
Dolphin 7200 2D Hand held Computer



**HAND HELD[®]
PRODUCTS**
a **WelchAllyn[®]** affiliate

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For more information on the basic operation of the Dolphin 7200 terminal, please see the Dolphin 7200 User's Guide included on the Users Guide and Product Reference Information CD.

FCC Statement

The Dolphin 7200 2D terminal complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. Devices may not cause harmful interference.
2. Devices must accept any interference received, including interference that may cause undesired operation.

FCC Class B Compliance Statement

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 or television technician for help.

Caution: Any changes or modifications made to this device that are not expressly approved by Hand Held Products may void the user's authority to operate the equipment.

About the Dolphin 7200 2D Hand Held Computer

The Dolphin™ 7200 2D handheld computer features the IMAGETEAM™ 4250 Image Engine, a low power, high-resolution digital image engine for omnidirectional and auto-discrimination reading and decoding of linear barcodes, stacked linear (PDF417) and 2D matrix codes. The image engine functions like a digital camera and also provides OCR (Optical Character Recognition) functionality.

The terminal is available in several configurations with alpha/numeric and numeric keyboard options. These configurations include the standard range image engine with 2MB RAM and 2MB non-volatile FLASH memory or 2MB RAM and 8MB non-volatile FLASH memory. A high-density image engine with the same memory options is also available integrated into the terminal.

Like the Dolphin 7200 with Image Capture terminal, the 2D terminal also has image lift capabilities for signature capture and proof of delivery applications. Images taken with the unit can be compressed and stored using industry-standard data compression technologies. The device provides the flexibility to store either images that contain grayscale information or black and white only information. Images can be downloaded via HomeBase™ or VehicleBase™ communication cradles and then transmitted via one of many options.

The terminal is able to decode barcode symbologies and capture images in dim lighting conditions or complete darkness.

Supported Symbologies

1D linear codes:

Code 3 of 9, Interleaved 2 of 5, Code 11, IATA 2 of 5, MSI, UPC A, UPC EO, UPC EI, EANISAN13, EANISAB8, EAN, Codabar, Code 128, Code 93, UPC

2D codes:

PDF417, microPDF, Maxicode, Datamatrix, Aztec, QR Code, Code 49

Composite codes:

RSS-14, CODABLOCK, AZTEC MESA

OCR codes (Optical Character Recognition):

OCR A and OCR B

Postal Codes:

Postnet and most international 4 state codes, PLANET CODE, BPO 4 STATE, CANADIAN 4 STATE, DUTCH POSTAL, AUSTRALIAN 4 STATE, JAPANESE POSTAL

For other supported symbologies, please see the IMAGETEAM™ 4250 User's Guide.

Reading Barcodes

The omni-directional scanning capabilities of the Dolphin 7200 2D terminal greatly simplify operating training and increase productivity. To read a bar code:

1. Press the ON/SCAN button to project the scanner's bright red aiming beam
2. Center the aiming beam over the barcode. The red SCAN LED illuminates when the user presses the ON/KEY key and the green DECODE LED illuminates when a bar code is successfully decoded. **The aiming beam can be positioned in any direction for a good read.**

Linear bar code

2D Matrix symbol



The aiming beam is smaller when the terminal is held closer to the code and larger when it is farther from the code. Symbologies with smaller bars or elements (mil size) should be read closer to the unit. Symbologies with larger bars or elements (mil size) should be read farther from the unit.

Capturing Images

The image-capture process is a split-second operation for experienced users. By following the basic guidelines, new users can easily develop their own technique and, with practice, quickly learn to adapt it to different circumstances. The basic steps for acquiring images using the Dolphin 7200 2D terminal are:

1. To aim, hold the Dolphin terminal horizontally at a 45° angle approximately 2 to 9 inches (5 to 20 cm) away from the target. You may have to adjust the angle at which you hold the Dolphin if there is glare on the screen.
2. Press the **ON/SCAN** button to take an image. Use the live video image on the terminal screen as a guide for positioning and aiming the terminal at the target. You may find it helpful to start by moving the terminal further away and then in closer to the target. The active screen image will have a slightly degraded appearance compared to the captured image. This is normal.
3. Release the **ON/SCAN** button to capture the image when the desired image is displayed on the terminal screen. Hold the Dolphin terminal as still as possible when capturing the image.

The image quality and related file size is determined by the data compression method used by your software application. For highest quality, take grayscale images. When saved, the image will be saved in JPEG file format. The size of the file depends on the information content of the image and will be approximately 4-8 K.

Lighting Conditions

The Dolphin 7200 2D terminal is designed to read bar codes and take images in dim light conditions. It is suggested that you turn on the unit's electroluminescent display backlight when taking images in extreme low light conditions to help with aiming.

Dolphin 7200 2D Demo Software

The Dolphin 7200 2D terminal demonstration software program allows you to show how the terminal omni-directionally decodes all popular linear and 2D barcodes and OCR as well as its image capture capabilities.

The software consists of two components – one that runs on the host computer and one that runs on the Dolphin terminal.

Installing the Dolphin 7200 2D Demo Software on the Host

The host computer demonstration software for the Dolphin 7200 2D hand held computer is similar to the program used for the Dolphin 7200 Image-Capture terminal. For information on using the host computer demonstration software, see the sections on *Installing the Dolphin Image-Capture Demo Software on the Host* in Chapter 4 of this manual. *This manual is included on the Users Guide and Product Reference Information you received with your Dolphin terminal.*

Installing the Dolphin 7200 2D Demo Software on the Dolphin Terminal

The Dolphin 7200 2D terminal is shipped loaded with client demonstration software.

If the demonstration program has been removed from your terminal, follow these steps to install:

1. Check to make sure that HomeBase is set at 57600 baud rate on the PC.
2. Click Windows Start button and go to Programs.
3. Select the Dolphin 2D Program Group.
4. Select Upload ICD2D Client Com 1 or Upload ICD2D Client Com 2.
5. Place the Dolphin terminal in the HomeBase.
6. On the Dolphin terminal, go to the DOS prompt and type YFF and press ENTER to transfer the files.
7. After successful transfer, type ICD2D and then press <ENTER> at the DOS prompt.

Dolphin 2D Demo Program

The following screen shown below will show on the Dolphin terminal's screen. Press any key to proceed to the main menu.



Main Menu



Dolphin 2D Imaging Demo Program Main Menu

ON Aiming Demo

This demo allows the user to practice aiming only, with the Dolphin 7200 2D terminal. Press ON/SCAN key to practice aiming. This option does not store images on the terminal's disk.

F1 Decode Demo

This option demonstrates how the terminal scans bar codes. When you press F1, the terminal is configured for reading barcodes and the following screen will appear:



F1 Decode Demo Screen

Press the ON/SCAN button to scan a barcode. When a successful decode is made, a screen similar to the one below will appear on the screen. Press ESC (SHIFT + BKSP) to return to the Dolphin 2D Demo main menu. *NOTE: When you select the Decode Demo from the main menu, all barcodes are enabled. To customize the demo program to read only certain barcodes, select F3 Options from the main menu.*



F2 Image Capture

This option allows the user to select the image file type, take an image and transmit it from the Dolphin terminal to the host computer.



F2 Image Capture Demo Menu

F1 Grayscale

Select this option to take uncropped grayscale images. Images taken with this option have the largest file sizes. Using this option yields a larger image than what you see on the Dolphin display.

F2 Black/White

Select this option to take uncropped black and white images. Using this option yields a larger image with more informative content than what you see on the Dolphin display. The pixel size of the image is 310 x 236 pixels.

Capturing Images

After you have selected the compression and cropping option and opened the Dolphin ICD server program on your PC, follow these screen prompts to capture an image:

1.



Scan Image Screen

Press the ON/SCAN key, aim and release it to take an image. After you scan the image, the terminal will beep, and the image taken will appear on the screen. If the image is acceptable, press the ENTER key to save the image and proceed to the next step. If the image is not satisfactory, press the ON/SCAN key to take a new image. Repeat as necessary to acquire the desired image and proceed to the next step.

2. The following screen will appear:



3. Place the terminal in the HomeBase to begin transferring the file to your host computer. The first screen shown below will appear on the terminal; then the second screen. *Note: You must put the terminal into the HomeBase within 15 seconds of taking the image. Otherwise, the image will be deleted and you will have to retake the image.*



Searching for Server Screen



Made connection, saving data Screen

4. The file transfer status screen shown will appear on the Dolphin 7200 2D terminal once the file transfer has begun.



File Transfer Status Screen

5. After the transfer is complete, the Dolphin 7200 2D terminal is ready to take another image.

Note: Be sure that the Dolphin Image Capture Server program is running on your PC before taking any images. If the program is not running when you put the terminal in the HomeBase, Dolphin cannot transfer the file to the host and you will see the following screen:



To begin the process, leave the Dolphin terminal in the HomeBase and open the Dolphin Image Capture Server program. The file transfer process will occur as described in Steps 4 and 5 above.

F3 Options

Use this option to customize the Dolphin 7200 2D terminal's barcode reading configuration when using this demo program. The terminal is able to read various linear barcodes, stacked linear and matrix codes. Press **F1** to enable all barcodes or **F2** to disable all barcodes.



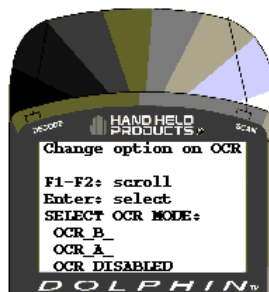
Options Menu

Press **F3** to set configure the Dolphin 2D terminal to read specific codes. Follow the directions as shown on the screen below:



Set Individual Codes Screen

Press **F4** on the Options menu and the screen below will show on the Dolphin 2D terminal. Follow the directions on the screen to set-up the terminal to read OCR.



Setup OCR Screen

F4 Turn Off

This option turns off the Dolphin 7200 2D terminal. To turn the terminal back on, press the ON/SCAN button.

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