# Pyxis MedStation™ ES System

Safety Guide

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System Release 1.5.2

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# Pyxis MedStation™ ES System Safety Guide

Changes in equipment, software, or procedures occur periodically; information describing these changes will be included in future editions of the guide.

The information in this document is subject to change and does not represent a commitment on the part of CareFusion to provide additional services or enhancements.

Documentation provided with this product might reference product not present in your facility or not yet available for sale in your area.

**Information to User**

**Caution:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**FCC Notice**

This device complies with Part 18 of the FCC rules.

**Canadian Notice (Avis Canadien)**

This ISM device complies with Canadian ICES-001.

Cet appareil ISM est conforme à la norme NMB-001 du Canada.

**Information to User**

**Caution:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**FCC Notice**

This device complies with Part 15 of the 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.

**Canadian Notice (Avis Canadien)**

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la class A est conforme à la norme NMB-003 du Canada.

## Authorized European Representative EC REP

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# Contents

# About this guide

Thank you for choosing Pyxis™ ES system products.

This document covers the safety requirements for Pyxis ES system products. The Pyxis ES system operates independently or in conjunction with other types of CareFusion equipment. Some information in this document does not apply to all Pyxis equipment. Refer to the information that applies to the CareFusion equipment at your facility. The user guides for other Pyxis products are provided as separate documents.

For safety information about the Pyxis ES system not covered in this document, call the Technical Support Center for Pyxis Products at 1.800.727.6102 or 858.617.2000.

## Revision history

| System release | DME/Date | Change summary |
|---|---|---|
| 1.5.2 | 10000282937-04/October 2017 | Added a table of toxic and hazardous substances for customers in China. |
| 1.5.2 | 10000282937-03/October 2017 | Added a caution about connecting stations in the USA and Canada only to 100–120 Vac, 60 Hz mains to *Installation site* on page 3. |
| 1.5.2 | 10000282937-02/June 2017 | Revised date, DME, and ES system version on document cover.<br>Revised year dates on legal page.<br>Revised Canadian Standards Association (CSA) information in section *Equipment markings and symbols* on page vii.<br>Revised Radiation (symbol) information in section *Equipment markings and symbols* on page vii. |

| System release | DME/Date | Change summary |
|---|---|---|
| | | Added section *Excessive current and voltage protection* on page 5.<br>Added section *Summary of the MedStation ES application specification* on page 6. |
| 1.5.1 | 10000282937-01/November 2016 | Updates to 1.4.2 document were included in this release. |
| 1.5.0 | 10000282937-00/August 2016 | First release of this guide for system release 1.5.0 |

# Conventions

### Text

- *Italic*—Variable placeholders, emphasis, reference to a document title, or a called-out term.
- **Bold**—Names of *interactive* GUI items.
- `Screen text`—Programming code, user input, system output.

### Notices

**WARNING**
**Indicates potentially hazardous situations which, if not avoided, could result in injury or death.**

**CAUTION**
Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. Cautions also alert against unsafe practices that could result in unpredictable results or data loss.

**Note**
Contains supplementary information or emphasizes a point or procedure.

# Equipment warnings

**WARNING**
**To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth.**

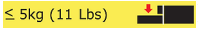
**WARNING**
**No modification of this equipment is allowed.**

**WARNING**
**Do not modify this equipment without authorization of the manufacturer.**

**WARNING**
**If this equipment is modified, appropriate inspection and testing must be conducted to ensure continued safe use of the equipment.**

# Equipment markings and symbols

Several symbols are used to convey visual messages in this manual and on the equipment. The symbols follow the International Organization for Standards (ISO) format. Some markings and symbols are specific to a product.

| | |
|---|---|
|  | **Warning: General Hazard**—Loss, injury, or damage may occur. Refer to the accompanying documents or the adjacent text. |
|  | **Warning: Dangerous Voltage**—Shock hazard. Refer servicing to qualified service personnel. |
|  | **Tip Over Hazard**—The height of most frames can cause interference with low hanging or permanently fixed items, all of which can create a tipping hazard. Be aware of low hanging items as the station is moved. Close and lock all station drawers before moving the station. |
|  | **On Position**—Indicates the switch position for turning on the power supply. |
|  | **Off Position**—Indicates the switch position for turning off the power supply. |
|  | Waste electrical and electronic equipment; not for municipal waste. |
|  | **Fuse Symbol**—Indicates the location of fuses. For continued protection against risk of fire, replace fuses only with fuses of the same type and rating. |
|  | **Alternating Current** |
|  | **Protective Earth** (Ground) |
|  | Federal Communications Commission |
|  | Refer to documentation. |
|  | Canadian Standards Association |
| IPX0 | No protection against ingress of fluids. |
|  | Radio frequency (RF) transmission |
|  | **Maximum Weight**—Maximum weight allowed for drawer contents. Do not overload the drawer. |

# Chapter 1
# Station guidelines

# Installation

The following guidelines apply to installing all Pyxis MedStation™ ES system products. This section includes guidelines for the following installation activities:



## Unpacking the station

The Pyxis MedStation ES system is shipped with accessory items to facilitate the setup of the station. A list identifying the items is included. Leave the items in the station so that they are available at the final installation site.

To schedule final installation, contact your local CareFusion representative or call the TSC at 1.800.727.6102 or 858.617.2000. Report any damaged or missing items.

## Moving the station

**Tip Over Hazard**—The height of most frames can cause interference with low hanging or permanently fixed items, all of which can create a tipping hazard. Be aware of low hanging items as the station is moved. Close and lock all station drawers before moving the station.

**WARNING**
**The stations are heavy. Use appropriate techniques when moving the station.**

- Before you move the station, make sure that it is safe to roll it on its wheels.
- If the station has lockable casters, unlock them.
- If the station has leveling pads, rotate them fully upward.
- After you move the station to the installation location, lock the casters or rotate the leveling pads to the down position.
- While moving the station, beware of all obstacles including dips, bumps, transition lines, or low-hanging items. Beware of instability from any of the casters, which can rotate 360 degrees.

## Installation site

A CareFusion representative will position the station, configure the shelves, and connect it to other stations and the network. Both user and local safety requirements will be addressed through this process.

The power and communication cables must be connected to the appropriate outlets according to the *Station specifications* on page 5. Protective earth (PE) must be guaranteed on the power cable before plugging it into the alternating current (AC) mains. Route cables to avoid a trip hazard and to prevent stress to the connection points on the wall and system.

Verify that the circuit on which the station is installed is not already overloaded with other equipment.

**CAUTION**

- Do not install stations in a magnetic resonance imaging (MRI) environment.
- Under testing conditions with an empty station, the temperature of certain locations within a station may reach up to 5°C (9°F) above ambient temperature in the room. Be aware of this when storing temperature-sensitive products.
- To prevent electrical shock, use CareFusion-supplied power cords only. Always select an unused AC outlet of Hospital Grade identification for the connection.
- For USA and Canada installation, connect only to AC Mains within 100 - 120 Vac, 60 Hz.
- This device uses intentional RF energy to connect with IEEE 802.11 b/g/n WiFi, and also with Bluetooth 2.0 or higher. Confirm that the installation includes consideration for other devices, including those with RF transmitters, to assure proper operation of the Pyxis MedStation ES system.
- The antenna for the Wireless WiFi/BT module mounted in the “all-in-one” computer behind the LCD display module requires a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures. Do not lay your cell phone or other wireless device on the Pyxis MedStation ES equipment.

# Safe computing

If you do need to transfer station files, CareFusion recommends that you use a USB drive for station use.

**Note**
Be sure to follow (HIPAA) compliance guidelines for protecting information on these drives.

## Turn station cabinets on

On/off switches have different locations on the various types of station cabinets. The following table provides the locations of the power switches on the cabinets.

| Cabinet | Configuration | Power switch |
|---|---|---|
| Main | • 6-drawer<br>• 2-drawer<br>• 0-drawer | The on/off switch is located on the rear of the cabinet, about four inches (10 centimeters) from the upper-right side when facing the rear of the cabinet. The switch is a toggle-on and toggle-off device. |
| Integrated main | • Double-column, 7-door<br>• Single-column, 3-door<br>• Single-column, 2-door (with one internal smart CUBIE drawer cabinet)<br>• Single-column, 1-door (with two internal smart CUBIE drawer cabinets) | The on/off switches for cabinet power and the cabinet light are located next to each other on top of the AC panel on top of the cabinet. Both switches are pushbutton devices. The switch closest to the front of the cabinet is the cabinet light switch. The cabinet power switch is behind the cabinet light switch. |
| Tall auxiliary | • Double-column, 8-door<br>• Single-column, 4-door | A tall auxiliary cabinet does not have a power switch. The pushbutton on/off switch for the cabinet light is located on top of the AC panel on top of the cabinet. Power is supplied to the cabinet doors through the cabinet bus cable from the station main cabinet. |
| Drawer-type auxiliary | • 7-drawer<br>• 6-drawer<br>• 4-drawer | A drawer-type auxiliary cabinet does not have a power switches or a cabinet light. Power is supplied to the cabinet |

| Cabinet | Configuration | Power switch |
|---|---|---|
| | | drawers through the cabinet bus cable(s) from the station main cabinet. |
| **Interconnection of Pyxis MedStation ES system main and auxiliary cabinets.** 36 Vdc power to devices in the Pyxis MedStation ES system auxiliary cabinets is provided by way of station bus cables connected to the rear of the main cabinet or to the rear of the main cabinet E-drawer. The bus connectors provide 36 Vdc power to the auxiliary cabinets and are not to be used for connection of any other equipment. | | |

## Turn station cabinets off

1. After shutting down the station application and the station Windows® operating system, move the station cabinet power and light switches to the OFF positions.

**WARNING**
**Unplugging the power cord before powering down the system causes the backup battery to engage and the system to be energized. This situation might cause a shock hazard when the top cover is open.**

2. Disconnect the power cord.

**Note**
In some circumstances, an orderly shutdown may not be possible. However, CareFusion strongly recommends performing an orderly shutdown whenever possible.

# Safety

This section provides information about operating the station in a safe manner.

## General safety tips

The station is designed for hospital and institutional use, but it contains electrical and mechanical components that can cause injury if not handled appropriately.

The following warnings apply to the station:

**WARNING**

- **Place unit in an area where it cannot be stepped on.**
- **Place unit in an area where it cannot create a trip hazard.**
- **Do not open more than one drawer at a time (except for MiniDrawer pockets).**
- **Do not load a drawer with more weight than is listed on the drawer lip.**
  - **Distribute weight evenly throughout the drawer.**
- **Be sure all drawers are closed and locked when a station is moved.**
- **Do not lean or step on an open drawer.**
- **The level supporting surface must meet the following requirements:**
  - **Be level (use a bubble level or equivalent).**
  - **Have all support feet in full contact with supporting surface at all times.**
  - **Be able to support 350 lb. (159 kg).**
- **Have a 1 in. (2.5 cm) minimum clearance from the back of the unit for venting.**
- **Do not operate the equipment—including the display—within 12 in. or 30.5 cm of a source of oxygen, including supplemental oxygen given to a patient.**

The following cautions apply to the Pyxis MedStation ES station:

**CAUTION**

- Do not attempt to force open a jammed door or drawer. Contact the Technical Support Center for Pyxis Products at 800.727.6102 or 858.617.2000.
- At least two people are required to load stations on and off of elevators.
- Do not use the top of the station for storage.
- Never store or place liquids on the station. If liquid spills in or near the station, clean it up immediately. Divert the spilled liquid from any seams or openings.
- The maximum capacity for each drawer is marked on the drawer. Distribute items evenly throughout the drawer.
- There are no serviceable parts inside the station. For service, contact the Technical Support Center for Pyxis Products at 800.727.6102 or 858.617.2000.
- Do not install the station in a place where the cord is likely to be removed from the wall outlet before the station is powered down.
- To prevent electrical hazard, be careful when touching exposed mechanical and electrical components when accessing the back panel.
- Be sure that there is at least one inch (25.4 millimeters) of space between the back of closed-frame units and the wall for adequate ventilation.
- Be sure fingers are out of the way when closing drawers or releasing drawers from the back panel.
- Do not open the top panel. The top panel can only be accessed by authorized and trained personnel.
- Do not remove the main cabinet display/touchscreen rear plastic cover. The display/ touchscreen rear plastic should only be removed by authorized and trained personnel.

# Excessive current and voltage protection

The station is designed with an internal electrical power source with an appropriately rated device for protection against fire caused by excessive current if the layout of the internal wiring/ cabling or the rating of connected components can give rise to a fire in case of a short circuit. This protective device will adequately cause system shutdown to interrupt the short-circuit current. The station is also designed with a metallic and non-metallic enclosure, having a flammability classification of FV-1 or better, which meets the constructional requirements for fire enclosures of ME (Medical Electrical) equipment per IEC 60601-1.

# Station specifications

There are many possible station configurations to provide the best fit for a specific application. Because more product types and sizes may be in development, contact your local CareFusion sales representative for the current product listings.

## Summary of the Pyxis MedStation ES system application specification

The following are the product's purpose and/or intended use:

- Streamlines medication distribution and workflow, providing more time to focus on patients and clinical activities.
- Improves nursing and pharmacy staff collaboration. Orders and order status are transmitted electronically so information is readily accessible.
- Supports Joint Commission and regulatory compliance efforts. Protects against unauthorized access, documents use, promotes pharmacist order review, and provides patient education material.
- Enhances patient throughput, narcotics management and pharmacy operations.
- Collects data and maintains accurate records to help hospitals increase charge capture and manage costs.

## Environmental specifications

| Description | Specification |
|---|---|
| Altitude | 0-3000 m. |
| Temperature | 15°C–40°C (59°F–104°F) |
| Relative humidity | 80% max. for temperatures up to 31°C (87.8°F), decreases linearly to 50% at 40°C (104°F) |
| Mains supply voltage fluctuations | Not to exceed + 10% of nominal voltage |

## Electromagnetic compatibility collateral standard

**WARNING**

- **The use of any accessory, transducer, or cable with the Pyxis MedStation ES system other than those specified may result in increased emissions or decreased immunity of the Pyxis MedStation ES system.**
- **Do not use the Pyxis MedStation ES system adjacent to or stacked with other equipment. If adjacent or stacked use is necessary, observe the Pyxis MedStation ES system to verify normal operation in the configuration in which it will be used.**

**CAUTION**

- This equipment/system is intended for use by healthcare professionals only. This is a CISPR 11 Class A, Group 1 Medical equipment system. In a domestic environment, this equipment or system may cause radio interference. If this happens, it may be necessary to take adequate mitigation measures, such as reorienting, relocating, or shielding the Pyxis MedStation ES system or filtering the connection to the public mains network.
- Medical electrical equipment needs special precautions regarding electromagnetic compatibility (EMC) and must be installed, put into service, and used according to the EMC information provided in the accompanying documents.
- This equipment generates, uses, and can radiate radio energy and, if not installed and used in the accordance with the instructions, may cause harmful interference to radio or television reception. This can be determined by turning the equipment OFF and ON. If interference happens, the user is encouraged to try and correct the situation by one of the following methods:
  - Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and the receiver.
  - Connect the equipment to a different outlet than where the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.
  - Do not stack any equipment on top or near the Pyxis MedStation ES equipment.
  - Do not lay a cell phone on top the Pyxis MedStation ES equipment.
- Portable and mobile radio frequency (RF) communications can affect medical electrical equipment.
- Operating the instrument near equipment which radiates high energy radio frequencies (electro-surgical or cauterizing equipment, portable radios, cellular telephones, and so on) may cause false alarm conditions. If this happens, reposition the Pyxis MedStation ES system away from the source of interference.
- WiFi/Bluetooth frequencies and power used:
  - WiFi: 2.4 GHz ISM bands 2.412–2.472 GHz, 2.484 GHz
    - 802.11b: Typical 17 dBm at 11 Mbps all rates ± 2.5 dBm
    - 802.11g: Typical 13 dBm at 54 Mbps / 17 dBm at 6 Mdbp ± 1.5 dBm
    - 802.11n in 2.4G HT 20: Typical 11 dBm at MCS7 ± 2.5 dBm
    - 802.11n in 2.4G HT 40: Typical 11 dBm at MCS7 ± 2.5 dBm
  - BT: 2402 MHz–2483 MHz
    - -6 ≤ output power ≤ +4 dBm (conductive)

## Electromagnetic Emissions IEC 60601-1-2

### Guidance and Manufacturer's Declaration—Electromagnetic Emissions International Electrotechnical Commission (IEC) 60601-1-2

The Pyxis MedStation ES system is intended for use in the electromagnetic environment specified below.

The customer or the user of the Pyxis MedStation ES system should ensure that it is used in such an environment.

| Emissions test | Compliance | Electromagnetic environment—Guidance |
|---|---|---|
| CISPR 11RF Emissions | Group 1 | The Pyxis MedStation ES system uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment. |
| CISPR 11RF Emissions | Class A | The Pyxis MedStation ES system is suitable for use in all establishments, other than domestic establishments and those directly connected to the public low voltage power supply network that supplies buildings used for domestic purposes. |
| IEC 61000-3-2 Harmonic Emissions | Class A | Not applicable. |
| IEC 61000-3-3 Voltage Fluctuations, Flicker Emissions | Complies | Not applicable. |

## Electromagnetic Immunity IEC 60601-1-2

### Guidance and Manufacturer's Declaration—Electromagnetic Immunity IEC 60601-1-2

The Pyxis MedStation ES system is intended for use in the electromagnetic environment specified below.

The customer or the user of the Pyxis MedStation ES system should ensure that it is used in such an environment.

| Immunity Test | IEC 60601-1-2 | Compliance Level | Electromagnetic Environment—Guidance |
|---|---|---|---|
| IEC 61000-4-2 Electro-Static Discharge (ESD) | ±6 kV contact<br>±8 kV air | ±6 kV contact<br>±8 kV air | Floors should be wood, concrete, or ceramic tile.<br>If floors are covered with synthetic material, the relative humidity should be at least 30%. |
| EC 61000-4-4 Electrical Fast Transient, Burst (EFT) | ±2 kV for power supply lines<br>±1 kV for input/output lines | ±2 kV for power supply lines<br>±1 kV for input/output lines | Mains power quality should be that of a typical commercial or hospital environment. |
| IEC 61000-4-5 Power Line Surge | ±1 kV differential mode<br>±2 kV common mode | ±1 kV differential mode<br>±2 kV common mode | Mains power quality should be that of a typical commercial or hospital environment. |
| IEC 61000-4-8 Power Frequency Magnetic Field (50/60 Hz) | 3 A/m | 3 A/m 50 Hz<br>3 A/m 60 Hz | Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment. If image distortion occurs, it may be necessary to position the Pyxis MedStation ES system further from sources of power frequency magnetic fields or to install magnetic shielding. The power frequency magnetic field should be measured in the intended installation to ensure that it is sufficiently low. |
| IEC 61000-4-11 Voltage Dips, Short Interruptions, | <5% UT (See Note 1)<br>(>95% dip in UT) for 0.5 cycle | <5% UT (See Note 1)<br>(>95% dip in UT) for 0.5 cycle | Mains power quality should be that of a typical commercial or hospital environment.<br>If the user of the Pyxis MedStation ES system requires continued operation during power mains interruptions, it is recommended that the Pyxis MedStation ES system be powered from an uninterruptible power supply or a battery. |

| Immunity Test | IEC 60601-1-2 | Compliance Level | Electromagnetic Environment—Guidance |
|---|---|---|---|
| and Voltage Variations | 40% UT (60% dip in UT) for 5 cycles | 40% UT (60% dip in UT) for 5 cycles | The Pyxis MedStation ES system employs an internal short duration battery. |
| | 70% UT (30% dip in UT) for 25 cycles | 70% UT (30% dip in UT) for 25 cycles | |
| | <5% UT (>95% dip in UT) for 5 seconds | <5% UT (>95% dip in UT) for 5 seconds | |
| IEC 61000-4-6 Conducted RF<br>IEC 61000-4-3 Radiated RF | • 3 V rms 150 kHz to 80 MHz<br>• 3 V/m 80 MHz to 2.5 GHz and 2.5 GHz to 6 GHz<br>(See Note 3) | • 3 V rms 150 kHz to 80 MHz<br>• 3 V/m 80 MHz to 2.5 GHz | Portable and mobile RF communications equipment should be used no closer to any part of the Pyxis MedStation ES system than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. (See Notes 1, 2)<br>Recommended Separation Distance:<br>• $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$<br>• $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz<br>• $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 80 MHz to 2.5 GHz<br>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). [a]<br>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,[b] should be less than the compliance level in each frequency range.[c]<br>Interference may occur in the vicinity of equipment marked with the following symbol:<br> |

- NOTE 1—At 80 MHz and 800 MHz, the higher frequency range applies.
- NOTE 2—These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.
- NOTE 3—In recent years there has been a significant increase in the use of radio telephones and other RF-emitting devices operating at frequencies between 0.8 GHz and 6 GHz. The increasing test level range of 2.5 GHz to 6 GHz may be applied to cover the corresponding frequency range of operation.

[a] The compliance levels in the Industrial, Scientific, and Medical (ISM) frequency bands between 150 kHz and 80 MHz and in the frequency range 80 MHz to 2.5 GHz are intended to decrease the likelihood that mobile/portable communications equipment could cause interference if it is inadvertently brought into patient areas. For this reason, an additional factor of 10/3 is used in calculating the recommended separation distance for transmitters in these frequency ranges.

[b] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess whether the field strength in the location in which the Pyxis MedStation ES system is used exceeds the applicable RF compliance level above, observe the Pyxis MedStation ES system to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the Pyxis MedStation ES system.

[c] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

## Recommended Separation Distances for NON-LIFE SUPPORT Equipment between Portable and Mobile RF Communications Equipment and the Pyxis MedStation ES system IEC 60601-1-2

The Pyxis MedStation ES system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled.

The customer or the user of the Pyxis MedStation ES system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Pyxis MedStation ES system as recommended below, according to the maximum output power of the communications equipment.

| Rated maximum output power of transmitter (Watts) | Separation distance according to frequency of transmitter (meters) | | |
|---|---|---|---|
| | 150 kHz to 80 MHz In ISM bands $d = \left[\frac{12}{V_2}\right]\sqrt{P}$ | 80 MHz to 800 MHz $d = \left[\frac{12}{E_1}\right]\sqrt{P}$ | 800 MHz to 2.5 GHz $d = \left[\frac{23}{E_1}\right]\sqrt{P}$ |
| 0.01 | 0.4 | 0.4 | 0.8 |
| 0.1 | 1.3 | 1.3 | 2.5 |
| 1.0 | 4.0 | 4.0 | 7.7 |
| 10 .0 | 12.8 | 12.8 | 24.5 |
| 100.0 | 40.0 | 40.0 | 76.6 |

For transmitters rated at a maximum output power not listed above, the recommended separation distance **d** in meters (m) can be determined using the equation applicable to the frequency of the transmitter, where **P** is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

- NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.
- NOTE 2: The ISM bands between 150 kHz and 80 MHz are 6.765 MHz to 6.795 MHz; 13.553 MHz to 13.567 MHz; 26.957 MHz to 27.283 MHz; and 40.66 MHz to 40.70 MHz.
- NOTE 3: An additional factor of 10/3 is used in calculating the recommended separation distance for transmitters in the ISM frequency bands between 150 kHz and 80 MHz and in the frequency range 80 MHz to 2.5 GHz to decrease the likelihood that mobile/portable communications equipment could cause interference if it is inadvertently brought into patient areas.
- NOTE 4: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

# Chapter 2
# Cleaning the device

This chapter contains guidelines for cleaning the device.

To prevent damage to electrical components and to prevent the possibility of electric shock, safely shut down, turn off, and unplug all Pyxis products before washing them. Pyxis products are typically cleaned with mild soap and warm water.

# Cleaning hazards

**WARNING**
**If you spill anything on the circuit board inside a drawer, immediately contact the Technical Support Center for Pyxis Products at 800.727.6102 or 858.617.2000.**

**CAUTION**

- When needed, clean the station with a damp cloth. Do not allow liquid to seep into any openings or seams. A nonabrasive cleanser can be used sparingly. Be sure to rinse off any residue with a clean, damp cloth. Avoid using spray bottles to spray into slots or ventilation openings.
- The same cautions, as previously stated, apply to cleaning drawer interiors and CUBIE™ pockets. Clean the drawers and pockets with a slightly damp cloth. Do not leave behind a wet surface where dust may accumulate.
- Do not use Ecolab Quick-Care hand sanitizer to clean the lids of enhanced half-height CUBIE pockets. Doing so will degrade the barcode labels on the lids.

**Note**
Do not use alcohol to clean clear plastic components.

# Cleaning the cabinet surfaces

- Clean the exterior of the cabinet with a slightly damp cloth, ensuring that liquids do not seep into any openings or seams.
- Wipe off any cleanser residue with a clean, damp cloth.
- Wipe computer keyboards using mild soap and warm water with a slightly dampened soft cloth.

  **Note**
  Station keyboards have a protective cover. Follow normal cleaning procedures to maintain the cover. Covers are replaced without charge for normal wear and tear.
- To remove any dirt or fingerprints from the front surface of Pyxis products displays or touch screens, use an alcohol pad and a clean, lint-free cloth.
- Clean third-party peripheral equipment, such as scanners, printers, and handheld devices, according to the manufacturer's instructions.
- All electronic areas must be completely dry and free of foreign material before returning the product to service.
- Clean the drawer interiors with a slightly damp cloth and wipe them dry.
- Bin liners can be replaced on a regular basis and whenever the liner becomes soiled.

For stations containing CUBIE MiniDrawers, and Matrix drawers , HealthCare Logistics™ has created a disposable bin liner that can be used to help reduce contaminants and minimize the risk of infection. The disposable, inexpensive liners can be ordered through the HealthCare Logistics website—*http://www.healthcarelogistics.com*. Enter **`bin liners`** in the search field.

**Note**
Avoid contaminating supplies and medications stored in the product when cleaning the drawer and door fronts.

Warm water is an acceptable cleaning solution. In addition, the following are acceptable cleaning solutions which must be diluted according to the manufacturer's recommendation:

- Mild detergent—per manufacturer's recommendation, as needed
- 10% bleach solution—1 part bleach to 9 parts water

- Compublend™ II (Base V with fragrance)—0.5 oz/gallon water
- 70% Isopropyl Alcohol (IPA)—no dilution required
- Wex-Cide™—1 oz/gallon water
- Ready to Use Wex-Cide—no dilution required
- Sani-Cloth™ Plus, Sani-Cloth Super, Sani-Cloth HB
- Asepti-zyme™—1 oz/gallon water
- Clorox™ wipes
- Clorox Healthcare™ Bleach Germicidal Cleaner—no dilution required
- Hibiclens™—25.6 oz/gallon water
- LpH™ disinfectant cleaner—0.5 oz/gallon water
- Maxima 128™—1 oz/gallon water
- MetriZyme™—1 oz/gallon water
- Expose II™ 256—0.5 oz/gallon water
- Virkon™—dilute per manufacturer's recommendation

# Hand sanitizers

- Purell™ with 62% alcohol—no dilution required
- 3M™ Avagard™ D—no dilution required
- Ecolab Quick-Care—no dilution required

# Chapter 3
# China RoHS

# Toxic and Hazardous Substances (China)

| Part Names | EFUP | Toxic and Hazardous Substances or Elements | | | | | |
|---|---|---|---|---|---|---|---|
| | | Pb | Cd | Hg | Cr6+ | PBB | PBDE |
| Chassis | | O | O | O | O | O | O |
| Monitor |  | X | O | O | O | O | O |
| Keyboard |  | X | O | O | O | O | O |
| Drawers | | O | O | O | O | O | O |
| Drawer Printed Circuit Boards | | X | X | O | O | O | O |
| Control Printed Circuit Boards | | X | O | O | O | O | O |
| Barcode Reader |  | X | O | O | O | O | O |
| Label Printer |  | X | O | O | X | O | O |
| Cables | | O | O | O | O | O | O |

| | |
|---|---|
| O: | Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in **GB/T 26572-2011** |
| X: | Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in **GB/T 26572-2011** |
| (Producers or importers may further provide in this box the technical explanation for marking "X" based on their actual conditions) | |
|  | |