

**WINCOR**  
**NIXDORF**

# BEETLE /iCHECK-G

Price Verifier

Operating Manual



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# **BEETLE /iCHECK-G**

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**Operating Manual**

Edition May 2009

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## Manufacturer's Declaration



This device fulfils the requirements of the EEC directives 2004/108/EC "Electromagnetic Compatibility".

Therefore, you will find the CE mark on the rear side of the device or packaging.

## Tested Safety



The BEETLE /iCHECK-G has been provided with the symbol for "Tested Safety".



In addition, the device has received the UL symbol and cUL symbol.

## FCC Class A Declaration

This equipment has been tested and found to comply with the limits for a

Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his expense. Modifications not authorized by the manufacturer may void user authority to operate this device. This class A digital apparatus complies with Canadian ICES-003.

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



Device repairs must be carried out by authorized personnel. All guarantee and liability claims are automatically excluded if repairs have been carried out by unauthorized personnel.

## Note on the Laser



## Unpacking and checking the packing list

Unpack the parts and check to be sure that the packing list agrees with the specifications on the bill of delivery.

In the packaging you will find the device and a power supply unit.

If you determine that there is shipping damage or discrepancies between the packing list and the bill of delivery, please see in the form your contract affiliate or the sales office of Wincor Nixdorf immediately. Please indicate the number of your delivery ticket and delivery ticket position and serial number of the respective device. The serial number can be found on the label illustrated below (example) which is located at the rear side of the device



The serial number is located on the label below the bar code.

## Care

Wipe the BEETLE /iCHECK-G with a damp cloth as required. Solvents must not be used under any circumstances as they may damage the plastic.

## Warranty

Wincor Nixdorf generally guarantees a limited warranty engagement for 12 months beginning with the date of delivery. This warranty engagement covers all those damages which occur despite a normal use of the product.

Damages because of

- improper or insufficient maintenance,
- improper use of the product or unauthorized modifications of the product,
- inadequate location or surroundings

they will not be covered by the warranty.

For details please consult your contract documents.

## Recycling



Environmental protection does not begin when it is time to dispose of the BEETLE /iCHECK-G; it begins with the manufacturer. This product was designed according to our internal norm "Environmental conscious product design and development".

The BEETLE /iCHECK-G is manufactured without the use of CFCs und CCHS and is produced mainly from reusable components and materials.

The processed plastics can, for the most part, be recycled. Even the precious metals can be recovered, thus saving energy and costly raw materials.

Please do not stick labels onto plastic case parts. This would help us to re-use components and material.

At this time, there are still some parts that are not reusable. Wincor Nixdorf guarantees the environmentally safe disposal of these parts in a Recycling Center, which is certified pursuant to ISO 9001.

So don't simply throw your BEETLE /iCHECK-G on the scrap heap when it has served its time, but take advantage of the environmentally smart, up-to-date recycling methods!

Please contact your competent branch office for information on how to return and re-use devices and disposable materials.

## Overview

The display is a graphical vacuum florescent display (VFD). It supports graphical display such as logo, and free programming.

The display is a vacuum florescent display (VFD) capable of displaying two or four lines of up to 32 alphanumeric or 16 double-byte characters per line. In addition it supports display of logo and user-defined graphical image. The character size (H x W) is 6.6 x 3.85mm for alphanumeric characters, 8.25 x 8.25mm for DBCS, 10.42 x 4.4 mm for Thai characters. The standard character set and corresponding country code are implemented (please refer to page 24 for pre-loaded character sets). Implementation of VFD technology ensures that the display is ergonomically designed to achieve a high degree of readability, irrespective of the customers' angle of vision.

The BEETLE /iCHECK-G is connected to the network via a shielded Ethernet cable. The shielded Ethernet cable must be ordered separately. The BEETLE /iCHECK-G can be run with a fixed Ethernet address or with DHCP. The administration of the network settings necessary for operation can be done via barcode labels or a browser based administration software.

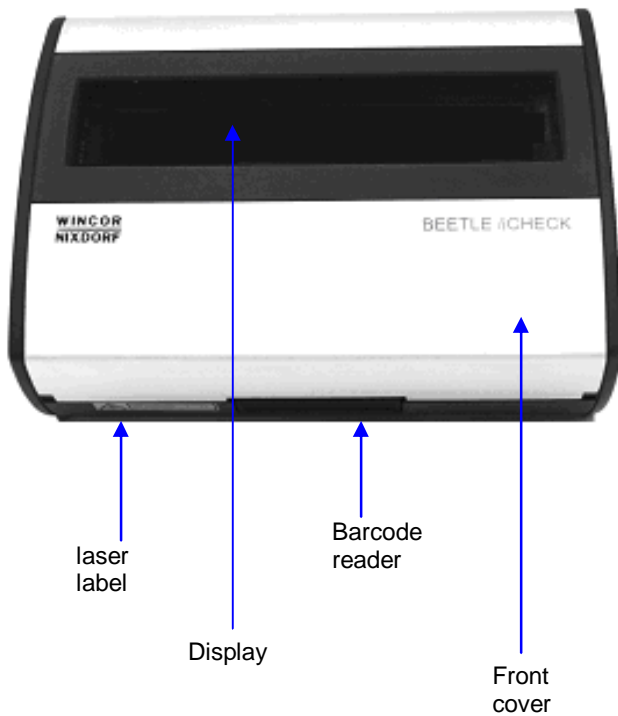
The BEETLE /iCHECK-G is equipped with a 1D or 2D barcode reader alternatively. The single line 1D barcode reader can handle only 1D barcode labels. In addition of reading 2D barcode labels the 2D barcode reader can also scan 1D barcode labels. Scanning a 1D barcode label with a 2D barcode reader is much easier because of its omni-directional scan pattern.

The voltage (12V DC) is supplied via a separate power supply unit shipped together with device.

The server of the BEETLE /iCHECK-G requires operating systems that support networks (e.g. TCP/IP). Wincor Nixdorf provides the programs "BEETLE /iCHECK-G Server Linux" and "BEETLE /iCHECK-G Server Windows" for the operating systems Linux and MS-Windows as freeware on the internet. These programs guarantee a trouble-free data exchange between the BEETLE /iCHECK-G and the server.

Install "your" program on the server:

[www.wincor-nixdorf.com](http://www.wincor-nixdorf.com)



## Reading a barcode

The BEETLE /iCHECK-G can read all commercially available barcode labels.

Hold the barcode underneath the barcode reader (with a 1D reader in a landscape format). The laser beam will start automatically. The laser beam must cover the whole width of the barcode.

A successful reading of the barcode will be quit with a beep. The information of the barcode will be displayed.

The laser beam will switch off after a few seconds if a barcode can not be recognized. Take the item/barcode out of the scan area and repeat reading the barcode.



1D barcode label  
(with "single line"- Barcode reader)



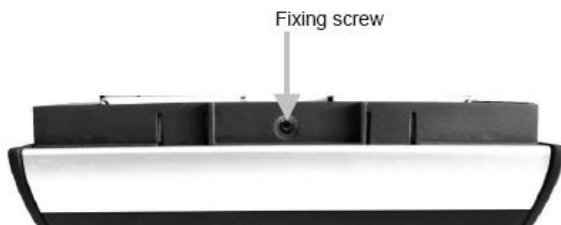
Omni-directional scan pattern

## Installation

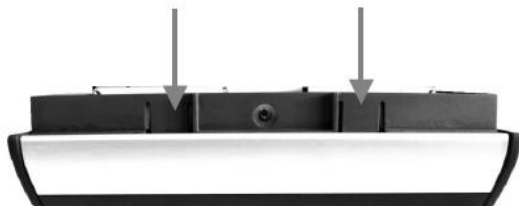


Installation may only be carried out by authorized personnel.

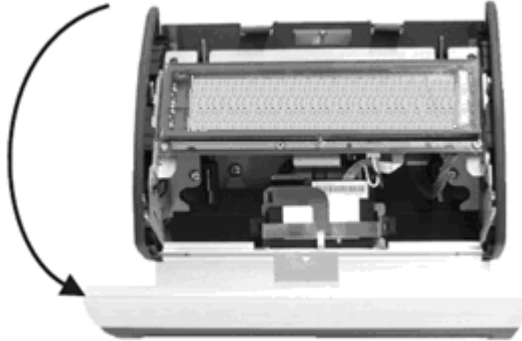
Loosen the fixing screw on top of the BEETLE /iCHECK-G with a Torx TX10 screwdriver.



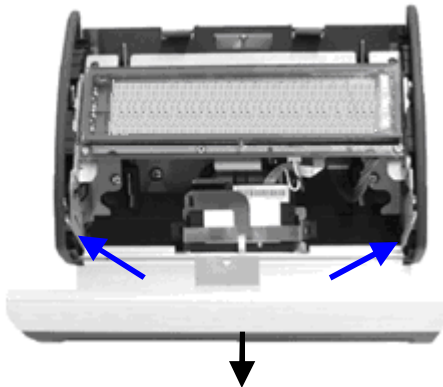
Push on the two latches (see arrows left and right) until the front cover is released.



Open the front cover of the BEETLE /iCHECK-G downwards.



Push the two securing latches outwards to release the front cover and simultaneously pull it out of the pin guiding to the top and the front. For an easier handling do not hold the front cover completely downwards.



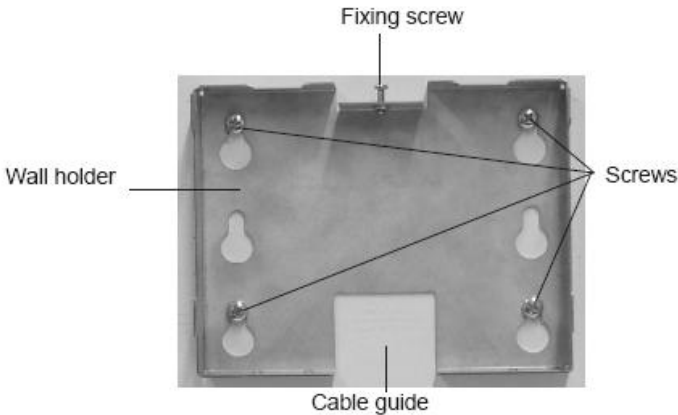
Take the wall holder out of the housing.



Note that there must be a free area of at least 30 cm underneath the BEETLE /iCHECK-G when mounting the wall holder. This is to avoid a faulty detection by the proximity sensor. There must be a minimum distance of 120 cm to reflecting surfaces and a free area of 0.5 m x 0.5 m underneath the device.

The installation heights of the BEETLE /iCHECK-G must meet the local installation requirements. The minimum installation height should not fall below 140 cm to ensure a comfortable reading of the display information.

Leave sufficient space above the BEETLE /iCHECK-G for tightening the fixing screw with a screwdriver. Use the **wall holder as jig**. Fasten the wall holder including the fixing screw for the BEETLE /iCHECK-G with four screws to the wall. Consider the wall material and the weight of the device when choosing the screws.

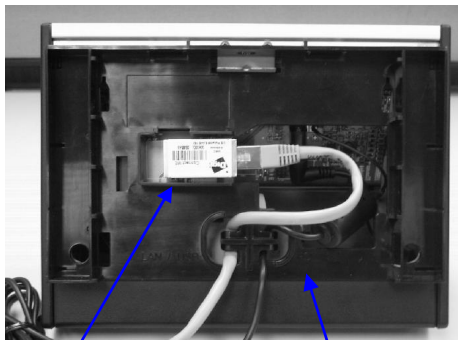


**Specification for screws:**

Ø Head:	min. 8,0 mm;	max. 12,0 mm
Head heights:		max. 6,0 mm
Ø Thread:	min. 4,0 mm;	max. 6,0 mm

Countersunk screws should *not* be used!

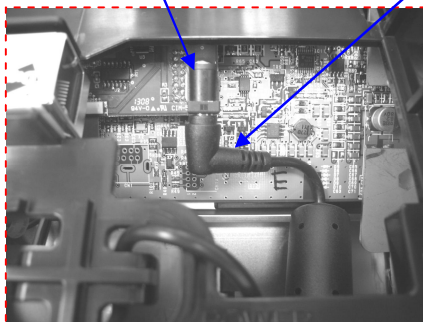
From the back of the housing, connect the DC plug of the 12V Power Adapter to the DC jack.



RJ45 socket

DC Jack (12V Input)

DC plug of 12V AC  
power adapter



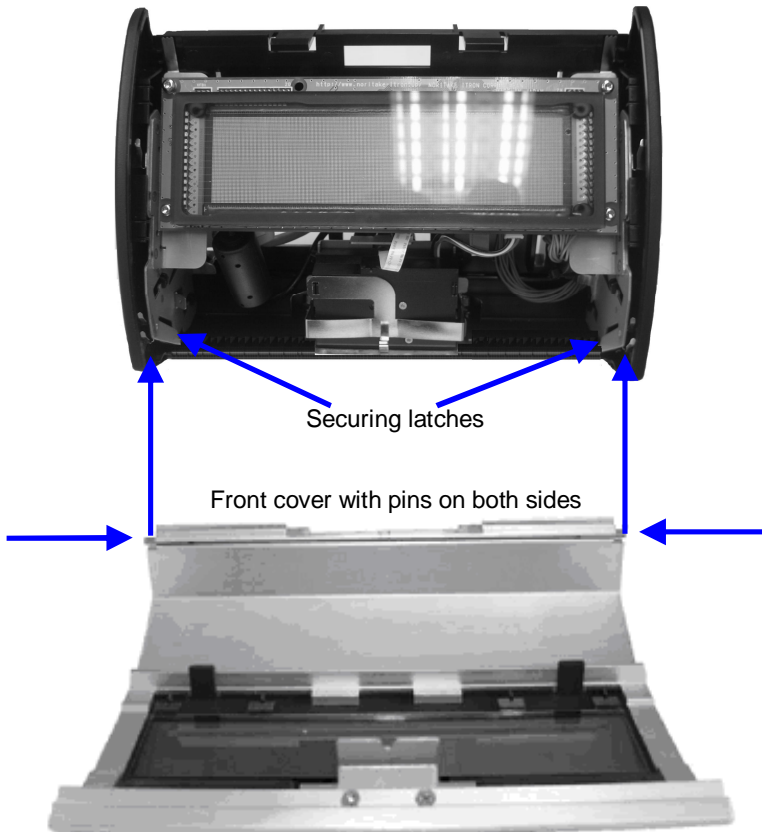
Create a loop within the housing for both the Ethernet cable and the 12V power cable as shown in picture below and hook the cables to the respective cable restrainers.



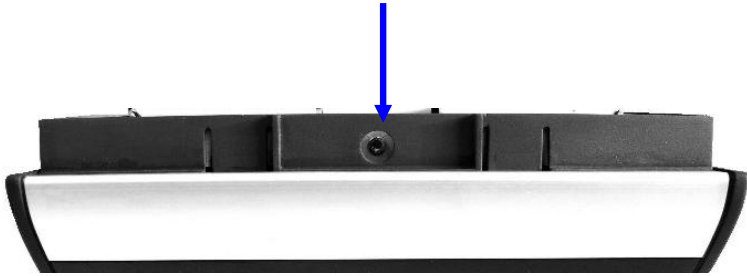
With the device front cover open, mount the device over the four hooks of the wall holder ensuring that it is properly seated.



Place the front cover with its pins into the pin guidance located on the left and right side of the housing. Push the front cover to the back until the securing latches audibly lock in place.



Close the front cover and tighten the fixing screw of the wall holder (see arrow) on top of the device.



## Cable Connection

Only use shielded Ethernet cable released by Wincor Nixdorf to connect it with the shielded network outlet.

Only use the power supply unit provided together with the BEETLE /iCHECK-G.

Connect the power supply unit with an appropriate power cord to the AC main outlet protective earth conductor. This country specific cable must be ordered separately.



## Administration of Network Settings

With the administration mode you or your service technician can configure the BEETLE /iCHECK-G and the network installation individually. The settings of the network parameter required will be made via barcodes. A network connection is not necessary so that you can configure the device off line.

The administration mode is recommended

- for the initial operation
- for checking the configuration
- for changing the network parameter

You can enter the administration mode only during the 10 seconds the device data and version number are displayed. After these 10 seconds or in case of an error repeat the following steps to enter the administration mode.

### Start Administration Mode

- Disconnect the device from the network and the power supply.
- Connect the device again.

The connection is acknowledged by a three time beep; the device will be initialised. A display test is followed for 2 seconds. After that the device data and version number are displayed for 10 seconds. After the lapse of these 10 seconds the device will be in operation mode.

During the 10 seconds the version number is displayed you can scan the barcode label (Start Administrations Mode, Type: **\_A\_A\_A\_**) to start the administration mode. The scanning is acknowledged by a beep. After 10 seconds three dots are displayed ( " ... " ) which indicate that the device is in administration mode.

In case of an error the message "???" is displayed for 3 seconds. Thereafter the device switches to operating mode.

## Recommended Procedure

The administration mode provides the following opportunities:

- Display of the current network parameters
- Changing the network parameters
- Quit the administration mode

## Displaying

Scan the barcode label **CFG** to display the active network parameters. The parameters will then be displayed in a closed loop.

## Changing

For changing the network settings the device needs no active network connection, it can be off line.

Barcode labels that will change specific settings must be produced by a barcode generator.

While the current parameters are displayed scan the barcode for the parameter you want to change

The changed parameter setting is displayed permanently. For changing further parameters just scan the respective barcode.

## Quitting

Check if the parameter changings are correct before quitting the administration mode. To do so, scan the barcode label **CFG**. Scan the barcode label "End" ( Typ: **\_Z\_Z\_Z\_** ) to quit the administration mode.

The settings will be stored. In the second line of the display you will see the message "--/ /--" (sign for off line status).

**Hint:** After ending the administration mode start a reset (unplug the device from power supply and and plug in again). This will ensure that the settings will work properly.

## Quitting

The required barcode labels can be produced with every commercially available barcode generator. We recommend the following program provided on the internet:

[www.barcodesinc.com/generator/index.php](http://www.barcodesinc.com/generator/index.php)

→ The barcodes of all valid labels for the administration mode must have **Code 128A** format.

## Scanned label administration mode



Start Administration Mode



Configuration CFG



End Administration Mode

## Structure of Barcode Labels for Network specific Settings

Server-IP:  
**Sxxx.xxx.xxx.xxx**

Server-Port:  
**Pxxxxx**

Client-IP:  
**Ixxx.xxx.xxx.xxx**

Client Subnet Mask:  
**Mxxx.xxx.xxx.xxx**

DHCP On:  
**D\_ON**

## Default Settings

The default parameters of each BEETLE /iCHECK-G are the following:

Server-IP:  
**192.168.0.1**

Server-Port:  
**51238**

Subnet Mask:  
**255.255.255.0**

DHCP:  
**ON**

# Character sets

## Downloadable Character Sets

Code Page	Character Set	Country	Font Size (W x H)
437	Standard	USA	8 x 16
850	Latin 1	International, Scandinavia, Latin-America	8 x 16
852	Latin 2	Hungary, Poland, Czechia, Slovakia	8 x 16
857	Latin 5/Turkey	Turkey	8 x 16
858	Latin 1+€ char.	International, Scandinavia, Latin-America	8 x 16
866	Latin/Cyrillic	Russia	8 x 16
862	Latin/Hebrew	Israel	8 x 16
737	Latin/Greek 2	Greece	8 x 16
813	Latin/Greek 2	Greece	8 x 16
99	Katakana	Japan	8 x 16
932	Shift JIS	Japan	16 x 16
936	GB Jianti	China	16 x 16
950	BIG 5	Taiwan	16 x 16
HKCS	BIG 5+HK	Hong Kong	16 x 16
949	Korean 2-byte	Korea	16 x 16
874	Thai	Thailand	12 x 32

## Preloaded Character Sets

(with CHKG\_LAN\_FONTS\_0101.hex)

Code Page	Character Set	Country	Font Size (W x H)
437	Standard	USA	8 x 16
850	Latin 1	International, Scandinavia, Latin-America	8 x 16
852	Latin 2	Hungary, Poland, Czechia, Slovakia	8 x 16
857	Latin 5/Turkey	Turkey	8 x 16
858	Latin 1+€ char.	International, Scandinavia, Latin-America	8 x 16
866	Latin/Cyrillic	Russia	8 x 16
862	Latin/Hebrew	Israel	8 x 16
737	Latin/Greek 2	Greece	8 x 16
813	Latin/Greek 2	Greece	8 x 16
99	Katakana	Japan	8 x 16
932	Shift JIS	Japan	16 x 16
936	GB Jianti	China	16 x 16

## Self Test

### iCHECK-G Dip Switch Configuration

Function (SW1)	S4	S3	S2	S1
General Test	Off	Off	Off	Off
Force Upgrade-Mode	Off	Off	Off	ON
Test Mode (without host)	Off	Off	ON	Off

The dip switch must be set to the above-mentioned to enter the respective test or mode before the power is turned on.

### General Test

The general test shows the module information and pixel patterns. The test will perform the following sequence in an endless loop:

- a. Display SELFTEST menu.



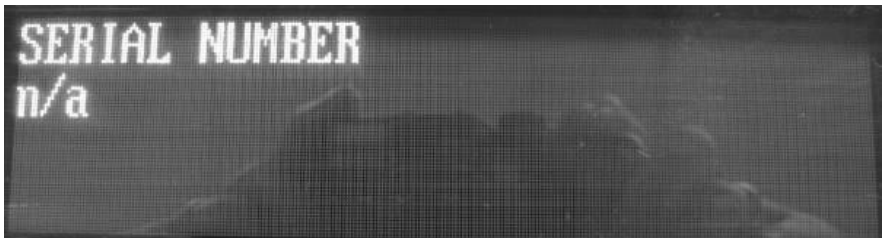
- b. Display Version and Date stamp of Loader (SST).



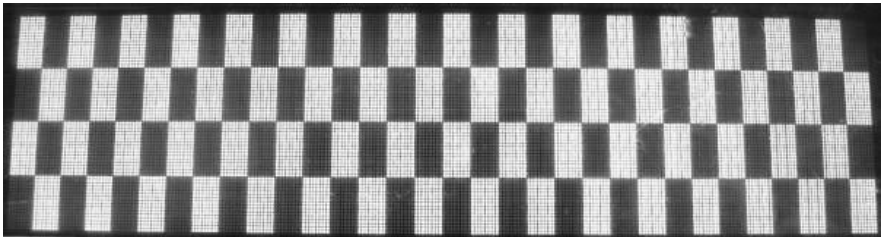
- c. Display Version and Date stamp of Firmware (FRM).



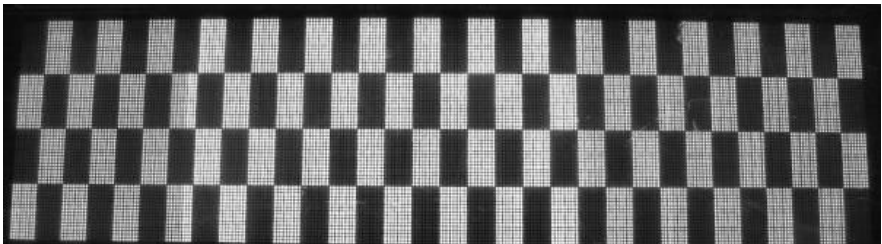
- d. Display SERIAL NUMBER if there is any.



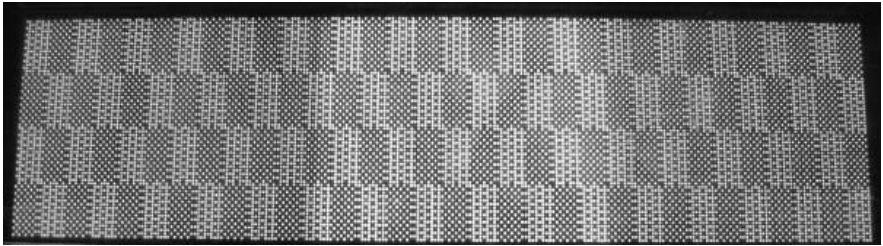
- e. Display checker box to check for any missing pixel.



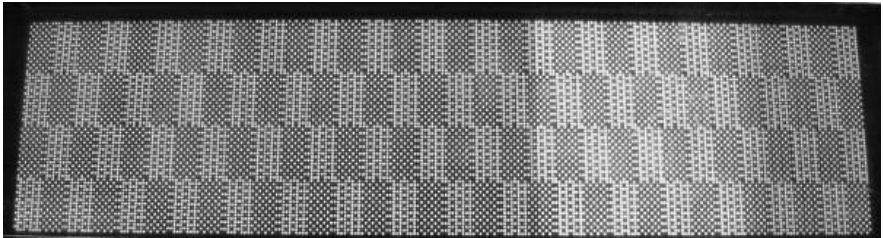
- f. Display the reverse of checker box to check for any missing pixel.



- g. Display pixel pattern.



- h. Display the reverse of pixel pattern.



- i. Display DIP Switch 1 is at ON position.



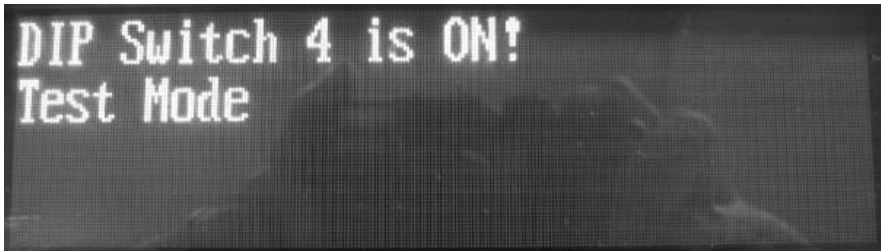
## Force Upgrade Mode

The upgrade mode is used to download modules like firmware (FRM) or serial number (SER) into the non-volatile memory of the device. The functionality of this mode is provided by the loader module (SST).

This mode forces iCHECK-G to enter the upgrade mode, which means that the Loader is activated. Normally this is not necessary because the upgrade mode will be activated by a command issued through the iCHECK service.

## Test Mode

This mode is for debug purpose only. The data of a scanned barcode label will be displayed without any need for host communication.



# Technical Data

<b>Display technology</b>	Vacuum Fluorescence Display, 256x64			
<b>Display colour</b>	Green			
<b>Character display</b>	Character cell (W x H): 8x16 and 16x16			
		ASCII	DBCS	Thai
	Height	6.60 mm	8.25 mm	10.45 mm
	Width	3.85 mm	8.25 mm	4.40 mm
	Row x Char	4 x 32	4 x 16	2 x 32
<b>Character set</b>	Built-in: IBM437 + international characters Optional downloadable character sets			
<b>Self-test function</b>	Via DIP switch			
<b>Interface</b>	Ethernet			
<b>Operating System</b>	Windows XP and Linux (MSDOS not supported)			
<b>Transmission mode</b>	10/100 Mbit/s			
<b>Voltage supply</b>	12V +/- 10 %, 800 mA (max)			
<b>Dimension</b>	Height (with base):	160 mm		
	Width:	215 mm		
	Depth:	95 mm		
<b>Weight</b>	1.23 kg (without cable)			
<b>Operating Temperature</b>	+5°C to 40°C			

## Scanner

**Light source:** Laser diode: Red light visible wave length of 650 nm

**Scan angle:** Horizontal: 34° (cyclone) 34° (raster)  
Vertical: 34° (cyklone) 12.5° (raster)

**Barcode types:** Code 39, UPC/EAN, Code 128 (pre-established\*)

**Proximity sensor:** Infrared, detection distance approx. 20 cm

\* All current barcode types can be activated if desired.

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