

Introduction

Purpose

This manual provides instructions for programming the Honeywell® MS7120 Orbit Hands-free Scanner for use with Gilbarco® equipment.

IMPORTANT INFORMATION

This scanner does not support the Passport® Age Verification feature. If you want to utilize Age Verification, refer to *MDE-4956 Honeywell Xenon™ 1900 Scanner Setup/Service Instructions*. The Honeywell Xenon 1900 Scanner is the only 2D scanner tested and approved by Gilbarco.

Figure 1: MS7120 Scanner

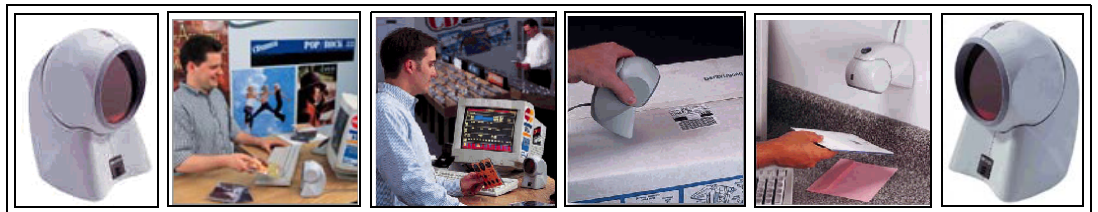


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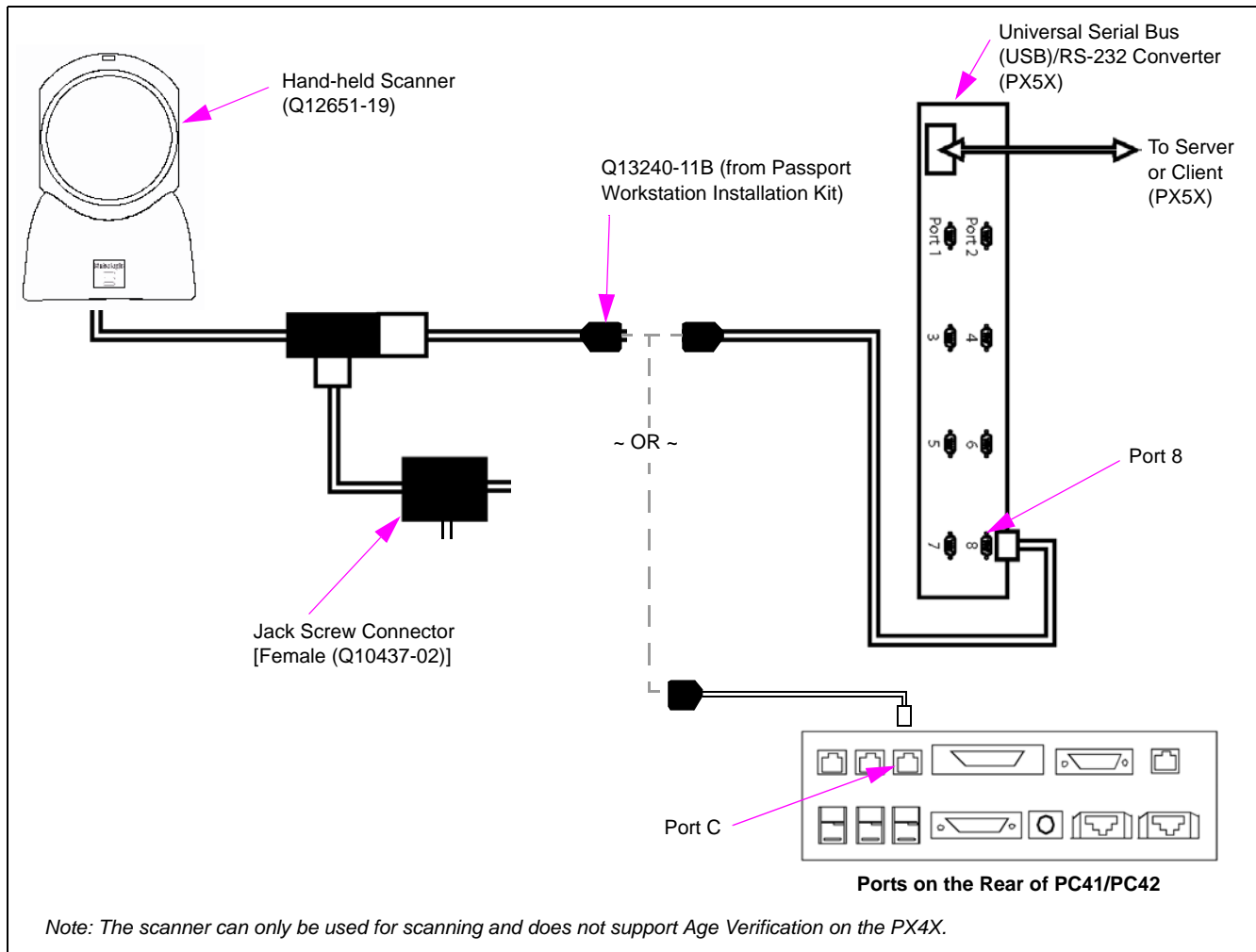
Parts List

The following parts are included with the Honeywell MS7120 Orbit Hands-free Scanner Kit (PA02710303):

Item	Description	Part Number	Quantity
1	Scanner, Hand-held	Q12651-19	1
2	Connector, Jack Screw (Female)	Q10437-02	1
3	Gender Mender	Q13180-35B	1
4	Cable, Work Area, 6'	Q13850-06	1

Connections Diagram

Figure 2: Passport System (Cashier) Connections Diagram



Related Documents

Document Number	Title	GOLD SM Library
MDE-4956	Honeywell Xenon 1900 Scanner Setup/Service Instructions	POS Peripheral Devices

Abbreviations and Acronyms

Term	Description
ASC	Authorized Service Contractor
GOLD	Gilbarco Online Documentation
I/O	Input Output
IBM®	International Business Machines
ITF	Interleaved 2 of 5
LED	Light Emitting Diode
LF	Low Frequency
MOC	Major Oil Company
MWS	Manager Workstation
NVRAM	Non-volatile Random Access Memory
PLC	Programmable Logic Controllers
PLU	Price Look Up
POS	Point of Sale
UPC	Universal Product Code
USB	Universal Serial Bus

Important Safety Information

Notes: 1) *Save this Important Safety Information section in a readily accessible location.*

2) *Although DEF is non-flammable, Diesel is flammable. Therefore, for DEF cabinets that are attached to Diesel dispensers, follow all the notes in this section that pertain to flammable fuels.*


This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining, or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock, or pressure release could occur and cause death or serious injury, if these safe service procedures are not followed.


Preliminary Precautions

You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain, or service this equipment.


Emergency Total Electrical Shut-Off

The first and most important information you must know is how to stop all fuel flow to the pump/dispenser and island. Locate the switch or circuit breakers that shut off all power to all fueling equipment, dispensing devices, and Submerged Turbine Pumps (STPs).

**WARNING**



The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser. This means that even if you activate these stops, fuel may continue to flow uncontrolled.



You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not the console's ALL STOP and PUMP STOP or similar keys.

Total Electrical Shut-Off Before Access

Any procedure that requires access to electrical components or the electronics of the dispenser requires total electrical shut off of that unit. Understand the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gilbarco equipment.

Evacuating, Barricading, and Shutting Off

Any procedure that requires access to the pump/dispenser or STPs requires the following actions:



- An evacuation of all unauthorized persons and vehicles from the work area
- Use of safety tape, cones, or barricades at the affected unit(s)
- A total electrical shut-off of the affected unit(s)

Read the Manual

Read, understand, and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call a Gilbarco Authorized Service Contractor or call the Gilbarco Support Center at 1-800-800-7498. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

Follow the Regulations

Applicable information is available in National Fire Protection Association (NFPA) 30A; *Code for Motor Fuel Dispensing Facilities and Repair Garages*, NFPA 70; *National Electrical Code (NEC)*, Occupational Safety and Health Administration (OSHA) regulations and federal, state, and local codes. All these regulations must be followed. Failure to install, inspect, maintain, or service this equipment in accordance with these codes, regulations, and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

Replacement Parts

Use only genuine Gilbarco replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gilbarco replacement parts could create a safety hazard and violate local regulations.

Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.

Alert Symbol



This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions below must be followed to prevent death, injury, or damage to the equipment:



DANGER: Alerts you to a hazard or unsafe practice which will result in death or serious injury.



WARNING: Alerts you to a hazard or unsafe practice that could result in death or serious injury.



CAUTION with Alert symbol: Designates a hazard or unsafe practice which may result in minor injury.

CAUTION without Alert symbol: Designates a hazard or unsafe practice which may result in property or equipment damage.

Working With Fuels and Electrical Energy

Prevent Explosions and Fires

Fuels and their vapors will explode or burn, if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause potentially dangerous vapors in the vicinity of the dispenser or island.

DEF is non-flammable. Therefore, explosion and fire safety warnings do not apply to DEF lines.

No Open Fire



Open flames from matches, lighters, welding torches, or other sources can ignite fuels and their vapors.

No Sparks - No Smoking



Sparks from starting vehicles, starting, or using power tools, burning cigarettes, cigars, or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuel vapors. Every time you get out of a vehicle, touch the metal of your vehicle, to discharge any electrostatic charge before you approach the dispenser island.

Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

Working With Electricity Safely

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion, or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Lockout/Tagout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Ensure that you clean hands after handling equipment. Do not place any equipment in the mouth.

WARNING

The pump/dispenser contains a chemical known to the State of California to cause cancer.

WARNING

The pump/dispenser contains a chemical known to the State of California to cause birth defects or other reproductive harm.

In an Emergency

Inform Emergency Personnel

Compile the following information and inform emergency personnel:

- Location of accident (for example, address, front/back of building, and so on)
- Nature of accident (for example, possible heart attack, run over by car, burns, and so on)
- Age of victim (for example, baby, teenager, middle-age, elderly)
- Whether or not victim has received first aid (for example, stopped bleeding by pressure, and so on)
- Whether or not a victim has vomited (for example, if swallowed or inhaled something, and so on)

WARNING



Gasoline/DEF ingested may cause unconsciousness and burns to internal organs. Do not induce vomiting. Keep airway open. Oxygen may be needed at scene. Seek medical advice immediately.

WARNING

DEF generates ammonia gas at higher temperatures. When opening enclosed panels, allow the unit to air out to avoid breathing vapors. If respiratory difficulties develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

WARNING



Gasoline inhaled may cause unconsciousness and burns to lips, mouth, and lungs. Keep airway open. Seek medical advice immediately.

WARNING



Gasoline/DEF spilled in eyes may cause burns to eye tissue. Irrigate eyes with water for approximately 15 minutes. Seek medical advice immediately.

WARNING



Gasoline/DEF spilled on skin may cause burns. Wash area thoroughly with clear water. Seek medical advice immediately.

WARNING

DEF is mildly corrosive. Avoid contact with eyes, skin, and clothing. Ensure that eyewash stations and safety showers are close to the work location. Seek medical advice/recommended treatment if DEF spills into eyes.

IMPORTANT: Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

Lockout/Tagout

Lockout/Tagout covers servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical, or other energy, but does not cover electrical hazards. Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

Programming Information

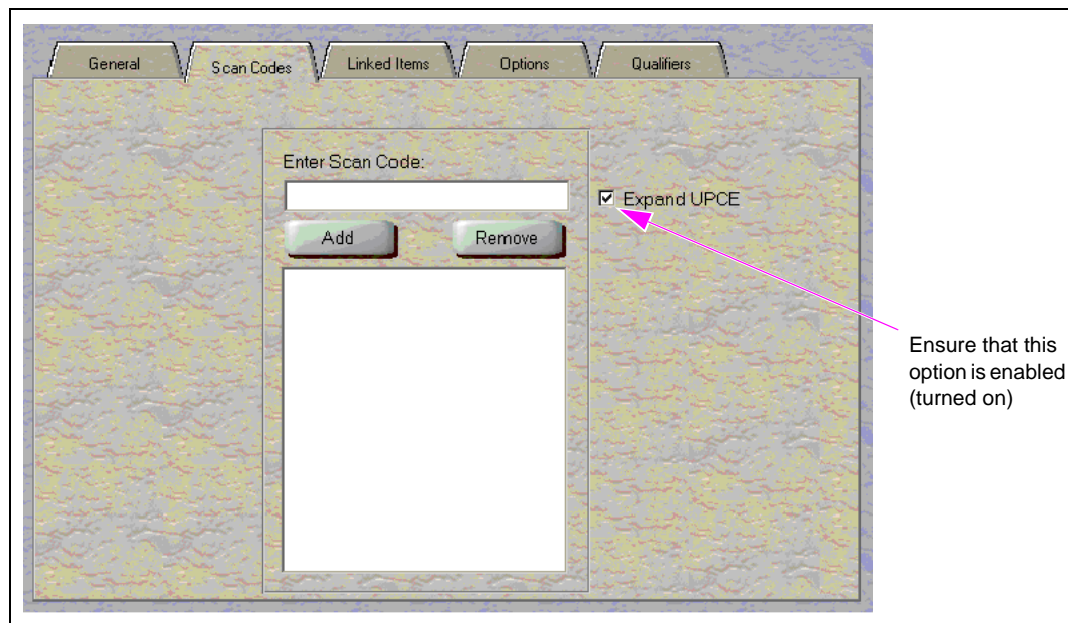
Important Programming Notes

To program the Honeywell MS7120 Scanner, scan the barcodes found in this manual from “Sheet 1” on page 12 through “Sheet 14” on page 24.

IMPORTANT INFORMATION
When the scanner is in configuration mode, the scan range is reduced significantly. As a result, it is sometimes required to almost touch the programming barcodes with the scanner so that it reads the barcodes.

Expanded UPC recognition may not be available on all systems, or may require selecting a specific option. To use Expanded UPC recognition from **Manager Workstation > Pricing > Items**, select **Expand UPCE** option.

Figure 3: Scan Codes Screen



Barcode Configuration Methods

The Honeywell scanners can be barcode configured in two methods:

- Single-code method
- Multi-code method

Single-code Method

Most features can be enabled or disabled using the single-code method. To configure the scanner by the single-code method, proceed as follows:

- 1 Turn on the scanner.
- 2 Scan the barcode(s) for the required feature(s).
- 3 Observe a multi-toned “save setting” beep that indicates the configuration has been saved to Non-volatile Random Access Memory (NVRAM).

Multi-code Method

All features can be enabled or disabled using the multi-code method. To configure the scanner by the multi-code method, proceed as follows:

Note: A feature marked with a tilde (~) requires the multi-code method.

- 1 Turn on the scanner.
- 2 Scan the Enter/Exit configuration mode barcode (three beeps).
- 3 Scan the barcode(s) for the required feature(s) (one beep).
- 4 Scan the Enter/Exit configuration mode barcode (three beeps) that saves new configuration.
Note: To abort a configuration change, remove power from the scanner before scanning the Enter/Exit configuration barcode.

Programming the Scanner

To program the scanner, proceed as follows:

- 1 Ensure that the scanner is connected to the Passport system.
- 2 Scan the barcodes on “Sheet 1” on [page 12](#) to “Sheet 12” on [page 22](#) in order. After you scan “Sheet 1” on [page 12](#) to enter the configuration mode, the scanner will beep three times and the Light Emitting Diode (LED) will flash.

Sheet	Function
1	Enter/Exit Configuration Mode
2	Recall Defaults
3	Disable Code 128
4	Disable Code 93
5	Disable Codabar
6	<ul style="list-style-type: none"> • Disable Interleaved 2 of 5 (ITF) • Enable Interleaved 2 of 5 (ITF)
7	Disable Code 39
8	Transmit UPC-A Check Digit
9	Transmit UPC-E Check Digit
10	Even Parity
11	Enable UPC Prefix ID
12	Disable Low Frequency (LF) Suffix
13*	Expand UPC-E to 12-digits
14	Enter/Exit Configuration Mode

**Use only if Expanded UPC recognition is supported/required.*

- 3 If Expanded UPC recognition is required by the Back Office software, scan “Sheet 13” on [page 23](#).
- 4 Scan “Sheet 14” on [page 24](#) to exit the configuration mode. The scanner will again beep three times.
- 5 Stop and restart the Passport application through System Maintenance toolbar to ensure proper operation.

Maintenance

To clean the glass on the scanner, use household glass cleaner and a soft cloth.

Scanner Tests

Test 1

Scan an item without connecting the data cable to the Passport system. The test is successful if the scanner beeps and the green LED flashes.

Test 2

Scan an item with the data cable connected to port 8 (PX5X) of the USB/RS-232 converter or port C (PC41/PC42) of the IBM® tailgate board [Price Look Up/Programmable Logic Controllers (PLU/PLC) must first be entered into the system using **Manager Workstation > Pricing > Item**]. The test is successful if the scanner beeps, the green LED flashes, and the Passport system responds.

Note: The test is unsuccessful if the scanner does not beep and the green LED does not flash; the scanner beeps and the green LED flashes, but the Passport system does not respond or displays “Item (barcode number) not found” in a red error box.

Customer Contact

Following information is used if the scanner is reported inoperable. This information can be used by the Authorized Service Contractor (ASC), Gilbarco Help Desk, or Major Oil Company (MOC) Help Desk.

Phone Questions

- 1 Is the red light on? If not, wave your hand in front of the red lens to turn on the scanner.
- 2 Has the scanner worked in the past?
 - If yes, continue to question 3.
 - If no, skip to question 5.
- 3 Is the scanner glass clean? If not, have the cashier clean the glass and scan the item again.
- 4 Did the cashier try to scan another item? If not, have the cashier scan another item.
- 5 Did the scanner beep or blink (green LED) when the item was scanned?
 - If yes, continue to question 6.
 - If no, suspect a faulty scanner. Go to “Site Visit” on page 10.
- 6 When the item was scanned, did “Scanned Item Not Found” appear on the console screen? If it did, the UPC number is not programmed in the system. Have the manager program the UPC number and update.
- 7 Has the Item Information programming been checked to assure the item’s status is valid?
- 8 Before the scanner stopped working, did the cashier have to scan an item several times before the scanner detected an item? If the message UPC/PLU Scan Error is displayed, expect a hardware problem.

Site Visit

PX5X Passport System

When a service call is required, take the following equipment to the site with you:

- New Scanner
- Serial Cable
- USB/RS-232 Converter

To service the scanner, proceed as follows:

- 1 Review “[Phone Questions](#)” on [page 9](#). If the scanner does not work, proceed to step 2.
- 2 Perform scanner “[Test 1](#)” on [page 9](#) on the existing scanner. If the scanner fails the test, replace the scanner. If the scanner passes the test, proceed to step 3.
- 3 Perform scanner “[Test 2](#)” on [page 9](#) on the existing scanner. If the scanner fails the test, proceed to step 4.
- 4 Stop the Passport application software by using the System Maintenance toolbar. Restart the Passport application software by using the System Maintenance toolbar. Retest the scanner by performing the “[Scanner Tests](#)” on [page 9](#). If the scanner fails, proceed to step 5.
- 5 Place the new scanner on the counter. Perform the “[Scanner Tests](#)” on [page 9](#). If the new scanner passes the tests, install the new scanner on the counter. If the new scanner fails the tests, proceed to step 6.
- 6 Replace the serial cable. Perform the “[Scanner Tests](#)” on [page 9](#) with the existing scanner. If the scanner fails the test, proceed to step 7.
- 7 Replace the USB/RS-232 converter. Perform the “[Scanner Tests](#)” on [page 9](#) with the existing scanner. If the scanner fails the tests, repeat the steps 1 through 7.

PC41/PC42 Passport System

When a service call is required, take the following equipment to the site with you:

- New Scanner
- RJ-45 to RS-232 Cable
- IBM Tailgate Board

To service the scanner, proceed as follows:

- 1 Review “[Phone Questions](#)” on [page 9](#). If the scanner does not work, proceed to step 2.
- 2 Perform scanner “[Test 1](#)” on [page 9](#) on the existing scanner. If the scanner fails the test, replace the scanner. If the scanner passes the test, proceed to step 3.
- 3 Perform scanner “[Test 2](#)” on [page 9](#) on the existing scanner. If the scanner fails the test, proceed to step 4.
- 4 Stop the Passport application software by using the System Maintenance toolbar. Restart the Passport application software by using the System Maintenance toolbar. Retest the scanner by performing the “[Scanner Tests](#)” on [page 9](#). If the scanner fails, proceed to step 5.

- 5 Place the new scanner on the counter. Perform the “Scanner Tests” on [page 9](#). If the new scanner passes the tests, install the new scanner on the counter. If the new scanner fails the tests, proceed to step 6.
- 6 Replace the RJ-45 to RS-232 cable. Perform the “Scanner Tests” on [page 9](#) with the existing scanner. If the scanner fails the tests, proceed to step 7.
- 7 Replace the IBM tailgate board. Perform the “Scanner Tests” on [page 9](#) with the existing scanner. If the scanner fails the tests, repeat steps 1 on [page 10](#) through 7.

Troubleshooting Passport Scanner Errors

The following information includes possible errors and solutions for scanners used with the Passport system.

Scan Item Not Found

This message appears on the message bar to indicate that the scanner read the barcode for the scanned item and correctly transmitted the data to the Passport system, but the UPC was not found on the system.

To troubleshoot this error, proceed as follows:

- 1 From MWS, select **Pricing > Item**.
- 2 Check the programming in the Passport system or Back Office PC, and verify if the UPCs are programmed correctly.
- 3 If UPCs are programmed from a Back Office PC package, you must resend the data from the PC.

Item (Barcode Number) Not Found, Enter Price Using Department

This message appears in a red error box to indicate that the scanner read the barcode for the scanned item and transmitted the data to the Passport system, but not in the correct format.

~ OR ~

There is no indication that anything has changed.

To troubleshoot this error, proceed as follows:

- 1 Verify if the cable configuration is correct. Pin #3 to console must be set to Receive Data (transmit data from scanner), and Pin #5 must be set to Signal Ground.
- 2 Verify if the cables are connected and seated properly.
- 3 Verify if the scanner programming options are set correctly.

Programming the Honeywell MS7120 Orbit Hands-free Scanner

Barcode Sheets

Sheet 1

Enter/Exit Configuration Mode



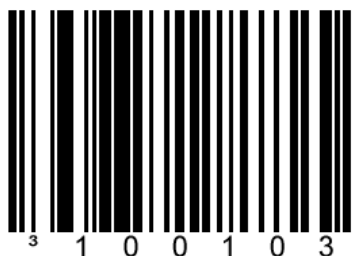
Sheet 2

Recall Defaults



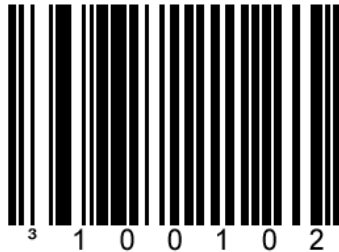
Sheet 3

Disable Code 128



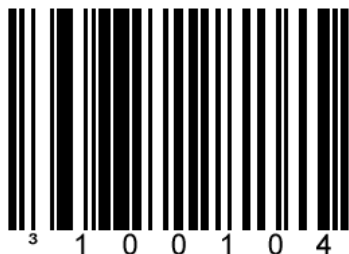
Sheet 4

Disable Code 93



Sheet 5

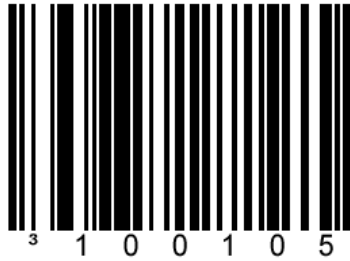
Disable Codabar



Sheet 6

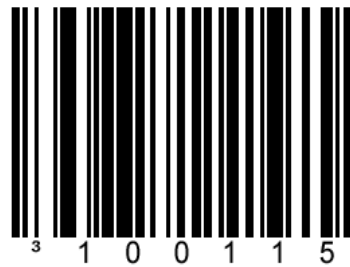
Disable Interleaved 2 of 5 (ITF)

This is for all MOCs except 76®.



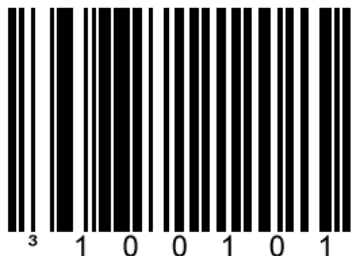
Enable Interleaved 2 of 5 (ITF)

This is for 76 **ONLY**.



Sheet 7

Disable Code 39



Sheet 8

Transmit UPC-A Check Digit



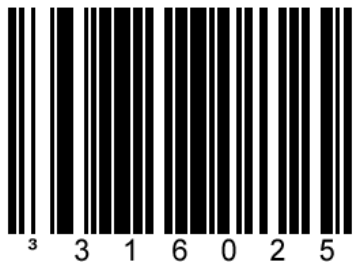
Sheet 9

Transmit UPC-E Check Digit



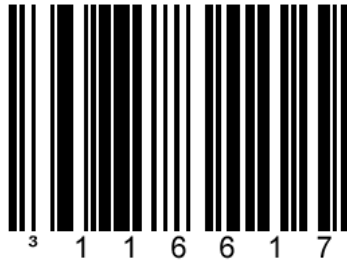
Sheet 10

Even Parity



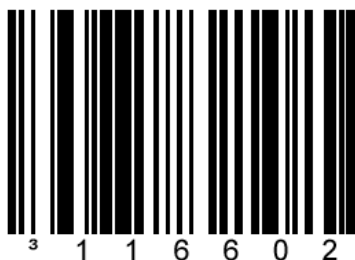
Sheet 11

Enable UPC Prefix ID



Sheet 12

Disable Low Frequency (LF) Suffix



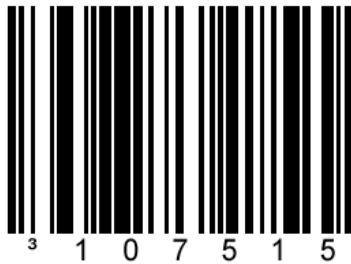
Sheet 13

Expand UPC-E to 12-digits

CAUTION

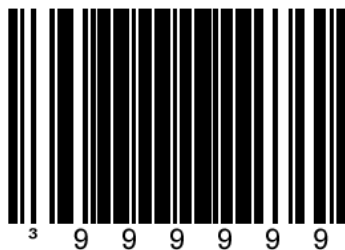
Do not scan this sheet unless Expanded UPC recognition is required and supported by Back Office software.

If Expanded UPC recognition is not supported, scanning this sheet will cause the system to lose all scanning ability.



Sheet 14

Enter/Exit Configuration Mode



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