |
| Code 3, Size 2 | 113 | 163 | 213 | 263 | 313 | 363 |
| Code 4, Size 2 | 114 | 164 | 214 | 264 | 314 | 364 |
| Code 5, Size 2 | 115 | 165 | 215 | 265 | 315 | 365 |
| Code 6, Size 2 | 116 | 166 | 216 | 266 | 316 | 366 |
| Code 7, Size 2 | 117 | 167 | 217 | 267 | 317 | 367 |
| Code 1, Size 3 | 121 | 171 | 221 | 271 | 321 | 371 |
| Code 2, Size 3 | 122 | 172 | 222 | 272 | 322 | 372 |
| Code 3, Size 3 | 123 | 173 | 223 | 273 | 323 | 373 |
| Code 4, Size 3 | 124 | 174 | 224 | 274 | 324 | 374 |
| Code 5, Size 3 | 125 | 175 | 225 | 275 | 325 | 375 |
| Code 6, Size 3 | 126 | 176 | 226 | 276 | 326 | 376 |
| Code 7, Size 3 | 127 | 177 | 227 | 277 | 327 | 377 |
| Code 1, Size 4 | 131 | 181 | 231 | 281 | 331 | 381 |
| Code 2, Size 4 | 132 | 182 | 232 | 282 | 332 | 382 |
| Code 3, Size 4 | 133 | 183 | 233 | 283 | 333 | 383 |
| Code 4, Size 4 | 134 | 184 | 234 | 284 | 334 | 384 |
| Code 5, Size 4 | 135 | 185 | 235 | 285 | 335 | 385 |
| Code 6, Size 4 | 136 | 186 | 236 | 286 | 336 | 386 |
| Code 7, Size 4 | 137 | 187 | 237 | 287 | 337 | 387 |

| PLU Base | PLU-6 400 | PLU-7 450 | PLU-8 500 | PLU-9 550 | PLU-U User |
|----------------|--------------|--------------|--------------|--------------|---------------|
| Code 1, Size 1 | 401 | 451 | 501 | 551 | base + 1 |
| Code 2, Size 1 | 402 | 452 | 502 | 552 | base + 2 |
| Code 3, Size 1 | 403 | 453 | 503 | 553 | base + 3 |
| Code 4, Size 1 | 404 | 454 | 504 | 554 | base + 4 |
| Code 5, Size 1 | 405 | 455 | 505 | 555 | base + 5 |
| Code 6, Size 1 | 406 | 456 | 506 | 556 | base + 6 |
| Code 7, Size 1 | 407 | 457 | 507 | 557 | base + 7 |
| Code 1, Size 2 | 411 | 461 | 511 | 561 | base + 11 |
| Code 2, Size 2 | 412 | 462 | 512 | 562 | base + 12 |
| Code 3, Size 2 | 413 | 463 | 513 | 563 | base + 13 |
| Code 4, Size 2 | 414 | 464 | 514 | 564 | base + 14 |
| Code 5, Size 2 | 415 | 465 | 515 | 565 | base + 15 |
| Code 6, Size 2 | 416 | 466 | 516 | 566 | base + 16 |
| Code 7, Size 2 | 417 | 467 | 517 | 567 | base + 17 |
| Code 1, Size 3 | 421 | 471 | 521 | 571 | base + 21 |
| Code 2, Size 3 | 422 | 472 | 522 | 572 | base + 22 |
| Code 3, Size 3 | 423 | 473 | 523 | 573 | base + 23 |
| Code 4, Size 3 | 424 | 474 | 524 | 574 | base + 24 |
| Code 5, Size 3 | 425 | 475 | 525 | 575 | base + 25 |
| Code 6, Size 3 | 426 | 476 | 526 | 576 | base + 26 |
| Code 7, Size 3 | 427 | 477 | 527 | 577 | base + 27 |
| Code 1, Size 4 | 431 | 481 | 531 | 581 | base + 31 |
| Code 2, Size 4 | 432 | 482 | 532 | 582 | base + 32 |
| Code 3, Size 4 | 433 | 483 | 533 | 583 | base + 33 |
| Code 4, Size 4 | 434 | 484 | 534 | 584 | base + 34 |
| Code 5, Size 4 | 435 | 485 | 535 | 585 | base + 35 |
| Code 6, Size 4 | 436 | 486 | 536 | 586 | base + 36 |
| Code 7, Size 4 | 437 | 487 | 537 | 587 | base + 37 |

To define your own base PLU, see *Edit an ECU Setup File* in the *Files & Cloning* section

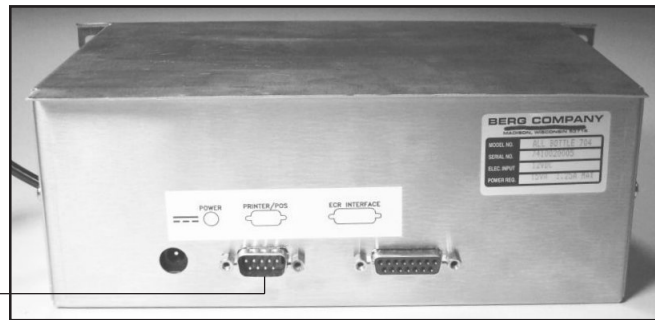
Connect the ECU to a Printer

In addition to making the necessary hardware connections for communication between the ECU and printer, you need to select the printer setup options.



Printer (Epson TM-U200)

Attach printer cable



■ To connect the ECU to a printer:

1. Connect a null modem cable from the printer to the back of the ECU using the 9-pin Printer/POS port. Tighten the connecting screws.

■ To set up the printer interface:

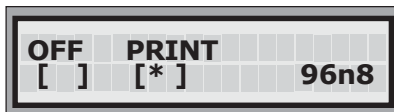
You may have already set up the printer interface when you set up an ECR interface.

1. Access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.



2. Press "S" to select NONE or "R" to select ECR .

Press



3. Press "R" to enable the printer interface.

The serial speed is 9600 baud, no parity, 8 bits.

4. When you're ready to exit SETUP mode, turn the key to a different mode.

Notes

- All changes are saved as you make them.

- The switch settings for an EPSON TM-U200 printer are:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------------|---|---|---|---|---|---|---|---|
| DSW1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| DSW2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

- These settings are:

| | |
|-----------|-----------|
| Baud Rate | 9600 |
| Data | 8 bits |
| Parity | None |
| Stop | 1 or more |
| Handshake | XON/XOFF |

- To view the EPSON TM-U200 printer's setup parameters, press in the FEED button and turn the power on. The current settings are printed out.

3 ECU Setup

Set up pouring options at the ECU using a Manager key. (For help copying setup values to another ECU or using an ECU setup file, see the *Files & Cloning* section.) Refer to this section for help with the following tasks:

| | |
|---|-----|
| Set Up Portion Size Reset | 3-2 |
| Set Up Restart Pour Delay | 3-3 |
| Set Up Pour Count Settings | 3-4 |
| Clear Current Pour Counts (Manager Key) | 3-6 |
| Disable Portion Sizes | 3-7 |
| Set A Default Portion Size | 3-8 |

Set Up Portion Size Reset

Portion Size Reset means the ECU automatically resets the portion size to the default size after every pour. This saves the bartender the extra step of pressing the size button for every default size pour. To set up your default portion size see *Set A Default Portion Size* in this section.

How it works

If you don't enable Portion Size Reset, the ECU doesn't reset the portion size. If you enable Portion Size Reset, the ECU resets the portion size to the default size after every pour. (You can still press the other size buttons.)



■ To set portion size reset:

1. Access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.



2. Press  repeatedly until you see this screen.

3. Press "R" to select SIZE-RESET.

OR

Press "S" to turn off SIZE-RESET.

4. When you're ready to exit SETUP mode, turn the key to a different mode.

Set Up Restart Pour Delay

Restart Pour Delay is convenient when you're pouring multiple identical drinks. With this feature enabled, a coded pourer continues to pour identical drinks at a specified interval as long as the pourer is inverted.

How it works


If you enable Restart Pour Delay, you can pour a drink and then move the inverted pourer over another glass and a second pour begins after the selected interval. If you disable this feature, you must tip the bottle upright when you finish a pour and then invert it again to pour an identical drink.



■ To set restart pour delay:

1. Access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.



2. Press  repeatedly until you see this screen.

3. Press "R" to select RESTART-POUR.

OR

Press "S" to turn off RESTART-POUR.



4. If you enabled restart pour delay, press "L" repeatedly to set the number of delay seconds.

Each push increases the restart delay by .2 seconds. Press "X" to decrease the delay.

5. When you're ready to exit SETUP mode, turn the key to a different mode.

Set Up Pour Count Settings

You can view and print pour counts in either Current or Lifetime mode. You can select a different mode at any time.

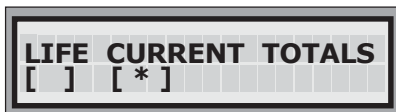
How it works

If you enable **Current** totals, the pour counts shown are the totals since the last zeroing out. A cumulative lifetime total of all pours is still shown, as well as the lifetime total from the Last time totals were zeroed out. (If you record the Lifetime total when you Z, it should match the Last lifetime total the next time you Z. This can help verify no unauthorized pouring or zeroing is taking place.)

If you enable Bartender Zero, anyone with a bartender key can zero the current totals. (This does not affect the Lifetime totals, which are always kept.) Otherwise, current totals are zeroed out only with a manager key.


If you enable **Lifetime** totals, all pour counts shown are for the life of the ECU.

See *Read Pour Totals* and *Print Pour Totals* in the *All-Bottle Pouring* section to see example pour counts in each mode.



■ To select a pour count mode:


1. Access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.

2. Press  repeatedly until you see this screen.

3. Press "S" to select LIFE. This means all pour counts are for the life of the ECU.

OR

Press "R" to select CURRENT. This means pour counts are the totals since the last zeroing out.

4. If you selected CURRENT, press . Press "R" to enable Bartender Zero. This means current totals can be zeroed when totals are read or printed with a bartender key.

OR

Press "S" to disable Bartender Zero. This means current

totals can only be zeroed with a manager key. See *Clear Current Pour Counts (Manager Key)* in this section.

5. When you're ready to exit SETUP mode, turn the key to a different mode.

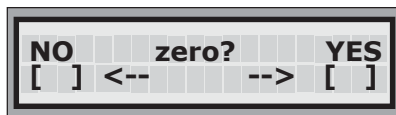
Clear Current Pour Counts (Manager Key)


If you disable Bartender Zero, the only way to zero out current pour counts is with a Manager key in the Setup menu.



■ To zero current totals:

1. Access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.



2. Press  repeatedly until you see this screen.

3. Press "X" to zero all current totals. (The lifetime total of all sizes and codes is always retained.)

OR

Press "S" if you decide not to zero current totals at this time.

4. When you're ready to exit SETUP mode, turn the key to a different mode.

Disable Portion Sizes

You can disable any portion sizes you don't need or don't want bartenders to use. Disabling a size disables it for all pourer codes.


How it works

You can disable any portion size (S, R, L, X). When a size is disabled, drinks cannot be poured using that size button, no matter which pourer code is used. You can disable up to 3 sizes at one time. You can enable or disable sizes at any time. Disabled sizes do not appear on the display.



Size "X" is disabled.

■ To disable portion sizes:

1. Access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.
2. Press  repeatedly until you see this screen.
3. Press the size button(s) you want to disable (**S**, **R**, **L** or **X**). To enable a disabled size, press the same size button. (The disabling feature toggles on and off.)
4. When you're ready to exit SETUP mode, turn the key to a different mode.

Notes

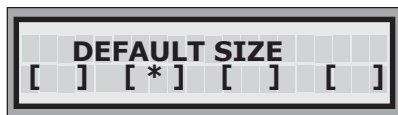
- To disable a particular pourer code/portion size combination, see *Calibrate Portion Sizes* in the *All-Bottle Pouring* section.
- To disable all 4 sizes, turn the ECU off.

Set A Default Portion Size

You can specify any portion size (S, R, L, X) as your default size. The default size is only used if you've enabled Portion Size Reset. See *Set Up Portion Size Reset* in this section.


How it works

Your default size should be the portion size you use most often. If you enable Portion Size Reset, the ECU resets the portion size to your default size after every pour. This saves the extra step of pressing the portion size button for a default size pour. You can change your default size at any time.



Size "R" is the default size.

■ To set a default portion size:

1. Access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.
2. Press  repeatedly until you see this screen.
3. Press the size button(s) you want as your default size (**S**, **R**, **L** or **X**).
4. When you're ready to exit SETUP mode, turn the key to a different mode.

4 Files & Cloning

Using a null modem cable, you can quickly copy ECU setup values to additional ECUs (cloning). You can also set up ECUs with a setup file you edit at a computer. Refer to this section for help with the following tasks:

| | |
|--|------|
| Copy Setup Values to Another ECU (Cloning) | 4-2 |
| Export ECU Setup Values to a File | 4-4 |
| Import ECU Setup Values from a File | 4-6 |
| Berg Terminal Software | 4-8 |
| Edit an ECU Setup File | 4-10 |

Copy Setup Values to Another ECU (Cloning)

Use this feature after you've set up one ECU to "clone" its values to any other 704 ECU.

■ To copy ECU values to another ECU:

1. Connect a null modem cable (Berg PN 8007020) to the back of one ECU using the 9-pin POS port. Connect the other end to the back of the other ECU. Tighten all connecting screws.

2. On both ECUs, access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.



3. Press  repeatedly until you see this screen.



4. On the receiving ECU, press the "X" button.

The values are coming "in" to this ECU. Be sure the receiving ECU is in this mode before you send the copy.



5. On the sending ECU, press "S".

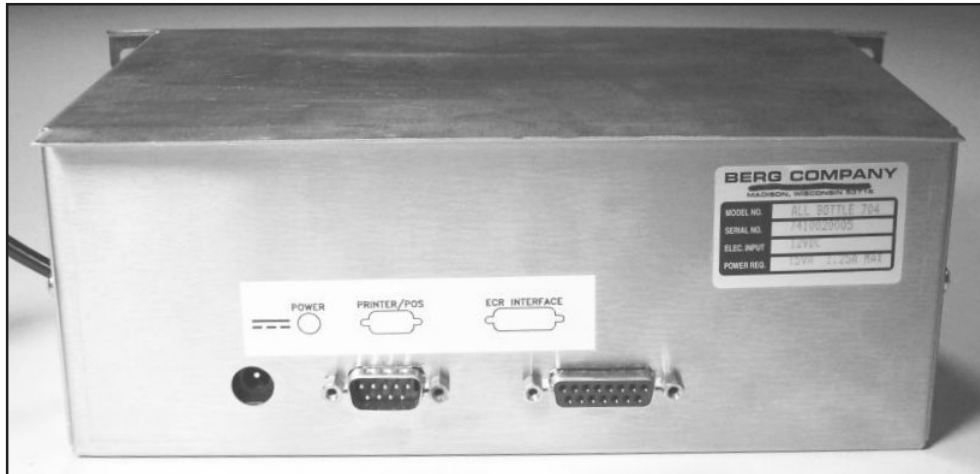
The values are going "out" of this ECU. As soon as you press "S", the values are sent.



6. Repeat steps 1-5 for any ECU that needs a copy of the original ECU values.

7. When you're ready to exit SETUP mode, turn the key to a different mode.

8. Disconnect the cable from the ECUs.



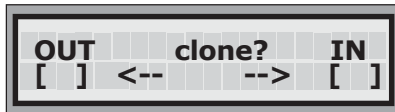
Attach null modem cable
here (on both ECUs)


Export ECU Setup Values to a File

Use this feature to copy an ECU's setup values to a computer text file. A computer file provides archive storage of setup values and/or permits further editing of setup values at the computer.

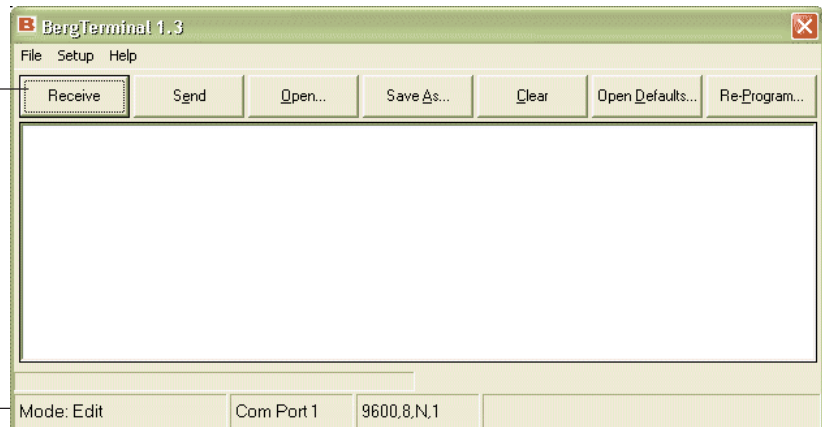
■ To export ECU values to a file:

1. Connect a null modem cable (Berg PN 8007020) to a COM port on the computer. Connect the other end to the back of the ECU. Tighten all connecting screws.
2. Run Berg Terminal software on the computer. Make sure the communication settings are correct. (See *Berg Terminal Software* in this section.)
3. At the computer, click **Receive**. Be sure the software is in "Receive Mode" before exporting from the ECU.
4. At the ECU, access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.



5. Press  repeatedly until you see this screen.
6. Press "S".
The values are going "out" of this ECU. As soon as you press "S", the values are sent.
7. Click **End Receive** at the computer once you see the file.
8. Edit, save and/or print the text file received at the computer. See *Edit an ECU Setup File* in this section.
9. To send a file back to the ECU from the computer, see *Import ECU Setup Values from a File* in this section.
10. When you've finished all communications, disconnect the null modem cable from the ECU and computer.

Click **Receive** to put the software in Receive Mode

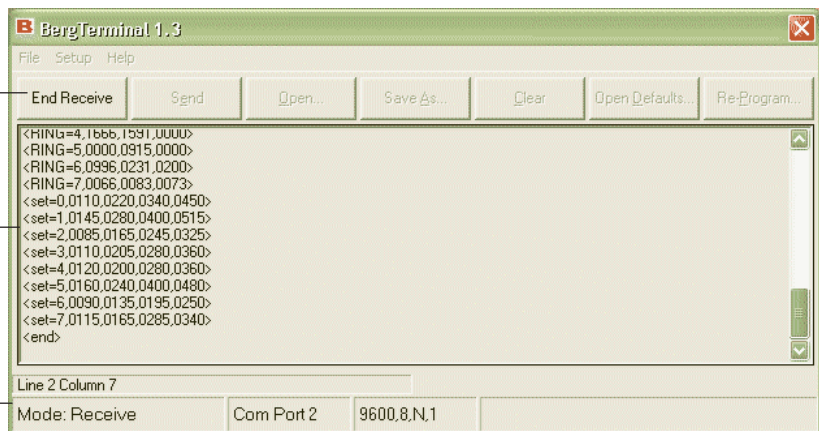


Berg Terminal starts up in Edit Mode

Click **End Receive** to return to Edit Mode

The file appears as soon as you send it from the ECU

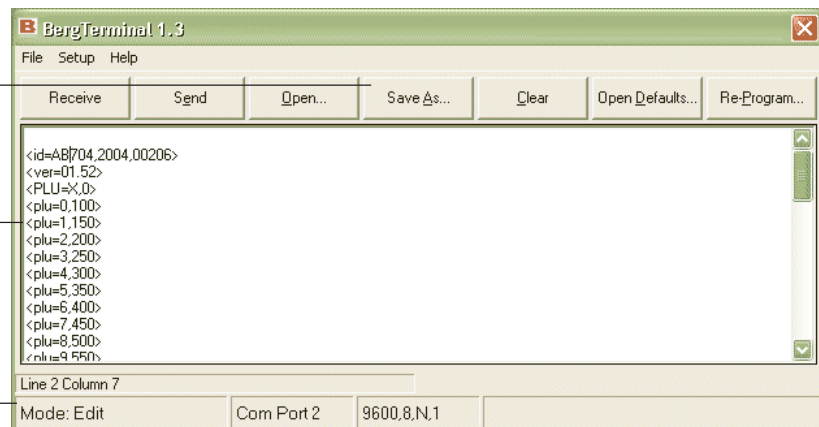
The darkened screen of Receive Mode indicates contents are uneditable



Click **Save As...** to save the file

See *Edit an ECU Setup File* for help with file changes

Make changes to the file in Edit Mode

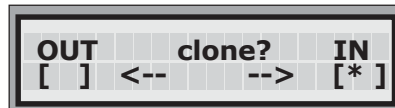


Import ECU Setup Values from a File

Use this feature to set up an ECU by importing all setup values from a computer text file. To create or edit a setup file, see *Edit an ECU Setup File* in this section.

■ To import ECU values from a file:

1. Connect a null modem cable (Berg PN 8007020) to a COM port on the computer. Connect the other end to the back of the ECU. Tighten all connecting screws.
2. Run Berg Terminal software on the computer. Make sure the communication settings are correct. (See *Berg Terminal Software* in this section.)
3. Click **Open...** to find the setup file for the ECU (if it's not already on the screen).
4. At the ECU, access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.



5. Press  repeatedly until you see this screen.

6. Press "X".

The values are coming "in" to this ECU.

Be sure the ECU is in this mode before you send the file.

7. At the computer, click **Send**.
8. Click **Yes** to verify the data sent to the ECU.
9. At the ECU, press "S".

You're sending a copy of the file the ECU received back to the computer for verification.

10. At the computer, click **End Receive**.

Berg Terminal compares the file sent from the computer (left window) with the file received at the ECU (right window) and displays the result. Click **OK**.

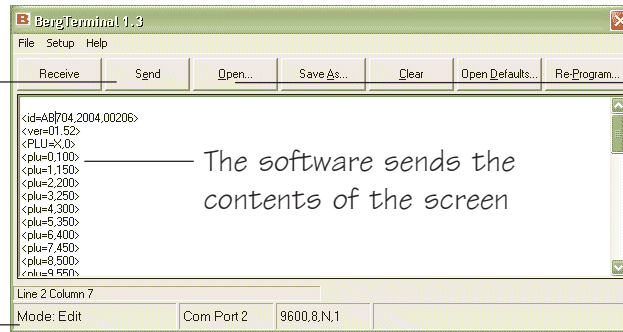
11. After reviewing the two files, click **End Verify**.

If the file was not received correctly, make any edits at the computer and repeat steps 6-11 to send and verify again.

12. When you've finished all communications, disconnect the null modem cable from the ECU and computer.

Click **Send** only when the ECU is ready

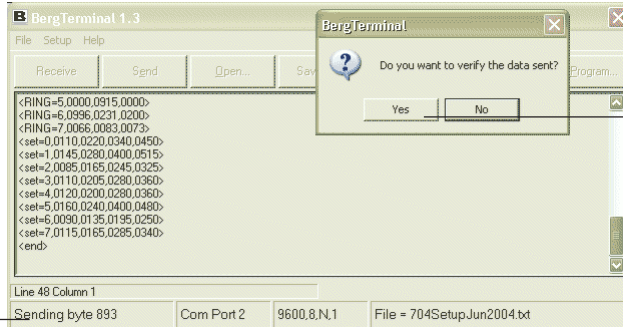
Berg Terminal starts up in Edit Mode



The software sends the contents of the screen

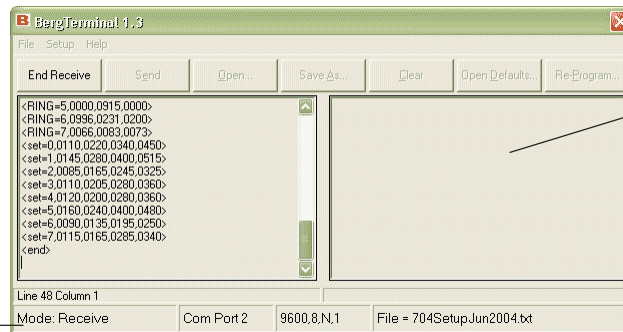
Click **Open...** to find a saved file

The darkened screen of Send Mode indicates contents are uneditable



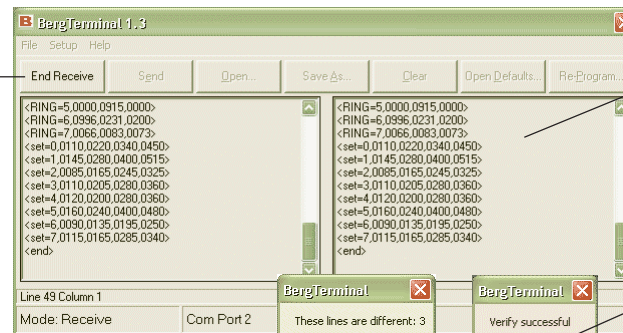
Click **Yes** to see what the ECU received

The software waits in Receive Mode for you to send a file from the ECU



Clicking **Yes** splits the screen (so you can compare what was sent and received)

Click **End Receive** after the file from the ECU appears

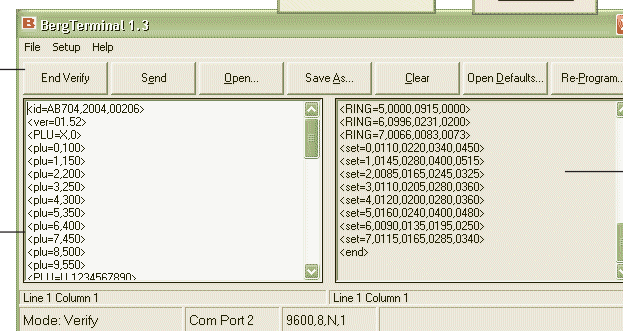


The file you send from the ECU appears on the right

The software compares the 2 files when you click **End Receive**

Click **End Verify** after comparing the 2 files

You can edit this file in Verify mode



If the 2 files are identical, you know the ECU received the values you sent

Berg Terminal Software

These steps illustrate installation and use of Berg's terminal emulation program, *Berg Terminal*.

Communication Settings

- Berg Terminal cannot send/receive data from the ECU if the communication settings are incorrect.
- Enter the correct settings every time you run Berg Terminal. They are not saved when you close the program.
- To check for a valid Com Port, click **Loopback Test...** and attach a loopback tester to the port in question.

■ To use the software:

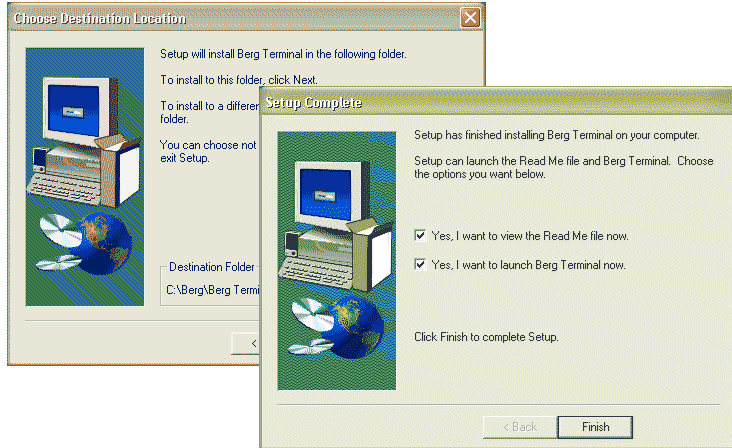
1. Install the software from the CD following the prompts.
2. Run Berg Terminal (**Start | Programs | Berg Terminal**).
3. Click **Setup | Communications...**

Enter the computer **Com Port** number used for a cable connection to the ECU. Select **704** as the **Setup Mode**. Click **Save**.

4. To receive a setup file from the ECU, see *Export ECU Setup Values to a File* in this section.
5. To open a setup file already saved on the computer, click **Open...** and select the file.
6. To see a default setup file, click **Open Defaults...** Select **704** as the ECU type and click **Continue**.

Use this feature to create a new setup file, or to revert to defaults when you're editing a file. If you have a file on the screen, the default replaces it. If you don't want the screen contents deleted, save to a file before opening defaults.
7. To edit a setup file you've opened or received from the ECU, see *Edit an ECU Setup File* in this section.
8. To save a copy of a file to the computer, click **Save As...** and enter a file name.
9. To send a setup file to the ECU, see *Import ECU Setup Values from a File* in this section.
10. To send a firmware upgrade file to the ECU, see *Upgrade ECU Firmware* in the *ECU Firmware* section.

Follow the prompts to quickly install Berg Terminal



Enter communication settings

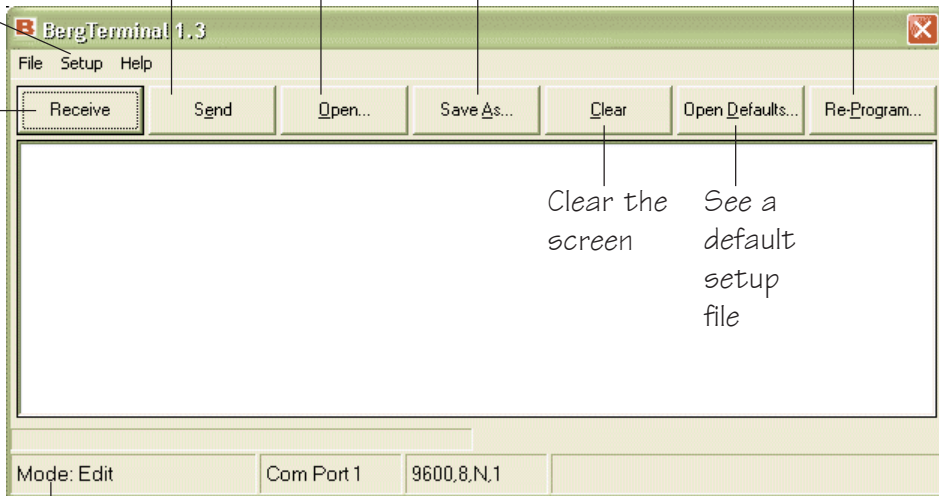
Send a file to the ECU

Open a file you've saved

Save screen contents to a file

Upgrade ECU firmware

Receive a file from the ECU

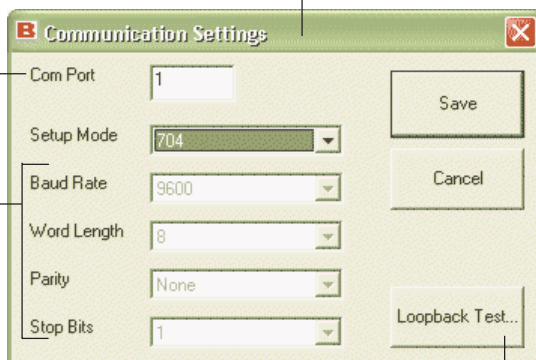


Note which mode you're in

Enter correct Communication Settings each time you run Berg Terminal

The port where you've attached the ECU cable

These entries are automatically set when you select 704 Setup Mode



To check a com port (its number or validity) click here and attach a loopback tester to the port

Edit an ECU Setup File

Use Berg Terminal to create a new setup file or export a setup file from an ECU and edit the values. For help with ECU setup options see tasks in the *ECU Setup* section.

File Parameters

- Editable text is *italicized* in the Sample ECU Setup File.
- **Bold** text in the sample file is required to start and end the file.
- You can create a file with only the setup items you want changed.
- Example files:

```
<id=AB704>  
<pwor=T>  
<end>
```

This file changes only Pour Without Release.

```
<id=AB704>  
<plu=X,U>  
<plu=U, 2000>  
<end>
```

This file changes the selected PLU Base to PLU-U and sets the PLU base number to 2000.

Calibration Tables

| • OZ | Standard | High |
|------|----------|------|
| .25 | 055 | 045 |
| .50 | 110 | 085 |
| .75 | 160 | 125 |
| 1.00 | 220 | 165 |
| 1.25 | 280 | 205 |
| 1.50 | 340 | 245 |
| 1.75 | 400 | 280 |
| 2.00 | 460 | 320 |

| • ML | Standard | High |
|------|----------|------|
| 15 | 120 | 090 |
| 20 | 160 | 115 |
| 25 | 200 | 135 |
| 30 | 240 | 165 |
| 35 | 280 | 195 |
| 40 | 320 | 225 |
| 45 | 360 | 255 |
| 50 | 400 | 285 |

• Pour Times

These numbers are pour times with seconds as the hundreds digit. For example, a calibration number of 360 means a 3.60 second pour.

■ To edit an ECU setup file:

1. Create or access the text file. Click **Open Defaults...** (in Berg Terminal) for a default AB704 setup file.
2. Edit the PLU Base by entering 0-9 or U for *n* in the **<PLU=X,*n*>** line. See *PLU Table* in the *Installation* section.
3. If you selected "U" as a PLU Base (i.e., **<PLU=X,U>**), enter a PLU base number for *n* in the **<PLU=U,*n*>** line.

The base number generates a PLU for every pourer/size with this equation: base+ portion size+ pourer code.

S portion=base + 00 + (1--7) pourer code

R portion=base + 10 + (1--7) pourer code

L portion=base + 20 + (1--7) pourer code

X portion=base + 30 + (1--7) pourer code

4. Edit the Interface protocol by entering ECR, POS or NONE for *n* in the **<INTRF=*n*>** line.
5. Edit Pour Without Release **<PWOR>**, Portion Size Reset **<RSIZE>**, Bartender Zero **<BARZ>** or the Printer Interface **<PRINT>** by entering T or F.
6. Edit Default Size **<DSIZE>** by entering S, R, L or X.
7. Edit Disable Portion Sizes **<XSIZE>** by entering S, R, L, and/or X.
8. Edit the Pour Count setting **<DIFF>** by entering T or F. ("DIFF" means the difference since the last count; T=Current pour counts, F=Life pour counts.)
9. Edit Reset Pour Delay **<RPDELAY>** by entering 0-500.
10. Edit Portion Calibration by entering new numbers for any pourer code(1-7) / portion size(S,R,L,X) in the **<CAL=1-7,*n*,*n*,*n*,*n*>** lines. See the *Calibration Tables* sidebar.
11. Edit Activator Ring Alignment by entering new numbers for any pourer code/portion size in the **<RING=1,*n*,*n*,*n*>** lines.
12. Make sure the file starts with the required first line and ends with the required last line. Other lines can be in any order.
13. Save the file with a unique name. You can create multiple files with unique names each changing specific setup items.

Sample ECU Setup File

```

<id=AB704,2004,27764>
<ver=01.51>
<PLU=X,0>
<plu=0,100>
<plu=1,150>
<plu=2,200>
<plu=3,250>
<plu=4,300>
<plu=5,350>
<plu=6,400>
<plu=7,450>
<plu=8,500>
<plu=9,550>
<PLU=U,1234567890>
<INTRF=NONE>
<PWOR=T>
<RSIZE=F>
<DSIZE=R>
<XSIZE=>
<RPDELAY=0>
<DIFF=F>
<BARZ=F>
<PRINT=T>
<CAL=1,0115,0165,0285,0340>
<CAL=2,0115,0165,0285,0340>
<CAL=3,0115,0165,0285,0340>
<CAL=4,0115,0165,0285,0340>
<CAL=5,0115,0165,0285,0340>
<CAL=6,0115,0165,0285,0340>
<CAL=7,0115,0165,0285,0340>
<RING=0,2642,3487,3010>
<RING=1,0024,1703,1846>
<RING=2,1142,0089,1139>
<RING=3,0004,0004,1185>
<RING=4,1765,1626,0000>
<RING=5,0000,0981,0000>
<RING=6,0927,0004,0004>
<RING=7,0004,0004,0004>
<set=0,0110,0220,0340,0450>
<set=1,0145,0280,0400,0515>
<set=2,0085,0165,0245,0325>
<set=3,0110,0205,0280,0360>
<set=4,0120,0200,0280,0360>
<set=5,0160,0240,0400,0480>
<set=6,0090,0135,0195,0250>
<set=7,0115,0165,0285,0340>
<end>

```

List of
PLU
Bases

Portion
Calibration
Numbers
for S, R,
L, X

Pourer/
Portion
Sets
(showing cal
numbers for
S, R, L, X)

ECU type, model year, serial number

ECU firmware version

PLU Base (0-7, U)

- Note that editable setup entries are listed in CAPITAL letters.
- If you change other entries, the changes are ignored by the ECU.
- You cannot damage an ECU by sending a file with improper data.

User-defined PLU base (set <plu=x,U>)

Interface protocol (ECR, POS, NONE)

Pour Without Release (T or F)

Portion Size Reset (T or F)

Default Portion Size (S, R, L or X)

Disable Portion Sizes (S, R, L and/or X)

Restart Pour Delay (0-500) 100=1 sec

Current Pour Counts (T or F)

Bartender Zero (T or F)

Printer interface (T or F)

See Calibration Tables sidebar

Activator Ring
Alignment Numbers
(coil 0, coil 1, coil 2)
for each pourer

The currently selected Pourer/
Portion Set is reflected in the
Portion Calibration Numbers
above. (The ECU in this file uses
set 7.)

See Select Portion Sizes in the
All-Bottle Pouring section for a
description of each set.

SECTION

5

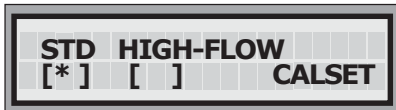
All-Bottle Pouring

Once your **All-Bottle 704** system is installed, you're ready to begin pouring. This section provides help with the following tasks:

| | |
|---|------|
| Select Portion Size Calibration Set | 5-2 |
| Calibrate Portion Sizes | 5-4 |
| Pouring Operations | 5-6 |
| Read Pour Totals | 5-8 |
| Print Pour Totals | 5-10 |


Select Portion Size Calibration Set

Perform this task to specify your pourer type and select a set of portion sizes from which to calibrate "S", "R", "L" and "X".



■ To select a portion size calibration set:

1. Access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.

2. Press  repeatedly until you see this screen.

3. Press "S" to start the process.

4. Press "S" to select ounces or press "R" to select milliliters. This is your portion size unit.

Press 

5. Press "S" to select Standard or press "R" to select High-Flow. This is the type of pourers you're using.

Press 

6. Press "S" to select Basic or press "R" to select Alternate. This is your portion size set. See the *Calibration Sets* graphic.

Press 

7. Press "S" to save your 3 previous choices as your portion size calibration set.

Notes

- Each combination of unit/pourer type/portion amounts is called a calibration set. These sets are referenced by set number in an ECU setup file.
- Calibrate each portion size to achieve accurate drink amounts. See *Calibrate Portion Sizes* in this section.

Calibration Sets measured in ounces

Set 0 oz/Standard/Basic

| Size | Oz | Calibration # |
|------|--------|---------------|
| S | .5 oz | 110 |
| R | 1.0 oz | 220 |
| L | 1.5 oz | 340 |
| X | 2.0 oz | 450 |

These 2 sets use Standard pourers

Set 1 oz/Standard/Alternate

| Size | Oz | Calibration # |
|------|---------|---------------|
| S | .65 oz | 145 |
| R | 1.25 oz | 280 |
| L | 1.75 oz | 400 |
| X | 2.25 oz | 515 |

Set 2 oz/High-Flow/Basic

| Size | Oz | Calibration # |
|------|--------|---------------|
| S | .5 oz | 085 |
| R | 1.0 oz | 165 |
| L | 1.5 oz | 245 |
| X | 2.0 oz | 325 |

These 2 sets use High-Flow pourers

Set 3 oz/High-Flow/Alternate

| Size | Oz | Calibration # |
|------|---------|---------------|
| S | .65 oz | 110 |
| R | 1.25 oz | 205 |
| L | 1.75 oz | 280 |
| X | 2.25 oz | 360 |

Calibration Sets measured in milliliters

Set 4 ml/Standard/Basic

| Size | ml | Calibration # |
|------|-------|---------------|
| S | 15 ml | 120 |
| R | 25 ml | 200 |
| L | 35 ml | 280 |
| X | 45 ml | 360 |

These 2 sets use Standard pourers

Set 5 ml/Standard/Alternate

| Size | Oz | Calibration # |
|------|-------|---------------|
| S | 20 ml | 160 |
| R | 30 ml | 240 |
| L | 50 ml | 400 |
| X | 60 ml | 480 |

Set 6 ml/High-Flow/Basic

| Size | Oz | Calibration # |
|------|-------|---------------|
| S | 15 ml | 090 |
| R | 25 ml | 135 |
| L | 35 ml | 195 |
| X | 45 ml | 250 |

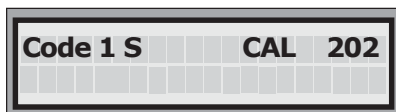
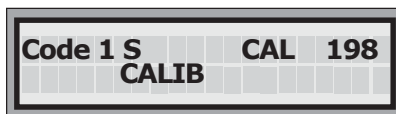
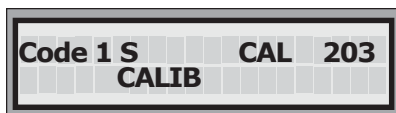
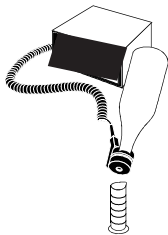
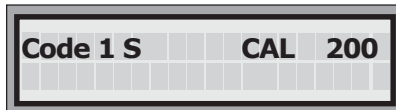
These 2 sets use High-Flow pourers

Set 7 ml/High-Flow/Alternate

| Size | Oz | Calibration # |
|------|-------|---------------|
| S | 20 ml | 115 |
| R | 30 ml | 165 |
| L | 50 ml | 285 |
| X | 60 ml | 340 |

Calibrate Portion Sizes

The **All-Bottle** coded pourers must be calibrated to pour accurate portion sizes. Perform the calibration process for each size of each of the seven price codes.



■ To calibrate coded pourers:

1. Insert the Manager key in the ECU's front key slot and turn to the **CAL** position. The key can't be removed in this mode.

The calibration number for Code 1 Small is displayed.

2. To view a different Code or Size, use the up and down arrows.

3. To calibrate the displayed Code and Size, press the **CAL** button.

The LCD displays the CALIB message. You are now in calibration mode for the selected pourer at the selected size. The LCD displays the current calibration number for the selected size. (The calibration number is the hundredths of a second the pourer stays open when inverted. A 1 ounce portion requires approximately 2 seconds to pour, or a calibration number of 200.)

4. Pour a drink with the selected pourer into a graduated cylinder. Carefully measure the volume of drink poured.

5. If the test portion was too small, use the up arrow to increase the calibration number.

6. If the test portion was too large, use the down arrow to decrease the calibration number.

7. Repeat steps 4-6 (pouring, measuring, adjusting the calibration number) until you're satisfied with the accuracy of the portion size.

8. Press the **CAL** button to save the calibration number and exit calibration mode for the displayed code and size.

The CALIB message disappears.

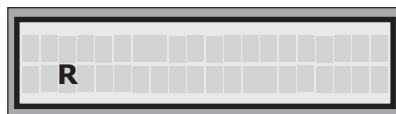
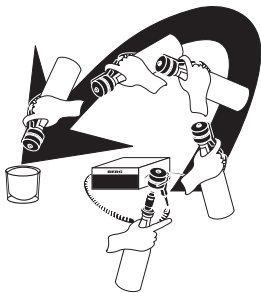
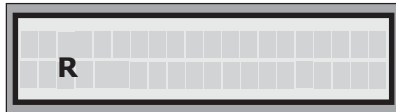
9. Repeat steps 2 through 8 for each code and size.
10. When finished calibrating, turn the Manager key to **OPERATE** or **OFF** and remove the key.

Notes

- All other pourers are temporarily disabled once you are in calibration mode for a selected pourer.
- Calibration pours are not included in pour totals.
- To disable a price code/portion size combination, repeatedly press the down arrow to decrease the calibration number to zero. This disables that portion size for that price code. Drinks will not pour and a PLU will not be sent. If a pour using the price code/portion size is attempted, "Disabled" appears on the display screen.

Pouring Operations

Use **OPERATE** mode to pour drinks.



■ To pour a drink:

1. Insert the Bartender key in the ECU's front key slot and turn to the **OPERATE** position.

The LCD displays the portion size message (S is Small, R is Regular, L is Large and X is Extra Large).

2. To change the portion size, push the **S**, **R**, **L** or **X** button.
3. Insert a bottle with a coded pourer into the activator ring. Using the finger grip on the activator ring, quickly invert the bottle to a near vertical position over a glass to start the pour. *(If the pour doesn't begin, quickly tip the bottle upright and then back to a vertical position over the glass. If the pour splashes sideways, you may not have tipped to a vertical position quickly enough.)*

The LCD displays the price code and portion size of the pour and the total number of pours at this price code and portion size (including the current pour).

4. When the pour ends, tip the bottle upright.

The LCD again displays the portion size message. (If you've enabled Portion Size Reset, the portion size reverts to Regular after every pour.)

Repeat pouring in **OPERATE** mode

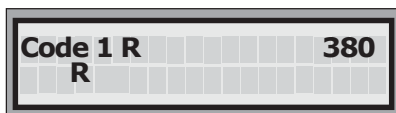
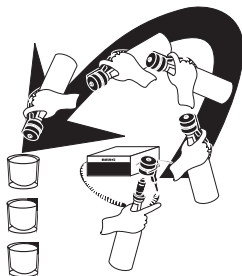
■ To pour two or more identical drinks:

1. When the first pour ends, quickly position the bottle over a new glass (still holding the bottle in a vertical pouring position).

If you've enabled **Restart Pour Delay**, a new pour commences every 2 seconds as long as you keep the bottle inverted. (To start a new pour in less than 2 seconds, give the inverted bottle a quick shake.)

If you haven't enabled **Restart Pour Delay**, you must give the inverted bottle a quick shake to begin a repeat pour.

The LCD increments the total number of pours at this price code and portion size.



Use **OFF** mode to disable the ECU.



■ **To access OFF mode:**

1. Insert either key in the ECU's front key slot and turn to the OFF position. Wait a few seconds while the ECU is disabled.

The LCD displays the disabled message. All features and controls are disabled. (Disabling the ECU does not affect sales terminals.)

2. To maintain security and prevent any pouring, remove the key.

Read Pour Totals

With a bartender or manager key in the READ position, you can view the number of pours for each size of each price code. Depending on the pour count mode you've selected, you'll see either current totals or lifetime totals. See *Set Up Pour Totals* in the *Installation* section for help selecting a pour count mode.



■ To view pour totals:

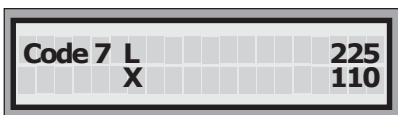
1. Insert the Bartender key in the ECU's front key slot and turn to the **READ** position. (*Portions can't be dispensed while in READ mode.*)

If you haven't enabled a printer interface, the LCD displays the total number of pours for Code 1, Small and Regular.



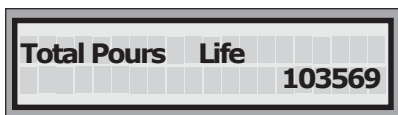
If you have enabled a printer interface, press the down arrow to view pour totals.

2. To view pour totals for other portion sizes and price codes, use the up and down arrow buttons to scroll through the list.



The LCD displays the total number of pours for all portion sizes of Codes 1-7 in succession.

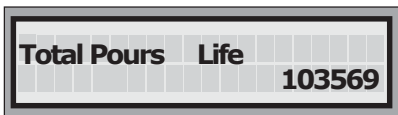
3. To view a total count for all pours, use the down arrow to scroll to the end of the list of codes.



*If you've enabled **Lifetime** totals, you'll see the Lifetime total pours.*



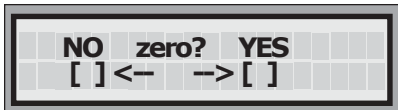
*If you've enabled **Current** totals, you'll see the Current total pours.*



Press the down arrow to see Lifetime totals.



Press the down arrow again to see the Lifetime total the Last time you zeroed your current totals.



4. To clear Current totals and reset them to zero, press the down arrow after viewing all totals. Press the "X" button to zero out all current totals. (Press the "S" button if you don't want to zero totals.)

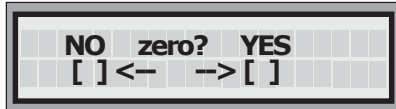
You must enable Bartender Zero to see this screen. See *Set Up Pour Count Settings* in the *ECU Setup* section.



5. When finished viewing pour totals, turn the key to **OPERATE** to resume pouring or to **OFF** to disable pouring.

Print Pour Totals

If you've connected a printer to the ECU, you can print pour totals. Depending on the pour count mode you've selected, you'll see either current totals or lifetime totals. See *Set Up Pour Count Settings* in the *ECU Setup* section for help selecting a pour count mode.



■ To print pour totals:

1. Insert the Bartender key in the ECU's front key slot and turn to the **READ** position. (*Portions can't be dispensed while in READ mode.*)
2. Press the **CAL** button to begin printing. (To scroll through the totals, press the up and down arrows).
3. *If you're viewing Current pour totals and you've enabled Bartender Zero*, press the "**X**" button to zero out the totals you've just printed OR press the "**S**" button to retain the totals.
3. When finished viewing pour totals, turn the key to **OPERATE** to resume pouring or to **OFF** to disable pouring.

Note

- To print pour totals to a computer file, connect a serial cable from the computer's COM port to the ECU's 9-pin Printer/POS port. Use a "capture" program such as HyperTerminal to save the print output from the ECU to a file.

Sample printout of Current Totals

```

AB704 - BERG LLC
s/n: 2002-00001
Ver: 01.01

C S          POURS

1 S           59
1 R          458
1 L           21
1 X           5

2 S          115
2 R          623
2 L           79
2 X           10

3 S           0
3 R          122
3 L           10
3 X           1

4 S           5
4 R          156
4 L           8
4 X           0

5 S           0
5 R           0
5 L           0
5 X          236

6 S           12
6 R           87
6 L           0
6 X           0

7 S           4
7 R           49
7 L           1
7 X           0

TOTALS BY CODE:
1           543
2           827
3           133
4           169
5           236
6           99
7           54

TOTALS BY SIZE:
S           195
R          1495
L           119
X           252

TOTAL POURS:
                2061

-----
LIFE TOTAL:    4237
LAST TOTAL:    2176
    
```

These are all current totals (since the last zeroing out).

All totals here are for the life of the ECU.

This is the Lifetime total of the ECU.

This is the Lifetime total the Last time current totals were zeroed out.

Sample printout of Lifetime Totals

```

AB704 - BERG LLC
s/n: 2002-00001
Ver: 01.01

C S          POURS

1 S           99
1 R          758
1 L           27
1 X           5

2 S          215
2 R          823
2 L           99
2 X           20

3 S           10
3 R          372
3 L           50
3 X           1

4 S           55
4 R          406
4 L           8
4 X           0

5 S           0
5 R           0
5 L           0
5 X          536

6 S           112
6 R          287
6 L           0
6 X           0

7 S           54
7 R          299
7 L           1
7 X           0

TOTALS BY CODE:
1           889
2           1157
3           433
4           469
5           536
6           399
7           354

TOTALS BY SIZE:
S           545
R          2945
L           185
X           562

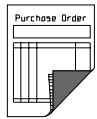
TOTAL POURS:
                4237
    
```


6 Financial Controls

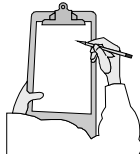
The suggestions in this section can help you manage your bar using the **All-Bottle 704** system.

| | |
|---|------|
| Purchasing and Receiving | 6-2 |
| Storeroom Instructions (Form) | 6-3 |
| Bottle Storage | 6-4 |
| Inventory Card (Form) | 6-5 |
| Stocking the Bar | 6-6 |
| Bar Requisition (Form) | 6-7 |
| Physical Inventory | 6-8 |
| Beverage Inventory (Form) | 6-9 |
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Purchasing and Receiving

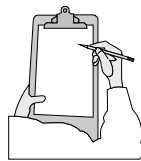


1. Prepare a written purchase order even when the order has been placed by phone. It is a safeguard against unauthorized substitutions in brands or bottle sizes.
2. When liquor deliveries are made, have one individual check the shipment into stock.
3. The person ordering should not have the responsibility for receiving.
4. Prepare a written receiving record from the actual merchandise rather than using the delivery slip from the supplier.
5. Have an additional staff member record the shipment.
6. As soon as the shipment is checked in and recorded, place the merchandise in a **LOCKED** liquor storeroom **IMMEDIATELY**.



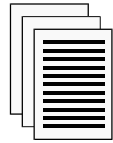
A large part of loss in liquor is due to theft of unattended goods at the time of receiving. Don't let a shipment sit around waiting to be checked in.

Bottle Storage



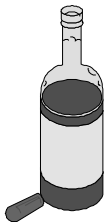
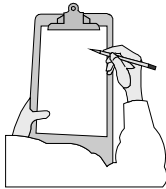
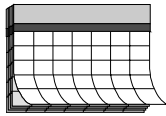
1. Keep your liquor storeroom locked at all times.
2. Keep keys **ONLY** in the hands of the responsible person and the manager/owner.
3. Keep only liquor, wine and beer in the storage area. Storing grocery items, syrup tanks or inventory leaves too many people accessible to the storage area.
4. Have adequate shelving in the storeroom for the placement of all bottle stock by type of liquor, e.g., all gins together, all vodkas together, all scotches together, etc.
5. Place bottles on shelves in the same order as they are placed on the back bar and speed rail--it speeds up taking physical inventory.
6. Keep a perpetual inventory system. Use an appropriate software package or a 5" x 8" index card for each size of each brand in the storeroom with receipts posted on one side of the card. Make a second column in the middle of the card showing issues to the bar and make a third column showing the balance. Posting of this perpetual inventory card should be done on a daily basis and can be done by a bookkeeper, manager or other responsible individual. Each inventory card should reflect the number of bottles on hand in the storeroom of any brand, at any time. See the next page for sample inventory cards.
7. Management should periodically and at irregular intervals check the bottles on hand against the card balance for specific brands. Such a spot check of three or four brands can be very revealing.

Stocking the Bar



1. Except under unusual circumstances, re-stock the bar only once every 24 hours.
2. Keep a par stock available which provides enough bottles of each brand to last through a busy 24 hour cycle plus a modest reserve for each brand. A reserve may contain a bottle of each brand.
3. Many successful and profitable operators provide for the closing bartender to fill out a 3-part requisition form for the liquor, beer, wine and other items needed to re-stock the bar for the coming day.
4. Have your closing bartender's 3-part requisition accompany the empty bottles from the day. By exchanging the empty bottles for full bottles, the par stock is easily maintained with minimum paperwork. The requisition will be filled the following morning.
5. Have the closing bartender keep a copy of the requisition, the storeroom keep a copy and a return a copy with the restocking order. Have the opening bartender sign this last copy as a receipt.
6. Give the signed third copy of the requisition to the bookkeeper to be used for reducing the quantities on hand as shown on the inventory cards.

Physical Inventory and Inventory Extension



1. Two people are required to quickly and accurately take a physical inventory.
2. A physical inventory should be taken on the last day of every month after the close of business. This inventory can be taken more often if the need arises, but a monthly inventory should be considered as the minimal frequency for a well-run bar.
3. Have one person call the brand, size and number of bottles both in stock and in use. The second person should write the figures on an inventory sheet. These same two people should perform their respective tasks at every inventory. Inventory should start in the storeroom and after all stock is recorded, the team should move to each successive station until the whole bar operation has been covered.
4. The inventory taken from each station can be recorded on the same inventory sheet used in the storeroom or on a separate sheet. If two sheets are used, two separate teams can work the inventory--one in the storeroom and one on the stations (reducing the time it takes to do the inventory)
5. Partial bottles should be visually inspected and recorded as a decimal fraction. For example, if a bottle is slightly more than half full, record as ".6".
6. When the physical inventory is completed, enter the bottle cost next to each item. Multiply the number of bottles of each brand and size (including fractional bottles) by the bottle cost. Add all these multiplied figures to arrive at a grand total. The grand total is the total dollar amount in inventory.

Monthly Profitability



1. The total cost of inventory consumed for a period is equal to the dollar total of inventory at the beginning of the month (or period) plus the dollar value of inventory added (taken from the daily requisition) minus the dollar value of the ending inventory. All dollar values are cost values.



2. The corresponding period cash register receipts will provide the actual sales achieved for that inventory used.





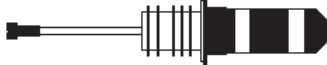


3. Divide the total inventory cost by the actual sales. This figure is your cost of goods and is expressed as a percentage of sales.



4. If these records are properly kept, there should be minimum fluctuation of the percentage from month-to-month, especially with the installation of the **All-Bottle 704** system.

Cash Balance Sheet

Date _____ *Station* _____ *Bartender* _____

| Pouwer Code / Size | Current Count | Adjustments | Net Count | Unit Price | Total |
|---|---------------|-------------|-----------|------------|-------|
| Code 1  | S | | | | |
| | R | | | | |
| | L | | | | |
| | X | | | | |
| Code 2  | S | | | | |
| | R | | | | |
| | L | | | | |
| | X | | | | |
| Code 3  | S | | | | |
| | R | | | | |
| | L | | | | |
| | X | | | | |
| Code 4  | S | | | | |
| | R | | | | |
| | L | | | | |
| | X | | | | |
| Code 5  | S | | | | |
| | R | | | | |
| | L | | | | |
| | X | | | | |
| Code 6  | S | | | | |
| | R | | | | |
| | L | | | | |
| | X | | | | |
| Code 7  | S | | | | |
| | R | | | | |
| | L | | | | |
| | X | | | | |

Signature: _____

Grand Total \$ _____

Remarks: _____

SECTION

7 Maintenance

Proper cleaning and maintenance of the **All-Bottle 704** system is essential. Refer to information in this section for the following tasks:

| | |
|--|-----|
| Clean the All-Bottle 704 ECU | 7-2 |
| Clean the All-Bottle Coded Pourers | 7-3 |
| Align the Activator Ring | 7-4 |

Clean the ECU

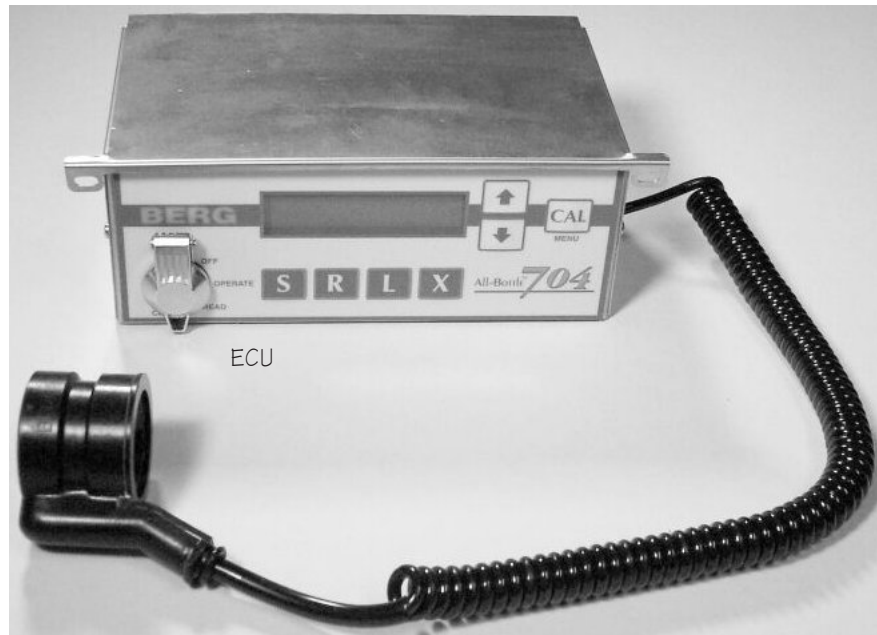
Clean the ECU and activator ring about once a week. The ECU is designed to protect the electronics inside from moisture, but bartenders should still be cautioned to avoid splashing water or drinks on the ECU.

■ To clean the All-Bottle 704 ECU:

1. Wipe the front of the ECU with a damp (not dripping) cloth or sponge.
2. Wipe the activator ring and activator ring holder with a damp (not dripping) cloth or sponge.

Note

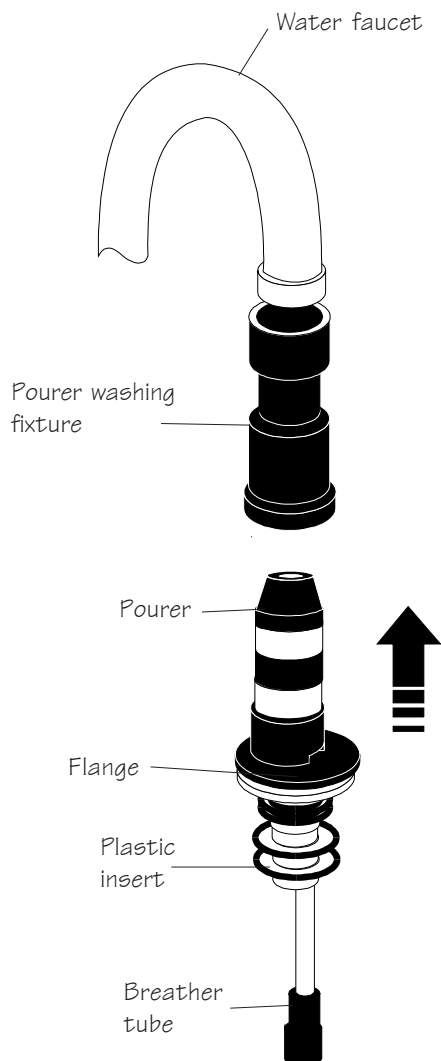
- Do not attempt any more thorough cleaning of an ECU, and absolutely do not attempt to clean any internal circuit boards or surfaces.



Activator ring

Clean the Coded Pourers

The All-Bottle coded pourers are carefully designed for liquor dispensing applications. They impart no taste or odor to liquor and should only be cleaned with clear water. Each pourer should be cleaned every time it is removed from a bottle. Berg provides a pourer washing fixture for this purpose.



■ To clean an All-Bottle coded pourer:

1. Attach the smaller end of the pourer washing fixture (Berg PN 9007191) to your faucet. Turn on a gentle flow of warm water.
2. Insert a coded pourer into the pourer washing fixture with the tip of the pourer pointed slightly away from you.
3. Snap the flange of the coded pourer into the washing fixture and hold it there for a few seconds.

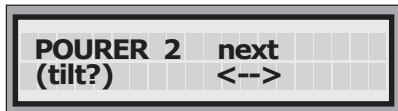
Two streams of water (one from the end of the breather tube and the other from inside the plastic insert) flow from the coded pourer when all passages are clear. Especially gummy pourers may need to be held in the washing fixture a little longer until both streams of water are running freely.

Notes

- Never clean your pourers in a dishwasher.
- Never use soap to clean a pourer. Unless removed completely, soap can get into your liquor. It can also react chemically with the specially formulated plastics and make them brittle, shortening the useful life of your pourers.
- If a pourer is removed from a bottle and allowed to dry without being cleaned, soak it for several minutes in clear, warm water to loosen the dried liquor before inserting the pourer in the washing fixture. Repeat the soaking and rinsing if necessary.
- Check the plastic insert of a pourer when cleaning. Liquor drying on the plastic may remove some of the plastic's elasticity. If the plastic insert remains stiff after cleaning, replace it.


Align the Activator Ring

All-Bottle activator rings "read" the subtle electronic signals on each coded pourer to assign the correct price and portion information to a pour. Aligning the activator ring ensures the ring can recognize each pourer's code. You should perform the alignment if directed by Berg personnel. Use a complete set of coded pourers when you perform the activator ring alignment.



■ To align the activator ring:

1. Access setup options by inserting a Manager key, pressing "S" and turning the key to CAL.

2. Press  repeatedly until you see this screen.

3. Press "S" to start the alignment process.

The display indicates a pourer number.

4. Insert a correctly numbered pourer into the activator ring. See the *Pourer Codes* graphic.

5. Tip the activator ring and the pourer upside down and hold in this position until the display reads "done".

6. Tip the activator ring and pourer upright.

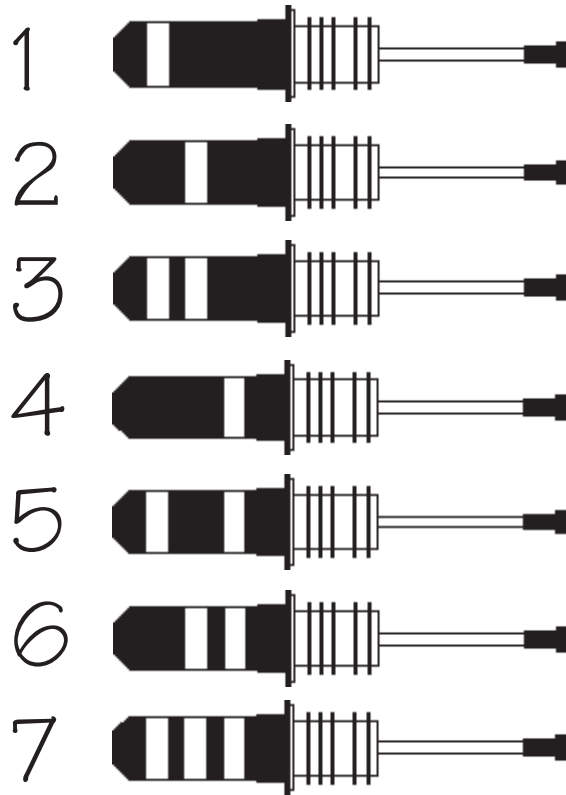
The display indicates the next pourer number.

7. Repeat steps 4-6 for each of the other pourers.

Note

- ❑ If for any reason you need to re-do a pourer or get back to a pourer number, simply press "L" repeatedly to cycle through the pourer numbers to the correct one.

Pourer Codes



SECTION

8

ECU Firmware

Work with Berg personnel to receive new firmware versions for the ECU. Refer to this section for help with the following tasks:

| | |
|---|-----|
| Upgrade ECU Firmware | 8-2 |
| View the ECU Serial Number and Firmware Version | 8-4 |

Upgrade ECU Firmware

Perform this task when you receive an ECU upgrade file from Berg.



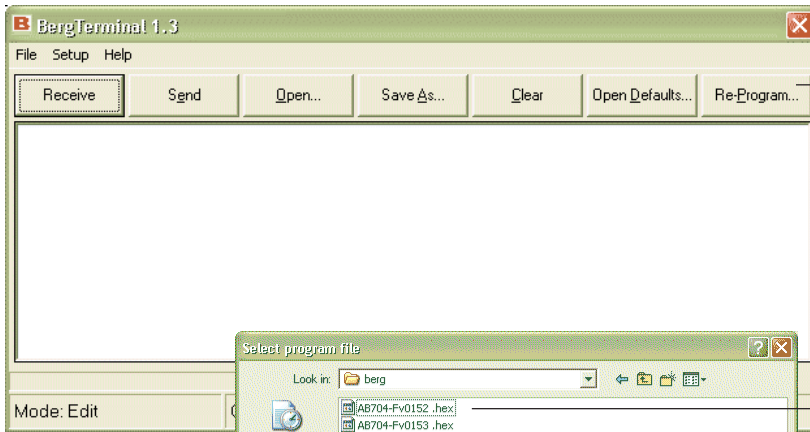
■ To upgrade ECU firmware:

1. Remove power to the ECU. Press and hold the "X" button while re-applying power.
2. Connect a null modem cable (Berg PN 8007020) to a COM port on the computer. Connect the other end to the back of the ECU. Tighten all connecting screws.
3. Make sure the upgrade file is accessible at the computer (in a CD drive, copied to a folder, etc.).
4. Run Berg Terminal software. Make sure the communication settings are correct. (See *Berg Terminal Software* in the *Files & Cloning* section.)
5. Click **Re-Program...**
6. Select the *AB704-Fvxxx.hex* upgrade file from the appropriate folder.
7. Click **Open** to send the file to the ECU.

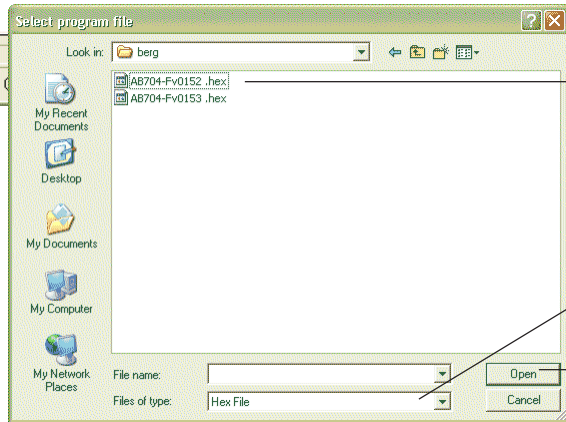


When the file transfer is complete, the ECU powers up and momentarily displays the new version number.

8. When you've finished all communications, disconnect the null modem cable from the ECU and computer.



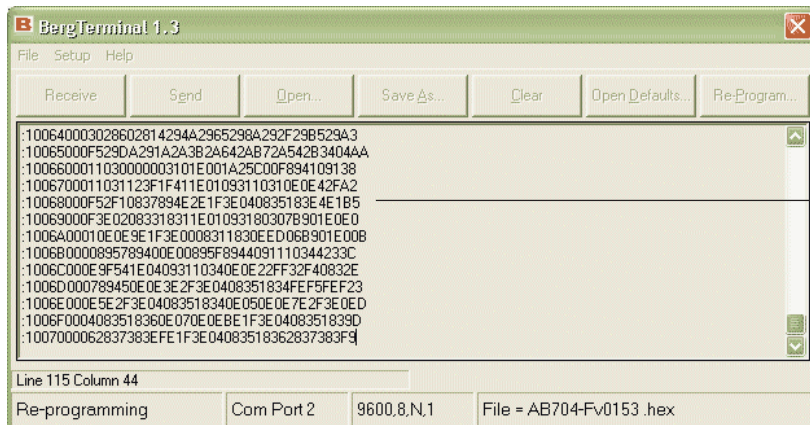
Click here to select the upgrade file



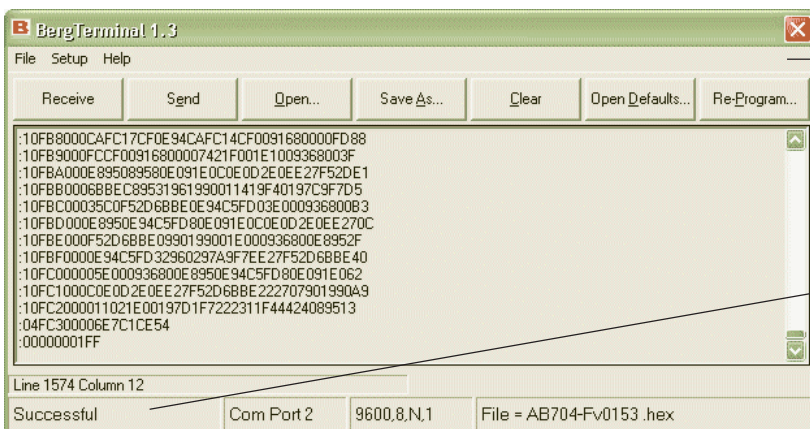
Find the upgrade file from Berg

Upgrade files end with .hex

As soon as you click **Open**, the file is sent to the ECU



Lines in the file scroll as the transfer to the ECU takes place



Click any button when the transfer is complete to perform another operation

When the transfer is complete, you'll see this message

View the ECU Serial Number and Firmware Version


To quickly determine the serial number and firmware version of your All-Bottle 704 ECU, follow these steps.

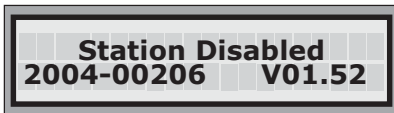


■ To view the serial number and firmware version:

1. Insert a Bartender or Manager key and turn to the OFF or OPERATE position.



2. Press at the same time "S", "R" and .



*The serial number appears on the left of the LCD screen.
The firmware version is the number starting with "V".*

OR





SECTION

9

**All-Bottle 704
Specifications**

All-Bottle 704 Specifications

Basic System

| | |
|--------------------------------|--|
| Electronic Control Unit size : | 3.25 in (82 mm) H 8.25 in (210 mm) W 4.5 in (114 mm) D 3.2 lbs (1.5 kg) |
| ECU Mounting Plate size : | 9.5 in (242 mm) W 5.5 in (142 mm) D |
| Dispenser type: | Patented bottle pourers and activator ring |
| Number of brands: | Unlimited |
| Number of price codes: | Seven |
| Portion size: | 1/8 to 10 ounces (3.7 to 295.7 ml) |
| Number of portion sizes: | Four per price code |
| Calibration: | By portion |
| Other Features: | Restart Pour Delay, Portion Size Reset |
| Display type: | LCD2x20 (shows portions dispensed per code and size) |
| Security: | Keylock |
| Interface Capability: | POS/ECR/Printer |

Power Supply Requirements

| | |
|---|--------------------------------|
| Input voltage, connector and frequency: | As required by your locality |
| DC output: | 12VDC @ 1.25A |
| Output power: | 15VAMAX |
| Mating connector: | 2.1 mm female, center positive |

Any power supply you purchase for use with Berg's All-Bottle 704 ECU must at a minimum be a Class II supply meeting these specifications and must carry one or more of the following certifications, as required by your locality.

Certifications: UL 1950, TUV EN60950, CSA 22.2 950, IEC 950.

Technical

| | |
|--------------------------|--|
| Electrical Requirements: | 12VDC @ 1.25A |
| Emissions: | FCC Class A, EN55022:1994 Class B |
| Susceptibility: | EN50082-1:1992 |
| Safety: | CENELEC EN61010.1 (IEC 1010-1:1990=A1:1992, Modified) First Edition UL 3101-1, CSA C22.2 No. 1010.1-92 |



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