Hardware

Installation

Manual

AdIDE 2™

For your Amiga Computer

ICD

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Chapter 1: General Information............................ 1

Chapter 2: Hardware Installation........................... 5

Chapter 3: General AdIDE 2 Information................. 17

Chapter 1: General Information

1.1 - Introduction

The AdIDE 2 provides you with a means to access a wide variety of low cost mass storage devices. The AdIDE 2 gives the ability to use up to two (2) 16 bit AT class IDE hard drives (commonly found on PC clone computers), autobooting, and full compatibility with Kickstart 1.2 and above. The AdIDE 2 is designed for internal installation in the Amiga 500/500 Plus, 1000, 1500, and Amiga 2000.

1.2 - AdIDE 2 Configurations

The AdIDE 2 is compatible with all motherboard revisions of the Amiga 500, 1000 and 2000 (PAL and NTSC).

A500 - Revision 3 - 6A, and 8 (500 Plus)
A1000 - Early and late revisions
A1500/2000 - Revision 4.0 (original German A2000), 4.1 - 4.5, 6.0 - 6.2 (all revisions)

The AdIDE 2 comes in one basic configuration. The AdIDE 2 package includes the following components;

(1) - AdIDE 2 circuit board
(1) - AdIDE 2 Hardware Installation Manual
(1) - Software User's Manual
(1) - AdIDE 2 Quick Installation Guide
(1) - ICDPrepHD floppy disk
(1) - 11 inch (27.94 cm) 44 pin to 40 pin ribbon cable

NOTE (A500/500 Plus, A1000): If you plan on installing a 3.5 inch hard drive internally you will need the Prima Mounting Kit (ACC-PRIMA-MK) or if you plan on mounting a 2.5 inch hard drive internally, you will need the Novia Mounting Kit (ACC-NOVIA-MK). Both kits are available from ICD. Amiga 1500/2000 owners do not need a mounting kit to install 3.5 inch hard drives.

1.3 - Before you Begin

You will need a few items ready before you proceed with the AdIDE 2 hardware installation.

- A #2 Phillips head screwdriver. (A1000, 1500/2000 installation).
- #10 Torx screwdriver (A500/500 Plus Installation).
- Small flat-bladed screwdriver (for removing ICs).
- An anti-static device (wrist strap, touch pad).
- A container to hold screws so that they don't get lost

It is recommended that you perform the installation on a flat, clear surface. This will allow you to keep track of all your computer's parts and reduces the risk of losing vital components (the screws!).

A quick installation guide is included for the experienced user or technician to perform a fast installation. If you are just getting started with expansion cards and hard drives, reading both manuals is highly recommended. If you feel uncomfortable with the idea of opening your computer or handling circuit boards, you should let your dealer or a more experienced user perform the installation for you.

This installation requires opening the case of the Amiga 500/500 Plus. These computers are typically referred to as 'closed' systems meaning that if the case is opened by the user, the manufacturer's warranty is voided. If you wish to preserve you computer's warranty, this installation should be performed by an authorized Amiga dealer.

1.4 - General Static Precautions

Many electronic components are sensitive to static electricity. A static electricity discharge to the AdIDE 2 could damage some chips or your computer. It is advised that you either wear a properly grounded anti-static wrist strap or use a properly grounded anti-static touch pad. A good place to ground these devices is to the screw that holds the front panel of an electrical outlet. A simpler method of grounding yourself is to touch something metal (a water pipe, heater vent or a grounded appliance). If you are not properly grounded, avoid performing this installation in a carpeted room. It is very easy to build up a static charge when walking across a carpet (or even moving your feet).

It is also recommended that you disconnect all of your computer peripherals from the wall outlet during electrical storms. Lightning bolts can range over 100,000 volts and could seriously damage your computer equipment. It is recommended that you use a surge protector with a circuit breaker for normal usage (a plain power strip will not stop electric surges).

1.5 - System Requirements/Recommendations

A1000 (All revisions): It is highly recommended that you perform most, if not all of the grounding modifications described in section 2.4.1.

It is recommended to install at least 1 MB of RAM. Many application, when used with a hard drive, require at least 1.5 MB of memory to be installed.

You should perform the installation on a clear, flat surface and have some containers handy to hold screws. Leave yourself plenty of room to work.

1.6 - About this Manual

This manual is intended to aid and instruct in the hardware installation of the AdIDE2.

Chapter 1, General Information, provides information on the content and layout of this manual and describes what things you need to get started.

Chapter 2, Hardware Installation, describes the AdIDE 2 installation procedures for the Amiga 500/500 Plus, 1000 and Amiga 1500/2000.

Chapter 3, AdIDE 2 Information provides details on AdIDE 2 jumper settings, and notes on using AdIDE 2 with CPU emulator cards.

Chapter 4, Testing and Troubleshooting, outlines a brief test to see if your AdIDE 2 is working properly and advice in the unlikely event that it does not.

Appendix A provides a chart for all AdIDE 2 jumper settings.

Appendix B provides pin diagram of the 44 pin IDE hard drive connector on the AdIDE 2.

Chapter 2: Hardware Installation

2.1 - Installing AdIDE 2 for the Amiga 500/500 Plus

The following sections cover installation procedures specific to the Amiga 500/500 Plus.

NOTE: If you already have a card that attaches to the CPU socket of your Amiga 500/500 Plus, please read section 2.4 before continuing.

2.1.1 - Opening the Amiga 500/500 Plus

1. Disconnect power coming to you Amiga 500/500 Plus. Disconnect power to any expansion devices and peripherals connected to your Amiga.

2. Remove any expansion devices and peripherals (mouse, printer, etc.) externally connected to your computer.

3. Flip the Amiga 500/500 Plus upside down. Using the #10 Torx screw driver, remove the six (6) screw which secure the cover. There are three (3) screws holding the back of the cover and three securing the front part of the cover. Keep the screws in a safe place as you will need them later.

4. Flip the Amiga 500/500 Plus upright again and carefully pull the plastic cover off and place it somewhere out of the way. Carefully disconnect the keyboard connector from the motherboard (this is the multi-colored group of wires). Please note the orientation of the connector as you pull it out.

WARNING!: Do not pull the keyboard connector out by the wires. You could inadvertently pull the wires out of the connector. Make sure you pull on the connector itself.

Carefully disconnect the keyboard ground cable from the internal floppy drive and remove the keyboard from the computer. Place the keyboard aside.

5. You will notice that the Amiga 500/500 Plus shielding is help down by some metal tabs and four (4) Torx screws. Gently pull the meal tabs upright taking care as not to break them). Using the #10 Torx driver, remove the two screws that secure the front part of the shielding to the motherboard. The other two (2) screws secure a separate, smaller piece of shielding over the Amiga 500/500 Plus expansion port. Remove both of these screws (located on the left side of the Amiga 500/500 Plus motherboard on both ends of the expansion connectors). Place the small piece of shielding and screws in a safe place. You will need them later.

6. Gently pull the shielding off of the Amiga 500/500 Plus. If it does not come off completely, check and make sure that you bent up all the small, metal tabs that secure the shielding. Set the shielding aside, out of the way.

2.1.2 - Placement of the AdIDE 2

7. You should now be able to see the entire Amiga 500/500 Plus motherboard. If you are a pop music fan, please take a moment to read the motherboard credits near the floppy drive. If not, you can skip this step.

8. Locate the 68000 processor in your computer. This chip is a long, rectangular IC located on the left side of the motherboard.

9. Using a small, flat-bladed screwdriver, gently pry up the CPU chip on alternate ends. Do not just pry up one end and pull it out. If you do, you are almost guaranteed of bending or breaking pins on the chip. Gently pry up one end a little ways, the do the same to the other end until the chip can be easily removed.

10. Remove the AdIDE 2 from its protective anti-static bag and remove the anti-static foam covering the pins on the bottom Once the CPU chip is out of the socket, place it on the AdIDE 2. When the AdIDE 2 is seated, the notch on the CPU should face the front of the computer. You should make any changes to the AdIDE 2's jumpers at this time. Read Chapter 3 for information regarding jumper settings. Examine the AdIDE 2. See figure 2.1 for help with orientation. Be very careful not to bend or break any pins on the AdIDE 2 board. If the board does not seem to be going in smoothly, remove it and try

again. DO NOT FORCE THE BOARD IN! You will likely break a pin if you do.

11. If the AdIDE 2 is installed properly, the 44 pin IDE ribbon cable connector should be facing the right side of the computer. Once the AdIDE 2 is installed, proceed with the instructions outlined in either the **Prima Mounting Kit** or the **Novia Mounting Kit**.

12. Once your mounting kit is installed, proceed to **Chapter 4: Testing and Troubleshooting**.

2.2 - Installing the AdIDE 2 in the Amiga 1000

This section covers the details necessary to install the AdIDE 2 in the Amiga 1000. If you already have a card that attaches to the CPU socket of your Amiga 500/500 Plus, please read section 2.4 before continuing.

2.2.1 - Opening the Amiga 1000

1. Disconnect any power coming to your computer, expansion devices and peripherals (mouse, keyboard, printer, etc.). Disconnect any expansion devices and/or peripheral you might have attached to your computer.

2. Flip the computer upside down.

3. Remove the five (5) sunken screws that hold the case together. Place the screws in a safe place.

4. Flip the computer back into an upright position. Remove the plastic cover. If you have never opened your A1000, take a moment and check out the developers signatures in the case top (this is where it all began). Place the case top aside.

5. Remove the screws that secure the metal shielding to the Amiga 1000 case. There are a total of eighteen (18) screws that need to be removed. Remove these screws and put them in a safe place. Bend up the two (2) metal tabs that help secure the shielding. There is one on the left, rear portion of the shielding and

one on the right rear portion of the shielding. Remove the shielding and place it aside.

6. Disconnect the ribbon cable connecting the floppy drive to the motherboard and make a note of its original orientation.

2.2.2 - Placement of the AdIDE 2

7. Locate the 68000 CPU chip. This is a long, rectangular chip located immediately to the left of the A1000 expansion port.

8. Using a small, flat-bladed screwdriver, gently pry up the CPU chip on alternate ends. Do not just pry up one end and pull it out. If you do, you are almost guaranteed of bending or breaking pins on the chip. Gently pry up one end a little ways, the do the same to the other end until the chip can be easily removed.

9. Remove the AdIDE 2 from its protective anti-static bag and remove the anti-static foam covering the pins on the bottom. Place the 68000 CPU on the AdIDE 2 board. The notch on the CPU should face the rear of the computer when the board is installed. You should make any changes to the AdIDE 2's jumpers at this time. Read Chapter 3 for information regarding jumper settings. See figure 2.2 for help with orientation. Be very careful not to bend or break any pins on the AdIDE 2 board. If the board does not seem to be going in smoothly, remove it and try again. DO NOT FORCE THE BOARD IN! You will likely break a pin if you do.

10. If the AdIDE 2 is installed properly, the 44 pin IDE ribbon cable connector should be facing the left side of the computer. Once the AdIDE 2 is installed, proceed with the instructions outlined in either the **Prima Mounting Kit** or the **Novia Mounting Kit**.

11. Once your mounting kit is installed, reassemble your computer and proceed to Chapter 4: Testing and Troubleshooting.

2.3 - Installing the AdIDE 2 in the Amiga 1500/2000

This section covers AdIDE 2 installation procedures for the Amiga 1500/2000.

NOTE: If you already have a card that attaches to the CPU socket of your Amiga 1500/2000, please read section 2.4 before continuing.

2.3.1 - Opening the Amiga 1500/2000

1. Disconnect power to your computer and to any peripherals that may be attached (mouse, printer, etc.). Disconnect any peripherals attached to the computer.
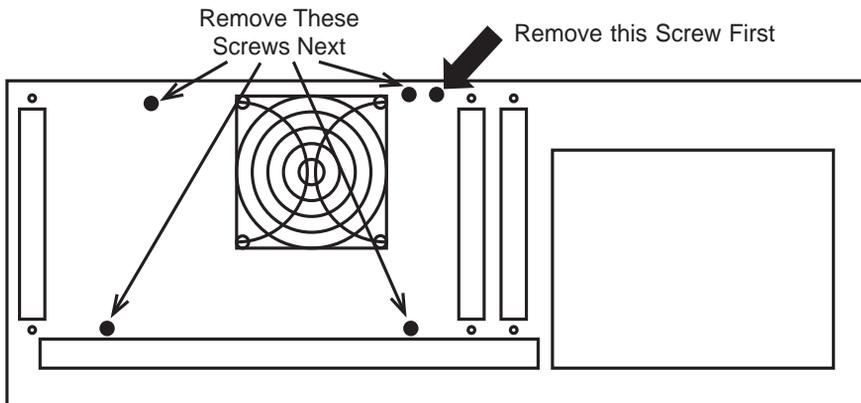
Figure 2.3

2. Remove the four (4) screws that secure the case top to the computer's frame (there are two (2) screws on the right side and two (2) on the left), remove the single screw shown in figure 2.3 and remove the case top. Put the screws in a safe place.

3. Remove the three (3) screws that secure the front of the power supply assembly. Turn the computer around and remove the four (4) screws shown in figure 2.3. Put the screws in a safe place.

4.   Using both hands, lift the complete power supply assembly up then rotate it to the left until it is upside down. Lay the upside down assembly down over the left side of your computer. Make sure the power supply assembly will not move from this position.

2.3.2 - Placement of the AdIDE 2

 5.   Locate the 68000 CPU chip on your motherboard. This is a long, rectangular chip. Using a small, flat-bladed screwdriver, gently pry up both ends of the CPU chip until it is loose. Remove the CPU chip and place it in a safe place.

6.   Take the AdIDE 2 board out of its protective anti-static bag and remove the anti-static foam from the bottom. Place the CPU on the AdIDE 2 board. The notch on the CPU should face the frint of the computer when the board is installed. You should make any changes to the AdIDE 2's jumpers at this time. Read Chapter 3 for information regarding jumper settings. Using the installation orientation in figure 2.1, place the AdIDE 2 board in the now empty 68000 socket. If the board does not seem to be going in smoothly, remove it and try again. DO NOT FORCE THE BOARD IN! You will likely break a pin if you do.

7.   Connect the 44-pin end of the supplied 44 pin to 40 pin ribbon cable to the 44 pin ribbon cable connector shown in figure 2.1. Be careful not to push the AdIDE 2 out of the 68000 socket.

8.   Connect the 40 pin end of the ribbon cable to your 3.5 inch IDE hard drive. Connect one of the A1500/2000 power leads to the power connector on your hard drive. Most drive and power connectors are keyed to make it difficult to plug the cables in backwards.

WARNING!: Some Seagate brand IDE hard drives (older half-height drives like the ST 157) have their ribbon cable connector is keyed in reverse. make sure pin 1 of your ribbon cable (marked by a red stripe) is actually connected to pin 1 of the hard drive. Do not assume that the connection is correct because the cable will only fit one way. If your drive's connector, is in fact keyed in reverse, trim the key tab from the ribbon cable so it may be connected correctly.

Contact ICD Amiga technical support if you have any doubts about your drive's connector.

2.3.3 - Mounting Devices in the Amiga 1500/2000 Drive Bays

If your hard drive has a face plate, it should be removed or trimmed before attempting to mount the drive to a drive bay. This will allow it to fit the hole in the cover. All cables should be attached before mounting the device as explained in steps 7 and 8 of section 2.3.1 and all changes to drive settings should be made before mounting the drive.

2.3.4 - Mounting a 3.5 Inch Hard Drive

Remove any cards already installed in your computer being sure to note their positions. Remove the metal plate to which the floppy diskette drive is attached by removing the two screws from each side. Line up and mount the hard drive to this plate with four screws. Replace the metal plate and the screws that hold it in. You should leave some play so the plate may be moved forward and backward. Slide the plate all the way forward and tighten the screws. If you have no other hard drives to install, you may proceed to section 2.3.5.

2.3.5 - Mounting a 5.25 Inch Hard Drive

Remove any cards already installed in your computer. Slide the 5.25 inch device (or 3.5 inch device in a 5.25 inch frame) into the drive bay under the floppy drive. Use four screws (two on each side) to mount the device, but do not tighten them all the way.

If your drive does not have a plastic face plate, you may go ahead and tighten the screws. If your drive does have a face plate, remove the blank plate from the A2000's cover by removing the two screws securing it. Push the device all the way forward and tighten the screws. Once the drive is securely mounted, read the next section.

2.3.6 - Closing the Amiga 1500/2000

Once you have your drives and cables mounted the way you want, re-install any other cards you may have removed, place the power supply assembly in its original position and replace the screws that secure it to the computer's frame. Replace the computer's metal cover and replace the four screws that connect to the sides of the case. Don't forget to replace the screw the case cover to the back of the computer. Reconnect the power cable to the rear of the computer. You may now proceed to the test phase outlined in Chapter 4.

2.4 - Using AdIDE 2 with Other Internal Expansion Devices

This sections describes how to use other devices that are installed in the 68000 socket with the AdIDE 2.

(A500/500 Plus): There is usually not enough room in the Amiga 500's case to mount more than one device in the 68000 socket Most devices will actually work together stacked in the 68000 socket but, as previously stated, there is not enough room in the A500/500 Plus case for both. There are alternate way to install multiple devices in the 68000 socket. Contact ICD Amiga technical support for details.

(A1000): There is enough room under the shielding to install two devices in the 68000 socket and if you remove the shielding, there is enough room for three devices. Using more than one expansion device may require additional grounding modifications to be performed on the A1000 motherboard. Read section 2.4.1 for more information.

(A2000): There is usually just enough room inside the Amiga 1500/2000 to install two devices in the 68000 socket. It is recommended that if you do this, insulate the bottom of the power supply assembly so it does not make contact with the power supply assembly.

(A2000): The AdIDE 2 will not work with accelerator cards which utilize the CPU slot. Whenever one of these cards is active, the 68000 and anything attached to its socket is disabled.

If you are stacking devices in the 68000 socket, the AdIDE 2 should always be the first device installed.

If you are unsure if your AdIDE 2 will work with your expansion, do not hesitate to contact ICD Amiga technical support for help.

2.4.1 - Amiga 1000 Grounding Modifications

The Amiga 1000 suffers from poor grounding that could cause certain combinations of expansions devices to fail. Most A1000 grounding problems are a result of poor grounding on the WCS (Write Control Store) daughterboard present on NTSC systems. PAL Al000s still have some grounding problems but they do not seem to be as severe as those on the NTSC systems. The modifications listed below may reduce or eliminate these grounding problems. These modifications do require some soldering to be done. If you do not feel comfortable soldering you should let a qualified service technician perform the modifications.

- **(PAL & NTSC)** Connect a jumper wire from pin 53 (ground) of the 68000 CPU chip to the motherboard ground screw. This screw is located along the right hand side of the A1000's power supply towards the middle.

- **(PAL & NTSC)** Connect a jumper wire from a +5v power source to pin 14 or 49 of the CPU. This will provide a steady flow of power to devices stacked on the 68000 socket.

- **(PAL & NTSC)** If you have an expansion device attached to the A1000's right side expansion port, connect a piece of 24 AWG wire between the above mentioned motherboard ground and pins 1, 2, 3 or 4 on the expansion port.

- **(NTSC)** Solder a 24 AWG wire in a daisy-chain between pin 10 of the PAL chips labeled J, K, L, and N. These chips are located on the A1000's WCS daughterboard. Connect the lead end of the wire to the above mentioned motherboard ground.

- **(NTSC)** Solder a jumper wire between the left pin of C31 (capacitor) to the PAL daisy-chain wire (modification mentioned above)

- **(NTSC)** Replace the PAL chips with faster 15 ns PALs. These PALs may be obtained from DKB Software or from Spirit Technology. (Use this modification only as a last resort).

If you are using the AdIDE 2 and these modifications do not seem to help, it may be necessary to shorten the length of the IDE ribbon cable to 6 inches (15.24 cm) to lessen interference.

Chapter 3: General AdIDE 2 Information

3.1 - AdIDE 2 Configuration

The AdIDE 2 has one (1) set of jumpers which control its configuration.

The **[KStart]** jumper set controls the hard drive autobooting feature of the AdIDE 2. When the **[KStart]** jumper is set to the **1.3** position, autobooting is enabled. When the **[KStart]** jumper is set to the **1.2** position, autobooting is disabled. Consult the Software User's Manual for more information on setting up your hard drive.

NOTE: Kickstart **1.2** users MUST have the **[KStart]** jumper set to the **1.2** position at all times.

3.2 - Installing an LED to the AdIDE 2 (Optional)

The output of the LED connector on the AdIDE 2 can be connected to the driver circuitry of the Amiga 500/500 Plus internal floppy LED to show hard drive access.

Tne recommended method is to solder a single jumper wire from our output to the driver IC. Connect this jumper from the inside (cathode) pin of the LED connector (see figure 2.1) to pin 6 of U36 (74LS38) on the Amiga 500/500 Plus.

Please note that this modification will probably void any warranty that you computer may have.

3.3 - Installing Two IDE Hard Drives (Optional)

The AdIDE 2 supports the use of two (2) 16-bit IDE hard drives. You will need to contact the manufacturer of your hard drive for the proper Master/Slave jumper settings. Most modern IDE drives come configured to be used as the

only drive. One hard drive will need to be configured as a 'Master' drive and the other configured as a 'Slave' drive.

NOTE: Some Conner brand IDE hard drives are factory set to be installed in a single drive system. These drives need to be sent back to Conner to have their Master/Slave functions enabled.

If you wish to use two IDE hard drives you will need a different cable than the one provided. You may purchase a two drive IDE ribbon cable from ICD. Contact ICD sales for more information.

Chapter 4: Testing and Troubleshooting

4.1 - Testing

Once you have your AdIDE 2 and drive(s) mounted and installed in the computer and the case closed, attach the power cables to the computer and turn the computer on.

If all is well, you will see you screen change colors (light gray, dark gray, white). It is likely that your hard drive will be unprepared. If this is the case, after the screen has turned white, you will see the "Insert Workbench" prompt. (Kickstart 1.2 and 1.3 show a hand holding a disk; Kickstart 2.04 and above show an animated disk being inserted into a drive). If you have another hard drive in the system that was previously prepared and set as bootable, the system should now load from that drive.

If you have no other hard drives that are set up to boot, you should insert your Workbench floppy disk and allow it to load the Workbench. When the Workbench has loaded, examine the memory display on the top, middle part of your screen. Make sure this number approximately matches the total amount of memory you know to be installed in your computer (this number will be slightly lower than the actual amount of memory installed and will vary depending on what programs you run at startup). Run the supplied ICDPrepHD program and verify that your hard drive is recognized. Make sure that any other drives that were previously prepared are still recognized and usable.

If everything is still working properly at this point, read the **Software User's Manual.** If the test sequence fails, read on.

4.2 - Troubleshooting

This section is provided for you in the event that your system did not make it through the test phase. Listed here are various symptoms and possible solutions to cure them. It may be necessary to remove all of your expansion cards except for the AdIDE 2. This is done to make sure no other boards are interfering with the AdIDE 2's operation. Double check all portions of your AdIDE 2

installation and make sure that the AdIDE 2 circuit board is attached firmly, check the installation of your memory chips for incorrect placement (plugged in backwards, pins bent or broken), check you cables (loose or broken cables, loose connectors), make sure that power is connected to your drive. Basically, you should recheck all aspects of the installation. If you installed memory, make sure that the chips are aligned properly and check for bent or broken pins, unplug the AdIDE 2 circuit board from the computer and verify that the computer works without it.

Symptom: Computer shows a "GURU Meditation" or "Software Failure" message when you turn on the computer.
Symptom: Computer screen shows only one color (light gray, dark gray or white) and does nothing else after 30 seconds.
Symptom: Computer shows different colors (Red, Green, Yellow) when turned on.
Symptom: Workbench loads but the computer consistently crashes ("GURU Meditation" or "Software Failure").
Possible Solution: Re-open the computer and make sure that all boards are seated properly and check for loose cables. Make sure that all chips (CPU, CIAs) are installed properly.
Possible Solution: It is also possible that you have a defective memory chip. If you think this to be the case, consult the **Software User's Manual** for information on how to use the ICD MemTest program.

Symptom: You have other prepared drives in the computer but when Workbench is loaded some or none of those drives are recognized.
Possible Solution: This symptom could be a result of incorrect IDE Master/Slave settings.
Possible Solution: You may have conflicting AmigaDOS ID numbers (two DH0: partitions). Consult the **Software User's Manual** for information on setting AmigaDOS ID numbers.
Possible Solution: Re-open the computer and make sure that all boards are seated properly and check for loose cables. Make sure that all memory chips are installed properly.

Symptom: Hard drive does not spin up (drive does not come on).

Possible Solution: Power cable is not attached to the drive. Connect power cabling to the drive and try again.

Possible Solution: Does your Amiga 500 have a switching power supply? It MIGHT be necessary to purchase a larger power supply.

Possible Solution: Make sure the power connector is outputting +5v and +12v (only 3.5 inch drives). Make sure the +5v and the +12v lines are not reversed.

Symptom: AmigaDOS consistently reports Read/Write errors or Checksum errors on your hard drive.

Possible Solution: If you are using a 2.5 inch drive, make sure the ground cable provided in the Novia Mounting Kit is installed and connected to a ground.

Possible Solution: If you are using a 2.5 inch drive, make sure the supplied 2 mm cable adapter is connected firmly.

A1000 Owners: Many of these symptoms could appear in your system if you did not perform the grounding modifications. It is recommend you perform all the modifications to insure stable operation.

If you are still having problems with your AdIDE 2, you should contact your Amiga dealer or ICD's Amiga technical support.

4.3 - Contacting ICD Technical Support or Customer Service

If you have any questions or comments for ICD technical support or customer service, please call **(815) 968-2228**, Monday through Friday (holidays excluded) between the hours of 8 a.m. and 5 p.m., Central Time. Questions regarding products being serviced or for product upgrades should be directed to customer service.

Questions may also be answered by mail and fax. Please fax your questions to **(815) 968-6888**. Please make sure that your return fax number is listed clearly on the page. If you are sending a letter, please make sure that your return address is clearly listed in your letter. Please don't expect instantaneous responses to a fax. You should have a response within one or two working days. Replies to technical support letters are typically sent out within one or two

working days of receipt. Questions of a technical nature should be sent in care of the ICD Amiga Technical Support Department.

For users with modems, we provide on-line technical support. Our primary outlet is the ICD RoundTable on GEnie. You may reach this RoundTable by typing m1220 or ICD from any main GEnie prompt. The ICD RoundTable provides the latest releases of our software, press releases, new product information, and discussions relating to ICD products. ICD may also be contacted through the AMIGAUSER forum on CompuServe (76004,1600) and the hardware section on Delphi.

ICD provides a 24-hour BBS that contains the latest ICD software and product information. The ICD BBS number is **(815) 968-2229**.

When contacting ICD Amiga Technical Support, you should have the following information available:

• What model Amiga computer you own
• What other expansion boards you have (memory, accelerators, bridgeboard, etc.) and the order you have them connected.
• What versions of ICD ROMs and software you have
• What version of Kickstart and Workbench you are using
• What software programs you are running in the background
• What kind of hard drive you have (type, model, manufacturer and capacity)
Example: SCSI Quantum LPS 105S 105 MB capacity

When contacting ICD Customer Service, you should know who you purchased your product from and you should keep the sales receipt or invoice. These are needed for warranty verification.

All products returned to ICD must have a Return Material Authorization (RMA). RMA numbers may be obtained through technical support or customer service. Please remember your RMA number. It will help us locate your product more quickly if you call to check on it.

Appendix A: AdIDE 2 Jumper Settings

AdIDE 2 Autobooting (KStart Jumper)

Option	Enable	Disable
KStart	1.3	1.2

Pin 2   **Pin 44**

Pin 1   **Pin 43**
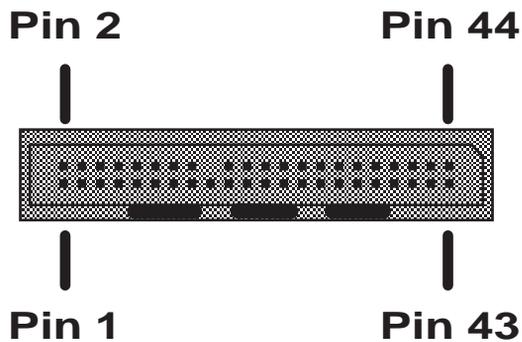
40/44-Pin IDE Connectors (Male)

Pin	Signal	Pin	Signal
1	Reset	2	Ground
3	Data Line 7	4	Data Line 8
5	Data Line 6	6	Data Line 9
7	Data Line 5	8	Data Line 10
9	Data Line 4	10	Data Line 11
11	Data Line 3	12	Data Line 12
13	Data Line 2	14	Data Line 13
15	Data Line 1	16	Data Line 14
17	Data Line 0	18	Data Line 15
19	Ground	20	Key Pin
21	Ready	22	Ground
23	I/O Write Data	24	Ground
25	I/O Read Data	26	Ground
27	I/O Channel Ready	28	No Connection
29	No Connection	30	Ground
31	Interrupt Request	32	No Connection
33	Host Address 1	34	No Connection
35	Host Address 0	36	Host Address 2
37	Host Chip Select 0	38	Host Chip Select 1
39	Drive Active (LED)	40	Ground
41	+5 Volt	42	+5 Volt
43	+5 Volt	44	Ground

Important Warranty Information

Limited Warranty

ICD, Inc. warrants to the original consumer purchaser that these ICD, Inc. Personal Computer Products (not including computer programs) shall be free of defects in material or workmanship for a period of one year for hardware and ninety days for diskettes, tapes and RAM chips from the date of purchase. *The warranty on hard drive and tapemechanisms shall not exceed he manufacturers' warranty.* If any such defect is discovered within he warranty period, ICD, Inc.'s sole obligation will be to repair or replace, at its election, the computer product free of charge on receipt of the unit (charges prepaid, if mailed or shipped) wih proof of date of purchase satisfactory to ICD, Inc. Customer is liable for shipping charges to and from ICD. Inc. as well as any customs clearance or handing charges added by a third party.

Write to:

    ICD, Inc.
    1220 Rock Street
    Rockford, IL 61101-1437
    USA.
    Attn: Customer Service Department

YOU MUST RETURN THE DEFECTIVE COMPUTER PRODUCT FOR IN-WARRANTY REPAIR.

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