

SERIES 1000

TO FLEETKEY CONVERSION

MANUAL

C35328

GASBOY INTERNATIONAL LLC

GASBOY

Series 1000 to FleetKey Conversion Manual

C35328

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GASBOY INTERNATIONAL LLC LANSDALE, PA

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SERIES 1000 TO FLEETKEY CONVERSION

IN THIS MANUAL

The instructions in this manual are provided to assist the system operator in the conversion of a GASBOY Series 1000 Mag or Optical system to a FleetKey system. This manual contains:

- An illustrated parts breakdown
- Instructions for converting the system from mag or optical to FleetKey
- System checks and diagnostics to verify proper operation

CONTENTS OF THE CONVERSION KIT

Depending on the FleetKey system you ordered and the features of your current Series 1000, you will have one of the following conversion kits:

Upgrade kits

- C06334 Series 1000 to single FleetKey
- C06335 Series 1000 to dual FleetKey
- C06336 Series 1000 with receipt printer to single FleetKey with receipt printer
- C06337 Series 1000 with receipt printer to dual FleetKey with receipt printer

The parts listing for the conversion kits is shown below and is keyed to the drawing shown on the next page. Parts that differ between kits are indicated by an "or" and the alternate part. The parts are indicated as to which conversion kit number they apply.

Your conversion kit consists of the following parts:

- 1. C04371 Trim Edge Material
- 2. C35288 PCB Mounting Bracket
- 3. C08759 4 screws #6, 32 x 3/8 Phil w/lockwasher plated
- 4. C06264 Key I/F PCB assembly
- 5. C35298 Key adapter single bracket assembly, (C06334 and C06336) or
 - C35287 Key adapter dual bracket assy (C06335 and C06337)
- 6. C39070 4 nuts, hex keps #8-32 plated
- 7. C06178 braided ground strap, 4.5" long
- C05644 braided ground strap, 13" long
- 8. 068842 2 star washers, lock #8 ext
- 9. C02848 1 or 2 key receptacles, access #KC4210
- 10. C06267 1 or 2 key receptacle ribbon cable(s), 10-position
- 11. C05435 Key interface ribbon cable, 26 position, 7.5 long
- 12. C06291 Key I/F w/receipt printer cable assembly (C06334 and C06335)
 - C06266 Key I/F to CPU cable assembly (C06334 and C06335)
- 13. CPK002 ROM chip, program revision, Series 1000
- 14. C08643 IC, RAM DS1225 8K CMOS non-volatile (Not required in units running Version 8.1 or higher)
- 15. C01518 Key operating instructions decal
- 16. C01519 Key insertion instructions decal, (Beige, for painted faces)
- C09499 Key insertion instructions decal, (Blue, for overlay faces)
- 17. C01625 Key, 1.000, serial memory, #LCK1000 black
- 18. C01624 Key, 1.000, serial memory, #LCK1000 gray
- 19. C01623 Key, 1.000, serial memory, #LCK1000 green
- 20. C08126 Tie Wrap, 8" Long

or

- 21. C09500 Overlay (not required on beige finish units or units shipped with overlay)
- 22. C09499 Overlay insert (key)
- 23. C08379 Manual, FleetKey Operation (not shown)



CONVERSION INSTRUCTIONS

Use the following instructions to convert your system. The first two subsections detail removal of your old mag or optical card reader unit. The next section details installation of the new key unit. A parts explosion drawing appears at the end of these instructions for your reference.

Remove Mag Reader

- 1. Unlock and open the rear door on the head of the Series 1000.
- 2. Turn off the AC power switch located on the right side of the unit.
- 3. Remove the hood of the unit.

IMPORTANT

In the upper left corner of the Series 1000 MPU, there is a revision level recorded on the board such as REV-H. A revision level of G1 or higher is needed to run key software. If the revision level is G or lower, an updated Series 1000 MPU PCB must be obtained before proceeding.

- 4. Working inside the head of the unit, remove the four screws that secure the external cover assembly (shields the mag card reader) to the face of the unit. Save these screws and cover, you will reinstall them later.
- 5. Locate the J5 connector in the middle of the left edge of the Series 1000 MPU PCB. Disconnect the attached cable.

Working inside the head of the unit, remove the two screws, one on each side, that secure the mag card reader to the face of the unit.

Remove the mag card reader with cable and rubber gasket from the unit.

6. Proceed with the **Installation of Key System** instructions.

Remove Optical Reader

- 1. Unlock and open the rear door on the head of the Series 1000.
- 2. Turn off the AC power switch located on the right side of the unit.
- 3. Remove the hood of the unit.

IMPORTANT

In the upper left corner of the Series 1000 MPU, there is a revision level recorded on the board such as REV-H. A revision level of G1 or higher is needed to run key software. If the revision level is G or lower, an updated Series 1000 MPU PCB must be obtained before proceeding.

4. Locate the J5 connector in the middle of the left edge of the Series 1000 MPU PCB. Disconnect the attached cable. Directly beneath the J5 connector is the J6 connector. Disconnect the cable.

- 5. Working inside the head of the unit, remove the 2 screws which secure the optical reader bracket to the face of the unit (the same 2 screws secure the bottom of the external card reader cover assembly). Remove the entire optical reader assembly from the head of the unit.
- 6. Working inside the head of the unit, remove the remaining 2 screws which secure the external card reader cover assembly to the face of the unit. NOTE: Be careful when removing the external cover assembly from the face of the unit because the optical reader adaptor plate will come off with it. Save the external cover assembly and the four screws that secured it to the face; you will re-install them later. The optical reader adapter plate will not be reused.
- 7. Proceed with the Installation of Key System instructions.

INSTALLATION OF KEY SYSTEM

- 1. From the conversion kit, press the **Trim Edge Material** onto the bottom edge of the **PCB Mounting Bracket**.
- 2. Using the **four screws** from the conversion kit, secure the **Key I/F PCB** to the **PCB Mounting Bracket**.
- 3. From the outside of the unit, insert the two threaded studs of the provided single or dual Key Adapter Bracket into the two mounting holes in the face of the unit that were used to mount the mag card reader. Verify that the four slots in the Key Adapter Bracket line up with the four holes in the face of the unit. If they do not, the bracket is installed incorrectly and should be rotated.
- 4. Working inside the head of the unit, align the two slotted holes of the PCB Mounting Bracket onto the two threaded studs of the Key Adapter Bracket. Secure the brackets together with two of the **hex keps nuts** provided in the conversion kit.
- 5. There are two **braided ground straps** of different lengths provided in the conversion kit, but only one will be used. The location of the ground studs on your system determines which cable you will use. One ground stud is located on the PCB Mounting Bracket.
 - If there is a ground stud to the side of the bracket (on the base of the head), use the short ground strap. The short strap is mounted between the ground stud on the PCB Mounting Bracket and the ground stud right next to the bracket.

Place the provided **star washers** onto the ground studs, then the ring terminals of the ground straps, and secure them in place with the provided **hex keps nuts**.

• If no ground stud is next to the bracket, use the long strap and make the connection between the PCB Mounting Bracket and the ground stud located near the hinge of the rear door. This stud already holds a ground wire to the rear door.

Secure one end of the strap to the ground stud on the PCB Mounting Bracket by first placing a provided star washer on the stud, then the ring terminal of the strap, and then a provided hex nut.

Remove the existing hex nut on the rear ground stud and place the ring terminal on the stud with the existing ground wire. (If there is not a star washer under the existing ground strap, add one at this time). Replace the hex nut.

- Install the Key Receptacle(s) by standing in front of the Series 1000 and snapping them into the hole(s) in the Key Adapter Bracket. Be sure the PCB connector of the Key Receptacle is facing upward before snapping it in place.
- 7. Reinstall the external cover assembly that was removed in step 4 (mag) or steps 5 & 6 (optical). Hold the cover in place over the Key Receptacle(s), be sure the cover will open upward. Working inside the head of the unit, use the four previously removed screws to secure the external cover to the face of the unit.

- 8. Install the 10-position Key Receptacle Ribbon Cable(s) by inserting one end into the top of the Key Receptacle and the other end into connector P3 or P4 of the Key I/F PCB. Select the connector closest to the Key Receptacle. Both the Key Receptacle and the connectors on the Key I/F PCB are keyed so the cables cannot be plugged in backwards. Important: Secure ribbon cable to key receptacle with the tie-wrap supplied in the kit.
- Install the 26-position Key I/F Ribbon Cable by inserting one end into the P2 connector of the Key I/F PCB and the other end into the J6 connector (labeled J6 OPTICAL READER) of the Series 1000 MPU PCB. Both PCB connectors are keyed so the cable cannot be plugged in backwards.
- 10. Install the **Key I/F Cable Assembly**. This cable contains three separate 10-position connectors (and one 4-position connector if your unit has a receipt printer). One end of the cable has a single connector, the other side of the cable splits off into two connectors (3 if your unit has receipt printer).

Plug the end with the single connector into the P1 connector of the Key I/F PCB. Feed the other ends of the cable underneath and out the center of the Series 1000 MPU PCB.

One of the remaining 10-position connectors has only 2 wires, an orange wire and a black wire. Attach it to the J5 connector (labeled J5 MAG READER) of the Series 1000 MPU PCB.

The remaining 10-position connector attaches to the J1 connector of the Series 1000 MPU PCB.

If you have a receipt printer, the four position connector splitting off of the J1 connector is for the receipt printer. *Existing Series 1000 receipt printer systems already have a small cable attached between the J1 connector of the Series 1000 MPU PCB and the P6 connector of the Auxiliary Communication PCB. Remove and discard this cable.*) Attach the connector to the P6 connector of the Auxiliary Communication PCB.

- 11. The U21 socket, containing the current ROM chip, is located in approximately the center of the Series 1000 MPU PCB. The ROM chip is labeled with the program name, version, start address and a directional arrow. The directional arrow points to a U-shaped notch indicating the top of the ROM chip. Using a screwdriver, carefully pry the ROM chip out of the socket. Install the provided **ROM chip**, which contains the software revision for the key system, so each of it pins are properly lined-up with the U21 socket on the MPU PCB and the directional arrow on the ROM label points up. Firmly press the ROM chip into the socket, being careful not to bend any pins.
- 12. The program contained within the new ROM chip has one of two possible starting addresses, 7000 or 8000. The starting address is written on the label of the ROM chip. The jumper selections of jumper patch JP3 and JP4 of the Series 1000 MPU PCB are dependent upon the start address of the system's program. See the drawing on the next page for jumper patch locations and settings. Set JP3 and JP4 appropriately.
- 13. If you are converting from version 8.1 or higher software, you already have an additional 8K RAM in the U22 socket. Proceed to Step 14. The key software requires an additional RAM chip in the U22 socket of the Series 1000 MPU PCB. The conversion kit provides an 8K RAM which looks similar to the 32K RAM in the U23 socket. The provided RAM is not a replacement for the existing RAM in the U23 socket, but works with it from the U22 socket. The U22 socket has a small chip in the center of the socket; do not attempt to remove it, the new RAM will cover it. Position the provided **RAM chip** so each of its pins are properly lined-up with the U22 socket on the MPU PCB and the small recessed circle in the top corner of the RAM chip points up. Firmly press the RAM chip into the socket, being careful not to bend any pins.



- 14. There is a set of operating instructions silkscreened to the right of the keypad on the face of the Series 1000. These instructions apply to the reader that was removed. Clean and dry this area. The conversion kit includes a self-adhesive **OPERATING INSTRUCTIONS decal**. Peel the backing off the decal and apply it over the current operating instructions.
- 15. There is a diagram showing proper card insertion silkscreened below the operating instructions on the face of the Series 1000. This diagram applies to the reader that was removed. Clean and dry this area. The conversion kit includes a self-adhesive **key insertion instructions decal**. Peel the backing off the decal and apply it over the current diagram.
- 16. Proceed with **Power On and Test** instructions.



POWER ON AND TEST

1. When you have finished installing the conversion kit, turn on the power for the Series 1000 System.

If it does not power up, check that the program ROM and additional RAM are inserted into the proper sockets. If they are, check that none of the pins are bent back.

If the system still does not power up, verify the jumper selections on the JP3 and JP4 jumper patches on the Series 1000 MPU PCB. They should be set in accordance with the start address of the system's program ROM.

If the system still does not power up, contact GASBOY Customer Service.

- When standing directly in front of the Series 1000 MPU PCB, the Diagnostic switch is located approximately in the middle of the right edge of the MPU PCB and is usually in the down (OFF) position. Place the switch in the up (ON) position. The LCD on the face of the unit displays: ENTER TEST 0-9.
- 3. On the system keypad press 6 and ENT. The system executes a RAM test. If the test completes successfully, the message **RAM OK!** displays. Proceed with the ROM test. If the test fails, the system displays **RAM FAILED!** Contact GASBOY Customer Service.
- 4. On the system keypad press 7 and ENT. The system executes a ROM test. If the test completes successfully, the message ROM OK! displays. Proceed with assigning the password. If the test fails, the system displays ROM FAILED! Contact GASBOY Customer Service.
- 5. On the system keypad press 1 and ENT. The system displays NEW PASSWORD?. Again, press 1 and ENT. The system displays PASSWORD CHANGED. This procedure sets the system password to GASBOY, which is necessary because the installation of a new program (ROM) will scramble the information (previous password) held in RAM. With a known value as the password you will be able to access command mode.
- 6. On the MPU PCB, return the Diagnostic switch to the down (OFF) position.

START-UP COMMANDS

Use the following commands to set up the system at the initial start-up. The Series 1000 FleetKey Operation Manual describes these commands in more detail. In the examples, bold represents the information that you enter, and this symbol \neg represents the RETURN key.

- 1. Press CTRL F or RETURN. The system displays: SIGN ON:
- Type GASBOY and press RETURN. (The word GASBOY is shown in the illustration for example only. You will not see the word GASBOY as you are typing it.) The asterisk prompt * appears indicating that you are in Command Mode and can begin entering commands to configure your Series 1000 System.

```
SIGN ON: GASBOY↓
```

3. Type LS to change the initial password (GASBOY) to one of your choice (up to 10 characters).

```
*ls
Password: password,J
*
```

4. Type SC to load your system configuration data.

```
*sc
RESETTING SYSTEM CONFIGURATION
ARE YOU SURE? <Y OR N> Y,
SITE NO.: <XXXX> 0003.
IDLE MESSAGE: <20 CHARS> GASBOY FLEETKEY,
ENTER KEY TYPE 1 PROMPT: INSERT GRAY KEY,
ENTER KEY TYPE 2 PROMPT: INSERT GREEN KEY,
NUMBER OF PUMPS: <1-8> 4.
PUMP #1
  $ OR QTY PULSES? <$ OR Q>$↓
PUMP #2
  $ OR QTY PULSES? <$ OR Q>Q↓
  PULSES PER GAL. <1000,500,250,100,10,1>100↓
PUMP #3
  $ OR QTY PULSES? <$ OR Q>Q→
  PULSES PER GAL. <1000,500,250,100,10,1>10↓
PUMP #4
  $ OR QTY PULSES? <$ OR Q>Q↓
  PULSES PER GAL. <1000,500,250,100,10,1>10,
NO. OF TANKS: <1-8> 4↓
PRICE DATA FORMAT
  0 = NO PRICE DATA
  1 = UNIT PRICE
  2 = UNIT & TOTAL PRICE
  ENTER FORMAT: <0,1,2>0↓
SYSTEM ID:<XXXX>
AUTO PUMP DISABLE
  NO. OF ZERO QTY. TRANS. <1-99> 5↓
LINES PER PAGE <0-62>: 62,
KEY EXPIRATION DATE
  ENABLE OR DISABLE? <E OR D> E,
AUTO PIN LOCKOUT
  ENABLE OR DISABLE? <E OR D> E↓
AUTO SITE SHUT DOWN
  ENABLE OR DISABLE? <E OR D> D,
TRANSACTION MPG
  ENABLE OR DISABLE? <E OR D> D,
```

NOTE: Additional system configuration prompts may appear depending on the options available on your system. See the description of your option in the Operation Manual for command differences.

5. Type **CT** to clear the key receptacle read and error table.

```
*CT CLEAR KEY READ TOTALIZERS <Y or N> \mathbf{Y}_{\text{+}} *
```

6. Type **RT** to initialize the transaction file.

```
*RT
RESET TRANS FILE ? <Y OR N> Y.J
*
```

7. Type **LN** to load the starting transaction number into the system.



8. Type **LD** to load the date and time into the system.

```
*LD

YEAR: 90,J

MONTH: 1,J

DAY: 23,J

HOURS: 9,J

MINS: 30,J

*
```

9. Type **MO** if you have a CRT attached and wish to display output one screen at a time.

```
DISPLAY OUTPUT ONE SCREEN AT A TIME <Y OR N>: \mathbf{Y}_{\leftarrow}J *
```

*мо

10. Type **WK** to load the 4-digit working key that is assigned to your system at the time of order. This is used in calculating PIN numbers.

*WK Working key no. 0015. *

- NOTE: The value shown is for example only. Use the PIN key assigned to your system. If you have a key system, the PIN key is listed on the key layout sheet supplied with your manuals.
- 11. Type **SD** to load the start and end times for site shut down. If you disabled the Auto Site Shut Down feature through the **SC** command, you can skip this step.

```
*SD
SITE SHUT DOWN START TIME:
HOURS: 23.J
MINS: 00.J
SITE SHUT DOWN END TIME:
HOURS: 7.J
MINS: 00.J
*
```

12. Type LI to assign the initial inventory of each tank. For example, if Tank 2 currently contains 1700 gallons, the entries are:

```
*LI
TANK #2.J
AMOUNT: 1700.J
TANK #.J
*
```

13. Type **LR** to assign the inventory reorder point for each tank.

```
*LR
TANK #2.1
REORDER: 700.1
TANK #.1
*
```

14. Type LP to assign specific fuels, prices, tanks, totalizer readings, and timeouts to your pumps.

```
*LP

PUMP NO. 1

FUEL CODE: 1

FUEL NAME: REGULAR

PRICE $1.189

TANK #1

AMOUNT: 0

BEFORE PUMP ACTIVATION TIME = 80

AFTER PUMP ACTIVATION TIME = 80

PUMP NO.J

*
```

- NOTE: **PRICE** may not appear if you selected 0 for price data format in the **SC** command.
- 15. Type **LF** to assign the fuel codes to the proper authorization codes. For initial start-up, assign fuel codes to all authorization codes, beginning with code 1 and continuing through code 9.

```
*LF
AUTH NO. : 1.1
ALLOW: 03 26.1
ALLOW: 00 13.1
ALLOW: 02.1
ALLOW: 02.1
ALLOW: 00 01.1
AUTH NO. : 2.1
ALLOW: 01.1
ALLOW: 01.1
ALLOW: 01.1
ALLOW: 03.1
ALLOW: 03.1
ALLOW: 00.1
AUTH NO. : 1
ALLOW: 01.1
```

16. Type **LL** to assign the maximum fuel quantities to the limitation codes. For initial start-up, assign quantities to all codes, beginning with Code 0 and continuing through Code 9.

```
*LL
CODE=1.J
MAX =25 J
CODE=9.J
MAX =100.J
CODE=.J
*
```

17. If you plan to use a *negative* key file (validate all keys and invalidate individual keys), type **VA**.

```
*VA
Validate all keys? <y or n> Y.J
*
```

18. If you plan to use a positive key file (invalidate all keys and validate individual keys), type IA.

```
*IA
INVALIDATE ALL KEYS? <Y OR N> Y.J
*
```

WHERE TO GO FROM HERE

When you have completed this section, your new FleetKey system should be working and fully operational. For more detail on commands and for fueling procedure at the island, see the *FleetKey Operation Manual, C08379*.

WARRANTY

General Statements:

Gasboy International LLC. warrants all new equipment manufactured by Gasboy against defective material and/or workmanship, for the warranty period specified below, when the equipment is installed in accordance with specifications prepared by Gasboy.

This warranty does not cover damage caused by accident, abuse, Acts of God, lack of surveillance of automatic recording systems, negligence, mis-application, faulty installation, improper or unauthorized maintenance, installation or use in violation of product manuals, instructions, or warnings. Under no circumstance shall Gasboy be liable for any indirect, special, or consequential damages, losses, or expenses to include, but not limited to, loss of product, loss of profits, litigation fees, or the use, or inability to use, our product for any for any purpose whatsoever.

Parts Only - During the warranty period, Gasboy will, at its option, repair or replace defective parts returned transportation prepaid to its factory. On-Site Labor Included - Gasboy will also provide, within the Continental United States and during the warranty period, the services of an Authorized Service Representative (ASR) for on-site repair or replacement of defective parts.

Replacement Parts - Any system components that are not part of the original system order, including Island Card Readers, Pump Control Units, etc., are considered replacement parts.

Equipment	Term	Coverage
Commercial Pumps and Dispensers Full-Cabinet Consumer Pumps	One year from date of installation or 18 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first.	Parts and Labor.
Small Transfer Pumps, Meters, Pressure Regulators	One year from date of installation or 18 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first Excepting the Model 2020 Hand Pump, which has a 90-day warranty from date of GASBOY International's invoice.	Parts Only.
Keytrol	One year from date of installation or 18 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first.	Parts and Labor.
Fuel Management Systems: - CFN/ Profit Point - Series 1000/Fleetkey - TopKAT - Fuel Point Readers (sold with new systems)	One year from date of start-up or 15 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first The basic warranty only applies to systems which have been started up by a Gasboy Authorized Service Representative (ASR).	Parts and Labor.
Additional Fuel Point Items: - Fuel Point Readers sold for retrofitting existing systems. - Fuel Point vehicle and dispenser components.	One year from date of start-up or 15 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first.	Parts Only.
Encoders, Embossers, Modems, CRTs, and Logger Printers	Purchased with Fuel Management System (Encoders, Embossers only): 90 days from the date of start-up by a Gasboy ASR, or 180 days from date of Gasboy International's invoice, whichever occurs first.	Purchased with System (Encoders, Embossers only): Parts only.
	Purchased with Fuel Management System (Modems, CRTs, and Logger Printers only): Matches system warranty.	Purchased with System (Modems, CRTs, Logger Printers only): Matches system warranty.
	Purchased Separately: 90 days from date of Gasboy International's invoice to the purchaser.	Purchased Separately: Parts Only.
Air Diaphragm Pumps	Three years from date of purchase (for full warranty description, see Price List).	Parts Only.
Items not manufactured by Gasboy (ex. automatic nozzles, hoses, swivels, etc.)	Not warranted by Gasboy International (consult original manufacturer's warranty).	Not Applicable.
Replacement Parts	One year from date of Gasboy International's invoice to the purchaser.	Parts Only.

To the extent permitted by law, this warranty is made in lieu of all other warranties, expressed or implied, including warranties of freedom from patent infringement, or merchantability, or fitness for a particular purpose, or arising from a course of dealing or usage of trade. No one is authorized to vary the terms of the warranty nor may anyone make any warranty of representation, or assume any liability other than that herein stated, in connection with the sale described herein. The acceptance of any order by Gasboy International is expressly made subject to the purchaser's agreement to these conditions.

