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<http://www.zebra.com>

Zebra Technologies Corporation  
Lincolnshire, IL U.S.A.



<http://www.zebra.com/support>

For the latest version of this guide go to:

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the equipment, they will contact the Zebra Support at:

facility's Technical or Systems Support. If there is a problem with If you have a problem using the equipment, contact your

## Service Information

### Introduction

The FLB3508/3578 cordless scanner cradle acts as a stand, host communication interface and charger for the LS3578 cordless scanner. It attaches to a mounting bracket using three isolators. The bracket is then mounted on the forklift surface. The FLB3578 cradle receives data from the scanner via a Bluetooth radio, and sends that data to the host through an attached cable. The cradle also charges the scanner's internal battery pack when the scanner is inserted. A portable power supply on the forklift supplies power to the cradle.

This document provides basic instructions on setting up and using the cradle.



**CAUTION** LS3478 cordless scanners are incompatible with FLB3508/

3578 cradles. LS3578 cordless scanners are incompatible with FLB3408/

3478 cradles.

### Equipment Supplied

The cradle package includes:

- Cradle
- Mounting bracket with isolators
- Three 8-32 x 1.5" Philips head screws (for attaching cradle to mounting bracket).

### Accessories

The following equipment may be needed:

- Four 1/4-20 screws, minimum length 1.0" (for fastening bracket to mounting surface).

Save the shipping container for storing or shipping. Inspect all equipment for damage. If anything is damaged or missing, call an authorized Zebra business Support Center immediately.

### Related Documentation

*LS3578 Product Reference Guide*, p/n 72-93911-xx.

*LS3578 Quick Start Guide*, p/n 72-93587-xx.

This documentation is available at:

<http://www.zebra.com/support>.

**Latviešu**: ES klientiem: visi produkti pēc to kalpošanas mūža beigām ir jānogādā atpakaļ Zebra otrreizējai pārstrādei. Lai iegūtu informāciju par produktu nogādāšanu Zebra, lūdzu, skatiet: <http://www.zebra.com/weee>.

**Lietuvių**: ES vartotojams: visi gaminiai, pasibaigus jų eksploatacijos laikui, turi būti gražinti utilizuoti į kompaniją „Zebra“. Daugiau informacijos, kaip gražinti gaminį, rasite: <http://www.zebra.com/weee>.

**Magyar**: Az EU-ban vásárlóknak: Minden tönkrement terméket a Zebra vállalathoz kell eljuttatni újrahaznosítás céljából. A termék visszajuttatásának módjával kapcsolatos tud-nivalókért látogasson el a <http://www.zebra.com/weee> weboldalra.

**Malti**: Għal klijenti fi-UE: il-prodotti kollha li jkunu waslu fi-aħħar tal-hajja ta' l-użu tagħhom, iridu jiġu rritornati għand Zebra għar-riċiklaġġ. Għal aktar taġġirif dwar kif għandek tirritorna l-prodott, jekk jogħġbok zur: <http://www.zebra.com/weee>.

**Nederlands**: Voor klanten in de EU: alle producten dienen aan het einde van hun levensd-uur naar Zebra te worden teruggezonden voor recycling. Raadpleeg <http://www.zebra.com/weee> voor meer informatie over het terugzenden van producten.

**Polski**: Klienci z obszaru Unii Europejskiej: Produkty wycofane z eksploatacji nale,y zwrócić do firmy Zebra w celu ich utylizacji. Informacje na temat zwrotu produktów znaj-duj' sié na stronie internetowej <http://www.zebra.com/weee>.

**Português**: Para clientes da UE: todos os produtos no fim de vida devem ser devolvidos à Zebra para reciclagem. Para obter informações sobre como devolver o produto, visite: <http://www.zebra.com/weee>.

**Românesc**: Pentru clienții din UE: Toate produsele, la sfârșitul duratei lor de funcționare, trebuie returnate la Zebra pentru reciclare. Pentru informații despre returnarea produsului, accesați: <http://www.zebra.com/weee>.

**Slovenčina**: Pre zákazníkov z krajín EU: Všetky výrobky musia byť' po uplynutí doby ich životnosti vrátené spoločnosti Zebra na recykláciu. Blížšie informácie o vrátení výrobkov nájdete na: <http://www.zebra.com/weee>.

**Slovenski**: Za kupce v EU: vsi izdelki se morajo po poteku življenjske dobe vrniti podjetju Zebra za reciklažo. Za informacije o vračilu izdelka obiščite: <http://www.zebra.com/weee>.

**Suomi**: Asiakkaat Euroopan unionin alueella: Kaikki tuotteet on palautettava kier-rätettäväksi Zebra-yhtiöön, kun tuotetta ei enää käytetä. Lisätietoja tuotteen palauttamis-esta on osoitteessa <http://www.zebra.com/weee>.

**Svenska**: För kunder inom EU: Alla produkter som uppnått sin livslängd måste returneras till Zebra för återvinning. Information om hur du returnerar produkten finns på <http://www.zebra.com/weee>.

**Türkçe**: AB Müşterileri için: Kullanım süresi dolan tüm ürünler geri dönüştürme için Zebra'ya iade edilmelidir. Ürünlerin nasıl iade edileceği hakkında bilgi için lütfen şu adresi ziyaret edin: <http://www.zebra.com/weee>.

For the complete Zebra hardware product warranty statement, go to: <http://www.zebra.com/warranty>.

#### Warranty

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#### Statement of Compliance

Zebra hereby, declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC and 2006/95/EC. A Declaration of Conformity may be obtained from <http://www.zebra.com/doc>.



## Waste Electrical and Electronic Equipment (WEEE)

**English**: For EU Customers: All products at the end of their life must be returned to Zebra for recycling. For information on how to return product, please go to: <http://www.zebra.com/weee>.

**Bulgarian**: За клиенти от ЕС: След края на ползения им живот всички продукти трябва да се връщат на Zebra за рециклиране. За информация относно връщането на продукти, моля отидете на адрес: <http://www.zebra.com/weee>.

**Čeština**: Pro zákazníky z EU: Všechny produkty je nutné po skončení jejich životnosti vrátit společnosti Zebra k recyklaci. Informace o způsobu vrácení produktu najdete na webové stránce: <http://www.zebra.com/weee>.

**Dansk**: Til kunder i EU: Alle produkter skal returneres til Zebra til recirkulering, når de er udtjent. Læs oplysningerne om returnering af produkter på: <http://www.zebra.com/weee>.

**Deutsch**: Für Kunden innerhalb der EU: Alle Produkte müssen am Ende ihrer Lebens-dauer zum Recycling an Zebra zurückgesandt werden. Informationen zur Rücksendung von Produkten finden Sie unter <http://www.zebra.com/weee>.

**Ελληνικά**: Για πελάτες στην Ε.Ε.: Όλα τα προϊόντα, στο τέλος της διάρκειας ζωής τους, πρέπει να επιστρεφονται στην Zebra για ανακύκλωση. Για περισσότερες πληροφορίες σχετικά με την επιστροφή ενός προϊόντος, επισκεφθείτε τη διεύθυνση <http://www.zebra.com/weee> στο Διαδίκτυο.

**Eesti**: EL klientidele: kõik tooted tuleb nende eluea lõppedes tagastada taaskasutamise eesmärgil Zebra'ile. Lisainformatsiooni saamiseks toote tagastamise kohta külastage palun aadressi: <http://www.zebra.com/weee>.

**Español**: Para clientes en la Unión Europea: todos los productos deberán entregarse a Zebra al final de su ciclo de vida para que sean reciclados. Si desea más información sobre cómo devolver un producto, visite: <http://www.zebra.com/weee>.

**Français** : Clients de l'Union Européenne : Tous les produits en fin de cycle de vie doivent être retournés à Zebra pour recyclage. Pour de plus amples informations sur le retour de produits, consultez : <http://www.zebra.com/weee>.

**Italiano**: per i clienti dell'UE: tutti i prodotti che sono giunti al termine del rispettivo ciclo di vita devono essere restituiti a Zebra al fine di consentirne il riciclaggio. Per informazioni sulle modalità di restituzione, visitare il seguente sito Web: <http://www.zebra.com/weee>.

The device complies with Internationally recognized standards covering Specific Absorption Rate (SAR) related to human exposure to electromagnetic fields from radio devices.

#### Safety Information

#### FCC RF Exposure Guidelines

The FLB3578 is an approved Bluetooth device. Bluetooth ID: B02794.

#### Bluetooth Devices

Bluetooth™ Radio, Type: LMX5452.

The FLB3578 contains an approved radio module. This module is identified below.

#### Radio Modules

attachments could cause damage and may violate regulations, or an approved replacement antenna. Unauthorized antennas, modifications, or could void the user's authority to operate the equipment. Antennas use only the supplied Any changes or modifications to Zebra equipment, not expressly approved by Zebra, Model Numbers: FLB3508, FLB3578, FLB3578. All Zebra devices are designed to be compliant

### Regulatory Information

- Improve work procedures.
- Provide a suitable working environment
- Provide adequate clearance
- Provide adjustable workstations
- Reduce or eliminate direct pressure
- Reduce or eliminate vibration
- Perform tasks at correct heights
- Keep objects that are used frequently within easy reach
- Reduce or eliminate excessive force
- Maintain a natural position
- Reduce or eliminate repetitive motion

you are adhering to your company's safety programs to prevent employee injury. recommendations below. Consult with your local Health & Safety Manager to ensure that

**Caution:** In order to avoid or minimize the potential risk of ergonomic injury follow the

### Ergonomic Recommendations

### Health and Safety Recommendations

#### Reducing RF Influence – Use Properly

It is advisable to use the device only in the normal operating position and it is recommended that no part of the human body be allowed to come too close to the antenna during operation of the equipment.

To satisfy FCC RF exposure requirements, this portable transmitting device must operate with a minimum separation distance of 0 cm or more from a person's body.

#### Power Supply

Use ONLY a LISTED, Type no. 50-14000 (5-14Vdc/ 1.5A minimum), or PWR5-14000 (5-14Vdc/ 1.5A minimum), Direct Plug-In Power supply, marked Class 2 or LPS (IEC60950-1, SELV). Use of alternative Power Supply will invalidate any approvals given to this unit and may be dangerous.

**CAUTION** An external fuse (not provided) is required. For protection against risk of fire, use only a fuse rated 3A, 125V 19-60Vdc).

#### Radio Frequency Interference Requirements-FCC

#### Radio Transmitters (Part 15)

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.

#### Radio Frequency Interference Requirements-Canada

#### Radio Transmitters

This device complies with RSS 210 of Industry & Science Canada. 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. Label Marking: The Term "IC:" before the radio certification only signifies that Industry Canada technical specifications were met.

#### Radio Frequency Interference Requirements-Brazil

Declarações Regulamentares para FLB3578 (LMX5452) BRAZIL
NOTA: A marca de certificação se aplica ao Equip. de Radiação Restrita, modelo FLB3578. Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário."

Para maiores consultas sobre ANATEL consulte o site: [www.anatel.gov.br](http://www.anatel.gov.br).

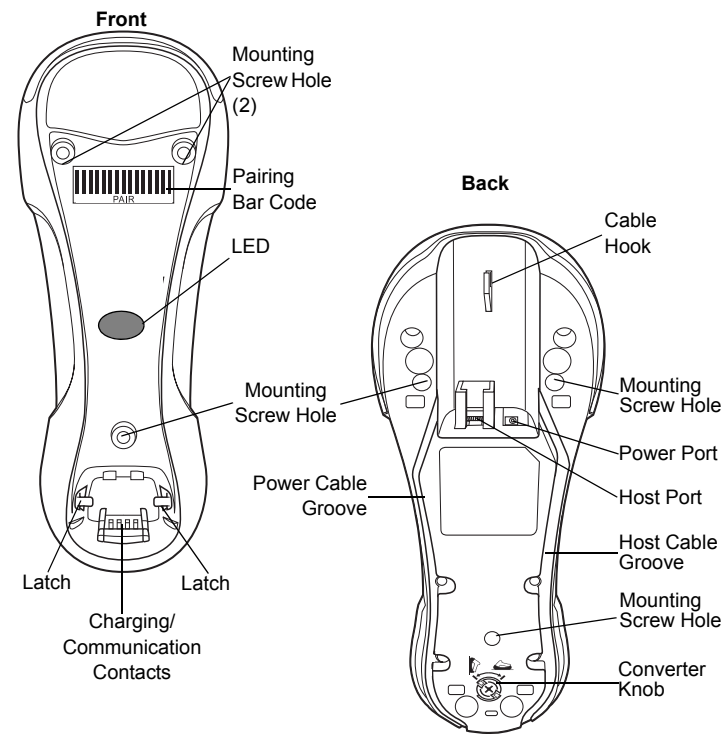


### Marking and European Economic Area (EEA)

Bluetooth for use through the EEA have the following restrictions:

- Maximum radiated transmit power of 10mW EIRP in the frequency range 2.400 -2.4835 GHz

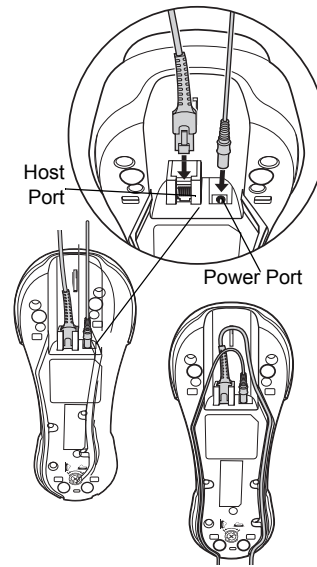
## Cradle Parts



## Cradle Connections

**IMPORTANT** Connect the interface cable and power supply (if necessary) in the following order to ensure proper operation of the scanner and cradle.

1. Insert the interface cable from the host computer into the cradle's host port.
2. Connect the forklift power supply to the cradle's power port, if applicable.
3. Optional: Thread the host cable over the cable hook and run the host and power cables into their respective cable grooves, or use cable ties to secure them to the mounting plate after it is attached to the cradle (see [Mounting the Cradle on the Forklift](#)).
4. Pair the scanner with the cradle by scanning the pairing bar code on the cradle.
5. If necessary, scan the appropriate host bar code (for non-autodetected interfaces). See the *Product Reference Guide*.



### Changing the Host Interface

To connect to a different host, or to the same host through a different cable:

1. Unplug the power supply from the cradle, if used.
2. Unplug the interface cable from the host.
3. Connect the interface cable to the new host, or the new interface cable to the existing host.
4. Reconnect the power supply, if required.
5. If necessary, scan the appropriate host bar code (for non-autodetected interfaces). Refer to the *Product Reference Guide*.

**CAUTION** If the scanner does not recognize the host, disconnect the power supply, then reconnect after connecting the host cable.

## Sending Data to the Host Computer

The cradle receives data from the scanner via a wireless radio connection and transmits it to the host computer via the host cable. The scanner and cradle must be paired for successful wireless communication.

### Pairing

Pairing registers a scanner to the cradle such that the scanner and cradle can exchange information. The FLB3578 operates in two modes: scanner-to-cradle and multi scanner-to-cradle. In scanner-to-cradle mode, the scanner is paired to the cradle either by insertion into the cradle (if pairing on insertion is enabled), or by scanning the pairing bar code. In multi scanner-to-cradle mode, up to three scanners can be paired to one cradle. A multipoint bar code must be scanned to activate this feature.

The cradle includes a pairing bar code on its front. To pair the scanner with the cradle, scan the pairing bar code. A high-low-high-low beep sequence followed by a low-high beep sequence indicates successful pairing and connection to the remote device. A long low, long high beep sequence indicates unsuccessful pairing. Refer to the *Product Reference Guide* for more information.

### Lost Connection to Host

If scanned data does not transmit to the cradle's host, ensure that all cables are firmly inserted and the power supply is connected to an appropriate AC outlet, if applicable. If scanned data still does not transmit to the host, reestablish a connection with the host:

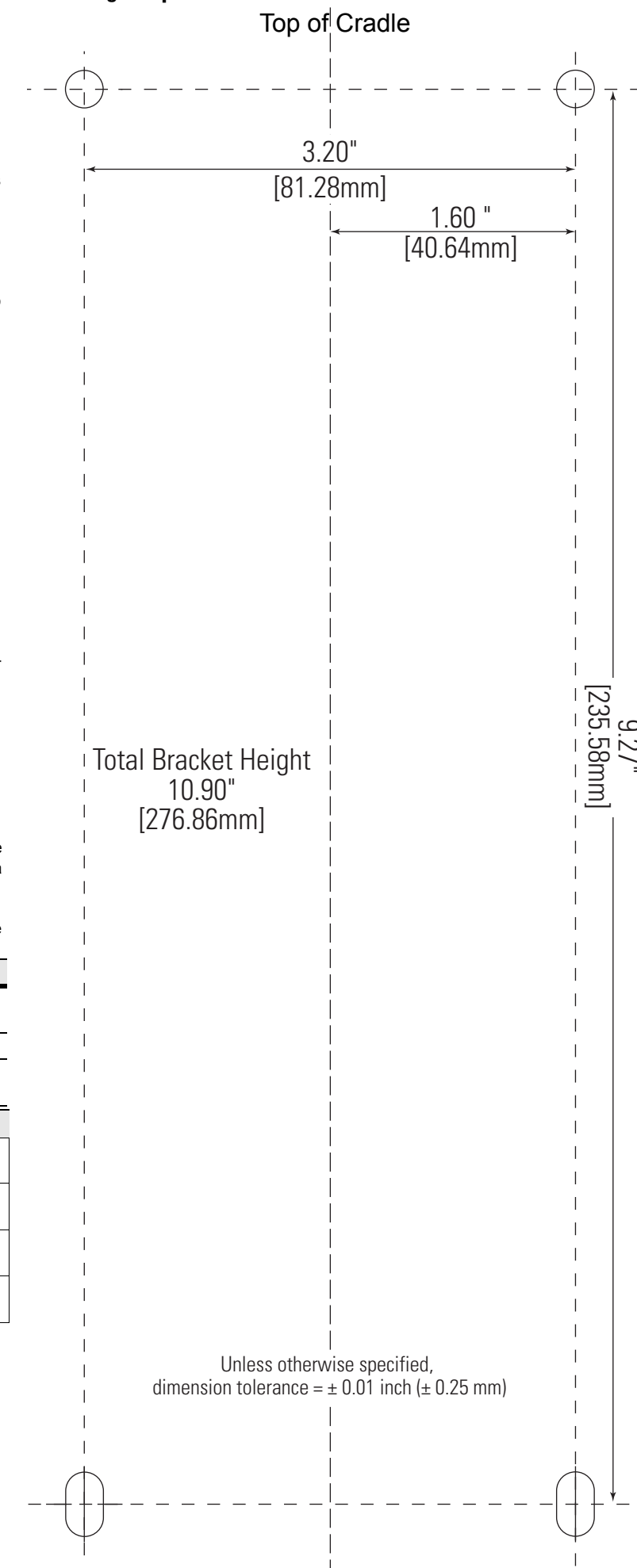
1. Disconnect the power supply from the cradle.
2. Disconnect the host interface cable from the cradle.
3. Wait three seconds.
4. Reconnect the host interface cable to the cradle.
5. Reconnect the power supply to the cradle, if required.
6. Reestablish pairing with the cradle by scanning the pairing bar code.

✓ **NOTE** The FLB3578 does not always require a power supply, depending on the host interface.

### Charging the Scanner Battery in the Cradle

To charge the scanner battery, place the scanner in the cradle (see [Inserting the Scanner in the Cradle](#)). The battery begins charging when the scanner LED indicator starts flashing green. A complete charge of a fully discharged battery can take up to four hours using external power and up to 10 hours using the interface cable.

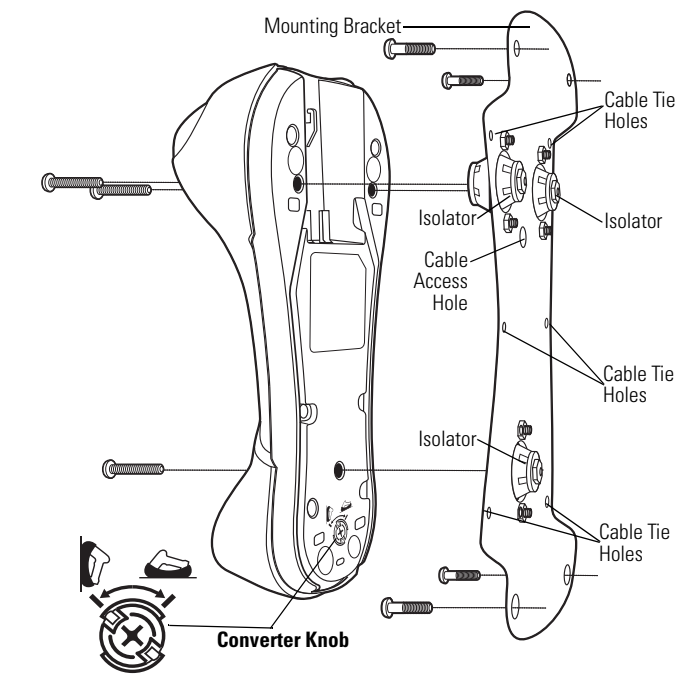
## Mounting Template



## The Mounting Bracket

The mounting bracket is used to install the cradle on a forklift. Mount the bracket so that the cradle is within the user's reach envelope. The recommended reach envelope has a radius of 15" measured from the front of the user's shoulder to the scanner grip.

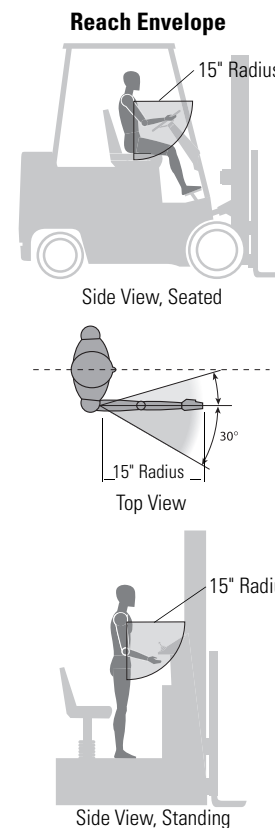
Three isolators ensure secure attachment with minimized vibration. The bracket has holes that provide access to the host and power ports, and enable securing the cables with cable ties.



**CAUTION** Ensure the Converter Knob is in the position shown above. If not, rotate the knob counterclockwise to activate latches.

## Mounting the Cradle on the Forklift

1. Consult an environmental health and safety manager to determine an appropriate mounting location within the recommended 15" reach envelope.
2. Ensure the converter knob is in the correct position (see [Caution in The Mounting Bracket](#) section).
3. Attach the host and power cables to the appropriate ports (see [Cradle Connections](#)).
4. Position the cradle with the screw holes in the cradle aligning with the holes in the isolators.
5. Attach the cradle to the bracket using three 8-32 x 1.5" Phillips screws through the cradle and isolator holes.
6. Mark the mounting surface through the four screw holes on the mounting bracket, or use the mounting template to determine the location of the screw holes.
7. Pre-drill holes into the mounting surface to accommodate four 1/4-20, minimum 1.0" length, Phillips head screws.
8. If desired, thread cable ties through the holes on each side of the bracket and secure the host and power cables along the edges of the bracket.
9. Attach the bracket to the mounting surface.
10. Place the scanner in the cradle.



## Inserting the Scanner in the Cradle

To insert the scanner in the cradle, insert the scanner top first. Then, push the handle until it clicks into place, engaging the contacts in the cradle and scanner.

## Scanner LED Indicators

The green LED on the scanner indicates charging activity (see the table below). If the scanner is charging in fast mode (non-bus powered mode), the green LED blinks at a fast rate. If the scanner is charging in slow mode (bus-powered mode), the LED blinks at a slow rate. If the red LED on the scanner begins flashing, indicating a charging problem, remove the scanner from the cradle and replace the battery. If the red LED continues flashing, contact a Zebra business Support Center.

Standard Scanner Use LED Sequences	
Off	No power applied to scanner (battery is discharged or removed); scanner is in low power and ready to scan.
Green	A bar code was successfully decoded.
Red	A data transmission error; scanner malfunction; or, LS3578 cordless scanner was inserted into a STB3478 cradle.
Charging Use LED Sequences	
Green Slow Flash	The scanner charges at the slow rate (used when the cradle is powered by the host cable).
Green Fast Flash	The scanner charges at the fast rate (used when cradle is powered from an external power supply).
Red Flash	Charging problem. Refer to the <i>Product Reference Guide</i> for more information.
Red and Green Flash	Temperature fault.

### Using a Host Interface to Supply Power

Some hosts can provide power to the cradle via the host interface, instead of an external power supply.

### Troubleshooting

If the cradle does not work after following the previous procedures:

- Check the system power.
- Check for loose cable connections.
- Check that the scanner is inserted properly in the cradle.
- Check that the host settings are correct and the cradle is connected to the appropriate port on the host.

⚠ **CAUTION** Do not pour, spray, or spill any liquid on the cradle.