

Greco Systems

e-DNC Hub

Operator's Manual



January 2007

325 W. Goodwin St. Prescott, AZ 86303 USA (800)23-GRECO

GS01/07

SAFETY

Protect yourself! Follow these precautions:

- **Never bypass the power cord ground lead by breaking off the ground pin, or by using inappropriate extension cords or adapters.**
- **Never plug the power cord into the AC power source until you have made sure that all installation, cabling, and power levels, are proper, and that the applicable procedures in this manual have been followed.**
- **Do not attempt to have this equipment repaired by under qualified personnel. Especially, personnel should be trained in working with hazardous voltages.**
- **Remove the AC power cord from the IEC inlet of the unit BEFORE removing the rear cover.**
- **Heed the WARNING statements. These statements point out situations that could cause injury or death.**
- **Heed the CAUTION statements. These statements point out the situations that could cause damage to the equipment.**
- **This instrument contains a LITHIUM BATTERY for timekeeping. Small quantities of these batteries may be disposed of as regular waste.
HOWEVER: DISPOSAL BY FIRE, OR INCINERATION, SHOULD ALWAYS BE AVOIDED.
Prior to disposal: It is recommended that the leads of the battery be cut off and exposed metal poles be completely isolated with tape. Completely discharged or mechanically damaged cells should be wrapped in strong packing material.**

CONTENTS

SAFETY	ii
CONTENTS	iii
FIGURES	v
DOCUMENTATION POLICY	vi
Disclaimer	vi
Copyright	vi
Acknowledgments	vi
WARRANTY	vii
Policy	vii
Exclusions	vii
RETURN MATERIAL AUTHORIZATION	viii
1 INTRODUCTION	1
Using This Guide	1
Overview	1
Receiving Inspection	1
2 INSTALLATION AND CONFIGURATION	3
Overview	3
Operational Check	5
Client Installation	5
Initial Powerup	5
Normal Operation	5
4 MAINTENANCE	6
Cleaning	6
Cleaning the Exterior Surfaces	6
Repair	6
Return Shipment	6
Return Material Authorization	6
Repackaging Materials	6
Repackaging Procedure	7

APPENDIX A _____	8
SPECIFICATIONS _____	8

FIGURES

Figure 1. Front Connector Panel	3
Figure 2. Top Connector Panel.....	4

DOCUMENTATION POLICY

Disclaimer

This manual is based upon the data available at the time of publication. While sincere effort has been made to make the manual accurate, the information contained herein does not purport to cover all the details or variation in hardware, software, or firmware; nor to provide for every possible contingency in connection with the installation, operation, maintenance, repair or replacement. Also, features may be described herein which are not present in all hardware, software, or firmware configurations.

GRECO SYSTEMS' policy is one of continuous improvement. Thus, the information in this manual is subject to change without notice and should not be construed as a commitment by GRECO SYSTEMS. GRECO SYSTEMS also assumes no obligation to notify manual holder of subsequent revisions.

GRECO SYSTEMS makes no representation of warranty, expressed or implied, nor assumes responsibility for, the accuracy, completeness, sufficiency, or usefulness of this manual, nor of any problems that may arise from the use of the information contained herein.

Copyright

The Greco Systems EDNC-Hub[®] Operator's Manual Copyright © 2007 by Greco Systems. All rights reserved.

The content of this manual is the property of Greco Systems, Prescott, Arizona, USA. Any reproduction of this information without express written permission from Greco Systems is prohibited.

Acknowledgments

The names of the companies, their hardware and software, may be trademarks or registered trademarks of their respective owners.

WARRANTY

Policy

Greco Systems warrants that all products manufactured by Greco Systems conform to published specifications and are free from defects in materials and workmanship for a period of one (1) year from the date of delivery when used under normal operating conditions and within the service conditions for which they were furnished.

The obligation of Greco Systems arising from a warranty claim shall be limited to repairing, or at its option, replacing without charge, any product which in Greco Systems' sole opinion proves to be defective within the scope of the warranty. In the event Greco systems is not able to modify, repair or replace nonconforming defective parts to a condition per warranty within a reasonable time after receipt thereof, Greco Systems will refund the purchase price to the customer in return for the nonconforming or defective parts.

Greco systems must be notified in writing of the defect or nonconformity within the warranty period and the affected product returned to Greco Systems' factory or to an authorized service center within thirty (30) days after discovery of such defect or nonconformity.

For product warranties requiring return to Greco Systems, products must be returned to a service facility designated by Greco Systems. Buyer shall prepay shipping charges, taxes, duties and insurance for products returned to Greco Systems for warranty service.

Greco Systems shall have no responsibility hereunder for any defect or damage caused by improper storage, improper installation, unauthorized modification, misuse, neglect, inadequate maintenance, accident, or for any product that has been repaired or altered by anyone other than Greco Systems or its authorized representative and not in accordance with the instructions furnished by Greco Systems.

Exclusions

THE WARRANTY DESCRIBED ABOVE IS THE BUYER'S SOLE AND EXCLUSIVE REMEDY, AND NO OTHER WARRANTY, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED. GRECO SYSTEMS SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. No statement, representation, agreement or understanding, oral or written, made by an agent, distributor, representative or employee of Greco Systems, which is not contained in the forgoing Warranty will be binding upon Greco Systems, unless made in writing and executed by an authorized Greco Systems employee. Under no circumstances shall Greco Systems be liable for any direct, indirect, special, incidental or consequential damages, expenses, losses or delays (including loss of profits) based on contract, tort, or any other legal theory.

RETURN MATERIAL AUTHORIZATION

All equipment returned for Warranty repairs require a Return Material Authorization (RMA) number to be issued by Greco Systems prior to shipping the equipment. To obtain this number, the Buyer or End User **must** provide Greco with the following information:

- Greco Customer/End User name
- Greco Customer/End User contact and telephone number
- product model and serial numbers
- product cable numbers, if applicable
- description of the problem
- purchase order number for return shipping charges
- mode of return shipment.

For non-warranty repairs, the following additional information is required:

- purchase order number for repair charges and return shipping charges
- a “not to exceed” price
- whether to call with charges before shipping.

1 INTRODUCTION

Using This Guide

This document outlines the basic hardware and operating system of the Greco Systems E-DNC Hub. Operation of specific applications, such as e-DNC Explorer are covered in the Operator Manuals for the specific software.

Overview

The E-DNC Hub is an industrialized PC compatible microcomputer hub enclosed in a shop hardened case that can be used in locations that are normally too harsh for standard Network Hubs.

The E-DNC Hub comes fully loaded with the latest EmbeddedDNC Server software and all necessary drivers.

Receiving Inspection

This section describes receiving inspection procedures. Any problems encountered while installing and configuring the E-DNC Hub can be solved by telephoning Greco Systems' Customer Service Department at (800) 23-GRECO.

Inspection Procedure:

1. Check the shipping carton for damage. If there are any signs of rough handling, save the carton for evidence. It is recommended that the shipping carton and padding be saved in the event the unit needs to be re-shipped.
2. Remove the E-DNC Hub from the carton by lifting the foam insulators, secured tightly around the sides of the Hub. Lift it gently and remove the insulators. The AC power cord can be lifted out from within the foam insulators, as well.
3. Check the E-DNC Hub for any evidence of physical damage. If there are any signs of damage, notify the carrier.

CAUTION: do not operate the E-DNC Hub if it has been damaged during shipment. The E-DNC Hub could be further damaged and might also cause damage to electrical devices connected to it.

4. Check the contents of the shipping container or containers against the Packing List to ensure that all items are included.
5. Install the AC power cord.

2 INSTALLATION AND CONFIGURATION

Overview

Unlike a simple network hub or switch, the setup of the E-DNC Hub will consist of connecting and configuring the serial ports, configuring and maintaining the Ethernet connection, and creating/maintaining User Accounts for EmbeddedDNC access.

Figure 1 specifies the connectors required for the cabling at the E-DNC Hub. All cabling should be properly dressed to industrial standards.

Refer to the document titled “EDNC Hub Configuration Steps” for the details of setting up and configuring the E-DNC Hub.

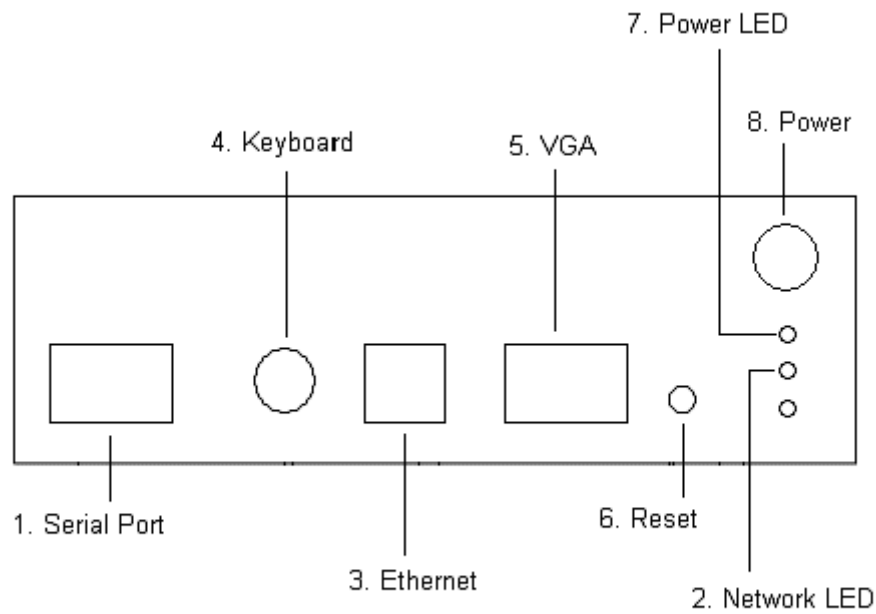


Figure 1. Front Connector Panel

Front Connector Details:

Additional connector details are listed below.

1. Serial Port (Disabled).
2. Ethernet LED.
3. Ethernet. (RJ45, 100/10Base-T connector for Ethernet network connection).
4. Keyboard.
5. VGA. (DB-9P, Video Graphics Adapter).
6. Reset Button.
7. Power LED.
8. Power Connector.

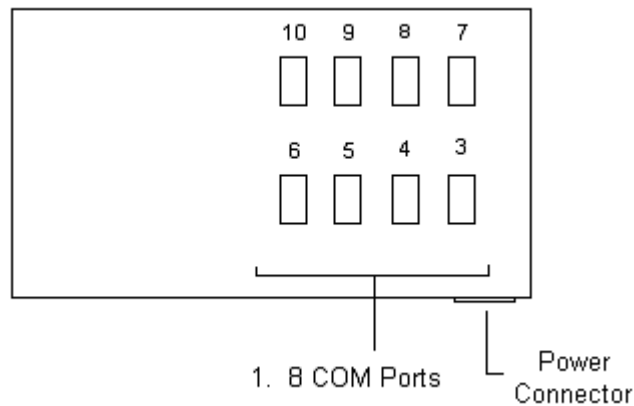


Figure 2. Top Connector Panel

Top Connector Details:

Additional connector details are listed below.

1. 8 COM Ports (DB-9 Male serial port connectors).

Operational Check

Refer to the *Connector Panel* illustrations above, and make the necessary connections.

If any additional or special configuration is required (see *Configuration*, below), do that before continuing this procedure.

Check operation of the indicator LEDs on the front panel.

Start up one of the installed programs. Refer to the application's software manual if needed.

Client Installation

EmbeddedDNC Server can be installed in several configurations. By default, everything is installed on the E-DNC Hub. The document titled "Workstation Installation Steps for e-DNC Explorer" will explain the installation and configuration process of e-DNC Explorer on client workstations. This process will allow client workstations to access the EmbeddedDNC server on the DNC Hub.

Initial Powerup

- Before powering up the E-DNC Hub, make sure it is installed and wired correctly. See *Section II, Installation* if necessary.
- Turn the unit ON. See *Section II, Installation*, if necessary.

Normal Operation

The E-DNC Hub is pre-loaded with the e-DNC Explorer software.

- All workstations using the E-DNC Hub will need the e-DNC Explorer software installed and configured for client functionality.
- Refer to the manual supplied with the software program you are using.
- Follow the instructions in the software manual, while paying careful attention to any Hints, Notes and Precautions.

4 MAINTENANCE

Cleaning

Cleaning the Exterior Surfaces

1. Carefully clean the screen and outer surfaces, making certain no dampness seeps into the interior of the instrument.
2. Go over the same area with a clean, damp cloth to remove detergent and any remaining dirt.
3. Dry the instrument with a clean, dry, lint-free cloth.

Repair

Field repair of the DNC Hub is not recommended. If the instrument is still in warranty, ALWAYS return it immediately to Greco Systems for repair TO KEEP THE WARRANTY IN EFFECT. If the instrument is no longer under warranty, it is still best to return it to Greco Systems for repair. (See *Return Shipment* below.)

There are no fuses accessible from the outside of the chassis. If the unit will not power up, it should be considered in need of repair, and it should be returned to Greco Systems for service, as outlined above.

Return Shipment

Return Material Authorization

Before returning the E-DNC Hub, a Return Material Authorization number should be obtained from Greco Systems. (See *Return Material Authorization Procedures* in the front matter of this manual.)

Repackaging Materials

If the original packaging was saved, repackage the unit in the original container, foam insulators, bags, and padding. Use the *Repackaging Procedure* below as a guide, but skip steps that do not apply.

If the original packaging is not available, follow the *Repackaging Procedure* exactly.

Note: *In-transit damage is not covered by Greco Systems.*

Repackaging Procedure

1. Disconnect the power cord and all cables, place them in a clean plastic bag, and tape the bag shut.
2. To protect the heads from vibration and shock, re-insert the diskette drive shipping protector into the drive. (The unit was originally shipped with a protector in the drive.)
3. Place the E-DNC Hub in a clean plastic bag, and tape the bag shut.
4. Tape the bag containing the cables to the top of the bagged instrument.
5. Place the original foam pads in place around the bagged instrument, or tape a strip of cardboard completely around the bagged instrument to protect all surfaces.
6. Place the instrument in the original container, if possible; or place it in the center of a strong container, with at least six inches of loose Styrofoam (or equivalent) pellets completely surrounding the instrument.
7. Place all paperwork in a separate bag, and place it with the other contents, away from the sides of the container, where it cannot be damaged when the box is opened.
8. Prepare the shipping label before sealing the container. Be sure to include the Return Materials Authorization number on the label.
9. Seal the container with strong packing tape, mark it FRAGILE on all sides, and affix the shipping label.
10. Ensure that the shipment is sufficiently insured to cover all costs if it is damaged or lost.
11. Ship the package by prepaid freight to:

**Greco Systems
325 W. Goodwin St.
Prescott, AZ 86303**

APPENDIX A

SPECIFICATIONS

CPU

- 600 MHz Pentium III

SYSTEM MEMORY

- 256 MB RAM

FEATURES

- Windows XP Embedded
- Positive pressure enclosure

CONNECTORS

- DB9 serial ports, COM3, COM4, COM5, COM6, COM7, COM8, COM9, COM10
- PS/2 keyboard connector
- RJ45 Ethernet 100/10BaseT connector
- DIN5 DC Power

DIMENSIONS

- Height: 2.5"
- Width: 6.5"
- Depth: 4.5"

POWER REQUIREMENTS

- 100 - 240 V ac 47-63Hz
- 60 W
- +5V@ 2A and +12V@ 1A

FUSE

Soldered to power supply.

OPERATING TEMPERATURE

- 0-60 °C

STORAGE TEMPERATURE

- -20 TO 80 °C

Notes