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32/3-1.1   A2320 Display Enhancer — Field Service Bulletin #A02.

The A2320 Display Enhancer board (PN# 310292-01) may not show a color difference (Gray Scale) if all RGB values are set to seven (7) for the background and you are displaying an image with values set to eight (8). This is due to the loading effects of the 180 ohm resistors between the Amber IC and Video Hybrid DAC. The difference between the MSB and the LSB is such that the DAC output levels are incorrect.

Field Service Bulletin #A02 — Authorized Service Agents may replace any A2320 PCB, which is under warranty, and displays these symptoms. The warranty labor reimbursement rate for PCB replacement is $45.00

Please use Special Instruction Code "A02" in field 15 of ABCD form, which is to be returned with the defective A2320 PCB. Full credit is issued when the defective PCB is received by the Parts Depot. Remember you must order a replacement board through the Parts Department.

For Out-of-Warranty repairs replace 180 ohm Resistor packs at locations RP301, RP302, and RP303 with 33 ohm Resistor packs, four (4) resistors, eight (8) pins, $\pm 2\%$. Approved vendors: Bourns Low Profile 33 ohm 4608x102336, and Murata Low Profile 33 ohm RSL8Y330G.

Technote — New resistor packs may be soldered to the pins of the 180 ohm Resistor packs on the back of the PCB without removing them. As long as they lay flat against the PCB they will not interfere with installation.

Any A590 Hard Drives with Rev 7.0 PCB assemblies which are returned for service should have the following modification included in the repair.

Power Connectors CN7 and CN7A, only one of which is stuffed depending on which type of Hard Drive is used in the unit, must have pins 2 and 3 shorted (these are the two (2) middle pins of the four (4) pin connector). Solder jumper on trace side of PCB. This modification changes the PCB Revision to Rev 7.1.

32/3-3.1   A2091 HDC — New Rom Rev 6.6 corrects Dual SCSI problem on PCB's with WD SCSI Controller type A, Revisions 04/08.*

A2091 Hard Drive Controller cards which lock up the system when accessing two or more SCSI devices can be upgraded, under warranty, by replacing both Roms at locations U12 and U13 on the A2091.

**If Reselection is turned ON.

Part Number	Description	Location
390722-02	IC ROM Rev 6.6 ODD	U12
390721-02	IC ROM Rev 6.6 EVEN	U13
317806-04	DISKETTE, A2091 INSTALL V1.30	

IMPORTANT NOTE: Only units which have an "A" type Western Digital SCSI controller WD33C93A, revision 04 or 08 (CBM PN# 390206-03) are effected by this upgrade.

The new V1.30 Install Disk for the A2091 Hard drive controller card features the new icon "Reselect-On" which can be used in conjunction with the new V6.6 ROM's to support multiple SCSI devices.

This ReselectOn program allows the user to change the setting of the Reselect bit on the rigid disk block of the SCSI drive to "ON" without having to reformat the whole drive. With the reselect bit turned "ON", the hard drive will release the SCSI controller, when not in use, allowing the controller to access other SCSI devices. Performance is greatly improved. With the reselect bit set to "OFF", the drive will not release the SCSI controller so it (the controller) can service other devices.

Earlier versions of the A2091 ROM's did not fully support the use of multiple SCSI devices, therefore all factory configured drives were formatted with the reselect turned "OFF". The only way to change the reselect setting prior to the "ReselectOn" program was by going into HDToolbox, changing the drive configuration setting and then reformatting the drive. Now you can simply double-click on the "ReselectOn" icon.

To use multiple SCSI devices with the A2091 controller, you must first upgrade the hardware with V6.6 ROM's. Next you double-click on the "ReselectOn" icon located on the V1.30 A2091 Install Disk. The program will prompt you with a couple of questions and when the program has run it will display the message "Rigid disk block update complete".

Note: Running the ReselectOn program will not affect the data on the hard drive, however Commodore recommends a complete hard drive backup as a precaution before any attempt is made to reconfigure the system.

The HDToolbox utility does not read the current settings of the hard drive as it was formatted, and therefore cannot be used to determine the current state of the reselect bit either before or after using ReselectOn.

On Amiga® A2000 Main PCB assemblies a blown fuse, at location F1, (User +5 volts) will prevent the Mouse pointer from moving. The Mouse buttons will still work. For Out-of-Warranty repairs, replace fuse F1.

The EMI filters on the Mouse Ports, if shorted to the bottom shield, may cause the right Mouse button not to function. This may be corrected by shortening the leads of the EMI's on the solder side of the PCB.

32/3-5.1 **A2286 AT Bridgeboard™ — Use in A3000 Systems.**

The 68030 Central Processor used in the Amiga A3000 Systems has a CACHE memory feature which can interfere with 80286 — Amiga operations. This feature should be disabled.

In the "S" directory, Startup-sequence (S/Startup-sequence) before the "BINDDRIVERS" statement add the following command, CPU NODATACACHE.