

CodeWriter 4500 Series

Operator's Manual

**Manual Part No. 108738
Rev. C**

NOTICE

There are no user-servicable parts inside the side access panel on the Codewriter 4500 Series products. Do not attempt to open the side access panel without first turning off the power to the unit, disconnecting the power cord from the unit, and disconnecting all communication cables.

All service procedures should be performed by a qualified service technician.

NOTICE

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

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

NOTE

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 instructions, 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 own expense.

NOTE

When connecting the printer to a host computer system, always use shielded interface cables. The use of non-shielded interface cables is a violation of the FCC emissions limits for a Class A computing device. Do not leave unterminated interface cables connected to the printer.

NOTE

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Cet appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le Brouillage Radioélectrique édicté par le Ministère des Communications canadien.

WARNING

Any alteration or modification to this equipment may cause non-compliance to:

WARNUNG

Jede Abänderung oder Modifizierung dieses Geräts kann eine Zuwiderhandlung gegen folgende Bestimmungen darstellen:

ADVERTENCIA

Cualquier alteración o modificación de este equipo podría resultar en la infracción de:

ATTENTION

Tout changement ou modification apporté à cet équipement peut entraîner sa non conformité au:

- UL safety standard 1950, Third Edition
- CSA safety standard C22.2 No. 950
- FCC regulations for Class A Computing Devices
- EN50082
- EN60950
- EN55022, Class A
- EN61000-3-2
- EN61000-3-3
- EN60825-1
- Canadian ICES-003

WARNING

The operator must disconnect the printer from the AC power supply before performing any corrective action procedure that requires reaching into the printer.

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Connect 115V (230V) units to 115V (230V) outlets only!

The printhead gets hot during use. Wait until the printhead is cool before handling the printhead.

Connecting this equipment to an ungrounded power receptacle can result in the risk of electrical shock.

Make certain the printer is disconnected from the AC power supply before reaching into the printer to perform any cleaning or maintenance task.

WARNUNG

Die Stromzufuhr zum Drucker muß unterbrochen werden, bevor irgendwelche korrektiven Maßnahmen im Inneren des Geräts vorgenommen werden.

Abänderungen oder Modifizierungen dieses Geräts dürfen nur mit ausdrücklicher Genehmigung der für die Zulassung verantwortlichen Stelle vorgenommen werden. Verstöße dagegen könnten den Widerruf der Zulassung des Geräts zur Folge haben.

115V (230V)-Geräte nur an 115V (230V)-Steckdosen anschließen!

Der Druckkopf erhitzt sich, während das Gerät in Betrieb ist. Bevor Arbeiten am Druckkopf durchgeführt werden, warten, bis dieser abgekühlt ist.

Dieses Gerät darf keinesfalls an eine ungeerdete Steckdose angeschlossen werden. Es besteht Elektroschockgefahr.

Die Stromversorgung des Druckers muß unterbrochen sein, ehe irgendwelche Reinigungs-oder Wartungsarbeiten vorgenommen werden.

ADVERTENCIA

El usuario debe desconectar la impresora de la corriente alterna AC antes de proceder con cualquier arreglo que requiera meter la mano dentro de la impresora.

Los cambios o modificaciones llevados a cabo en esta unidad, no aprobados explícitamente por la parte responsable de cumplir con el reglamento, podrían invalidar la autoridad del usuario para utilizar el equipo.

¡Conecte unidades de 115V (230V) únicamente a tomas de 115V (230V)!

La cabeza impresora se recalienta con el uso. Esperar hasta que se enfríe antes de tocarla.

El enchufar este equipo a una toma de corriente no conectada a tierra podría resultar en riesgo de una descarga eléctrica.

Asegúrese de que la impresora esta desconectada de la corriente alterna AC antes de introducir la mano en su interior para cualquier labor de limpieza o mantenimiento.

ATTENTION

L'opérateur doit débrancher l'imprimante de la source d'alimentation C.A avant de réaliser toute procédure de correction manuelle dans l'imprimante.

Les changements ou modifications apportés à cette unité non expressément approuvés par la partie responsable de la conformité peuvent annuler l'autorité de l'utilisateur à opérer l'équipement.

Brancher les unités 115V (230V) uniquement sur des prises 115V (230V)!

La tête d'impression chauffe pendant l'usage. Attendre que la tête d'impression soit froide avant de la manipuler.

Brancher cet équipement à une prise non reliée à la terre peut provoquer une électrocution.

S'assurer que l'imprimante soit débranchée de la source d'alimentation C.A avant de réaliser des tâches de nettoyage ou d'entretien manuelles.

Datasouth CodeWriter 4500 Disclaimer of Warranties

Software

All software is licensed "as is" without warranty of any kind, either expressed or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. Datasouth Computer and its authorized sales agent have no liability or responsibility to you or any other person or entity with respect to any liability, loss, or damage caused, or alleged to have been caused directly or indirectly by the software system (hardware, software, manuals, and labels), nor for indirect, special, or consequential damages. In no event will Datasouth Computer be liable to you for any damages, including any lost profits, savings, or other incidental or consequential damages arising out of the use or inability to use any program produced by Datasouth Computer or any authorized dealer advised of the possibility of such damages occurring. No person has the authority to modify such limitations, unless obtained in writing and signed by a corporate officer at Datasouth Computer. Acceptance of software is conditional on the acceptance of this disclaimer. Use of the hardware/software constitutes acceptance of this disclaimer.

Extended Maintenance

Datasouth Computer provides telephone support and maintenance following delivery of your printer. Contact Datasouth for details and current pricing on extended maintenance.

Hardware Warranty

Hardware provided with your system is warranted to be free from defects in workmanship. Refer to the warranty information included with the printer for details. Call East Coast customer support at (800) 476-2450 or West Coast Customer Support at (800) 962-7344 for return authorization.

Labels, Tags and Ribbons

Only previously authorized label and ribbon material may be used in this printer. Due to variations in label and ribbon quality, use of unauthorized material may damage the printer and may void the warranty. Check with your Datasouth Dealer for a list of authorized materials.

CodeWriter is a trademark of Datasouth Computer.

All other brand and product names are trademarks or registered trademarks of their respective companies.

Datasouth

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Charlotte, North Carolina 28217

- Phone: 704.523.8500
- Service: 800.476.2450
- Sales: 800.476.2120
- Internet: www.datasouth.com

Specifications

Environmental

- Operating Temperature: 32 to 104 degrees F (0 to 40 degrees C)
- Storage Temperature: 0 to 140 degrees F (-17 to 60 degrees C)
- Relative Humidity: 8 to 80 percent
- Maximum wet bulb temperature: 84 degrees F (29 degrees C)

Physical

4505

- Width: 9.1 inches
- Depth: 10.8 inches
- Height: 11 inches
- Weight: 18.9 pounds

4505+ and 4510

- Width: 9.1 inches
- Depth: 14.6 inches
- Height: 11 inches
- Weight: 21.4 pounds

Power Input and Output

- Input: Universal 110/230 VAC 60/50 Hz, 2/1 A
- Output: +5 VDC, +24 VDC

Specifications

Media

Ribbon

- Length: 984 feet (300 meters) Maximum
- Width: 4.375 inches Maximum
- Ribbon Leader: 12 inches (300 mm)
- Ribbon Trailer: 6 inches (150 mm) Reflective or Clear
- Ink Side: Outside
- Core ID: 1.0 inches
- Roll OD: 2.68 inches Maximum

Document (Label Stock)

- Roll OD: 4505 – 6 inches, 4505+/4510 – 8 inches
- Core ID: 4505 – 1.5 inches, 4505+/4510 – 3 inches
- Width: 4.52 inches
- Print Width: 4.25 inches
- Thickness: 0.0023 to 0.010 inches
- Label Facing: In

Serial Communications

- RS232 Interface
- Connector: DB25 Female
- Baud Rate: 300 – 57600 bps
- Flow Control: Hardware, Xon/Xoff, Xon/Xoff Robust

Printing

- Resolution: 300 DPI (11.8 dots/mm)
- Print Width: 4.25 inches
- Print Speed: 4505/4505+ - 5 IPS, 4510 – 10 IPS
- Method: Direct Thermal or Thermal Transfer
- Maximum Label Size: 60 inches (4MB DRAM)

Processing

- Intel i960 32-bit Processor
- Flash: 1Mbyte (User Flash 32Kbyte), Expansion Option: 1Mbyte
- DRAM: 4Mbyte, Expansion Option: 16 Mbyte



Advanced Features

Flash Memory Management

The CodeWriter 4500 Series printer provides the user with a dedicated 32k area of flash memory to store applications or label formats. To use this area the user must understand how to access the area and copy the application to the printer. The following information is provided to assist the user in understanding the function of the flash memory on this printer and how they can interact with it.

The firmware contains several front panel button press combinations that can influence the power-up initialization of the printer.



High Speed Firmware Update Download Mode

Hold down the  and  buttons while turning on power. Do not release until the printer displays the “>> Flash Boot <<” message.

This places the printer into the high speed firmware update download mode. In this mode, the printer will accept firmware downloads at strictly 115,200 baud. Firmware downloads require a special application on the host computer which Datasouth provides along with firmware updates. Firmware downloads cannot be performed by operators using terminal emulation or other generic host applications.

Although very unlikely, the potential exists for operators to corrupt any existing firmware within the printer by accessing the firmware update communications mode using improper host software. If this occurs, the printer will require a new firmware download to correct the problem.


Auto-Baud Firmware Update Download Mode

Hold down the  and  buttons while turning on power. Do not release until the firmware displays the “>> Flash Boot <<” message.

Exactly the same as the High Speed Firmware Download Mode, except the firmware will perform an autobaud operation when initially establishing communication with the download application on the host computer. This mode will only autobaud to between 2,400 and 57,600 baud. In order to perform a high speed 115,200 baud download, the operator must select the high speed download mode.

Advanced Features

PAL Application Bootstrap Bypass

Hold down the  button while turning on power. Do not release until the printer displays the Interface Status Online message.

The printer supports the downloading of standalone or other user PAL applications into a reserved portion of the internal flash ROM. Given the proper identifier at the start of such an application, the PAL interpreter will automatically start executing any such application once the firmware has completed initialization.

This presents a problem when recording certain types of PAL applications into the printer. Many types of PAL applications are designed to assume control of the printer's RS-232 interface at power-on in order to accept non-PAL commands and/or data from the host system. With a PAL application in control of the RS-232 interface, the host system is unable to communicate directly with the PAL interpreter. As a result, the operator cannot send the PAL commands necessary to erase and/or replace the PAL application program contained in the flash ROM.



The PAL application bootstrap bypass feature allows the operator to stop the PAL interpreter from automatically executing any PAL application contained in the flash ROM. Thereby instructing the interpreter to enter normal PAL interpretation mode and allowing the operator to send the necessary commands to erase and/or replace any PAL application program contained in the flash.

To clear ROM memory area send the following command to the printer after performing the above "Bootstrap":

(A:) () _deviceformat

Turn the printer off and then on. It should come up in the On-Line mode. You are now ready to load the new application.

Release Identification Message Pause

Press and release the  button while the firmware is displaying any release identification message ("RelID"). The firmware will pause and leave the message on the display until the  button is pressed.

As explained above, this feature provides the operator with sufficient time to record the release identifiers in order to report them to technical service personnel.







Print Darkness Control



CodeWriter 4500 Series Printers shipped with this manual⁴ will contain a new Print Darkness control method. This method replaces the print settings method that involved a Contrast and Preheat setting. The Operator Panel includes access to these former methods to service current customers obtaining satisfactory print quality with those settings. Customers desiring to use this previous method may use the following procedure.








New Customers not obtaining satisfactory results with the Print Darkness method should contact their Datasouth representative for additional assistance.

Setting Contrast and Preheat

Use the following procedure to program the printer's Contrast and Preheat parameter values:

1. Press the  key. This takes you to the off-line menu.
2. When Interface Status Off-Line is displayed, press the  key. This will take you to the Print Parameters menu.
3. Press the  key until ENTER to Select Expert Settings is displayed.
4. Press the  key.
5. Print Cont. is the first parameter displayed. Press the  or  key to change the Contrast value.

NOTE: When changing values using the  or  keys, a single key press will change the value by one unit. If the key is pressed and held in, the value will change by 10 units.

6. Press the  key. Pre-Heat is the next parameter displayed. Press the  or  key to change the Preheat value.
7. Press the  key, followed by the  key. The display will read ENTER to save new defaults. Press the  key to save these values.
Or Press the  key to return to the Print Parameters menu.

⁴ Firmware Revision - 4505/4505+: 109225 Revision A or later, 4510: 109063 Revision D or later.

Advanced Features