RS409 Ring Scanner

Quick Reference Guide

Motorola, Inc.
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http://www.motorola.com

Warranty

For the complete Motorola hardware product warranty statement, go to:
http://www.motorola.com/enterprisemobility/warranty.

Introduction

The RS409 ring scanner is a modular, wearable laser scanner that allows the operator hands-free bar code scanning capability. The scanner is used with the WT4070/90 wearable terminal.

The RS409 is worn on the operator's index finger, and utilizes a thumb-operated trigger. The RS409 connects via an interface cable to the wearable terminal, which provides power and performs the data collection functions. The RS409 is available in two configurations; a short cable version for connection to a wrist mounted wearable terminal, and a long cable version for connection to a hip mounted wearable terminal.

Connector

Exit Window Scan Assembly Scan LED

Trigger Assembly

Finger Strap Assembly Scan Trigger
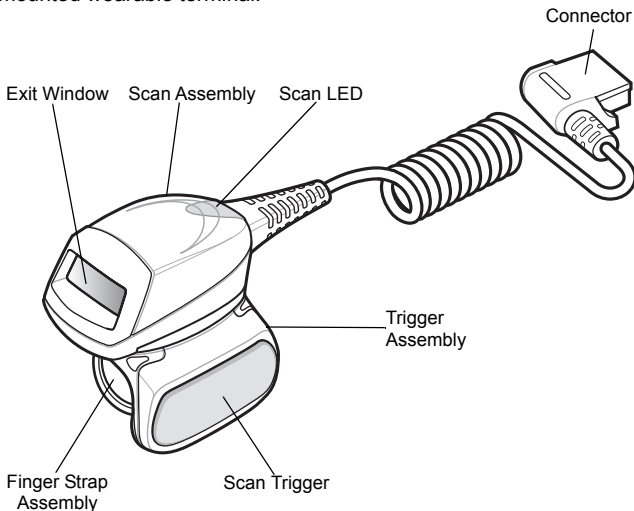
Changing Trigger Position

The trigger assembly of the RS409 rotates to provide left-hand or right-hand use.

1. Determine whether the RS409 is used on the right or left hand.

⚠️ *CAUTION* The trigger assembly only rotates 180° around the back of the scan assembly. Do not rotate the trigger assembly past the designed stops.

2. Rotate the trigger assembly so that the scan trigger is positioned next to the thumb when the RS409 is placed on the index finger.
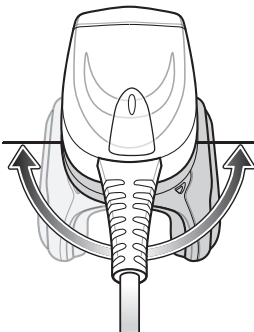
Installation

The RS409 connects to the wearable terminal and mounts on the index finger.

1. On the wearable terminal, remove the connector cap.

2. Connect the RS409 interface cable to the wearable terminal interface connector. If connecting to a wrist mounted wearable terminal, connect to the interface connector closest to the wrist.

Scanner Cable Connector   Interface Connector
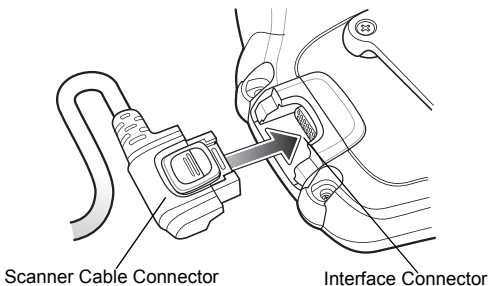
3. Slide the RS409 onto the index finger with the scan trigger next to the thumb.
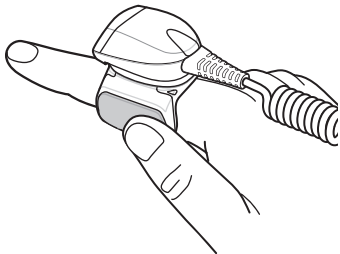
4. Tighten the finger strap.
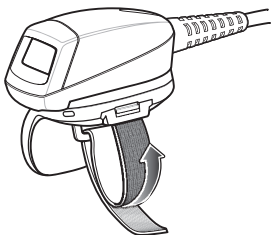
5. If required, cut excess finger strap material.

6. Warm boot the wearable terminal.

Using the Scanner

To scan bar codes:

1. Turn on the wearable terminal.

2. Launch a scanning application.

3. Press the scan trigger and aim the RS409 at a bar code.

   The scan LED lights red to indicate the RS409 is on.

4. Adjust the aim so that the thin, red laser beam covers the entire length of the bar code.

Right

012345

Wrong

012345

5. If the decode is successful the LED turns green. The terminal beeps if programed accordingly.

Scanning Tips

- For larger bar codes, hold the RS409 farther away from the bar code.
- For bar codes with bars that are closer together, hold the RS409 closer to the bar code.
- The optimal scanning distance varies with bar code density, but 10 to 25 cm (4 to 10 inches) generally works. Practice to determine what distances to work within.
- Do not position the RS409 exactly perpendicular to the bar code being scanned. In this position, reflected light can bounce back into the exit window, and possibly prevent a successful decode.

Finger Strap Assembly Replacement

The finger strap assembly can be changed for each user or for replacement. To replace the finger strap assembly:

1. Press down on the finger strap assembly release tab.
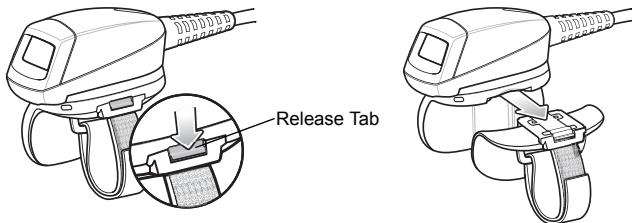
Release Tab

2. Slide the finger strap assembly out of the trigger assembly.

3. Align a new finger strap assembly with the slot in the trigger assembly.

4. Push the finger strap assembly into the trigger assembly until the release tab clicks into place.

5. Insert your index finger through the finger strap. Tighten the strap and press the hook and pile together.

6. If required, cut excess finger strap material.

Replacing the Trigger Assembly

To replace the trigger assembly:

1. Remove the finger strap assembly.

2. Turn the RS409 upside-down.

3. Remove the set screw with screwdriver.
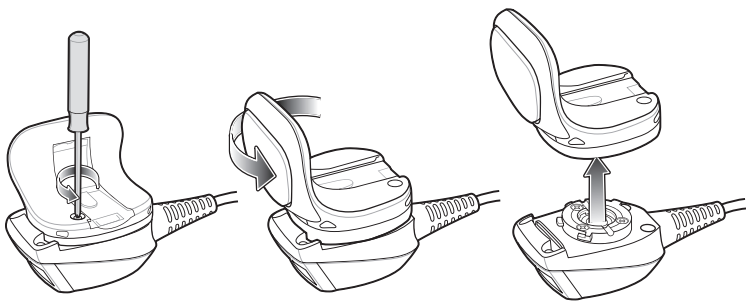
4. Turn the trigger assembly counter-clockwise until the exit window and scan trigger align.

5. Lift the trigger assembly off the scan assembly.

6. Align replacement trigger assembly with scan assembly.

7. Rotate trigger assembly 1/4 turn clockwise.

8. Tighten the set screw with screwdriver.

9. Replace finger strap assembly.

Cleaning

Wipe the exit window periodically with a lens tissue or other material suitable for cleaning optical material such as eyeglasses.

⚠️ *CAUTION* Do not pour, spray, or spill any liquid on the RS409.

Troubleshooting

Symptom	Probable Cause	Action
Laser beam does not display when pressing the trigger.	Interface cable is not secure.	Verify that the interface cable connection is connected properly.
	Power is not applied to RS409.	Power for the RS409 is provided by the wearable terminal. Verify that the wearable terminal has a charged battery installed.
	Scan enabled application on the wearable terminal is not running.	Launch scanning application on the wearable terminal.
RS409 does not decode a bar code.	Bar code is unreadable.	Verify that the bar code is not defective, i.e., smudged or broken.
	Exit window is dirty.	Clean exit window with a lens tissue. Tissues for eyeglasses work well. Do not use tissues coated with lotion.
	Symbology is not enabled.	See your system administrator.

Ergonomic Recommendations

⚠️ *CAUTION* In order to avoid or minimize the potential risk of ergonomic injury follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are adhering to your company's safety programs to prevent employee injury.

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

Regulatory Information

This device is approved under the Symbol Technologies brand; Symbol Technologies, Inc., is the Enterprise Mobility business of Motorola, Inc. ("Motorola").

All Symbol devices are designed to be compliant with rules and regulations in locations they are sold and will be labeled as required.

Regulatory Information is available in French, Italian, German, Spanish (Spain), Portuguese, Japanese, Korean, Russian and Simplified Chinese. Please see the following website: http://www.motorola.com/enterprisemobility/manuals/ and look for your specific product.

Any changes or modifications to Symbol Technologies equipment, not expressly approved by Symbol Technologies, could void the user's authority to operate the equipment.

⚠ *CAUTION* Only use Symbol approved and UL Listed terminals.

⚠ Laser Devices

Complies with 21CFR1040.10 AND 1040.11 Except For Deviations Pursuant To Laser Notice NO. 50, dated June 24, 2007 and IEC 60825-1 (Ed. 2.0), EN60825-1: 2007.

The laser classification is marked on one of the labels on the device.

Class 1 Laser devices are not considered to be hazardous when used for their intended purpose. The following statement is required to comply with US and international regulations:

Caution: Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

Class 2 laser scanners use a low power, visible light diode. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful.
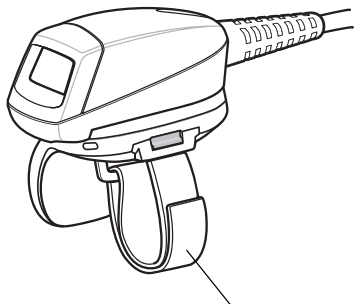
LASER LIGHT- DO NOT STARE INTO BEAM CLASS 2 LASER PRODUCT   630-680nm, 1mW
LASERLICHT - NICHT IN DEN STRAHL BLICKEN LASER KLASSE 2
LUMIERE LASER - NE PAS REGARDER DANS LE FAISCEAU APPAREIL À LASER DE CLASSE 2

Radio Frequency Interference Requirements-FCC

FC Tested to comply with FCC Standards
FOR HOME OR OFFICE USE

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna
• Increase the separation between the equipment and receiver
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
• Consult the dealer or an experienced radio/TV technician for help.

Radio Frequency Interference Requirements - Canada

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

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

$C\epsilon$ Marking and European Economic Area (EEA)

Statement of Compliance

Motorola/Symbol, hereby, declares that this device is in compliance with the essential requirements and other relevant provisions of Directives 1999/5/EC. A Declaration of Conformity may be obtained from http://www.motorola.com/doc.

⌧ **Waste Electrical and Electronic Equipment (WEEE)**

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

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

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

Bulgarish: За клиенти от ЕС: След края на полезния им живот всички продукти трябва да се връщат на Motorola за рециклиране. За информация относно връщането на продукти, моля отидете на адрес: http://www.motorola.com/recycling/weee.

Deutsch: Für Kunden innerhalb der EU: Alle Produkte müssen am Ende ihrer Lebensdauer zum Recycling an Motorola zurückgesandt werden. Informationen zur Rücksendung von Produkten finden Sie unter http://www.motorola.com/recycling/weee.

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

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

Nederlands: Voor klanten in de EU: alle producten dienen aan het einde van hun levensduur naar Motorola te worden teruggezonden voor recycling. Raadpleeg http://www.motorola.com/recycling/weee voor meer informatie over het terugzenden van producten.

Polski: Klienci z obszaru Unii Europejskiej: Produkty wycofane z eksploatacji nale¿y zwróciæ do firmy Motorola w celu ich utylizacji. Informacje na temat zwrotu produktów znajduj¹ siê na stronie internetowej http://www.motorola.com/recycling/weee.

Čeština: Pro zákazníky z EU: Všechny produkty je nutné po skonèení jejich životnosti vrátit spoleènosti Motorola k recyklaci. Informace o zpùsobu vrácení produktu najdete na webové stránce: http://www.motorola.com/recycling/weee.

Eesti: EL klientidele: kõik tooted tuleb nende eluea lõppedes tagastada taaskasutamise eesmärgil Motorola'ile. Lisainformatsiooni saamiseks toote tagastamise kohta külastage palun aadressi: http://www.motorola.com/recycling/weee.

Magyar: Az EU-ban vásárlóknak: Minden tönkrement terméket a Motorola vállalathoz kell eljuttatni újrahasznosítás céljából. A termék visszajuttatásának módjával kapcsolatos tudnivalókért látogasson el a http://www.motorola.com/recycling/weee weboldalra.

Slovenski: Za kupce v EU: vsi izdelki se morajo po poteku življenjske dobe vrniti podjetju Motorola za reciklažo. Za informacije o vraèilu izdelka obišèite: http://www.motorola.com/recycling/weee.

Svenska: För kunder inom EU: Alla produkter som uppnått sin livslängd måste returneras till Motorola för återvinning. Information om hur du returnerar produkten finns på http://www.motorola.com/recycling/weee.

Suomi: Asiakkaat Euroopan unionin alueella: Kaikki tuotteet on palautettava kierrätettäväksi Motorola-yhtiöön, kun tuotetta ei enää käytetä. Lisätietoja tuotteen palauttamisesta on osoitteessa http://www.motorola.com/recycling/weee.

Dansk: Til kunder i EU: Alle produkter skal returneres til Motorola til recirkulering, når de er udtjent. Læs oplysningerne om returnering af produkter på: http://www.motorola.com/recycling/weee.

Ελληνικά: Για πελάτες στην Ε.Ε.: Όλα τα προϊόντα, στο τέλος της διάρκειας ζωής τους, πρέπει να επιστρέφονται στην Motorola για ανακύκλωση. Για περισσότερες πληροφορίες σχετικά με την επιστροφή ενός προϊόντος, επισκεφθείτε τη διεύθυνση http://www.motorola.com/recycling/weee στο Διαδίκτυο.

Malti: Għal klijenti fl-UE: il-prodotti kollha li jkunu waslu fl-aħħar tal-ħajja ta' l-użu tagħhom, iridu jiġu rritornati għand Motorola għar-riċiklaġġ. Għal aktar tagħrif dwar kif għandek tirritorna l-prodott, jekk jogħġbok żur: http://www.motorola.com/recycling/weee.

Românesc: Pentru clienţii din UE: Toate produsele, la sfârşitul duratei lor de funcţionare, trebuie returnate la Motorola pentru reciclare. Pentru informaţii despre returnarea produsului, accesaţi: http://www.motorola.com/recycling/weee.

Slovenski: Za kupce v EU: vsi izdelki se morajo po poteku življenjske dobe vrniti podjetju Motorola za reciklažo. Za informacije o vračilu izdelka obiščite: http://www.motorola.com/recycling/weee.

Slovenčina: Pre zákazníkov z krajín EU: Všetky výrobky musia byť po uplynutí doby ich životnosti vrátené spoločnosti Motorola na recykláciu. Bližšie informácie o vrátení výrobkov nájdete na: http://www.motorola.com/recycling/weee.

Lietuvių: ES vartotojams: visi gaminiai, pasibaigus jų eksploatacijos laikui, turi būti grąžinti utilizuoti į kompaniją "Motorola". Daugiau informacijos, kaip grąžinti gaminį, rasite: http://www.motorola.com/recycling/weee.

Latviešu: ES klientiem: visi produkti pēc to kalpošanas mūža beigām ir jānogādā atpakaļ Motorola otrreizējai pārstrādei. Lai iegūtu informāciju par produktu nogādāšanu Motorola, lūdzu, skatiet: http://www.motorola.com/recycling/weee.
Türkçe: AB Müşterileri için: Kullanım süresi dolan tüm ürünler geri dönüştürme için Motorola'ya iade edilmelidir. Ürünlerin nasıl iade edileceği hakkında bilgi için lütfen şu adresi ziyaret edin: http://www.motorola.com/recycling/weee.

Service Information

If you have a problem using the equipment, contact your facility's Technical or Systems Support. If there is a problem with the equipment, they will contact the Motorola Enterprise Mobility Support at:
http://www.motorola.com/enterprisemobility/contactsupport.

For the latest version of this guide go to:
http://www.motorola.com/enterprisemobility/manuals.

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