



DATALOGIC JOYA™ R2U
"READY TO USE"



USER'S MANUAL



Datalogic Mobile S.r.l.
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Datalogic Joya™ - User's Manual

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REFERENCES

CONVENTIONS

This manual uses the following conventions:

“User” refers to anyone using a Datalogic Joya™ mobile computer.

“Mobile computer” and “Datalogic Joya™” refer to Datalogic Joya™ mobile computer.

“You” refers to the System Administrator or Technical Support person using this manual to install, configure, operate, maintain or troubleshoot a Datalogic Joya™ mobile computer.

“Cradle” refers to Datalogic Joya™ Cradle Dispenser.

REFERENCE DOCUMENTATION

For further information regarding Datalogic Joya™ refer to the SDK Help on-Line.

SAFETY REGULATIONS



NOTE

Read this manual carefully before performing any type of connection to the Datalogic Joya™ mobile computer. The user is responsible for any damages caused by incorrect use of the equipment or by inobservance of the indication supplied in this manual.

GENERAL SAFETY RULES

- Use only the components supplied by the manufacturer for the specific Datalogic Joya™ being used.
- Do not attempt to disassemble the Datalogic Joya™ mobile computer, as it does not contain parts that can be repaired by the user. Any tampering will invalidate the warranty.
- When replacing the battery pack or at the end of the operative life of the Datalogic Joya™ mobile computer, disposal must be performed in compliance with the laws in force.
- Before using the device and the battery pack, see par. 4.2 and read every warnings about the device and the battery pack.
- Do not submerge the Datalogic Joya™ in liquid products.
- The Datalogic Joya™ is designed and labelled to be compliant with laws, rules and regulations in force in the countries where it is sold.
- For further information, refer to this manual and to the Datalogic Mobile web site: www.mobile.datalogic.com.

BLUETOOTH® APPROVAL

This product is equipped with the following certified Bluetooth® module:

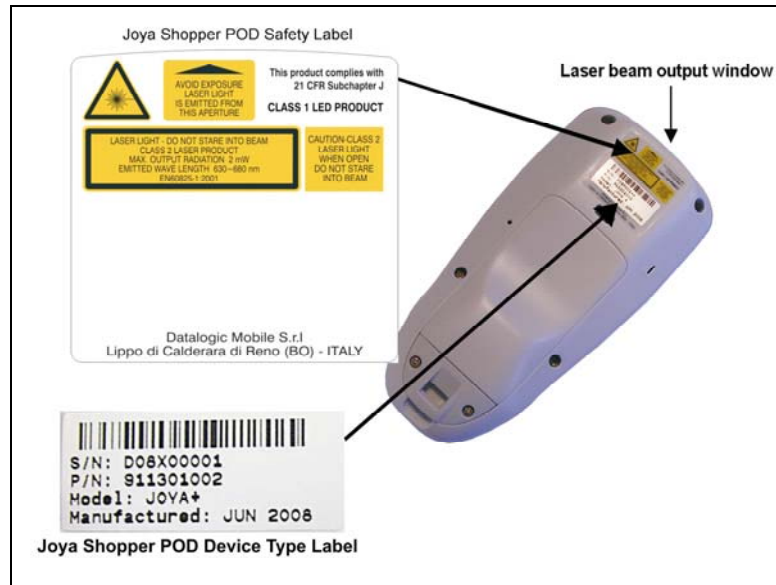
Product Name: Datalogic controller subsystem based on LBMALCS2 MURATA module for Windows CE and Windows Mobile for portable barcode readers application

Bluetooth ID: B016407

Product ID: DLBTLCS2

LASER SAFETY

The laser light is visible to the human eye and is emitted from the window indicated in the figure.



I	D	F	E
La luce laser è visibile all'occhio umano e viene emessa dalla finestra indicata nella figura.	Die Laserstrahlung ist für das menschliche Auge sichtbar und wird am Strahlaustrittsfenster ausgesendet (siehe Bild).	Le rayon laser est visible à l'oeil nu et il est émis par la fenêtre désignée sur l'illustration dans la figure.	La luz láser es visible al ojo humano y es emitida por la ventana indicada en la figura.
I	D	F	E
LUCE LASER NON FISSARE IL FASCIO APPARECCHIO LASER DI CLASSE 2 MASSIMA POTENZA DI USCITA: 2mW LUNGHEZZA D'ONDA EMESSA: 650nm CONFORME A EN 60825-1 (2001)	LASERSTRAHLUNG NICHT IN DER STRAHL BLINKEN PRODUKT DER LASERKLASSE 2 MAXIMALE AUSGANGLEISTUNG: 2mW WELLENLÄNGE: 650nm ENTSPR. EN 60825-1 (2001)	RAYON LASER EVITER DE REGARDER LE RAYON APPAREIL LASER DE CLASSE 2 PUISSANCE DE SORTIE: 2mW LONGUEUR D'ONDE EMISE: 650nm CONFORME A EN 60825-1 (2001)	RAYO LÁSER NO MIRAR FIJO EL RAYO APARATO LÁSER DE CLASE 2 MÁXIMA POTENCIA DE SALIDA: 2mW LONGITUD DE ONDA EMITIDA: 650nm CONFORME A EN 60825-1 (2001)

ENGLISH

The following information is provided to comply with the rules imposed by international authorities and refers to the correct use of your mobile computer.

STANDARD LASER SAFETY REGULATIONS

This product conforms to the applicable requirements of both CDRH 21 CFR 1040 Subchapter J and EN 60825-1:2001 at the date of manufacture.

For installation, use and maintenance, it is not necessary to open the device.



CAUTION

Do not attempt to open or otherwise service any components in the optics cavity. Opening or servicing any part of the optics cavity by unauthorized personnel may violate laser safety regulations. The optics system is a factory only repair item.



CAUTION

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

The product utilizes a low-power laser diode. Although staring directly at the laser beam momentarily causes no known biological damage, avoid staring at the beam as one would with any very strong light source, such as the sun. Avoid that the laser beam hits the eye of an observer, even through reflective surfaces such as mirrors, etc.



CAUTION

Use of optical systems with the scanner will increase eye hazard. Optical instruments include binoculars, microscopes, eye glasses and magnifying glasses.

ITALIANO

Le seguenti informazioni vengono fornite dietro direttive delle autorità internazionali e si riferiscono all'uso corretto del terminale.

NORMATIVE STANDARD PER LA SICUREZZA LASER

Questo prodotto risulta conforme alle normative vigenti sulla sicurezza laser alla data di produzione: CDRH 21 CFR 1040 sezione J e EN 60825-1:2001.

Non si rende mai necessario aprire l'apparecchio per motivi di installazione, utilizzo o manutenzione.



CAUTION

Non tentare di accedere allo scomparto contenete i componenti ottici o di farne la manutenzione. L'apertura dello scomparto, o la manutenzione di qualsiasi parte ottica da parte di personale non autorizzato, potrebbe violare le norme della sicurezza. Il sistema ottico può essere riparato solamente alla fabbrica.



ATTENZIONE

L'utilizzo di procedure o regolazioni differenti da quelle descritte nella documentazione può provocare un'esposizione pericolosa a luce laser visibile.

Il prodotto utilizza un diodo laser a bassa potenza. Sebbene non siano noti danni riportati dall'occhio umano in seguito ad una esposizione di breve durata, evitare di fissare il raggio laser così come si eviterebbe qualsiasi altra sorgente di luminosità intensa, ad esempio il sole. Evitare inoltre di dirigere il raggio laser negli occhi di un osservatore, anche attraverso superfici riflettenti come gli specchi.



CAUTION

L'uso di strumenti ottici assieme allo scanner può aumentare il pericolo di danno agli occhi. Tali strumenti ottici includono cannocchiali, microscopi, occhiali e lenti di ingrandimento.

DEUTSCH

Die folgenden Informationen stimmen mit den Sicherheitshinweisen überein, die von internationalen Behörden auferlegt wurden, und sie beziehen sich auf den korrekten Gebrauch vom Terminal.

NORM FÜR DIE LASERSICHERHEIT

Dies Produkt entspricht am Tag der Herstellung den gültigen EN 60825-1:2001 und CDRH 21 CFR 1040 Subchapter J Normen für die Lasersicherheit.

Es ist nicht notwendig, das Gerät wegen Betrieb oder Installations-, und Wartungs-Arbeiten zu öffnen.



CAUTION

Unter keinen Umständen darf versucht werden, die Komponenten im Optikhohlraum zu öffnen oder auf irgendwelche andere Weise zu warten. Das Öffnen bzw. Warten der Komponenten im Optikhohlraum durch unbefugtes Personal verstößt gegen die Laser-Sicherheitsbestimmungen. Das Optiksysteem darf nur werkseitig repariert werden.




ACHTUNG

Jegliche Änderungen am Gerät sowie Vorgehensweisen, die nicht in dieser Betriebsanleitung beschrieben werden, können ein gefährliches Laserlicht verursachen.

Der Produkt benutzt eine Laserdiode. Obwohl zur Zeit keine Augenschäden von kurzen Einstrahlungen bekannt sind, sollten Sie es vermeiden für längere Zeit in den Laserstrahl zu schauen, genauso wenig wie in starke Lichtquellen (z.B. die

Sonne). Vermeiden Sie es, den Laserstrahl weder gegen die Augen eines Beobachters, noch gegen reflektierende Oberflächen zu richten.

 CAUTION	<i>Die Verwendung von Optiksystemen mit diesem Scanner erhöht die Gefahr einer Augenbeschädigung. Zu optischen Instrumenten gehören unter anderem Ferngläser, Mikroskope, Brillen und Vergrößerungsgläser.</i>
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FRANÇAIS


Les informations suivantes sont fournies selon les règles fixées par les autorités internationales et se réfèrent à une correcte utilisation du terminal.

NORMES DE SECURITE LASER


Ce produit est conforme aux normes de sécurité laser en vigueur à sa date de fabrication: CDRH 21 CFR 1040 sous-chapitre J et EN 60825-1:2001.

Il n'est pas nécessaire d'ouvrir l'appareil pour l'installation, l'utilisation ou l'entretien.

 CAUTION	<i>Ne pas essayer d'ouvrir ou de réparer les composants de la cavité optique. L'ouverture de la cavité optique ou la réparation de ses composants par une personne non qualifiée peut entraîner le nonrespect des règles de sécurité relatives au laser. Le système optique ne peut être réparé qu'en usine.</i>
--	--

 ATTENTION	<i>L'utilisation de procédures ou réglages différents de ceux donnés ici peut entraîner une dangereuse exposition à lumière laser visible.</i>
---	--

Le produit utilise une diode laser. Aucun dommage aux yeux humains n'a été constaté à la suite d'une exposition au rayon laser. Eviter de regarder fixement le rayon, comme toute autre source lumineuse intense telle que le soleil. Eviter aussi de diriger le rayon vers les yeux d'un observateur, même à travers des surfaces réfléchissantes (miroirs, par exemple).

 CAUTION	<i>L'utilisation d'instruments optiques avec le scanner augmente le danger pour les yeux. Les instruments optiques comprennent les jumelles, les microscopes, les lunettes et les verres grossissants.</i>
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ESPAÑOL

Las informaciones siguientes son presentadas en conformidad con las disposiciones de las autoridades internacionales y se refieren al uso correcto del terminal.

NORMATIVAS ESTÁNDAR PARA LA SEGURIDAD LÁSER

Este aparato resulta conforme a las normativas vigentes de seguridad láser a la fecha de producción: CDRH 21 CFR 1040 Sección y EN 60825-1:2001.

No es necesario abrir el aparato para la instalación, la utilización o la manutención.



CAUTION

No intente abrir o de ninguna manera dar servicio a ninguno de los componentes del receptáculo óptico. Abrir o dar servicio a las piezas del receptáculo óptico por parte del personal no autorizado podría ser una violación a los reglamentos de seguridad. El sistema óptico se puede reparar en la fábrica solamente.



ATENCIÓN

La utilización de procedimientos o regulaciones diferentes de aquellas descritas en la documentación puede causar una exposición peligrosa a la luz láser visible.

El aparato utiliza un diodo láser a baja potencia. No son notorios daños a los ojos humanos a consecuencia de una exposición de corta duración. Eviten de mirar fijo el rayo láser así como evitarían cualquiera otra fuente de luminosidad intensa, por ejemplo el sol. Además, eviten de dirigir el rayo láser hacia los ojos de un observador, también a través de superficies reflectantes como los espejos.



CAUTION

El uso de sistemas ópticos con el escáner aumentará el riesgo de daños oculares. Los instrumentos ópticos incluyen binoculares, microscopios, lentes y lupas.

LED CLASS

According to EN 60825-1:2001, the Datalogic Joya™ models which use the good read spot LED are also CLASS 1 LED PRODUCTS.

APPARECCHIO LED CLASSE 1
PRODUKT LED KLASSE 1

PRODUIT LED DE CLASSE 1
PRODUCTO LED DE CLASE 1

RADIO COMPLIANCE

In radio systems configured with mobile computers and access points, the frequencies to be used must be allowed by the spectrum authorities of the specific country in which the installation takes place. Be absolutely sure that the system frequencies are correctly set to be compliant with the spectrum requirements of the country.

Information for the User

ENGLISH

Contact the competent authority responsible for the management of radio frequency devices of your country to verify any possible restrictions or licenses required.

Refer to the web site <http://europa.eu.int/comm/enterprise/rte/spectr.htm> for further information.

ITALIANO

Prendi contatto con l'autorità competente per la gestione degli apparati a radio frequenza del tuo paese, per verificare eventuali restrizioni o licenze. Ulteriori informazioni sono disponibili sul sito:

<http://europa.eu.int/comm/enterprise/rte/spectr.htm>.

FRANÇAIS

Contactez l'autorité compétente en la gestion des appareils à radio fréquence de votre pays pour vérifier d'éventuelles restrictions ou licences. Pour tout renseignement vous pouvez vous adresser au site web:

<http://europa.eu.int/comm/enterprise/rte/spectr.htm>.

DEUTSCH

Wenden Sie sich an die für Radiofrequenzgeräte zuständige Behörde Ihres Landes, um zu prüfen ob es Einschränkungen gibt, oder eine Lizenz erforderlich ist. Weitere Informationen finden Sie auf der Web Seite:

<http://europa.eu.int/comm/enterprise/rte/spectr.htm>.

ESPAÑOL

Contacta la autoridad competente para la gestión de los dispositivos de radio frecuencia de tu país, para verificar cualesquiera restricciones o licencias posibles requerida. Además se puede encontrar mas información en el sitio Web:

<http://europa.eu.int/comm/enterprise/rte/spectr.htm>.



FCC COMPLIANCE

Modifications or changes to this equipment without the expressed written approval of Datalogic could void the authority to use the equipment.

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.

FCC ID: U4G0056

SAR COMPLIANCE

This product has been tested and found to comply with the following standards:

- OET BULLETIN 65 SUPPLEMENT C:2001: evaluating compliance with FCC guidelines for human exposure to radio frequency electromagnetic fields.
- EN 50392:2004: generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz- 300 GHZ).

WIRELESS AND RADIO FREQUENCIES WARNINGS



WARNING

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications or attachments could damage the product and may violate laws and regulations.



WARNING

Most modern electronic equipment is shielded from RF signals. However, certain electronic equipment may not be shielded against the RF signals generated by Datalogic Joya™.



WARNING

Datalogic recommends persons with pacemakers or other medical devices to follow the same recommendations provided by Health Industry Manufacturers Associations for mobile phones.

Persons with pacemakers:

- *Should ALWAYS keep this device more than twenty five (25) cm from their pacemaker and/or any other medical device;*
- *Should not carry this device in a breast pocket;*
- *Should keep the device at the opposite side of the pacemaker and/or any other medical device;*
- *Should turn this device OFF or move it immediately AWAY if there is any reason to suspect that interference is taking place.*
- *Should ALWAYS read pacemaker or any other medical device guides or should consult the manufacturer of the medical device to determine if it is adequately shielded from external RF energy.*

In case of doubt concerning the use of wireless devices with an implanted medical device, contact your doctor.



WARNING

Turn this device OFF in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may use equipment that could be sensitive to external RF energy.



WARNING

Do not use the device while driving: give full attention to driving — driving safely is your first responsibility. The device is not designed to be used with a GPS system. Any program installed without Datalogic authorization may affect the device's safety.



WARNING

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.



WARNING

An air bag inflates with great force. DO NOT place objects, including either installed or portable wireless equipment, in the area over the air bag or in the air bag deployment area. If vehicle's wireless equipment is improperly installed and the air bag inflates, serious injury could result.



WARNING

Turn off the device when in any area with a potentially explosive atmosphere. Observe restrictions and follow closely any laws, regulations, warnings and best practices on the use of radio equipment near fuel storage areas or distribution fuel areas, chemical plants or where some operation involves use of explosive materials.

Do not store or carry flammable liquids, explosive gases or materials with the device or its parts or accessories.

Areas with a potentially explosive atmosphere are often, but not always, clearly marked or showed.

Sparks in such areas could cause an explosion or fire, resulting in injury or even death.

PATENTS

This product is covered by one or more of the following patents.
Design Pat.: EP 891,544.
U.S. Pat. 5,992,740; 6,808,114 B1; 6,997,385 B2; 7,387,246 B2
European Pat. 789,315 B1; 1,128,315 B1; 1,396,811 B1
Additional patents pending.

WEEE COMPLIANCE



Informazione degli utenti ai sensi della Direttiva Europea 2002/96/EC

L'apparecchiatura che riporta il simbolo del bidone barrato deve essere smaltita, alla fine della sua vita utile, separatamente dai rifiuti urbani.

- Smaltire l'apparecchiatura in conformità alla presente Direttiva consente di:
- evitare possibili conseguenze negative per l'ambiente e per la salute umana che potrebbero invece essere causati dall'errato smaltimento dello stesso;
 - recuperare materiali di cui è composto al fine di ottenere un importante risparmio di energia e di risorse.

Per maggiori dettagli sulle modalità di smaltimento, contattare il Fornitore dal quale è stata acquistata l'apparecchiatura o consultare la sezione dedicata sul sito www.mobile.datalogic.com.

Information for the user in accordance with the European Commission Directive 2002/96/EC

At the end of its useful life, the product marked with the crossed out wheeled wastebin must be disposed of separately from urban waste.

- Disposing of the product according to this Directive:
- avoids potentially negative consequences to the environment and human health which otherwise could be caused by incorrect disposal
 - enables the recovery of materials to obtain a significant savings of energy and resources.

For more detailed information about disposal, contact the supplier that provided you with the product in question or consult the dedicated section at the website www.mobile.datalogic.com.

Information aux utilisateurs concernant la Directive Européenne 2002/96/EC

Au terme de sa vie utile, le produit qui porte le symbole d'un caisson à ordures barré ne doit pas être éliminé avec les déchets urbains.

Éliminer ce produit selon cette Directive permet de:

- éviter les retombées négatives pour l'environnement et la santé dérivant d'une élimination incorrecte
- récupérer les matériaux dans le but d'une économie importante en termes d'énergie et de ressources

Pour obtenir des informations complémentaires concernant l'élimination, veuillez contacter le fournisseur auprès duquel vous avez acheté le produit ou consulter la section consacrée au site Web www.mobile.datalogic.com.

Información para el usuario de acuerdo con la Directiva Europea 2002/96/CE

Al final de su vida útil, el producto marcado con un símbolo de contenedor de basura móvil tachado no debe eliminarse junto a los desechos urbanos.

Eliminar este producto de acuerdo con la Directiva permite de:

- evitar posibles consecuencias negativas para el medio ambiente y la salud derivadas de una eliminación inadecuada
- recuperar los materiales obteniendo así un ahorro importante de energía y recursos

Para obtener una información más detallada sobre la eliminación, por favor, póngase en contacto con el proveedor donde lo compró o consultar la sección dedicada en el Web site www.mobile.datalogic.com.

Benutzerinformation bezüglich Richtlinie 2002/96/EC der europäischen Kommission

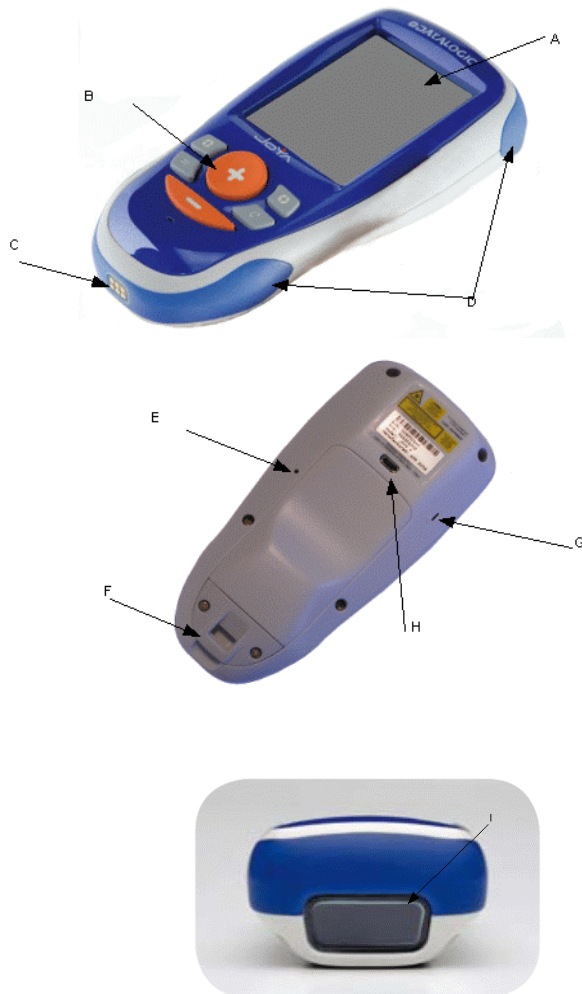
Am Ende des Gerätelebenszyklus darf das Produkt nicht über den städtischen Hausmüll entsorgt werden. Eine entsprechende Mülltrennung ist erforderlich.

Beseitigung des Produkts entsprechend der Richtlinie:

- verhindert negative Auswirkungen für die Umwelt und die Gesundheit der Menschen
- ermöglicht die Wiederverwendung der Materialien und spart somit Energie und Ressourcen

Weitere Informationen zu dieser Richtlinie erhalten sie von ihrem Lieferanten über den sie das Produkt erworben haben, oder besuchen sie unsere Homepage unter www.mobile.datalogic.com.

GENERAL VIEW



A) Display*	D) Bumper	G) Loudspeaker
B) 6 keys keyboard	E) Cold reset Hole	H) Micro USB
C) TTL Serial connector	F) Neck Strip Anchor	I) Laser window

*Remove protective film cover before use

1 INTRODUCTION

1.1 DATALOGIC JOYA™ DESCRIPTION

The Datalogic Joya™ is a pocket-sized Windows powered mobile computer.

This extremely compact, lightweight, and versatile device, combines fully integrated automatic data capture (1D bar code) and wireless communication capabilities, supporting nearly any application.

The Datalogic Joya™ system architecture is based on the blend of Intel X-Scale series processors coupled with the Windows CE operating system and it was developed to meet the most demanding customer needs.

A huge quantity of on-board memory is available. It enables the user to adapt the terminal for any specific need.

Thanks to its great ergonomics and the state of the art architecture, the Datalogic Joya™ is the right answer to enhance your business opportunities.

1.2 MODEL DESCRIPTION

The brand new Datalogic Joya™ is available in two different models depending on the options it is equipped with. All options are listed below:

- 911301003: JOYA R2U (base model)
- 911301004: JOYA+ R2U (enhanced model)

For further details about the Datalogic Joya™ models refer to the web site: <http://www.joya.datalogic.com>.

1.3 PACKAGE CONTENTS

The Datalogic Joya™ package contains:

- 1 Datalogic Joya™ mobile computer

Remove all the components from their packaging; check their integrity and congruity with the packing documents.



CAUTION

Keep the original packaging for use when sending products to the technical assistance center. Damage caused by improper packaging is not covered under the warranty.



NOTE

Rechargeable battery packs are not initially charged. Therefore the initial operation to perform is to charge them.

1.4 ACCESSORIES

- Cradle**
912201000 Datalogic Joya™ Cradle Dispenser
- Batteries**
91ACC1055 Datalogic Joya™ Battery Pack (10 pcs.)
 - Cradle Accessories**
91ACC1000 Power Supply 12V 300W
91ACC0730 Power Junction Cable I90x/3 Cradle (8 pcs.)
91ACC0650 Term. Unlock Magnets (5 pcs.)
 - Various**
94ACC1328 Datalogic Joya™ Stylus Pens (10 pcs)
91ACC1056 Datalogic Joya™ trolley holder (60 pcs.)
91ACC1057 Datalogic Joya™ checkout holder



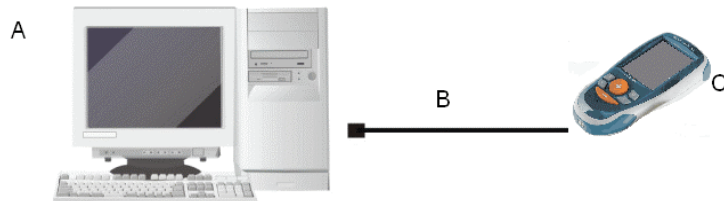
NOTE

Use only a Datalogic Mobile-approved power supply and cables. Use of an alternative power supply will invalidate any approval given to this device and may be dangerous.

2 CONNECTIONS

2.1 USB CONNECTION

You can use any standard micro USB cable to directly connect the Datalogic Joya™ to a host computer to transfer data through the USB interface.



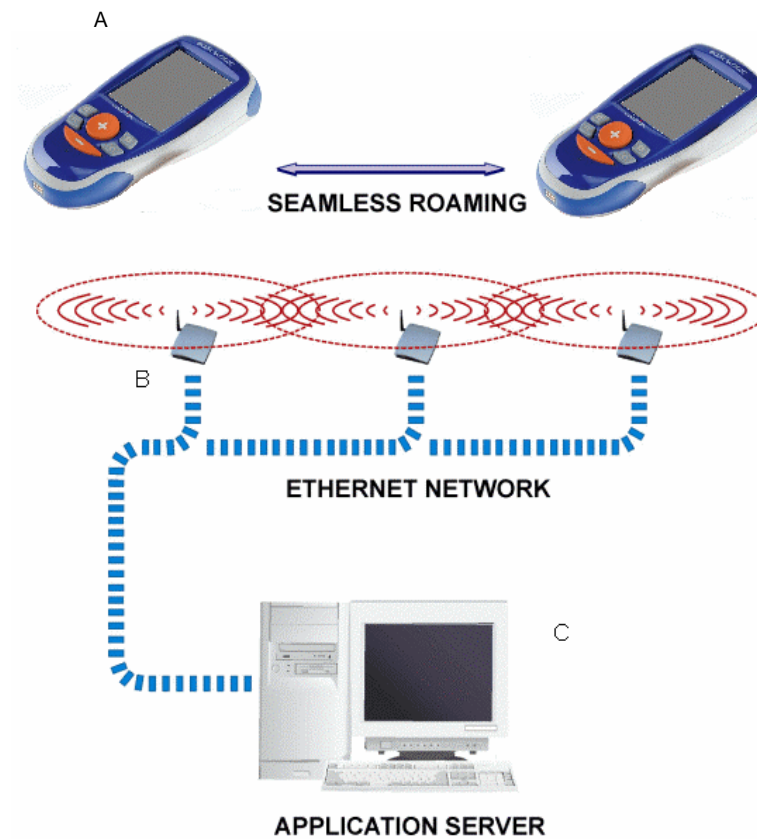
Key:

- A) Host Computer
- B) Standard Micro USB cable type USB A – micro USB B
- C) Datalogic Joya™

2.2 WLAN CONNECTION

Datalogic Joya™ Wi-Fi 802.11 b/g radio models can communicate with the host using the on-board radio frequency component and an Access Point connected to the host computer.

To launch this utility you can tap the specific icon if it's visible on the taskbar or you can open Connections folder or Control Panel from desktop and select the 'Summit Client Utility' icon.



Key:

- A) Datalogic Joya™
- B) Access Point
- C) Host – Application Server

**NOTE**

Wi-Fi module is on by default, in order to avoid wasting energy, you can switch it off using the Wireless Communications applet.

**NOTE**

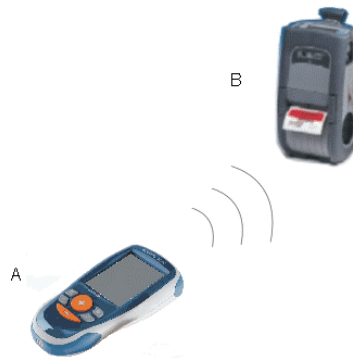
Suspending the terminal powers off the 802.11b/g radio and drops the radio connection. When the terminal resumes, depending on the radio power mode and security protocol selected, it may take up to 30 seconds for the 802.11b/g radio driver to re-associate the radio to the network.

**NOTE**

Area coverage and radio performance may vary, due to environmental conditions, access points types or interference caused by other devices (microwave ovens, radio transmitters, etc.)

2.3 WPAN CONNECTIONS

Bluetooth® Datalogic Joya™ mobile computer models can communicate with a Bluetooth® device, such as a printer, within a range of 10 m, using the on-board Bluetooth® module.



Key:

- A) Datalogic Joya™
- B) Bluetooth® printer



NOTE

In order to avoid wasting energy, the Bluetooth® module is off by default. If you need to have Bluetooth® working, the module must be powered on using the Wireless Communications applet (see par. 3.6.3), and perform the Discovery procedure (see par. 3.7.2).



NOTE

Suspending the terminal powers off the Bluetooth® radio and drops the piconet (Bluetooth® connection). When the terminal resumes, it takes approximately 10 seconds for the Bluetooth® radio driver to re-initialize the radio.



NOTE

Area coverage and Bluetooth® radio performance may vary, due to environmental conditions or interference caused by other devices (microwave ovens, radio transmitters, etc.), etc.

3 USE AND FUNCTIONING

The use of the Datalogic Joya™ depends on the application software loaded. However there are several parameters that can be set and utilities that can be used to perform some basic functions such as data capture, communications, file management, etc.

3.1 STARTUP

The Datalogic Joya™ turns on when a charged battery pack is inserted.

As soon as the mobile computer is on, the Windows CE 5.0 desktop configuration will appear on the screen. Wait a few seconds before starting any activity so that the mobile computer completes its startup procedure.



The mobile computer goes into power-off (low power with display and keyboard backlight off), when it is no longer used for more than a programmable timeout, which is defined in the POWER applet of the Control Panel. In this mode it can be awakened (resuming operation) pressing the **Up** Key.

**NOTE**


The mobile computer can also be awakened or turned off by the application program.

3.1.1 Using the Stylus (available only on Joya+™)

The stylus selects items and enters information. The stylus functions like a mouse.

Double Tap:	Touch the screen twice with the stylus to open items and select options.
Drag:	Hold the stylus on the screen and drag across the screen to select text and images. Drag in a list to select multiple items.
Tap-and-hold:	Tap and hold the stylus on an item to see a list of actions available for that item. On the pop-up menu that appears, tap the action you want to perform.

To recalibrate the touch screen use the Stylus Applet



Use only original Datalogic styluses supplied with the product itself.

CAUTION *In harsh applications, use of screen protectors should be taken into consideration, in order to extend the touch screen operating life.*

To prevent damage to the screen, do not use sharp devices or any device other than the Datalogic Mobile-provided stylus.

Do not apply not necessary high pressures on the screen.

For applications where an intensive use of the touch screen is foreseen, please consider that touch screen components are subject to progressive wear.

3.2 DATA CAPTURE

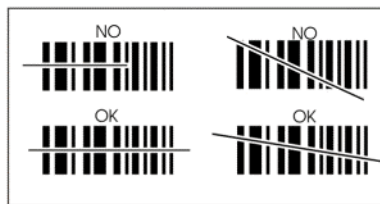
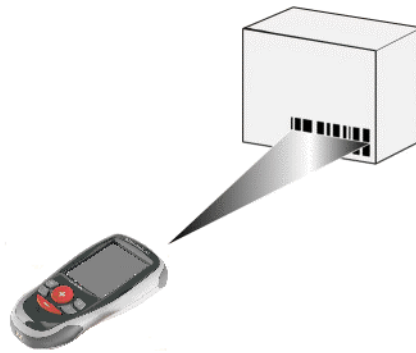
To capture data first of all select the barcode icon on the bottom-right side of the display and tap the 'Capture' menu item then proceed with the following directions.

To configure and enable data capture parameters refer to par. 3.5.

3.2.1 Laser Data Capture

To scan barcodes, point the Datalogic Joya™ laser model onto the code from a distance within the reading range while pressing the “Up” key.

The lighted band emitted by the laser must completely intercept the barcode as shown in the figure below. If enabled, the emission of an acoustic signal will indicate that the scan has taken place correctly.



3.3 DESCRIPTION OF THE KEYS

The Datalogic Joya™ provides a 6-key keyboard. The following image shows this keyboard.



Main Keys Function

Key “+ ”: it corresponds to ArrowUp Key.

Key “- ”: it corresponds to ArrowDown Key.

Key “Left ⬅ ”: it corresponds to F1 (Function1) Key.

Key “Right ➡ ”: it corresponds to F2 (Function2) Key.

Key “= ”: it corresponds to ESC Key.

Key “e ”: it corresponds to ENTER Key.

3.3.1 Resetting the Joya™

There are two reset methods for the Joya™.

A warm boot terminates an unresponsive application and clears the working RAM, but preserves both the file system and the registry.

A cold boot forces all applications to close and clears working RAM and files not resident on the persistent flash memory. Registry is restored from persistent memory if available or returned to factory default.

WARM BOOT

A warm boot closes all applications, clears the working RAM, but preserves the file system and registry. If an application "hangs" initiate a warm boot to terminate the application.

To perform a warm boot, press these keys simultaneously for 5 seconds:

“ + ” & “ - “

COLD BOOT

A cold boot is a complete reset of the Joya™ in which all applications are forcibly closed and RAM is completely cleared. Registry is restored from persistent memory if a saved copy is available (see 3.6.1) and RAM file system completely erased. You will lose any applications and data (registry too) which are not stored in persistent flash memory.

A cold boot is necessary when the Windows CE operating system locks up and the warm boot command does not work.

To perform a cold boot, lightly press with a metallic clip inside the circle hole on the back.

	Warm Boot	Cold Boot
REGISTRY	Preserved	Restored from flash (if available)
Flash Disk (Backup Folder)	Preserved	Preserved
RAM File System	Preserved	Reinitialized (factory default)



CAUTION

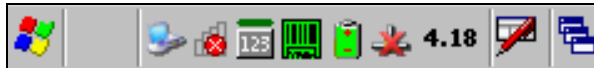
Before performing a reset, it is recommended to:











- *execute a system backup to keep your more important files and applications persistent. See par. 3.8;*
- *save the registry to non-volatile memory to guarantee the persistence of the Windows configuration. See par. 3.6.1.*

3.4 STATUS INDICATORS

3.4.1 Taskbar

The Taskbar provides information about the time, the battery level, the keyboard function, and the decoding status.



ICONS	DESCRIPTION
Time and Battery Icons	
10.50	It displays the time.
	They are representative of five different icons indicating the battery level. The icon is partially green when the power left is >20% and partially red colored when the power left is <20%.
	It indicates that the battery is charging.
Keyboard Status Icons	
	It indicates that the blue FUNC key has been pressed and is going to affect the next key press.
	It indicates that the yellow FUNC key has been pressed and is going to affect the next key press.
	It indicates that the ALPHA key has enabled the selection of the characters printed in orange.
	It indicates the NUMERIC key selection, the ALPHA key has not been pressed.
	It indicates that the ALPHA key has enabled the selection of the characters printed in orange and the Capslock is active.
	It indicates that the keyboard is locked.
Decoding Status Icons	
 	It indicates that the decoder is active (green), not active (grey).

3.5 DATA CAPTURE CONFIGURATION

From the Taskbar, tap the "Decoding" icon to open a drop-down menu. Decoding can also be accessed from the Control Panel.



By selecting the *Info* item from this drop-down menu you can access information about the Scanner and the Software; the *Configure* item opens the configuration applet (Data Capture Configuration Window), while *Capture* accesses the data capture applet (Data Capture Window), which enables code reading. The last menu item (*Wedge*) enables Wedge Emulation.

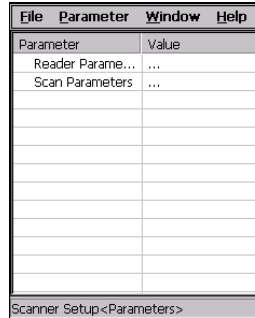
3.5.1 Configure

The Configuration applet contains the barcode scanning configuration parameters in a directory tree structure. The available barcode parameters are divided into two groups: Reader Parameters and Scan Parameters.

The Reader Parameters depend on the type of scanner module installed on the mobile computer and allow barcode configuration (i.e. enable/disable Code 39, check digit control, etc.).

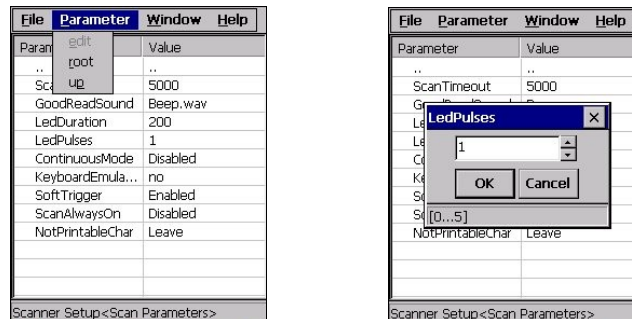
The Scan Parameters are common to all scanner modules and allow control of the scanning device (i.e. beeper control, LED control, laser timeout, etc.).

Each Data Capture screen window corresponds to a branch of the tree, and the name of the current branch is displayed at the bottom of each screen window.

**Data Capture Configuration Window**

The screen format shows two columns where the left column indicates branches or parameters. Branches have three dots in the right column (...). You can navigate through the tree structure using the stylus or keyboard arrows directly on the item field or from the menu.

Parameters have their corresponding current values in the right column. You can edit parameter values using the stylus or keyboard arrows directly on the item field or from the menu. To change a value for example, select the line of the value to be changed, choose Edit from the Parameter Menu then choose a new value from the values listed in the box (see following figures).

**Selecting Data Capture Setup Parameters**

Alternatively using the stylus, you can tap once directly on the value on the right column; continue tapping until the desired value is reached.

To activate a new configuration select the File -> Save Menu to send the new configuration to the barcode decoding software and save the new configuration. This will save the configuration to non-volatile memory preventing loss at the next system reset.

Reader Parameters

The barcode reading parameters and values are dependent upon the type of scanner module mounted in your mobile computer. For a detailed list of parameters and of their configuration procedures, please refer to the SDK Help file on the CD.

Scan Parameters

The Scan Parameters are common to all scanner modules and allow control of the scanning device. The Scan parameters are described as follows:

ScanTimeout: the maximum time, in milliseconds, during which the scanner remains on without decoding any barcode.

BeepType: if set to dual tone, the good read beep is a sequence of high and low pitch sounds. If set to monotone, the beep is a single pitch sound.

BeepDuration: the time interval, in milliseconds, during which the beeper will sound when the scanner reads a code. To disable the beeper, set this value to 0.

BeepFrequency: determines the frequency in Hertz of the beeper.

GoodReadSound: is the beep sound emitted when the scanner reads a code.

LedDuration: the length of the good-read led pulse, in milliseconds.

LedPulses: the number of times the good-read led pulse is emitted when the scanner reads a code.

ContinuousMode: disables the effect of the ScanTimeout parameter.

KeyboardEmulation: if enabled all scanned data are transformed into keyboard events and can therefore be displayed and saved to a file as if input from the mobile computer keyboard.

SoftTrigger: when enabled, the laser can be turned on/off by the application software.

ScanAlwaysOn: enables the scanner for barcode reading independently from the application software.

NotPrintableChar: if set to "Remove", all not printable characters included in the scanned data are deleted and the final barcode will include only printable characters.

ScanButton: enables/disables the scan button. If the scan button is disabled, the reader can be triggered under software control.

Default Settings

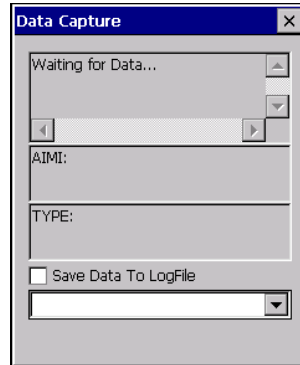
The following tables contain the default values for the major barcode setup parameters, according to the type of scan engine mounted on the mobile computer. For a complete list of parameters and of their configuration procedures, please refer to the SDK Help file on the CD.

SCAN PARAMETERS	LASER MODELS
ScanTimeout	5000
BeepType	Dual tone
BeepDuration	20
BeepFrequency	2000
GoodReadSound	Beep
LedDuration	200 ms
LedPulses	1
ContinuousMode	Disabled
KeyboardEmulation	Enabled
SoftTrigger	Enabled
ScanAlwaysOn	Disabled
NotPrintableChar	Leave
ScanButton	Enabled

BARCODE SYMBOLOGY SPECIFIC READER PARAMETERS	LASER MODELS
UPC A	Enabled
UPC E	Enabled
EAN 8	Enabled
EAN 13	Enabled
Code 39	Enabled
Code 39 Full ASCII	Disabled
Code 32	Disabled
2/5: Interleaved	Enabled
2/5: Industrial	Disabled
2/5: Matrix	Disabled
Code 128	Enabled
EAN 128	Enabled
Codabar	Disabled
MSI	Disabled
Plessey	Disabled
Code 93	Disabled
Code 11	Disabled

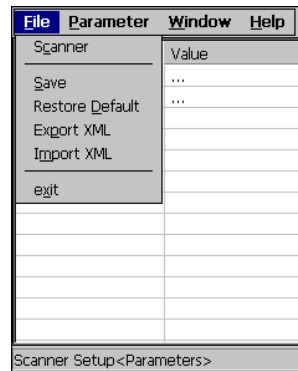
3.5.2 Capture

The Data Capture applet (Capture) enables code reading.



Data Capture Window

Data Capture can also be enabled through the Configuration applet by selecting File ->Scanner from the main menu, or by enabling the parameter Scan Always On in the Scan Parameters branch.

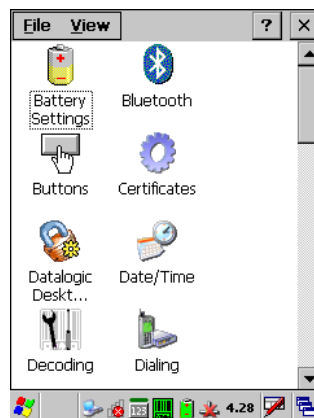


Enabling the Data Capture

3.6 CONTROL PANEL

From the Desktop, double tap on the "My Device" icon and then double tap on the "Control Panel" icon to open the control panel main window. The Control Panel can also be launched from Start ->Settings ->Control Panel.

APPLET programs are displayed as icons; one icon corresponds to each APPLETT.



Control Panel

3.6.1 Registry

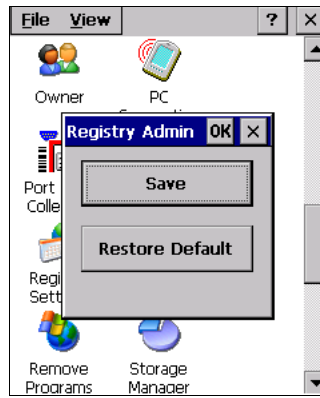
The REGISTRY ADMIN applet provides management of Windows CE 5.0 registry.

Select the REGISTRY ADMIN applet by double tapping the Registry Admin icon.

The Registry Administration Main window appears. Two functions are available:

- Save Registry allows permanently saving the Windows configuration (example: custom configuration of screen desktop background color, or network adapter configuration) to non-volatile memory (SAVE button).
- Restore Default Registry allows restoring the initial factory default configuration (Restore Default button). After restoring the factory default configuration, you must perform a warm boot.

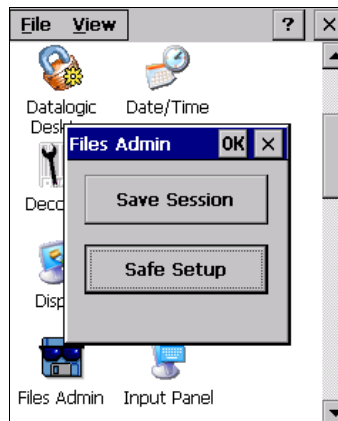
Saving the registry to non-volatile memory guarantees the persistence of the Windows configuration in case of battery pack replacement and in case of a Cold Boot.



Registry Administration Window

3.6.2 Files Admin

The FILES ADMIN applet enables control of the permanence of files in the System Folder. Two functions are available on the Files Admin Main window by means of two buttons:



Files Admin Main Window

Save Session: with this button all files will be permanently saved in the Windows directory in non-volatile memory. This function guarantees the steady maintenance of every file produced during the current working session - even of sub-directories and relevant files - with the exception of the files belonging to the FLASH image.

These current working session files will be backed-up in the \Backup\Windows directory.

At the next cold boot, the files previously saved in the \Backup\Windows directory will be restored to the Windows directory (see par. 3.8).

Safe Setup: with this button, the installation of software programs will be saved to non-volatile memory (Backup directory). Before doing this, it will be checked that the Backup directory has enough space to save the files. If the directory space is not enough, an error message will be shown and the program will exit the Safe Setup function.

Two activating procedures are available for Safe Setup:

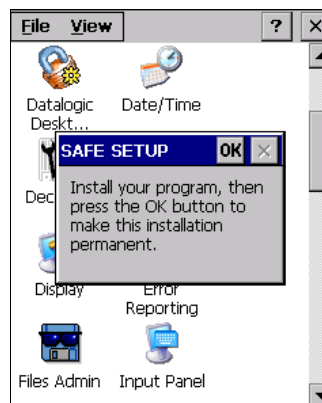
- Select an installation file (for example, a .CAB cabinet file) from the Safe Setup mask.



Safe Setup First Mask

Then select Windows or a relevant sub-directory in the path box. Then, Safe Setup will recognize the new files and directories present in the Windows directory, and will copy them to the \Backup\Windows directory. At the next cold boot, these files will be restored (see par. 3.8).

- Simply skip the first mask either by closing it or by pressing the ESC key. When it closes, a new mask will pop up: it will enable any type of installation (even remote ones like ActiveSync® installations). Make sure the installation directory is Windows or one of its sub-directories. After installation, tap OK: Safe Setup will save the new files in the \Backup\Windows directory.



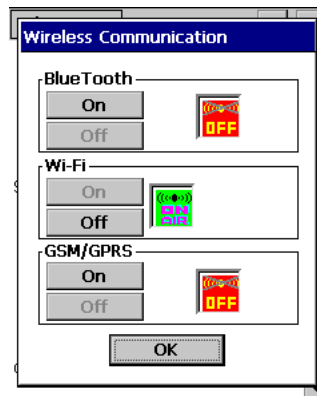
Safe Setup Second Mask

3.6.3 Wireless Communications

The WIRELESS COMMUNICATIONS applet provides management of the 802.11 b/g radio and of the Bluetooth® module.



Select the WIRELESS COMMUNICATIONS applet by double tapping the Wireless Communications icon. The following window will appear:



Wireless Communications Window

3.6.4 Using Summit Radio Card Utility

The Joya Summit WiFi card provides a useful client utility suitable for radio configuration and site survey purposes.

Summit Radio Card : Starting client

The client can be started from the Windows CE desktop by clicking the related icon of the tool bar at the bottom.



Fig. 1 : Summit client utility

Summit Radio Card : Main screen

The following picture shows the screen when Summit Client is started



Fig. 2 : Client utility main

The *Active Profile* window displays the current profile and lets user to change it. The *Disable Radio* button turns off the radio card; after deactivation the same button changes to *Enable Radio* so the radio can be reactivated. To close the application, press the close button at upper-right corner of window.

Summit Radio Card : Profile screen

Radio card is managed through radio profiles.



Fig. 3 : Profile manager

User can rename, delete, create and save any changes by the *Rename*, *Delete*, *New* and *Commit* buttons.

The name chosen for the profile is his own identifier. Profile is defined by a set of parameter that user can customize. The following is a simple profile for testing.

Field	Value
SSID	tsunami
Client Name	D08P00088 (the Joya S/N)
Power Save	Fast
Tx Power	Maximum
Bit Rate	Auto
Radio Mode	BG subset
Auth Type	Open
EAP Type	None
Encryption	None

Once a new profile is created, remember to enable it from the Main windows.

Summit Radio Card : Status screen

This screen shows the radio status related to the profile currently used.



Fig. 4 : Status screen

User can read current profile name, client device name, IP address and MAC address. The Access Point to which the terminal is currently associated is specified by name, IP address and MAC address. User can also read the signal strength (dBm), the transmission power (mW), the WiFi channel, the rate (Mbps) and the signal quality.

Summit Radio Card : Diagnostic screen

This screen allows user to interact with radio card to perform simple and useful functionalities.

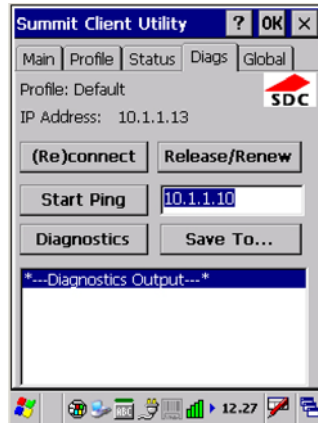


Fig. 5 : Diagnostic screen

The *(Re)connect* button disables and re-connects radio card.
The *Release/Renew* button releases and renews the radio interface IP address.

In order to test the radio link, user can ping the associated access point by pressing the *Start Ping* button.



Fig. 6 : Start Ping



Fig. 7 : Stop Ping

The ping output is displayed on the large text windows

The *Diagnostic* button displays the radio configuration and dumps available profiles

Site Survey functionality is not available.

Summit Radio Card : Global Settings screen

There are many other parameters used to configure the radio card and they do not depend on used profile, nevertheless for good working it's recommended do not change the default values.



Fig. 8 : Global screen

3.6.5 Stylus Calibration (available only on Joya+™)

You might need to recalibrate the touch screen (i.e. when you attempt to select one item with the stylus, another item is erroneously selected).

To recalibrate the touch screen, complete the following steps:

1. Select **Start > Settings > Control Panel > Stylus** to open the **Stylus Properties** dialog as shown in Figure 1.
2. Adjust **Double-Tap** sensitivity if needed or desired.
3. Select the **Calibration** tab to open the **Calibration** application.

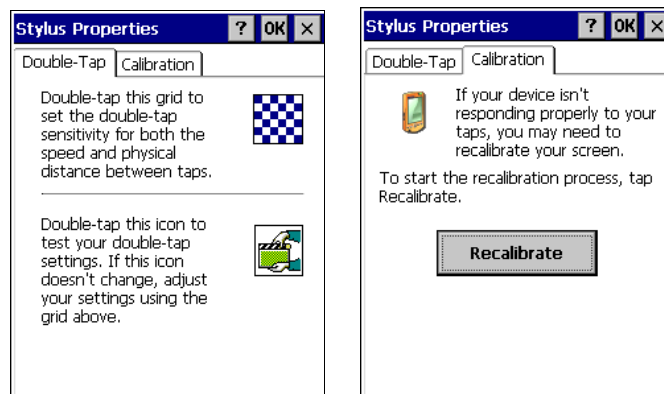


Figure 1

4. Tap **Recalibrate** to open the **Calibration** screen shown in Figure 2.
5. Carefully press and briefly hold stylus on the center of the target. Repeat as the target moves around the screen. Press the **<ESC>** key to cancel the stylus calibration.
6. Press the **<ENTER>** key or tap the screen to accept the new calibration settings. Press the **<ESC>** key to keep the old settings.
7. New calibration settings are persistently saved in registry.

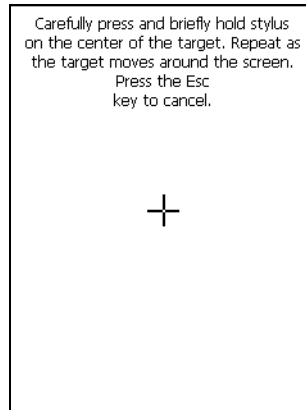


Figure 2

Startup stylus calibration

When starting the terminal, a stylus calibration screen comes up if valid calibration settings are not available. This happens in the following circumstances:

1. At the first startup of the terminal.
2. After restoring registry default settings using the applet **Registry Admin** and performing a warm boot.
3. After a **Clean Boot**.
4. After a **Firmware Update** (see par. 3.9).

3.7 WINDOWS CONNECTIONS

To connect the Datalogic Joya™ to another device (i.e. Host PC) from Windows, several programs are available.

3.7.1 Microsoft® ActiveSync®

Microsoft® ActiveSync® gives you the possibility to connect your desktop computer to your Datalogic Joya™ and synchronize the information on them. Synchronization compares the data on the Datalogic Joya™ with that on the desktop computer and updates both computers with the most recent information.

With ActiveSync®, it is possible to:

- Back up and restore Datalogic Joya™ data.
- Copy files between Datalogic Joya™ and desktop computer.
- Synchronize files by selecting a synchronization mode.

You can establish an ActiveSync® connection to your Datalogic Joya™ through the following electrical interfaces:

- **USB** directly
- **Bluetooth®** (see par. 3.7.2)

It is possible to constantly synchronize while connected to a desktop computer or, alternatively, synchronization can be performed only when the synchronize command is chosen. You can select which information types are synchronized and control how much data is synchronized.



NOTE

By default, ActiveSync® does not automatically synchronize all types of information. Use ActiveSync® options to turn synchronization on and off for specific information types.

For example:

Synchronize Microsoft Word and Microsoft Excel files between the Datalogic Joya™ and the desktop computer. The files will automatically be converted to the correct format.



NOTE

*Visit the following Microsoft Web site for the latest in updates and technical information:
<http://www.microsoft.com/windowsmobile/activesync/default.aspx>*

ActiveSync® Remote



NOTE

Microsoft® ActiveSync® Remote is no longer supported in Windows CE. For backward compatibility you can download it from the Internet. We suggest enabling the FTP Server and connecting to an FTP Client. See par. 3.7.3.

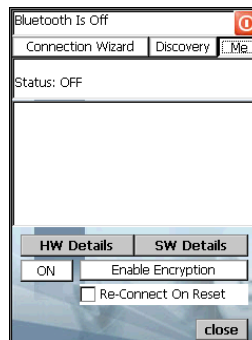
3.7.2 Bluetooth® Manager Device Setup

In order to enable a Bluetooth® device for communication with the Datalogic Joya™ you must perform the discovery procedure and enable the device as follows:

1. Place the Bluetooth® device within the range of the Datalogic Joya™ (10 meters).
2. From the "Control Panel" main window double tap on the "Bluetooth" applet to open the Bluetooth® Manager Device window:

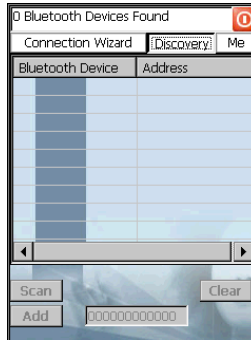


3. Tap on the "Me" button to enter the related window; then, tap on the "ON" button to activate the Bluetooth® module. The module activation may be also performed by using the WIRELESS COMMUNICATION applet as described in par. 3.6.3.



By tapping on the "HW Details" and "SW Details" buttons, information about the mobile computer Bluetooth® hardware and software will be displayed, while the "Enable Encryption" button starts encryption of the Bluetooth® communication data. If tapping on the "Close" button the Bluetooth® Manager Device window will be closed.

4. Tap on the “Discovery” button to enter the related window; then, tap on the “Scan” button to run the Discovery procedure:




Once the Discovery procedure has been completed, select the desired Bluetooth® device from the list. It is also possible to digit (12 hexadecimal digits) the Bluetooth® address of the desired device by tapping on the “Add” button. The “Clear” button deletes all discovered devices from the list.

5. Once the desired Bluetooth® device has been selected, tap on the “Connection Wizard” button to enter the related window where selecting the connection type to be used for communication with the Bluetooth® device:



The “Serial Port” button starts communication through the Bluetooth® serial port COM 5 (typically used for connection with GPS devices).
 The “Printer” button starts communication with a printer through the Bluetooth® serial port COM 5.
 The “Kbd Emulation” button allows connection with a barcode reader using the keyboard emulation.
 The “ActiveSync” button starts communication with a PC equipped with a Bluetooth® antenna and the related ActiveSync.

6. Hide the Bluetooth® Manager Device window by tapping on the  icon available on each window or close it through the “Close” button available in the “Me” window (see step 3 of this procedure).

3.7.3 FTP Server Setup

The Datalogic Joya™ Operating System includes a sample File Transfer Protocol (FTP) server. FTP is used for copying files to and from remote computer systems over a network using TCP/IP. You can establish a connection to your Datalogic Joya™ using its FTP Server through the following interfaces:

WLAN using the WiFi radio

Proceed as follows:

1. Create a registry file (extension .reg) to setup and enable FTP Server communication. A simple example file for anonymous logon is given below:

```
REGEDIT4

[HKEY_LOCAL_MACHINE\Comm\FTPD]
"DefaultDir"="\\"
"AllowAnonymousUpload"=dword:00000001
"UseAuthentication"=dword:00000000
"BaseDir"="\\"
"IsEnabled"=dword:00000001
"LogSize"=dword:00001000
"DebugOutputMask"=dword:00000017
"DebugOutputChannels"=dword:00000002
"IdleTimeout"=dword:0000012c
"AllowAnonymous"=dword:00000001
"AllowAnonymousVroots"=dword:00000001
```

2. Copy this file to the Datalogic Joya™ using ActiveSync®.
3. Launch the .reg file from the Datalogic Joya™.
4. Perform a warm boot on the Datalogic Joya™.
5. From the PC > Explorer address bar (or running an FTP Client from the PC), enter the Datalogic Joya™ IP address.



NOTE

For more information on FTP Client/Server connections refer to the following web page:

<http://msdn2.microsoft.com/en-us/library/aa922316.aspx>.

3.8 BACKUP DIRECTORY FILE MANAGEMENT

All of the Windows CE 5.0 system files reside in RAM (volatile memory) except for the Backup directory, which resides in FLASH (non-volatile memory). Therefore the contents of the Backup directory are persistent even if the mobile computer is re-booted or the battery pack is changed.

You can save your more important files that you don't want to lose due to mobile computer re-boot, in the Backup directory or create a sub-directory within Backup.

Even though the Windows Directory resides in RAM, it often contains files or sub-directories created by the user or by installation programs that you don't want to lose at re-boot. To keep these files persistent it is necessary to copy them to the directory \Backup\Windows. This directory doesn't exist originally (only Backup exists), and therefore it must be created. At the next cold boot, before activating the shell, Windows CE 5.0 will copy the contents including all sub-directories of \Backup\Windows to \Windows.

Likewise, to maintain files that must be run at Windows CE 5.0 startup, (i.e. .exe, .lnk, .vb, .htm, etc.), it is necessary to copy them to the directory \Backup\Startup. This directory does not exist originally (only Backup exists), and therefore it must be created. The application programs will be run after any type of re-boot (both software and cold boot).

As an alternative to the Safe Setup function, it is possible to copy the .cab files to the directory \Backup\Cabfiles (the Cabfiles sub-directory doesn't exist originally and must therefore be created) and perform a mobile computer cold boot to have the application installed. Once these files are copied to the directory \Backup\Cabfiles, the application will be run after each re-boot.

From the second cold boot on, a message may be displayed such as "<application name> is already installed. Re-install?". This message blocks the boot process. Press the [Enter] key to continue the system initialization.

3.9 FIRMWARE UPDATE

The Datalogic Joya™ is equipped with a tool that implements a firmware update service.

This tool, called **Datalogic Updater (DLUpdater)**, is compatible with all hardware versions of the following WindowsCE 5.0 models:

Datalogic Skorpio™;
Datalogic Jet™;
Datalogic Kyman™;
Datalogic Joya™
Datalogic Memor™.

The DLUpdater, that is automatically invoked at startup, searching for a potential update file (**DLUpdate.bin**). If it finds it, it proceeds to update only the components that are damaged or not updated. An update can be explicitly invoked by running the application **DLUpdater.exe**, provided together with the update file. The update must be contained in folder "BACKUP".



CAUTION

It is advisable, even if not binding, to connect the terminal to an external power source before starting the update process. This prevents the terminal from turning off while running and avoids a corruption of flash content.



CAUTION

After the update process, all the data stored in the backup folder could be irreparably lost, as well as the device configuration (even that one stored in persistent memory). Therefore, before starting a firmware update it is advisable to run a backup copy of the data you want to preserve on PC (e.g. using ActiveSync).

Retrieving a Firmware Image Update

The following instructions use Internet Explorer to retrieve the most current firmware image.

1. Launch Internet Explorer on your PC and navigate to **www.mobile.datalogic.com**.
2. Navigate the **Downloads** section of the web site.
3. Select the product, desired language, and software updates. Click **Go!**
4. Select the file you want to download, then click **Save** and navigate to the location where you want to save the firmware files.
5. Click **Save** again to begin copying the files to your local machine (or local network location).

Firmware Update Procedure

- Download the update from the web site (see previous par.). It is a zip file containing the files:
 - DLUpdater.exe** – that starts the update;
 - DLUpdate.bin** – binary file containing the updated firmware;
- Copy the files **DLUpdater.exe** (optional) and **DLUpdate.bin** in folder “\BACKUP”.
- Open the folder “\BACKUP” on the terminal and run DLUpdater.exe (double tap the icon).
- The message shown in figure 1 will come up on the screen. It informs that DLUpdater found a firmware update in “\BACKUP\DLUpdate.bin”. It also warns the user that by proceeding with the terminal firmware upgrade all data and configurations (registry) may be lost. Select <YES> to continue, <NO> to cancel operations.
- DLUpdater detects whether an external power source is present. If not, a warning will come up on the screen asking for a confirmation before carrying on (see figure 2).



Figure 1

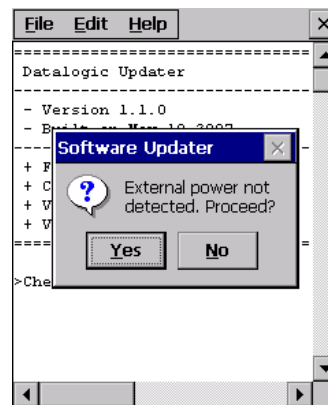


Figure 2

- DLUpdater performs all the necessary operations of check, update and verify and, if no errors occur during the update, terminates the running invoking a cold boot of the terminal, so that the update process could be completed.
- Following the operating system upgrade, the message shown in figure 3 may come up at the terminal startup. It informs the user that a flash disk formatting (folder **\backup**) would be required for a clean update and asks whether to proceed with this operation. Select <YES> to format the flash disk. Select <NO> to preserve the current data stored in the backup folder. Sometimes the update process may force a flash format. In these cases

the data stored in the backup folder will be irreparably lost. It is therefore recommended to run a backup of the data you want to preserve before starting a firmware update.



Figure 3

4 MAINTENANCE



NOTE

Battery packs are not initially charged. Therefore the initial operation to perform is to charge them. See below.



CAUTION

By default, the battery pack is disconnected at the factory to avoid damage due to excessive draining. Annual replacement of rechargeable battery pack avoids possible risks or abnormalities and ensures maximum performance.

4.1 CHARGING THE BATTERY PACK

The battery pack autonomy varies according to factors, such as the frequency of barcode scanning, RF usage, etc.

The battery icon on the Taskbar indicates when the battery pack is low.

It is also possible to recharge the battery pack by using a Joya Cradle.

Moreover recharging is possible by USB Direct connection with the host computer, but with longer charging times and in this case it is advised to keep the mobile computer off.



NOTE

The battery pack autonomy varies according to many factors, such as the frequency of barcode scanning, RF usage, battery life, storage, environmental conditions, etc.



CAUTION

*If the battery pack is new or has not been recharged for a long time, it is necessary to perform two or three charging and discharging cycles (complete use) before it can reach its maximum charge capability.
The maximum time required to recharge a completely run-down standard battery pack is about 3 hours.*



NOTE

*Even if the storage temperature range is wider, In order to achieve the longest battery life, store the terminal and the spare batteries between 20 to 30 °C (68 to 86 °F).
The Batteries must be charged at a temperature ranging from 0° to +45 °C (+32° to +113 °F).*

4.2 REPLACING THE BATTERY PACK

To correctly replace the battery pack, proceed as follows.

1. Unscrew the two screws placed on the back bottom. The battery pack cover is now released.



2. Remove the cover and then the battery pack, using the proper plastic strip. Pay attention when disconnecting the connector.



3. Install the new battery pack, first insert the connector respecting the right way, then the upper side, finally the bottom side, leaving the plastic strip available for future replace.
4. For correct locking, first insert the upper part of the battery cover, then the lower and rotate the screws to the horizontal position.



To install, charge and/or do any other action on the battery, follow this manual.

WARNING The battery pack may get hot, explode, ignite, and/or cause serious injury if exposed to abusive conditions.

If the battery pack is replaced with an improper type, there is risk of explosion.

Do not place the battery pack in or near a fire or heat; do not place the battery pack in direct sunlight, or use or store the battery pack inside unventilated areas in hot weather; do not place the battery pack in microwave ovens, dryer, high pressure containers, on induction cookware or similar device. Doing so may cause the battery pack to generate heat, explode or ignite. Using the battery pack in this manner may also result in a loss of performance and a shortened life expectancy.

Use only a Datalogic Mobile approved power supply. The use of an alternative power supply will void the product warranty, may cause product damage and may cause heat, explode or ignite.

The area in which the units are charged should be clear of debris and combustible materials or chemicals.

Do not use the battery pack of this terminal for power devices different from this mobile computer.

Immediately discontinue use of the battery pack if, while using, charging or storing the battery pack, the battery pack emits an unusual smell, feels hot, changes colour or shape, or appears abnormal in any other way.

Do not short-circuit the battery pack contacts connecting the positive terminal and negative terminal. This might happen, for example, when you carry a spare battery pack in your pocket or purse; accidental short-circuiting can occur when a metallic object such as a coin, clip, or pen causes direct connection of the contacts of the battery pack (these look like metal strips on the battery pack). Short-circuiting the terminals may damage the battery pack or the connecting object.

Do not apply voltages to the battery pack contacts.

Do not pierce the battery pack with nails, strike it with a hammer, step on it or otherwise subject it to strong impacts or shocks.

Do not disassemble or modify (i.e. bend, crush or deform) the battery pack. The battery pack contains safety and protection devices, which, if damaged, may cause the battery pack to generate heat, explode or ignite.

**WARNING**

In case of leakage of liquid from the battery, avoid contact with liquid the skin or eyes. If the contact occurs, immediately wash the affected area with water and consult a doctor.

Do not solder directly onto the battery pack.

Do not expose the battery pack to liquids.

Avoid any knocks or excessive vibrations. If the device or the battery is dropped, especially on a hard surface, you should take it to the nearest Authorised Repair Centre for inspection before continuing to use it.

Do not replace the battery pack when the device is turned on.

Do not remove or damage the battery pack's label.

Do not use the battery pack if it is damaged in any part.

Battery pack usage by children should be supervised.

Collect and recycle waste batteries separately from the device in comply with European Directive 2006/66/EC, 2002/95/EC, 2002/96/EC and subsequent modifications, US and China regulatory and others laws and regulations about environment.

**NOTE**

In order to guarantee an adequate operating autonomy, when replacing the battery pack the mobile computer checks the battery energy level. If the battery is not sufficiently charged, Datalogic Joya™ does not turn on.

In this case, either substitute the battery pack with a charged one (sufficiently charged) or insert Datalogic Joya™ into a powered cradle or plug it into the direct power supply.

**NOTE**

To achieve the best battery life, turn off the radios not in use.

4.3 CLEANING THE MOBILE COMPUTER

Periodically clean the Datalogic Joya™ with a slightly dampened cloth.

5 JOYA™ CRADLE DISPENSER

5.1 INTRODUCTION

Joya™ Cradle Dispenser has the following responsibilities:

- to recognize the insertion and extraction of the Joya
- to control the blocking device
- to signal status using the LEDs
- to supply power to the Joya for battery recharging



Joya Cradle Dispenser has three Joya slots, each equipped with its own control unit, an electromechanical system for blocking/releasing the terminal, notification light, battery power and recharging circuits. Its special structure makes it possible to design any type of dispenser (wall-mounted or island) easily, allowing twice the number of terminals to be installed per vertical square meter with respect to the competing systems.

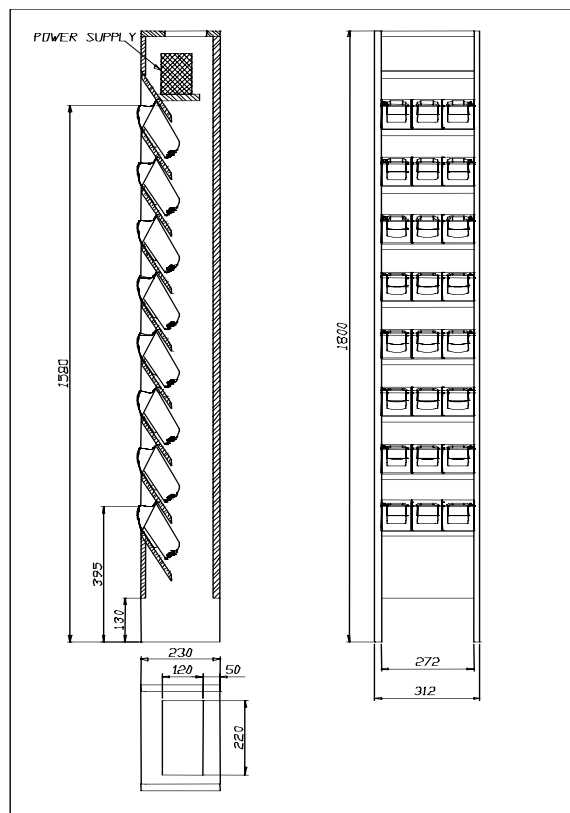
5.2 ACCESSORIES

- 91ACC1000 Power Supply 12V 300W
- 91ACC0730 Power Junction Cable I90x/3 Cradle (8 pcs.)
- 91ACC0650 Term. Unlock Magnets (5 pcs.)

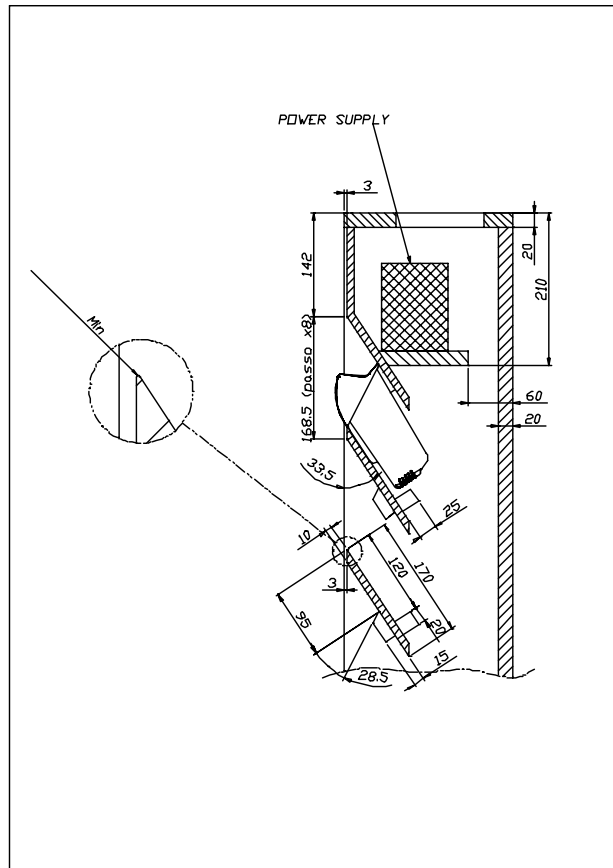
5.3 INSTALLATION REQUIREMENTS

The figure below represents an 8 Joya Cradle Dispenser Base Unit organized in a single column.

Joya will be inserted into the Cradle Dispensers are at a minimum height of approximately 40 cm. from the floor and a maximum height of about 160 cm. from the floor.



5.3.1 Base Unit Construction Details



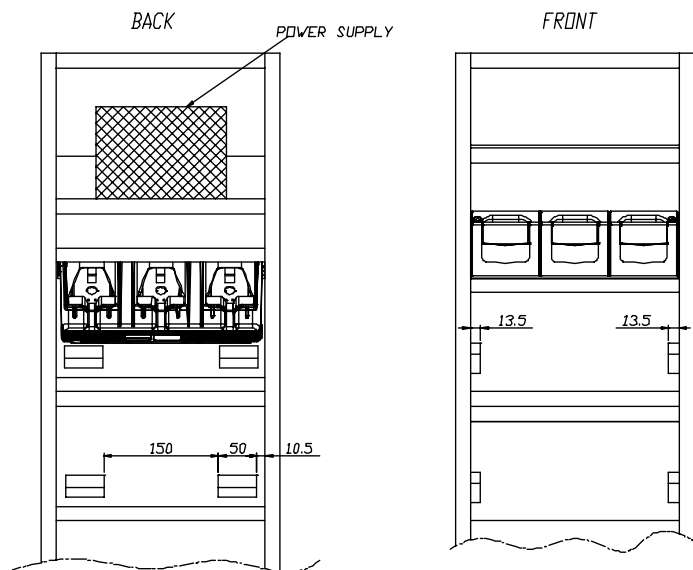
All of the dimensional quotes necessary for building and correctly mounting the supporting crosspieces and fixing blocks for the Joya Cradle Dispensers are indicated.

The zoom of the upper edge of the supporting crosspiece indicates the necessity of reducing the radius of this edge as much as possible in order to provide a stable contact surface for the upper cover of the Joya Cradle Dispenser.

The power supply shelf is positioned so that it guarantees a sufficient volume of air flow for the cooling of the power supplies.

Suggestion:

The cradle fixing blocks shown in the figures are mounted to the supporting crosspieces under the Joya Cradle Dispensers. Their purpose is to prevent the Joya Cradle Dispensers from falling inside the cabinet during the mounting phase in which the Joya Cradle Dispensers may not be correctly positioned before fixing them.



5.3.2 Joya™ Cradle Dispenser Supports

Joya Cradle Dispensers are supported inside the Base Unit from crosspieces fixed to the side panels of the cabinet. The front part of each Joya Cradle Dispenser cover rests on the upper edge of its supporting crosspiece, while the back part rests on two fixing blocks attached to the crosspiece above it.

Joya Cradle Dispenser is mounted to the cabinet using two screws that are inserted into the holes provided towards the back of its cover and screwed into the corresponding holes in the fixing blocks..

To correctly position Joya Cradle Dispensers, the supporting crosspieces and the fixing blocks must be mounted according to the dimensional quotes and the angles.

5.3.3 Internal Cabinet Space and Openings

The space between the rear of the Joya Cradle Dispensers and the back part of the cabinet must be left for two reasons:

- it must be possible to retrieve objects that accidentally fall through the cradles from the floor behind the cabinet.
- there must be a zone for air to freely circulate behind the Joya Cradle Dispensers to aid their cooling during operation.

For these reasons the cabinet must not be closed at the bottom and must have an opening at the top. To allow retrieval of objects that could accidentally fall into the cabinet, it is necessary to leave space between the lower edge of the lowest crosspiece and the floor. This space must be a compromise between the necessity of allowing object retrieval and the necessity of prohibiting access behind the cabinet.

5.3.4 Anchoring and Maintenance Issues

The cabinet must be anchored to the wall in at least two points, since the contact surface area on the floor is small and therefore not sufficient to guarantee full stability.

Suggestion:

It is preferable for the cabinet to have a removable back panel for easy access inside when performing cabling.

The top of the cabinet should also be removable for access to the power supplies during maintenance without the necessity of removing the cabinet from the anchoring points to the wall. For this reason the power supplies should also be able to be mounted and removed from the top of the cabinet.

5.3.5 Power Supply Positioning and Cooling

At the top of the cabinet there must be an opening not small. This opening generates a natural convection effect allowing the flow of air to remove heat generated by the Joya Cradle Dispensers during their operation.

The power supplies, or single power supply must be mounted on their shelf in the upper part of the cabinet.

This position for the power supplies has been chosen to aid the flow of air inside the cabinet taking advantage of natural convection. The hot air generated by the power supplies, in fact, leaves through the opening at the top and takes in cooler air from the lower part of the cabinet.

The power supplies therefore must be placed on the shelf in such a way as not to block the flow of air coming up from the lower part of the cabinet.

The opening at the top of the cabinet must be covered with a grill or mesh, which allows air to flow freely but protects against access to the inside of the cabinet. In this way the power supplies can not be reached externally.

Power Supplies

- a single 300 W power supply capable of supplying all 8 Cradle Dispensers (91ACC1000 Power Supply 12V 300W).

The power supplies must be mounted inside the cabinet onto their shelves so that the necessary air flow for cooling the Joya Cradle Dispensers below is not limited. In addition, the openings on the power supplies must not be obstructed at any time, which could impede correct cooling.

If the power supplies are mounted using angular brackets, use the threaded holes provided on the power supply case. Make sure that the mounting screws are size M4 and do not penetrate the power supply case by more than 5.5 mm.



5.3.6 AC Power Cabling

Connection of the Power Supply to the AC line must be made using a cable having characteristics that meet the Safety Normatives currently in force.

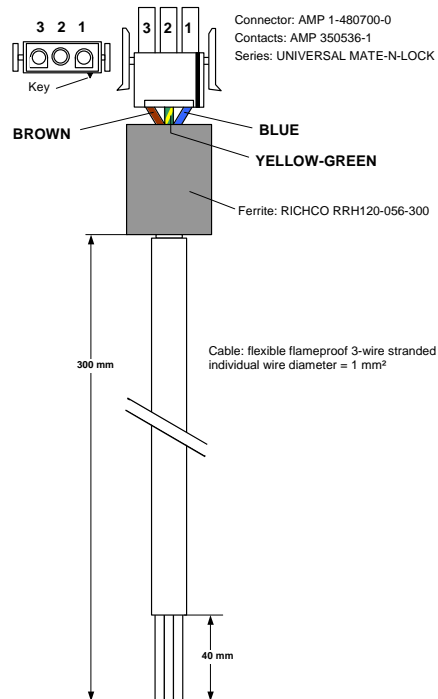
The cable must have an earth ground wire that is connected to the earth ground terminal of the power supply.

The cable must have wire dimensions that meet or exceed the nominal current and power specifications of the power supply to which it is connected.

There must be a cable clamp applied to the power cable where it enters the cabinet, which meets the Safety Normatives currently in force.

5.3.7 Wiring

To wire the Joya Cradle Dispensers, pre-wired power junction cables are provided as accessories (91ACC0730 Power Junction Cable I90x/3 Cradle -8 pcs.), which are ready to be connected to the power connector at the bottom of the Joya Cradle Dispenser.



To connect the Joya Cradle Dispensers to the power supplies, the pre-wired junction cables must be connected to three multi-strand copper wires (singly or incorporated in a cable) and these must be connected to the power supply terminals.



These wiring connections must be made with particular care and meet or exceed the nominal current and power specifications; the current flowing through them is 2.5 A per Joya Cradle Dispenser. The wires must meet the Safety Normatives currently in force.

The following table indicates the maximum current specifications for some wire conductor sections according to the EN 60950 Electrical Safety Normative.

Maximum Current	Wire Section
10 A	1 mm ²
16 A	1.5 mm ²
25 A	2.5 mm ²

Suggestion:

It is advised to use a cable made up of two groups of three-conductor multi-stranded wire with flame retardant insulation (single or together in a cable with flame retardant insulation) having a copper wire section equal to 1.5 mm².


The two groups of three conductors are connected to the output terminals of the power supplies: in the case of two power supplies, one group of wires is connected to one power supply and the other group is connected to the other power supply; in the case of a single power supply, both groups of wires are connected to the same power supply.

Each three conductor cable group must be used to connect four of the Joya Cradle Dispensers mounted in the Base Unit via their junction cables.

Joya Cradle Dispenser junction cables can be connected to the three-conductor cable groups using IDC connectors having a maximum current capability not less than 3 A.

5.3.8 Cable to Power Supply Connection

All 12 Vdc power supply connections, both the main power cable and the power junction cables must be made according to the following requirements:

Power Junction Cable Wires	Connection	Designation
Brown	+12V	+V
Blue	ground	-V
Yellow-Green	earth ground	FG or 

5.3.9 Affixing Cables to Cabinet

The ends of the junction cables that are connected to the main cable groups must be affixed to the cabinet sides so as to guarantee the following conditions:

- it must be possible to extract the Joya Cradle Dispenser from the front of the cabinet while the cable is connected so that the connector can be plugged in or out of the Cradle Dispenser from outside the cabinet.
- when the Joya Cradle Dispenser is mounted in the cabinet, its cable must be laid against the supporting crosspiece so that it does not block objects which may accidentally fall through the Cradle Dispenser into the inside of the cabinet.

Next image shows an example of affixing the Cradle Dispenser cables to the cabinet. The Cradle Dispenser cables are connected to the main power cables through IDC connectors.



5.3.10 Safety Precautions

Joya Cradle Dispenser Cabinet, the relative electrical wiring and connection to the AC power line must be made according to the Safety Normatives currently in force.

The following paragraphs contain some particularly important considerations to keep in mind.

- Cradle Dispenser Operating Temperature

Joya Cradle Dispensers are designed and built to operate within the following environmental conditions:

Operating Temperature Range: 10 to 30 °C

Storage Temperature Range: -20 to 60 °C

Humidity: 90% non condensing

- Cabinet

The cabinet must not have any exposed sharp edges, which could represent a danger to customers.

The requirements for air passages to cool both the JoyaCradle Dispensers and the power supplies must be adhered to in order to avoid overheating problems for the components inside the cabinet.

All components having dangerous voltage levels must be protected from unauthorized access. Only qualified personnel should be authorized access for maintenance purposes.

In particular, the opening at the top of the cabinet must be closed with a grill or mesh that prevents access from the outside to the power supplies below. In addition, the plastic protection covers must be mounted over the power supply terminals to avoid accidental contact by maintenance personnel when the cabinet is open.

- Wiring

The wires used for cabling must have flame retardant insulation.

The cables must be affixed to the cabinet avoiding types of cable clamps that use screws or have moving parts that press directly upon the cable itself. Cable clamps must also be applied close to the wires coming from the power supplies so that they won't be accidentally pulled out of the power supply terminals to which they are connected.

Avoid running cables with sharp bends or that rest on sharp edges which can damage them over time and in the long run pose a danger inside the cabinet.

After making all the wiring connections, if some connections have wire exposed without insulation, they must be insulated.

5.3.11 Connection to AC Line Voltage

If connection to the AC power line is made with a plug at the end of the cable, The outlet to which it is inserted must be close by and easily accessible. The outlet must also be rated for the maximum power consumption, which can be considered equal to the nominal power of the connected power supplies.

If the Terminal Distributor is connected in a fixed electrical plant, a circuit breaker must be provided in order to completely disconnect the AC line voltage from the Cradle Dispenser cabinet. This circuit breaker must be positioned close to the cabinet and be easily accessible. It must also be rated for the maximum power consumption and must meet the Safety Normatives currently in force.

5.4 JOYA™ CRADLE DISPENSER FIRMWARE

Joya Cradle Dispenser is provided with a full operational Firmware, therefore it doesn't require any kind of software developing activity. Instead, the behaviour of the Joya Cradle Dispenser could be controlled at high level using the Joya. In SDK Tools is furnished APC.exe program, to upgrade Joya Cradle Dispenser firmware release.

5.4.1 APC installation

By using *ActiveSync* copy in the *\BACKUP* folder the following files:

- APC.EXE (executable)
- APC_EN.xml (english language help)
- CpodC2.HEX (cradle's latest firmware provided by Datalogic Mobile s.r.l.)

5.4.2 Starting program

Run APC.exe application:

```
JOYA APC ver 1.00.01
UpLeft  quit
UpRight read version
+       loader already active
ANYKEY  update
```

The screen displays the APC version and the mode to interact with the cradle (read or write).

- The upper left key close the application and come back to Windows CE
- The plus key (upper centre key) is reserved.
- The upper right key read the current version of firmware
- Any other keys put APC to the writing mode.

When application runs USB cable can be disconnected.

5.4.3 Reading firmware version

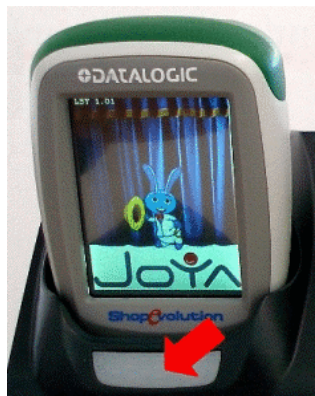
Select the “Read version” by pressing the upper-right key. APC will display the message on the left. Insert in any cradle’s slot and the result will look as the right picture.

```
Insert
the scanner
into the rightmost slot
```

```
Version:
JOYACRAD rel 2.03.2
Cradle compatible

UpLeft  quit
UpRight read version
+       loader already active
ANYKEY  update
```

Cradle locks terminal in the slot, the terminal top flashes three times. At the end approach a magnet to the sensitive area to unlock and extract the terminal.



If user does not insert Joya into a slot, a timeout message is displayed asking to remake the operation.

In case of errors a suitable message is displayed.

5.4.4 Firmware update procedure

Select "Update" from main menu and insert the terminal into the rightmost slot of the cradle.

```
Insert
the scanner
into the rightmost slot
```

```
Cradle update
Success

UpLeft  quit
UpRight read version
+       loader already active
ANYKEY  update
```

The cradle locks the terminal and APC transfers firmware, during this period slot leds flashes. At the end the terminal top flashes three times, approach a magnet to the sensitive area to unlock and extract the terminal.

APC shows a suitable message to inform user if update is correctly completed or an error has been occurred.

5.5 JOYA™ – JOYA™ CRADLE DISPENSER CONNECTION

Joya Cradle Dispenser is equipped with an electrical-serial connection, used to exchange command and response with Joya. The communications between the terminal inserted into the slot and the slot itself, are performed by means of a special "RPC like commad-response" protocol.



5.6 CONFIGURATION

Joya Cradle Dispenser should be previously configured using an apposite program: ABC.exe (see SDK Help for more information).

In a typical application there is the need to identify in a unique way each cradle slot, in order to be able to perform selective operations. This requirement is satisfied by each Joya Cradle Dispenser slot, by means of a set of four parameters, called Config Parameters:

Slot ID: is a string of 2 bytes
Dispenser ID: is string of 1 byte
IP address: is a string of ...bytes
Port ID: is a string of 2 bytes

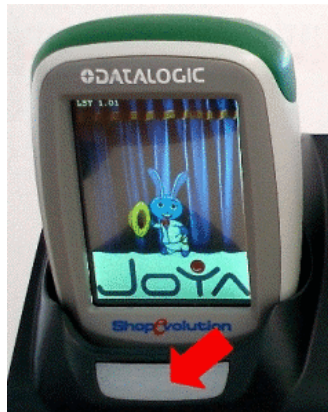
Using this four byte strings it is possible to setup and identify each slot in a unique way.

This Config Parateters are stored in the permanent memory location dedicated of each slot. They can be configured making use of the ABC companion tool and they can be read by a well inserted Joya.

5.7 USE AND FUNCTIONING

Insert a Joya inside a slot, Joya Cradle Dispenser will lock the Joya, when electrical connectors are contacted.

To unlock Joya, approach a magnet to the sensitive area and extract the Joya.



All other commands could be developed by developers using Joya SDK.

6 JOYA™/JOYA+™ TECHNICAL FEATURES

6.1 TECHNICAL DATA

Datalogic Joya™/Joya+ Common Features

Electrical Features	
Power	
Battery Pack	2 cell Li-Pol 2200 mAh@3.7 V (nominal)
Communication Features	
Bluetooth® Interface****	COM5
Serial Interface	USB 1.1
	COM6
Wireless Features	
WLAN	IEEE 802.11b/g WiFi
WPAN	Bluetooth® IEEE 802.15, Class 2, Version 1.2
Environmental Features	
Working Temperature*	0° to +50 °C / 32 °F to +122 °F
Storage Temperature	-20° to +70 °C / -4° to +158 °F
Humidity**	10 to 80% non condensing for temperatures < 38 °C
Drop Resistance***	1.2 m / 3,9 ft
Hardware Features	
FLASH	128 MB
RAM	128 MB
Microprocessor****	Intel PXA 270 312/520 MHz
Audio****	Beeper / Polyphonic audio
LEDs****	Datalogic Green Spot Top & bottom Lighting Bumper
Display****	TFT LCD 65K Color, 2.8", with 320 x 240 pixel resolution (QVGA), with LED backlight and touch screen
Keyboard****	6 fully programmable keys; backlight feature

* Battery must be charged at a temperature ranging from 0° to +45 °C.
Close to the limits of the working temperature, some display and/or battery performance degradation may occur.

** Multiple rapid humidity and/or temperature variations may cause condensing.

*** Multiple drops can permanently damage the device.

**** PXA 270 520 Mhz, polyphonic audio, bottom lighting bumper, touch screen, keyboard backlight and Bluetooth® Interface only on JOYA+ model

Mechanical Features	
Dimensions (LxWxH)	149 x 73 x 44 mm
Weight	255 g (incl. battery)
Programming Features	
Operating system	Windows CE 5.0
Laser Optical Features	
Light source laser scanner	Visible laser diode - laser class 2
Scan rate	100 scans/sec
Safety class	Class II EN 60825-1
Decoding features	
Decoded barcodes 1D	GS1 Databar, UPC-EAN, Code 39, Two-of-five, Plessey, Codabar, Code 128, Code 11, Code 93, MSI

7 TEST CODES

High Density Codes

0.25 mm (10 mils)

Code 39



17162

2/5 Interleaved



0123456784

Code 128



test

EAN 13



EAN 8



Medium Density Codes0.38 mm (15 mils)

Code 39



17162

Interleaved 2/5



0123456784

Code 128

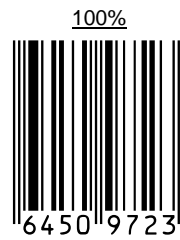


test

EAN 13



EAN 8



Low Density Codes

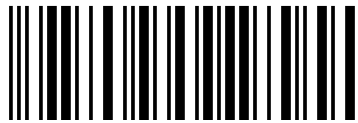
0.50 mm (20 mils)

Code 39



17162

Interleaved 2/5



0123456784

Code 128



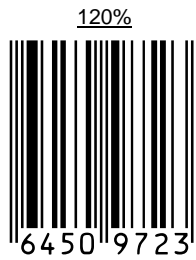
test

EAN 13



8 012345 000012

EAN 8



6450 9723

GLOSSARY

Access Point

A device that provides transparent access between Ethernet wired networks and IEEE 802.11 interoperable radio-equipped mobile units. Hand-held mobile computers, PDAs or other devices equipped with radio cards, communicate with wired networks using Access Points (AP). The mobile unit (mobile computer) may roam among the APs in the same subnet while maintaining a continuous, seamless connection to the wired network.

Barcode

A pattern of variable-width bars and spaces which represents numeric or alphanumeric data in binary form. The general format of a barcode symbol consists of a leading margin, start character, data or message character, check character (if any), stop character, and trailing margin. Within this framework, each recognizable symbology uses its own unique format.

Baud Rate

A measure for data transmission speed.

Bit

Binary digit. One bit is the basic unit of binary information. Generally, eight consecutive bits compose one byte of data. The pattern of 0 and 1 values within the byte determines its meaning.

Bluetooth®

A standard radio technology using a proprietary protocol. The onboard Bluetooth® module in the mobile computer is compatible with the 1.1 protocol.

Byte

On an addressable boundary, eight adjacent binary digits (0 and 1) combined in a pattern to represent a specific character or numeric value. Bits are numbered from the right, 0 through 7, with bit 0 the low-order bit. One byte in memory can be used to store one ASCII character.

Decode

To recognize a bar code symbology (e.g., Codabar, Code 128, Code 3 of 9, UPC/EAN, etc.) and analyze the content of the bar code scanned.

EEPROM

Electrically Erasable Programmable Read-Only Memory. An on-board non-volatile memory chip.

Flash Disk

Non-volatile memory for storing application and configuration files.

Host

A computer that serves other mobile computers in a network, providing services such as network control, database access, special programs, supervisory programs, or programming languages.

Liquid Crystal Display (LCD)

A display that uses liquid crystal sealed between two glass plates. The crystals are excited by precise electrical charges, causing them to reflect light outside according to their bias. They use little electricity and react relatively quickly. They require external light to reflect their information to the user.

Light Emitting Diode (LED)

A low power electronic light source commonly used as an indicator light. It uses less power than an incandescent light bulb but more than a Liquid Crystal Display (LCD).

RAM

Random Access Memory. Data in RAM can be accessed in random order, and quickly written and read.

RF

Radio Frequency.

RTC

Real Time Clock.

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Bologna - Italy



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JOYA

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and all its models
et tous ses modèles
und seine Modelle
y todos sus modelos

sono conformi alle Direttive del Consiglio Europeo sottoelencate:
are in conformity with the requirements of the European Council Directives listed below
sont conformes aux spécifications des Directives de l'Union Européenne ci-dessous:
der nachstehend angeführten Direktiven des Europäischen Rats:
cumple con los requisitos de las Directivas del Consejo Europeo, según la lista siguiente:

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Questa dichiarazione è basata sulla conformità dei prodotti alle norme seguenti:
This declaration is based upon compliance of the products to the following standards:
Cette déclaration repose sur la conformité des produits aux normes suivantes:
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Esta declaración se basa en el cumplimiento de los productos con la siguientes normas:

ETSI EN 301 489-17 v1.2.1, August 2002:	ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM); ELECTROMAGNETIC COMPATIBILITY (EMC) STANDARD FOR RADIO EQUIPMENT AND SERVICES; PART 17: SPECIFIC CONDITIONS FOR 2,4GHZ WIDEBAND TRANSMISSION SYSTEMS AND 5GHZ HIGH PERFORMANCE RLAN EQUIPMENT
ETSI EN 300 328 v1.7.1, October 2006:	ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM); WIDEBAND TRANSMISSION SYSTEMS; DATA TRANSMISSION EQUIPMENT OPERATING IN THE 2,4GHZ ISM BAND AND USING WIDE BAND MODULATION TECHNIQUES; HARMONIZED EN COVERING ESSENTIAL REQUIREMENTS UNDER ARTICLE 3.2 OF THE R&TTE DIRECTIVE
EN 60950-1, December 2001:	INFORMATION TECHNOLOGY EQUIPMENT – SAFETY – PART 1: GENERAL REQUIREMENTS
EN 50392:2004	GENERIC STANDARD TO DEMONSTRATE THE COMPLIANCE OF ELECTRONIC AND ELECTRICAL APPARATUS WITH THE BASIC RESTRICTIONS RELATED TO HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS (0 HZ – 300 GHZ)

Lippo di Calderara, December 12th, 2008

Paola Chientaroli
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Joya Cradle Dispenser

e tutti i suoi modelli
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cumple con los requisitos de las Directivas del Consejo Europeo, según la lista siguiente:

89/336/EEC EMC Directive	e	92/31/EEC, 93/68 /EEC	emendamenti successivi
	and		further amendments
	et		ses successifs amendements
	und		späteren Abänderungen
	y		successivas enmiendas

Basate sulle legislazioni degli Stati membri in relazione alla compatibilità elettromagnetica ed alla sicurezza dei prodotti.

On the approximation of the laws of Member States relating to electromagnetic compatibility and product safety.

Basée sur la législation des Etats membres relative à la compatibilité électromagnétique et à la sécurité des produits.

Über die Annäherung der Gesetze der Mitgliedsstaaten in bezug auf elektromagnetische Verträglichkeit und Produktsicherheit entsprechen.

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EN 55022 (CLASS B ITE), SEPTEMBER 1998:

*INFORMATION TECHNOLOGY EQUIPMENT
RADIO DISTURBANCE CHARACTERISTICS
LIMITS AND METHODS OF MEASUREMENTS*

**EN 55024, SEPTEMBER 1998:
AMENDMENT A1, OCTOBER 2001
AMENDMENT A2, JANUARY 2003**

*INFORMATION TECHNOLOGY EQUIPMENT
IMMUNITY CHARACTERISTICS
LIMITS AND METHODS OF MEASUREMENT*

Lippo di Calderara, December 12th, 2008

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