

THE COMPASS COMPUTER (TM) OWNER'S MANUAL

October 1, 1982

Order Number 1101-40

FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE STATEMENT

WARNING: This equipment generates, uses, and can radiate radio frequency energy, and, if not installed in accordance with the Owner's Manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J, Part 15 of FCC Rules which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference. Appendix A describes some procedures that may correct interference.

COPYRIGHT © 1982 GRiD Systems Corporation
2535 Garcia Avenue
Mountain View, CA 94043
(415) 961-4800

Manual Name: The Compass Computer (TM) Owner's Manual
Order Number: 1101-40
Issue date: October 1, 1982

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopy, recording, or otherwise, without the prior written permission of GRiD Systems Corporation.

The information in this document is subject to change without notice.

NEITHER GRiD SYSTEMS CORPORATION NOR THIS DOCUMENT MAKES ANY EXPRESSED OR IMPLIED WARRANTY, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. GRiD Systems Corporation makes no representation as to the accuracy or adequacy of this document. GRiD Systems Corporation has no obligation to update or keep current the information contained in this document.

GRiD System Corporation's software products are copyrighted by and shall remain the property of GRiD Systems Corporation.

UNDER NO CIRCUMSTANCES WILL GRID SYSTEMS CORPORATION BE LIABLE FOR ANY LOSS OR OTHER DAMAGES ARISING OUT OF THE USE OF THIS MANUAL.

The following are trademarks of GRiD Systems Corporation: GRiD, NAVIGATOR, COMPASS CENTRAL, COMPASS COMPUTER, and LEVERAGED LEARNING.

TABLE OF CONTENTS

CHAPTER 1: FIRST THINGS

Caring for your Compass Computer (TM) System	1-1
General Warnings	1-1
Cleaning your Compass Computer	1-3

CHAPTER 2: INTRODUCING THE COMPASS COMPUTER (TM) SYSTEM

Layout of the Compass Computer	2-1
The Compass Rear Panel	2-2
The Fastener Protectors	2-2
The On/Off Switch	2-2
The Power Connector	2-3
The Line Voltage Switch	2-3
The Fuse	2-3
The Accessory Connector	2-4
The Telephone Connectors	2-4
The GPIB Connector	2-4
The Leg	2-4
Setting up and Starting Up	2-4
Notifying the Telephone Company	2-7
Closing up the Computer	2-7

APPENDIX A: DEALING WITH RADIO FREQUENCY INTERFERENCE	A-1
---	-----

LIST OF FIGURES

Figure 2.1. Front Top View of the Computer	2-1
Figure 2.2. Rear Panel of the Computer	2-2
Figure 2.3. Computer Line Voltage Settings	2-3
Figure 2.4. Pulling Down the Compass Computer Leg	2-5
Figure 2.5. The Compass Computer System	2-6

CHAPTER 1: FIRST THINGS

Congratulations on your acquisition of a Compass Computer (TM) system. A few moments spent with this book will give you the basic knowledge you need to set up, start up, and care for your Compass Computer system.

Before beginning a study of your GRiD (TM) application programs, be sure to review the companion volume to the Owner's Manual, "The Compass Computer (TM) System Guidebook." If you have a disk system or other peripheral device, you should also read "The Compass Computer (TM) Peripherals Manual."

CARING FOR YOUR COMPASS COMPUTER (TM) SYSTEM

=====

Although GRiD Systems has engineered and constructed your Compass Computer system for durability as well as performance, we advise you to treat it (and each peripheral you own) as you would any precision instrument, such as an expensive camera -- with care.

GENERAL WARNINGS

- Keep your Compass Computer shipping carton. It provides the best available protection for shipping the unit back to GRiD Systems Corporation should a need for service arise. If you should lose the carton, contact your local GRiD office for a replacement.
- Always unfold the system's leg. This action not only presents the keyboard and screen at proper work angles, but allows for cooling of the unit.
- Operate the system only within an ambient temperature range of 50°

to 105° F (10° to 40° C). Allowable storage temperatures range from -40° to 150° F (-40° to 65°C).

- Always turn the computer off before unplugging it.
- Do not subject the computer or its peripherals to prolonged exposure to direct sunlight.
- Do not subject the unit to unnecessary shock or vibration.
- Do not operate the system in a dirty or a dusty environment.
- Do not get the computer wet or operate it where it could fall into water.
- Do not operate your Compass Computer system in any potentially explosive atmosphere.
- Do not use the unit when humidity has reached the point of condensation.
- Do not attempt to open the computer case; it contains no user-serviceable parts. Such an action could damage the computer and will void your warranty.
- Do not let the power cord or peripheral connector cords hang over the edge of your work surface. This invites problems, like someone accidentally pulling equipment off onto the floor.
- Make sure that any power plug adaptor (whether for a foreign or a domestic outlet) is properly grounded.
- For continued protection against risk of fire, replace the fuse only with fuses of the same rating and type. In the U.S., use a 1 ampere slow-blow fuse. Note: the fuse for the Compass Computer system have the dimensions 1 1/4" x 1/4" (6.35mm x 31.8mm).
- When traveling overseas ...
 - Carry the proper 500 milliampere slow-blow fuse for 220 VAC lines.
 - Be sure to change the fuse and the voltage selector on the Compass Computer rear panel before plugging in the system.
 - See that you have a properly grounded adaptor plug for local, non-grounded outlets.

CLEANING YOUR COMPASS COMPUTER SYSTEM

Before attempting to clean either the case or the screen, turn your computer off and disconnect the power cord from the outlet. To clean the case work, use a slightly damp, soft cloth and, if necessary, a mild, non-abrasive detergent. Wipe the case clean and then dry it with a soft cloth.

To clean the display, dampen a soft cloth with a non-abrasive glass cleaner and gently wipe the screen with it. **WARNING:** Do not get the screen wet to the extent that you can see liquid running down it. Finally, wipe the display dry with another soft cloth.

CHAPTER 2: INTRODUCING THE COMPASS COMPUTER (TM) SYSTEM

We'll begin by orienting you to the Compass Computer system. Following that, the chapter will show you how to set up, start up, and close up the unit.

LAYOUT OF THE COMPASS COMPUTER SYSTEM

=====

Figure 2-1 shows the top front surfaces of the Compass Computer system. To orient you to the computer, note that the GRiD logo belongs at the rear top of the case. The screen latches are on the sides toward the front.

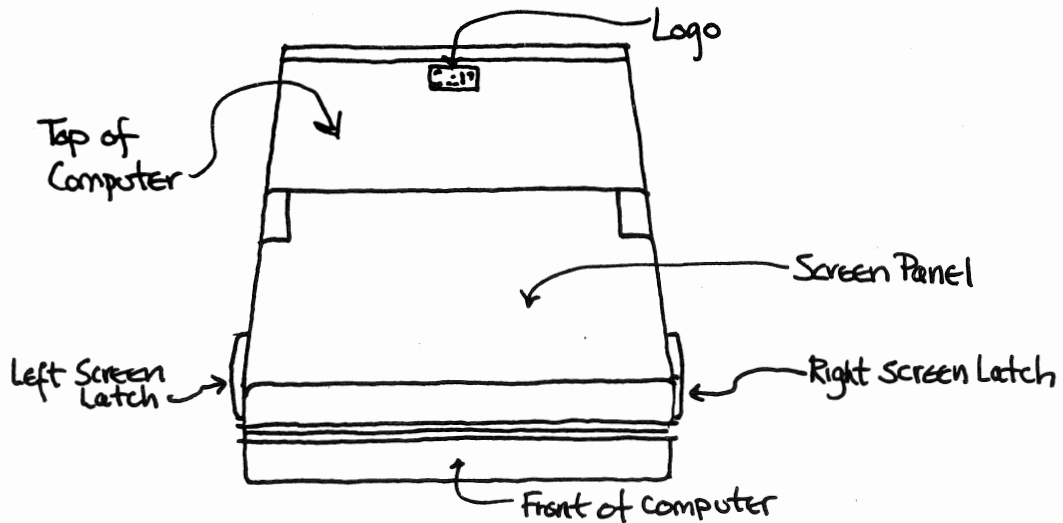


Figure 2-1. Front Top View of the Computer

THE COMPASS COMPUTER REAR PANEL

Figure 2-2 shows the rear panel of the computer in detail. A knowledge of the rear panel is necessary when setting up and using the computer.

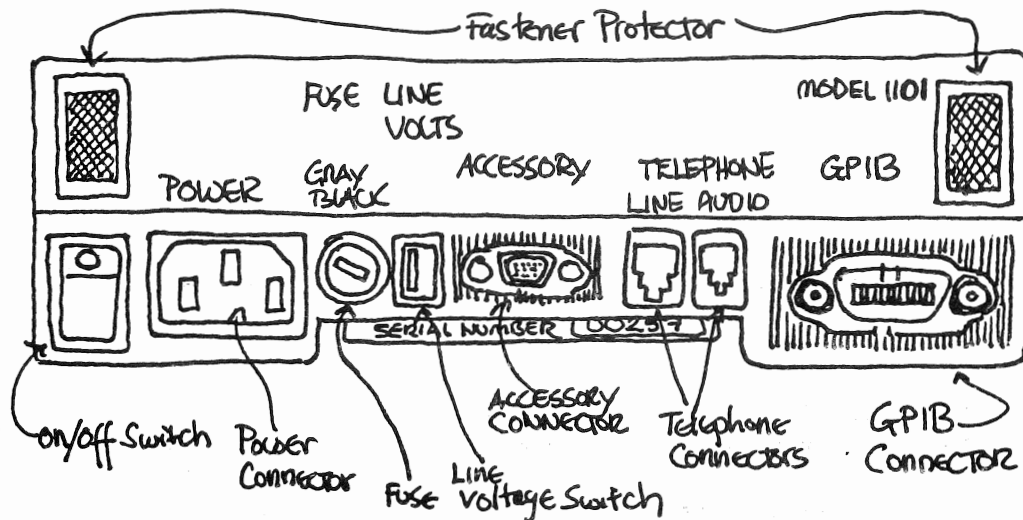


Figure 2-2. Rear Panel of the Computer

The Fastener Protectors

These two plastic pads cover fasteners. Do not attempt to open your Compass Computer System. No user serviceable parts are enclosed. Opening the computer will void your GRiD warranty.

The On/Off Switch

The On/Off switch is a rocker switch. In the off position, the switch reveals a red circle on its top. To turn the computer on, press on the upper portion of the switch. To turn it off, press on the bottom portion of the switch. The computer goes through a power cycle sequence after you turn the unit off. To allow completion of this sequence, always wait at least 5 seconds before turning the computer on again. Ignoring this precaution may cause improper loading of system software.

The Power Connector

The three prong male connector provides a ground prong and keeps you from improperly positioning the female end of the power cord. To remove power from the computer, disconnect the three-prong male connector from the wall outlet.

The Line Voltage Switch

The Line Voltage switch lets you switch between 100-120 AC voltages and 220-250 AC voltages. See Figure 2-3 below. **WARNING:** Always make sure this switch is on its proper setting before plugging the power cord into an electrical outlet. An incorrect voltage setting could damage your computer when power is applied.

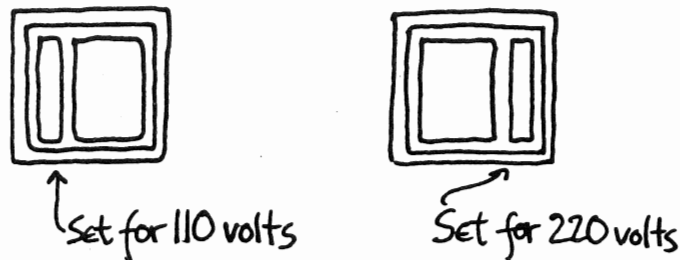


Figure 2-3. Computer Line Voltage Settings

The Fuse

The fuse protects your system from out of range electrical input. The fuse that comes with your computer is a one ampere, slow-blow fuse for the 110 VAC Line Voltage setting. If you switch to the 220 VAC setting, be sure to exchange the one ampere fuse for a 500 milliampere slow-blow type fuse. You can gain access to the fuse by turning the fuse cover in a counter-clockwise direction.

WARNING: For continued protection against risk of fire, replace only with the same type and ratings of fuse. The fuse must have the dimensions 1 1/4" x 1/4" (6.35mm x 31.8mm). The one ampere Littelfuse type is 3AG; the Fusetron type is MDL.

The Accessory Connector

The accessory connector is an RS-232-C compatible a microminiature 2D-E-19 connector. It can be used to connect an external modem, certain printers and other serial devices. Note the "D" shape; it makes an upside-down connection impossible.

The Telephone Connectors

The computer has two telephone connectors. A cable going directly to a telephone wall jack should connect in the slot marked "LINE." Only the optional Compass Computer handset works with the AUDIO slot.

The GPIB Connector

Most GRiD peripherals -- disk drives, plotters, and dot matrix printers -- connect through the GPIB (General Purpose Interface Bus) connector. See the "Peripherals Manual" for instructions on how to connect your computer and its peripherals with GPIB cables.

The Leg

The computer's leg runs across the lower middle portion of the rear panel. When setting up, you must pull it down to position the computer at a good angle for typing and viewing. The position provided by the leg also helps keep the computer from overheating. Always extend the leg before turning on the computer.

SETTING UP AND STARTING UP

=====

Begin by clearing a sturdy, flat work surface. Never rest the computer on a soft surface like a carpet, pillow or blanket. Such surfaces can interfere with air circulation beneath the computer and cause damage due to overheating. Follow the instructions below.

▶ HOW TO SET UP AND START UP THE COMPUTER

- ① Pull down the computer's leg (see Figure 2-4) until it clicks into place. Place the unit on your work surface so that you can get at the rear panel easily.

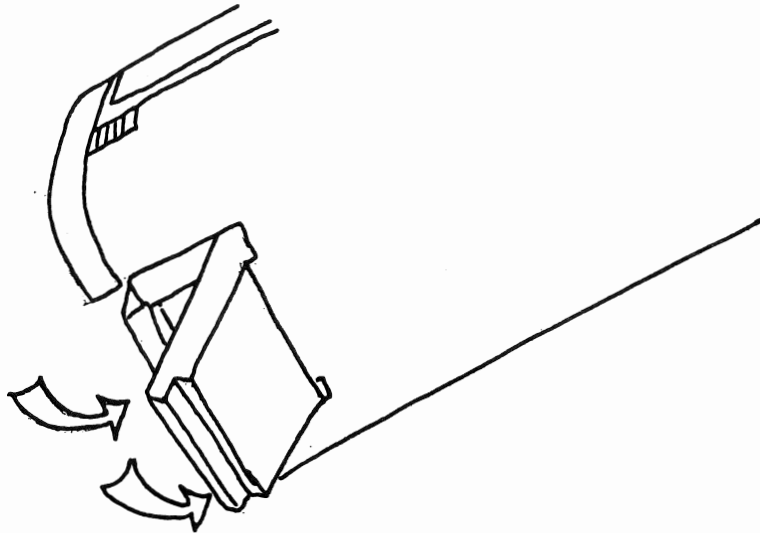


Figure 2-4. Pulling down the Compass Computer Leg

- ② Check to see that the voltage line switch is set to 110 VAC (for the U.S.A.). Outside of the U.S., find out what the local voltage is. If necessary, flip the voltage line switch to 220 VAC and change to a 500 milliamperere slow-blow fuse.
- ③ Plug your power cord into the power connector and then into a wall outlet.
- ④ If you intend to use any of the computer's telephonic features,

plug your phone line into the slot marked "LINE" and the other end into a modular phone jack. See the section below on notifying the telephone company.

If you intend to use your Compass Computer handset, plug the handset's jack into the slot marked "AUDIO."

- ⑤ If you want to attach any peripherals to either the GPIB and/or accessory connectors, attach them now and turn them on.
- ⑥ Turn the computer to the position most convenient for work. Pull the screen latches towards you. Gently lift the screen until it comes to rest. Once set up, your computer should resemble the one in Figure 2-5.

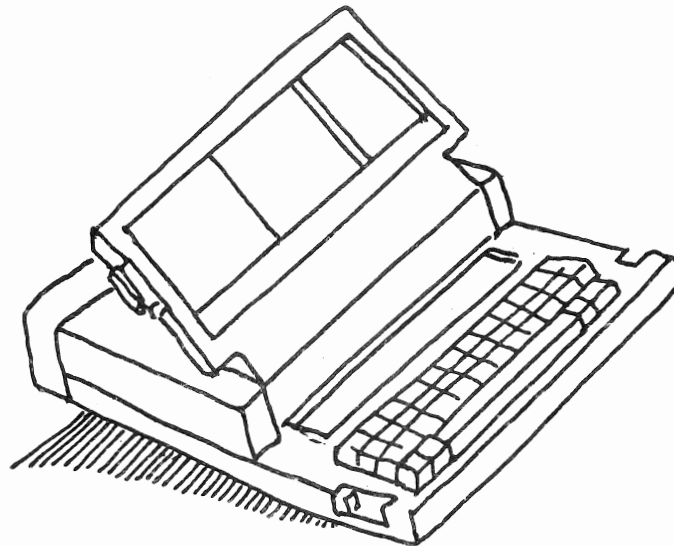


Figure 2-5. The Compass Computer System

- ⑦ Reach to the right rear corner of the machine and push the on/off switch into the on position. The system will load its operating software and present its initial screen in a few seconds. This screen will show the word "Programs," surrounded by a rectangle.

"Programs" is a "subject" -- a special kind of file that contains other files. See "The Compass Computer (TM) Guidebook" for details on "Programs," subjects, and other files.

NOTIFYING THE TELEPHONE COMPANY

The Federal Communications Commission (FCC) requires that you contact your local telephone company before using telephone lines to transmit data. The telephone company will want four pieces of information. You must give this information for any telephone number from which you operate the computer.

- Manufacturer -- GRiD Systems Corporation
- Equipment model number -- 1101
- FCC registration number -- AJ496M 70322-DM-E
(Note: the registration number is printed on a sticker affixed to the cavity that accomodates the Compass Computer leg. With the leg pulled down, turn the computer upside-down to check the registration number.)
- Ringer equivalence -- 0.9B

CLOSING UP THE COMPASS COMPUTER
=====

You can return the screen panel to its closed position and/or turn the power off whenever you're not using your computer. When you want to take advantage of the computer's portability, you will need to reverse the setup process.

▶ HOW TO CLOSE UP THE COMPUTER

- ① Turn the power off.
- ② Return the screen panel to its closed position and press gently until you hear it click shut.
- ③ Disconnect all cords -- telephone, peripheral, and power -- and accessories (the handset).
- ④ Pick up the computer and turn it so that you can get a good grip on its leg. Pull the leg outward (away from the bottom of the computer) until it clicks, then fold it back. When it reaches this closed position, you will hear another click.

That's all there is to getting ready to travel. Don't forget your power

cord and whatever peripherals, cables, and accessories you might want to take.

APPENDIX A: DEALING WITH RADIO FREQUENCY INTERFERENCE

If you suspect that your Compass Computer system is interfering with another electronic device (like a TV or radio), try the following experiment.

With the system turned on, watch and/or listen to the instrument that seems to be picking up Radio Frequency (RF) interference. Turn the computer off. If interference subsides significantly, you may confidently trace your problems to the computer. If no change occurs, the problem lies elsewhere in your environment (even in the "troubled" device, itself).

If the computer seems to be the guilty party, try these methods for lessening interference. Note: You should have the computer and the other instrument (the "receiver") turned on to determine when one or more of these ideas work.

- Change the position of the receiver's antenna. In the case of radios, this may mean moving the radio itself.
- Similarly, change the computer's position relative to the receiver.
- Move the computer away from the receiver. If this means unplugging the computer, be sure to turn it off first.
- Try plugging either the computer or the receiver into a different outlet. If possible, get the two instruments on different electrical (branch) circuits.

If after trying the above solutions you still can't achieve satisfactory reception, contact your local GRiD office.

