Baby Check Transmitter

User Guide

0510-1124-A

Baby Check Transmitter

PN 0510-1124-A
Release Date 02/02/15

Users must read this Guide before using the Product

Important Warnings

It is important for your facility to implement and enforce the following WARNINGS in order to keep all equipment functioning properly. Disregarding the information and instructions in this document is considered abnormal use and may result in injury or system failure.

⚠ **WARNING**
ACCESSORIES (SUPPLIES)—To ensure patient safety and proper operation of equipment, use only parts and accessories manufactured or recommended by RF Technologies, Inc. Parts and accessories not manufactured or recommended by RF Technologies, Inc. may not meet the requirements of the applicable safety and performance standards.

Failure to use the components and supplies specified by RF Technologies, Inc. may result in equipment and/or system failure.

⚠ **WARNING**
EXPLOSION HAZARD—These devices should not be used in the presence of flammable gas mixtures. It should also not be used in oxygen enriched atmospheres.

⚠ **WARNING**
INSTALLATION AND CONFIGURATION—It is the responsibility of the facility to follow the installation instructions carefully, as outlined in the applicable system guides, and to use the components and supplies specified by RF Technologies, Inc. for all installations.

Failure to use the components and supplies specified by RF Technologies, Inc. may result in equipment and/or system failure.

⚠ **WARNING**
INSTRUCTIONS FOR SET UP AND USE—It is the responsibility of the facility to follow the instructions for set up and use carefully, as outlined in this manual, and to use the components and supplies specified by RF Technologies, Inc. for set up and use. Do not attempt to use extension cords or other equipment not supplied by RF Technologies, Inc.

Failure to use the components and supplies specified by RF Technologies, Inc. may result in equipment and/or system failure.

⚠ **WARNING**
MISMATCH ALARM—If you do not already have procedures in place, you must establish procedures for your staff to follow in the event of a mismatch alarm. Existing procedures may require modification to incorporate the Mother-Baby Match feature option.

Failure to create or modify these procedures can result in unnecessary patient agitation.

WARNING

PATIENT GENERATED ALARMS—Do not rely exclusively on patient generated alarms for patient care and safety. The alarm function of equipment in the possession of patients must be verified periodically and regular patient surveillance is recommended.

WARNING

PATIENT MONITORING—The most reliable method of patient monitoring combines close personal surveillance with correct operation of monitoring equipment. It is the responsibility of the facility to periodically check on patients in possession of RF Technologies, Inc.'s equipment (i.e. Pendants, Pull Cords, Control Units) to mitigate risk of inappropriate use of equipment or strangulation and stumbling hazards from cables and cords.

WARNING

PRODUCT WARRANTIES—Failure to follow the Warnings and Cautions in this guide voids any and all Product Warranties.

WARNING

STATIC DISCHARGE—Do not touch the conductor portion of any conductor or port. Damage to the device may result.

WARNING

STRANGULATIONS AND TRIPPING HAZARD—Due to the possibility of strangulation, all cables and cords should be routed away from the patient's throat. Cables and cords must be routed in a way to prevent tripping hazards.

WARNING

SYSTEM INSPECTION—It is the responsibility of the facility to establish and facilitate a regular inspection schedule for your system. RF Technologies, Inc. recommends quarterly inspections of your system for safety and performance by a qualified RF Technologies, Inc. representative.

To arrange for a quarterly inspection by RF Technologies, Inc., call our Technical Support Department at (800)-669-9946 or (262) 790-1771.

Failure to provide regular inspection of these products may result in equipment and/or system failure.

WARNING

SYSTEM MAINTENANCE AND TESTING—It is the responsibility of the facility to establish and facilitate a regular maintenance schedule for your system, as outlined in the applicable system guides. This includes regular inspection, testing, and cleaning. RF Technologies, Inc. recommends monthly maintenance and testing of your system. It is also recommended that your facility keep records of maintenance and test completions.

Failure to provide regular maintenance and testing of these products may result in equipment and/or system failure.

WARNING

SYSTEM WIRING—All permanent supply connections must be done in accordance with National Electric Code, NFPA 70.

WARNING

USER TRAINING—Only users who have received adequate training on the use of the system, as outlined in this manual, should use the system. It is the responsibility of the facility to ensure all users have been trained.

Failure to adequately train employees may cause system failure due to user error. In addition, incorrect use of the equipment may also result in system failure.

WARNING

WORN OR DAMAGED PARTS—If the control unit pads or cables are worn or damaged, you must have the product serviced. For more information, see the section entitled "Service and Return."

WARNING

All RF Technologies transmitters, pendants and banding material "PRODUCT" have been determined to be MR Unsafe as defined by ASTM F 2503-05. Use of "PRODUCT" in a Magnetic Resonance Imaging system will cause injury to patients and staff, MR system malfunction or "PRODUCT" malfunction. Do not bring "PRODUCT" into the MR system area and follow your facilities policies to classify and label "PRODUCT" as MR Unsafe.

CAUTION

DISPOSAL—At the end of their service life the products described in this manual, as well as accessories (i.e. lithium batteries, banding material, disposable pads, etc.), must be disposed of in compliance with all applicable federal, state and local guidelines regulating the disposal of products containing potential environmental contaminants. Dispose of the packaging material by observing the applicable waste control regulations.

Compliance

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference.
- This device must accept any interference, including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by RF Technologies Inc. can void the user's authority to operate the equipment.

The term "IC" before the certification/registration number only signifies that the Industry Canada technical specifications were met.

- FCC ID: KXU-MBTX 2
- IC: 2719A - MBTX 2

Contents

Preface

Overview

This guide provides important information about the Baby Check transmitter, a component of the 9450 System. It provides detailed instructions about using the transmitter as well as specific requirements.

9450 System

The 9450 System monitors doors, elevators, hallways, and stairwells, to assist staff in monitoring patients and assets in a facility. The various transmitters and devices of the system alerts staff if a transmitter's banding material is tampered with, cut or opened without authorization (referred to as Cut Band for Infant and Emergency Department systems only), or if monitored devices in the system are not functioning properly. An alarm also sounds if a transmitter is detected in an Exit Alarm Zone. If the system fails to detect a transmitter within its monitored area, a Check Transmitter (v3-v6) or No Signal (v7 and above) alarm is issued.

Depending on which equipment options your facility has installed, the 9450 System can automatically lock doors and deactivate elevators. In addition, the system sounds an alarm at the Central Server and its network of Client computers when the event occurs. If configured, alarms are also annunciated at remote notification locations (i.e. pagers, walkie-talkie, Quick Look display).

With the Baby Check/Infant Matching feature activated, an alarm is generated if there is a mismatch, meaning the Infant and Baby Check transmitters do not match; a linking error, meaning there is a problem linking the Infant transmitter to a Baby Check transmitter; or if a discharge is attempted without first matching the Infant transmitter with the Baby Check transmitter.

> ⚠ **WARNING**: The 9450 system is designed and intended to work in conjunction with a facility's overall patient security program, including reasonable operating policies and procedures. The 9450 system, by itself, cannot prevent the mismatch, abduction, or elopement of patients.

Intended Audience

The *Baby Check Transmitter User Guide* is intended for caregivers who use the Baby Check transmitters. It includes detailed information about care, cleaning, and testing the transmitters, along with transmitter specifications.

Additional Detailed Documentation

Documentation for the 9450 System is available in Portable Document Format (PDF) on the 9450 System Documentation CD-ROM. Please contact your RF Technologies sales representative for replacement CD ROMs.

Contact Information

For more information about RF Technologies, Inc. products go to www.rft.com. For technical support, contact (800) 669-9946 or (262) 790-1771. For questions or comments about documentation, contact the RF Technologies Technical Publications team at techpubs@rft.com.

Product Warranty

Product Warranty information can be found on the 9450 System Documentation CD-ROM or with your original system proposal and invoice.

Chapter 1
Transmitters

The Baby Check Transmitter

Introduction

The Baby Check transmitter is used in conjunction with the Infant transmitter. The Infant transmitter is placed on the ankle of an infant. The Baby Check transmitter, although portable, is placed in its wall mount cradle in the hallway just near the door to the mother's assigned room. Whenever someone needs to verify that the infant is being returned to the correct mother, one just need to bring the Baby Check transmitter in proximity to the Infant transmitter and one button push will indicate a correct match. The Baby Check transmitter will flash green to indicate that the Infant and Baby Check is a match. If a Match does not exist between the Baby Check transmitter and the Infant transmitter the Baby Check transmitter will flash red.

CAUTION: The radio frequency (RF) characteristics of certain metal crib carts may interfere or block the Infant transmitter's signal during transport, preventing detection by the system's Exit Receiver or the Baby Check transmitter.

WARNING: The 9450 System Baby Check Match feature option is designed and intended to work in conjunction with a facility's overall infant identification program, including identification bands and reasonable operating policies and procedures. The 9450 System Baby Check Match feature option, by itself, cannot prevent the mismatch, abduction or elopement of patients.

Mounting of Baby Check Transmitter Wall Bracket

The Baby Check transmitter resides outside the Mother's room near the doorway.

To mount the Baby Check transmitter

1. Determine a desired location near the doorway. The mounting height should be between 36 and 42 inches from the floor.
2. Once the location is determined place the mounting bracket on the wall and mark the four mounting holes found in the four corners of the mounting bracket.
3. Center punch each hole and install nylon wall anchors in each hole. If the mounting bracket is to be attached to a concrete or masonry wall use the wall anchors designed for these substrates.
4. Attach the mounting bracket to the wall with the four screws provided.

Link a Baby Check Transmitter

This section provides detailed information on how to Link a Baby Check transmitter to an Infant transmitter.

To Link a Baby Check transmitter

1. When ready to Link the Baby Check transmitter with the Infant transmitter bring the Baby Check transmitter 10-12 inches from the Infant transmitter and press the button on the front of the Baby Check transmitter.

    a. The amber LED on the front of the Baby Check transmitter will begin flashing as it attempts to link to the Infant transmitter. It will attempt to Link for two minutes.

    b. Once the Baby Check transmitter Links with the Infant transmitter the Green LED on the front of the Baby Check transmitter will flash three times.

    c. The amber LED on the front of the Baby Check transmitter will begin flashing again as it attempts to look for a second Infant transmitter (a twin).

      - If a twin exists bring the Baby Check transmitter 10-12 inches from the second Infant transmitter. Again, once the Baby Check transmitter Links with the Infant transmitter the Green LED on the front of the Baby Check transmitter will flash three times.
      - If a twin does not exists press the button on the front of the Baby Check transmitter and it will stop attempting to link.
      - Repeat the previous steps if a triplet exists.

2. Return the Baby Check transmitter to its holder outside the mother and infant's room.

Verify a Baby Check/Infant Match

This section provides detailed information on how to determine if a Match exists between a Baby Check transmitter and an Infant transmitter.

To Verify a Match

1. When ready to verify a Match between the Baby Check transmitter and the Infant transmitter bring the Baby Check transmitter 10-12 inches from the Infant transmitter and press the button on the front of the Baby Check transmitter.

   a. The amber LED on the front of the Baby Check Transmitter will begin flashing as it attempts to determine if it's a Match with the Infant Transmitter. It will attempt to Match for two minutes.

   b. Once the Baby Check Transmitter Matches with the Infant Transmitter the Green LED on the front of the Baby Check Transmitter will flash three times.

   c. The amber LED on the front of the Baby Check Transmitter will begin flashing again as it attempts to look for a second Infant Transmitter (a twin).

      • If a twin exists bring the Baby Check Transmitter 10-12 inches from the second Infant Transmitter. Again, Once the Baby Check Transmitter Matches with the Infant Transmitter the Green LED on the front of the Baby Check Transmitter will flash three times.

      • If a twin does not exist then press the button on the front of the Baby Check Transmitter and it will stop attempting to link.

      • Repeat the previous steps if a triplet exists.

2. When finished return the Baby Check transmitter to its holder outside the mother and infant's room.

   NOTE: In the event of a mismatch, follow your facility's established procedures.

The Baby Check Transmitter

The Baby Check transmitter is lightweight and compact. Each transmitter is stamped with a warranty expiration date. This date indicates the date that RF Technologies' warranty on that transmitter expires (the last day of the month stamped). **If the warranty period has expired, discard the Baby Check transmitter immediately**.

⚠ **WARNING**: Using a Baby Check transmitter beyond the printed expiration date can result in system failure and/or a mismatch or abduction.

Required Transmitter Testing

You must test the Baby Check transmitters top verify their functionality. To do this, perform a match using the Baby Check transmitter and a working Infant transmitter.

NOTE: The Baby Check transmitter cannot be tested with the transmitter tester used with the infant transmitter.

⚠ **WARNING**: You must test all transmitters prior to use to verify proper operation. Failure to test the transmitters before use can result in system failure and/or a mismatch or abduction. In addition, failure to test transmitters voids the RF Technologies Product Warranty.

⚠ **WARNING**: The Baby Check transmitter does not link to an Infant transmitter when the Baby Check transmitter's battery is low. If this occurs, discard the Baby Check transmitter and replace it with a new one.

To order additional Baby Check transmitters, contact RF Technologies (800) 669-9946 or (262) 790-1771

Required weekly testing for transmitters in use

NOTE: Transmitters in use must be tested at least weekly.

1. Test the operation of transmitters in use weekly as described above.
2. Visually inspect transmitters in use weekly for damage or loose parts.
3. Verify on a weekly basis that the warranty expiration date stamped on transmitters in use has not expired. If the warranty period has expired, discard and replace the transmitter immediately.
4. Your facility must keep records of test and transmitter inspection completions, as well as transmitter warranty expiration dates.

Clear a Baby Check Transmitter

NOTE: Refer to Chapter 2, "Transmitter Clearing Device" for more information.

To clear a Baby Check transmitter

1. With the Transmitter Clearing Device within 10 to 12 inches of the Baby Check transmitter, press the button on the front of the Baby Check transmitter. An amber light will blink until the clear occurs. Once cleared, the Baby Check transmitter will blink green than red for a total of 5 light flashes.
2. Store the cleared Baby Check transmitter together with the Transmitter Clearing Device until the next use.

Cleaning and Caring for a Transmitter

This section provides detailed information about cleaning and caring for a transmitter.

To clean a transmitter after use

> **CAUTION**: Use of non-approved cleaners on transmitters can cause permanent damage to the transmitter and will void any and all warranties.

> **NOTE**: In order to avoid nuisance alarms, cleaning procedures must be performed at least 100 feet from any Alarming Band Zone.

1. Disinfect the transmitter by spraying it with an approved cleaner.

    > **CAUTION**: Using an approved cleaner does not confirm the suitability of the cleaner to meet your infection control standard; it only indicates that the transmitter will not be harmed by the cleaner.

2. Allow the cleaner to remain on the transmitter for the amount of time specified by the manufacturer. When using surface disinfectants and decontaminant cleaners, always follow the manufacturer's instructions.

    > **CAUTION**: The transmitters may be sprayed or rinsed with water or the approved cleaners during cleaning, but must not be soaked. Soaking transmitters may result in equipment and/or system failure.

3. Wipe the transmitter with a clean cloth or towel, and then allow the transmitter to air-dry. The transmitter is not under constrictions so it can be rinsed with water.

4. Place the clean transmitter in a storage container for future use.

Approved Cleaners

Following is a list of an approved cleaners recommended for use when cleaning the transmitter.

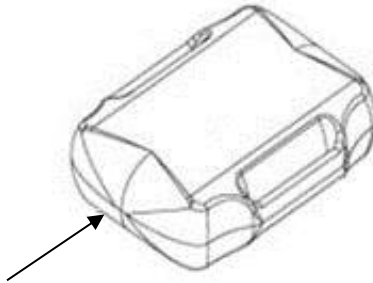| Approved Cleaners		
Airex 109A	Isopropyl Alcohol	Quest 256
Cavicide™	Neutral Quat 128™	Virex II-256
Health-Tec™	Quik Fill 920™	Sani-cloth HB (wipes)
Hi-Tor Plus™		
NOTE: Some agents are intended for topical, antimicrobial use only and will not destroy viruses such as Hepatitis B and HIV		

Chapter 2

Transmitter Clearing Device

The Transmitter Clearing Device

The Transmitter Clearing Device is lightweight and compact. It is water resistant; however, complete submersion should be avoided.

CAUTION: Prolonged submersion may result in equipment and/or system failure and voids any and all Product Warranties.

The Transmitter Clearing Device is available with a two year life expectancy. Each Transmitter Clearing Device is stamped with a warranty expiration date. This date indicates the date that RF Technologies' warranty on that Transmitter Clearing Device expires (the last day of the month stamped). **If the warranty period has expired, discard the Transmitter Clearing Device immediately**.

Expiration date stamped on each transmitter

WARNING: Using a Transmitter Clearing Device beyond the printed expiration date can result in system failure and/or elopement.

Required Transmitter Clearing Device Testing

You must test each Transmitter Clearing Device prior to use to verify proper operation.

⚠ **WARNING**: Do not use the transmitter tester on a Transmitter Clearing Devices whose expiration date has expired. Results may not be accurate. The expiration date printed on the transmitter takes precedence over the transmitter tester's results.
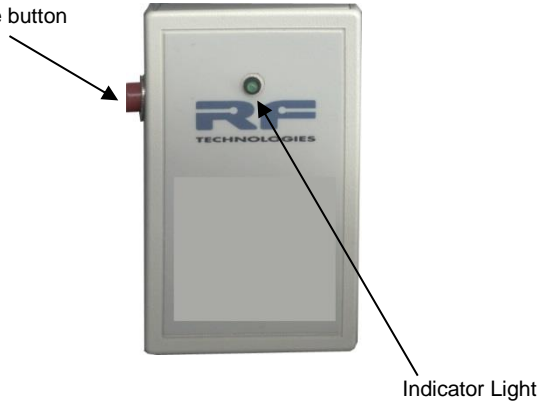
🛈 **CAUTION**: Failure to test the Transmitter Clearing Devices before use can result in system failure and/or an abduction. In addition, failure to test Transmitter Clearing Devices voids the RF Technologies' Product Warranty.

All of these steps are mandatory

1. Verify that the warranty expiration date that is stamped on the Transmitter Clearing Device is not expired.
2. Visually inspect the Transmitter Clearing Device for damage or loose parts.
3. Test the operation of the Transmitter Clearing Device using the transmitter tester. The transmitter tester will detect whether or not the Transmitter Clearing Device is emitting a signal, but cannot indicate the strength of the signal.
    a. Place the Transmitter Clearing Device tester directly on the transmitter.

b.   Press and hold the button on the left side of the transmitter tester.

Press and hold the button

Indicator Light

c.   The device beeps once when you press the button.

d.   If the Transmitter Clearing Device is working properly, the indicator light flashes and a tone sounds once per second. Wait for at least 3 flashes of the indicator light and 3 tones from the Transmitter Clearing Device tester to verify that the Transmitter Clearing Devices is functioning correctly.

e.   If the Transmitter Clearing Devices fails this test, check the battery in the tester. The transmitter tester requires a 9V battery.

f.   Retest the Transmitter Clearing Devices If it fails a second time, DO NOT USE THE TRANSMITTER CLEARING DEVICE and contact RF Technologies Technical Support Team at (800)669-9946 or (262) 790-1771.

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Chapter 3

Alarms and Troubleshooting

Baby Check Alarms

Baby Check alarms are High Priority alarms. They are displayed on the Safe Place Computer on the Map Screen in the right column.

Mismatch Alarm

How to Respond

1. Ensure patient safety.
2. Move the infant out of proximity of the Baby Check transmitter.
3. Select the Event Cause that best explains the problem.

Common Causes

- An Infant transmitter comes in close proximity of a wrong Baby Check transmitter that is linked to a different Infant transmitter

Link Alarm

How to Respond

1. Ensure patient safety.
2. Move the Infant and Baby Check transmitters out of close proximity.
3. Clear the alarm at the computer by selecting the Event Cause.
4. Use the Clearing Device to Erase the Baby Check transmitter's incorrect Link.
5. Verify the identity of the Baby Check and infant then re-link the Baby Check and the correct Infant transmitters.

Common Causes

- There is a problem linking the Infant transmitter to a Baby Check transmitter because the Infant has already been linked to another Baby Check transmitter

LED Troubleshooting

The LED lights and audible beeps on the transmitter signal various meanings. These meanings are described in detail throughout this document.

Lights Flash	What Does It Mean and How to Respond
None	**Baby Check Transmitter Battery is Dead** 1. A new Baby Check Transmitter button is pressed but no LED indicators flash. The battery may be dead. 2. Call Tech Support for a Return Merchandise Authorization (RMA) and return transmitter.

1 Amber	**Baby Check Transmitter is in Link Mode**
	1. The button on the Baby Check transmitter is pressed once to verify it is ready to be linked.
	2. The amber light signals Link Mode.
3 Green	**Baby Check Transmitter Decodes 4 Signals and Links**
	1. Transmitter is successfully linked.
	2. No action required; operates as designed.
3 Red	**Baby Check and Infant Transmitter Mismatch**
	1. An Infant transmitter comes in contact with the Baby Check transmitter. The Baby Check and Infant transmitters do not match.
	2. Follow your facility's established procedures to secure and separate the infant from the mismatched Baby Check.
	3. Clear the alarm at the Client computer (you must select an event cause).
5 Red	**Baby Check Transmitter Indicates Low Battery**
	1. Discard transmitter or call RFT Tech Support for replacement.
Green, Red, Green, Red, Green	**Baby Check Transmitter Cleared**
	1. With the Transmitter Clearing Device 10 to 12 inches in front of the Baby Check transmitter, the button on the Baby Check transmitter is pushed to clear it and remove all linked activity.
	2. Store the cleared Baby Check transmitter together with the Transmitter Clearing Device.

Discharge Troubleshooting

If "Confirm Discharge" and "Require Mom/Infant match before discharge" are both enabled during configuration (refer to the Software Administrator Guide for your system), the following discharge procedure is standard from linked Baby Check/Infant transmitters.

To discharge a linked Baby Check and Infant transmitter

1. Perform a Baby Check/Infant match.
2. Discharge the Infant transmitter, the transmitter is now in a discharge state but the discharge is not complete until the banding material is removed.
3. Remove the infant banding material, the discharge is now complete.
4. Clear the Baby Check transmitter.
5. Discharge events should post for both the Baby Check and Infant transmitters.

In the event that a match was not performed, the following alarms will occur.

Alarm	Scenario
No Match Alarm	The Baby Check transmitter is discharged before the Infant transmitter is put into discharge.

Chapter 4

Specifications

Baby Check Transmitter

Size	2.5 x 2 x .62 inches
Weight	1.6 oz.
Color	Gray
Operating Temperature	32-122° Fahrenheit (0–50° Celsius)
Composition	ABS
Battery Life	2 year, Lithium Ion (non-replaceable)
Frequency	Depends on Model: 66 kHz 262 kHz
Regulations	FCC Compliant
Part Number	9450-7066— 66 kHz TX 9450-7262—262 kHz TX

Transmitter Clearing Device

Size	2.00 x 1.56 x .70 inches
Weight	1.28 oz.
Color	Gray
Operating Temperature	32–104° Fahrenheit (0–40° Celsius)
Composition	Poly carbonate
Battery Life	2 years
Frequency	Depends on Model: 66 kHz 262 kHz
Banding Material	N/A
Regulations	FCC Compliant
Part Number	9450-3066—Transmitter Clearing Device 66 kHz 9450-3262—Transmitter Clearing Device 262 kHz
Transmitter Tester	9450-0050