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Techtopics — Issue 32 — April 1991

Section 1

1 INFO

32/1-0.0	Index — Info Section — Techtopics Issue 32	Page 1
32/1-1.1	Details of New Professional Systems Service Plan	Page 2
32/1-2.1	New FRU Pricing & Labor Rates	Page 3
32/1-3.1	New ABCD Form & Instructions	Page 4
32/1-3.2	Enclosure: Sample ABCD Warranty Claim Forms w/Instructions	Page 5
32/1-4.1	Monitor Warranty Policy	Page 6

Techtopics — Issue 32 — April 1991

Section 2

2 PARTS

32/2-0.0	Index — Parts Section — Techtopics — Issue 32.....	Page 7
32/2-1.1	Field Replaceable Unit Pricing — CBM Professional Series..	Page 8

Techtopics — Issue 32 — April 1991

Section 3

3 AMIGA

32/3-0.0	Index — Amiga Section — Techtopics — Issue 32.....	Page 9
32/3-1.1	A2320 Display Enhancer — Field Service Bulletin #A02.....	Page 10
32/3-2.1	A590 Hard Drives — Grounding on Power Connectors CN7, CN7A.....	Page 11
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.....	Page 12
32/3-4.1	A2000 — TechTip — Mouse Problems, Check Fuse, F1....	Page 13
32/3-5.1	A2286 AT Bridgeboard — Use in A3000 Systems.....	Page 14

Techtopics — Issue 32 — April 1991

Section 4

4 CBM

32/4-0.0	Index — CBM Section — Techtopics — Issue 32.....	Page 15
32/4-1.1	1802 Monitor — Techtip — No Color, Check R225.....	Page 16

Techtopics — Issue 32 — April 1991

Section 5

5 PC

32/5-0.0	Index — PC Section — Techtopics — Issue 32.....	Page 17
32/5-1.1	SL386SX — Configuring RAM in Setup.....	Page 18

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32/1-0.0 INDEX — INFO SECTION

32/1-0.0	Index — Info Section — Techttopics — Issue 32	Page 1
32/1-1.1	Details of New Professional Systems Service Plan	Page 2
32/1-2.1	New FRU Pricing & Labor Rates	Page 3
32/1-3.1	New ABCD Form & Instructions	Page 4
32/1-3.2	Enclosure: Sample ABCD Warranty Claim Forms w/Instructions	Page 5
32/1-4.1	Monitor Warranty Policy	Page 6

32/1-1.1 Details of New Professional Systems Service Plan.

Commodore® Amiga® Professional Series Computer Systems* are warranted for 12 months from date of purchase. Systems purchased as of February 1, 1991 are also covered by the CommodoreExpress™ Gold Service Program. "Gold Service" is NOT part of the 1 year warranty. Customers receive a Gold Service Activation Form with each CPU purchased from an Authorized Dealer, and must complete this form to be eligible for "Gold Service". The program covers peripheral equipment if purchased at the same time.

When the Gold Service Activation Form is returned to Commodore the Customer is given an Activation number and 800 number to be used if service is required. The 800 number is maintained by CommodoreExpress, who, if a hardware repair is necessary, will dispatch an Authorized Gold Service provider to the site, or arrange for a replacement unit to be shipped direct to the Customer.

Gold Service providers must be authorized by Commodore. On-Site Service Applications have been mailed to Authorized Dealers. You must be both an Authorized Dealer and an Authorized Service Center, and have completed service training for Amiga 2000 through Amiga 3000 series hardware to apply for "On-Site" service authorization.

*Commodore Amiga Professional Series Computer Systems include A2000 and A3000 CPUs as well as factory installed options.

32/1-2.1 New FRU Pricing & Labor Rates.

Field Replacement Units (FRU) consist of the major assemblies for each product, such as Main PCB Assemblies, Power Supplies, Drives — Floppy/Hard, and Option Cards. Under the New Service Policy all In-warranty repairs are to the FRU level only, NO component level service will be authorized other than upgrades explicitly detailed in Commodore Field Service Bulletins.

The following list details FRU's for Commodore Professional Series Products effective March 15, 1991.

<i>Part Number</i>	<i>Description</i>	<i>ASP*</i>	<i>Suggested Retail</i>	<i>Warranty Labor Reimbursement</i>	
				<i>Depot</i>	<i>On-Site**</i>
312288-05	A2630 w/2m	\$950.00	\$1,369.00	\$45.00	\$120.00
312288-06	A2630 w/4M	\$1,223.00	\$1,799.00	\$45.00	\$120.00
312365-01	A2052 2M	\$190.00	\$329.00	\$45.00	\$120.00
312370-03	A2058 w/2M	\$237.00	\$349.00	\$45.00	\$120.00
314114-01	A2286 ATBB	\$543.00	\$799.00	\$60.00	\$135.00
312720-05	A2000 PCB ASSY	\$604.00	\$1,099.00	\$60.00	\$135.00
313310-02	A3000 PCB 16MHZ	\$1,842.00	\$3,349.00	\$60.00	\$135.00
313310-04	A3000 PCB 25MHZ	\$2,077.00	\$3,775.00	\$60.00	\$135.00
313310-10	A3000 PCB 25MHZ UX	\$3,572.00	\$6,499.00	\$60.00	\$135.00
312769-01	A2091 HDC	\$135.00	\$199.00	\$45.00	\$120.00
313315-01	DRIVE ASSY FDD 3.5	\$100.00	\$229.00	\$45.00	\$120.00
380111-06	DRIVE ASSY FDD 5.25	\$105.00	\$219.00	\$45.00	\$120.00
380752-01	DRIVE ASSY FDD 3.5	\$110.00	\$259.00	\$45.00	\$120.00
311836-03	DRIVE ASSY HDD 105MB	\$1,300.00	\$1,729.00	\$60.00	\$135.00
311837-01	DRIVE ASSY HDD 50MB	\$538.00	\$979.00	\$60.00	\$135.00
311838-01	DRIVE ASSY HDD 200MB	\$1,450.00	\$2,399.00	\$60.00	\$135.00
312716-02	KEYBOARD A2000	\$66.00	\$119.00	\$35.00	N/A
313323-02	KEYBOARD A3000	\$185.00	\$339.00	\$35.00	N/A
	1930 MONITOR	\$382.00	\$649.00	\$35.00	N/A
	1950 MONITOR	\$479.00	\$799.00	\$35.00	N/A
	1084S MONITOR	\$260.00	\$399.00	\$35.00	N/A
327124-03	MOUSE	\$23.00	\$36.00	\$35.00	N/A
313250-01	EXP CARD A3000	\$77.00	\$139.00	\$35.00	\$110.00
380708-02	POWER SUPPLY A2000	\$161.00	\$299.00	\$45.00	\$120.00
390500-02	POWER SUPPLY A3000	\$218.00	\$399.00	\$45.00	\$120.00

*ASP — Average Selling Price (Dealer Cost)

**On-Site — Must be dispatched by Commodore.

Please note: Full ASP is credited to your account upon receipt of defective In-warranty FRU and ABCD form.

IMPORTANT: FRU's returned must be in REPAIRABLE condition and packed in ANTI-STATIC bags. **REMEMBER** — remove any Expansion Ram from PCBs which was not installed by Commodore.

32/1-3.1 New ABCD Form & Instructions.

The Microcomputer Industry Association's ABCD Form has been selected to replace the NARDA Form used for Warranty claims.

Samples of the ABCD form are enclosed with this Techtomics Issue, along with complete instructions for ordering and filling out the forms. You may use the NARDA forms you have in stock until May 1, 1991, after which the NARDA form will not be accepted.

Authorized service centers may order ABCD forms by calling 1-800-433-5557, and asking for the ABCD forms order desk, or by faxing your order (on an ABCD order form) to: 1-817-387-9367 (Moore Business Forms, Dallas, Texas).

32/1-3.2 Enclosure: Sample ABCD Warranty Claim Forms w/Instructions.

Five sample ABCD forms with detailed instructions have been enclosed with Techtopics Issue 32 — April 1991.

32/1-4.1 Monitor Warranty Policy.

Component repairs to Commodore Monitors which are In-warranty have been discontinued. All defective monitors, while In-warranty, will be exchanged for the customer either by an Authorized service center, or through CommodoreExpress if customer has elected to activate their Gold Service coverage. Service centers will receive a credit of \$35.00 for handling an In-warranty monitor exchange.

Please use the following procedure for Depot exchanges:

- 1) Prepare an ABCD form, (or NARDA, if you are still using that type — valid until May 1, 1991) with all required Customer information.
- 2) Return defective Monitor to: Commodore Parts Depot. Include copies of the completed ABCD form.
- 3) A credit will be issued to your account upon receipt of the defective Monitor at current pricing.
- 4) Order a replacement Monitor through Commodore Parts. Your account will be debited at current pricing.
- 5) A Warranty reimbursement labor rate of \$35.00 will be credited to your account when the ABCD form is processed.

IMPORTANT:

- No RA/RMA is required for these warranty returns.
- If no defect is found — No Credit will be issued. The unit will be returned and your account will be charged \$25.00 for handling and return.
- If the unit is not repairable because of abuse or was damaged in shipping, due to improper dealer packaging, the unit will be returned to you and your account will be charged \$25.00 for handling and return. (No Credit will be issued.)

32/2-0.0 INDEX — PARTS SECTION

32/2-0.0	Index — Parts Section — Techtopics — Issue 32.....	Page 7
32/2-1.1	Field Replaceable Unit Pricing — CBM Professional Series.....	Page 8

32/2-1.1 Field Replaceable Unit Pricing — Out of Warranty.

The following Out-of-Warranty Core Allowances for Commodore® Professional Series FRU's are effective immediately.

The Core Allowance (Return Credit for Repairable Units) is credited for units in REPAIRABLE condition. Any modifications made to the unit which are not authorized by Commodore will negate the Core Allowance Credit.

<i>Part Number</i>	<i>Description</i>	<i>Core Allowance</i>	<i>Net ASP*</i>	<i>Suggested Retail</i>
312288-05	A2630 w/2M	\$721.00	\$229.00	\$380.00
312288-06	A2630 w/4M	\$948.00	\$275.00	\$460.00
312365-01	A2052 2M	\$73.00	\$117.00	\$195.00
312370-03	A2058 w/2M	\$91.00	\$146.00	\$245.00
314114-01	A2286 ATBB	\$293.00	\$245.00	\$429.00
312720-05	A2000 PCB ASSY	\$405.00	\$199.00	\$329.00
313310-02	A3000 PCB 16MHZ	\$1,473.00	\$369.00	\$615.00
313310-04	A3000 PCB 25MHZ	\$1,688.00	\$389.00	\$649.00
313310-10	A3000 PCB 25MHZ UX	\$3,035.00	\$535.00	\$899.00
312769-01	A2091 HDC	\$0.00	\$135.00	\$199.00
313315-01	DRIVE ASSY FDD 3.5	\$0.00	\$100.00	\$229.00
380111-06	DRIVE ASSY FDD 5.25	\$0.00	\$105.00	\$219.00
380752-01	DRIVE ASSY FDD 3.5	\$0.00	\$110.00	\$259.00
311836-03	DRIVE ASSY HDD 105MB	\$900.00	\$400.00	\$679.00
311837-01	DRIVE ASSY HDD 50MB	\$199.00	\$339.00	\$565.00
311838-01	DRIVE ASSY HDD 200MB	\$1,030.00	\$420.00	\$705.00
312716-02	KEYBOARD A2000	\$0.00	\$66.00	\$119.00
313323-02	KEYBOARD A3000	\$113.00	\$72.00	\$129.00
	1930 MONITOR	\$232.00	\$150.00	\$255.00
	1950 MONITOR	\$316.00	\$163.00	\$275.00
	1084S MONITOR	\$140.00	\$120.00	\$240.00
327124-03	MOUSE	\$0.00	\$23.00	\$36.00
313250-01	EXP CARD A3000	\$0.00	\$77.00	\$139.00
380708-02	POWER SUPPLY A2000	\$87.00	\$74.00	\$125.00
390500-02	POWER SUPPLY A3000	\$140.00	\$78.00	\$139.00

*ASP — Average Selling Price (Dealer Cost). NET ASP — ASP (see INFO section) minus Core Allowance.

IMPORTANT — FRU's returned must be in REPAIRABLE condition and packed in ANTI-STATIC bags. **REMEMBER** — remove any Expansion Ram from PCBs which was not installed by Commodore.

32/3-0.0 INDEX — AMIGA SECTION

32/3-0.0	Index — Amiga Section — Techttopics — Issue 32.....	Page 9
32/3-1.1	A2320 Display Enhancer — Field Service Bulletin #A02.....	Page 10
32/3-2.1	A590 Hard Drives — Grounding on Power Connectors CN7, CN7A... 	Page 11
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.....	Page 12
32/3-4.1	A2000 — TechTip — Mouse Problems, Check Fuse, F1.....	Page 13
32/3-5.1	A2286 AT Bridgeboard — Use in A3000 Systems.....	Page 14

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.

32/3-2.1 A590 Hard Drives — Grounding on Power Connectors, CN7, CN7A.

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.

<i>Part Number</i>	<i>Description</i>	<i>Location</i>
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 HDTtoolbox, 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 HDTtoolbox 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.

32/3-4.1 A2000 — Techtip — Mouse Problems, Check Fuse, F1.

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.

32/4-0.0 INDEX — CBM SECTION

32/4-0.0	Index — CBM Section — Techttopics — Issue 32.....	Page 15
32/4-1.1	1802 Monitor — Techtip — No Color, Check R225.....	Page 16

32/4-1.1 1802 Monitor — Techtip — No Color, Check R225.

1802 Monitors, Daewoo type, with NO COLOR may have a defective Resistor at location R225, (5.1K ohm, 1W.) For Out-of-Warranty repairs replace R225.

32/5-0.0 INDEX — PC SECTION

32/5-0.0	Index — PC Section — Techtomics — Issue 32.....	Page 17
32/5-1.1	SL386SX — Configuring RAM in Setup.....	Page 18

32/5-1.1 SL386SX — Configuring RAM in Setup.

To configure RAM in SL386SX systems, enter the second screen of the SetUp menu (Ctrl-Alt-S followed by PgUp to enter CS8221 options).

NO SIMM'S INSTALLED: With no added RAM installed in the SL386SX, you can either Enable the Shadow Bios Rom or 640-1024K Relocation, but NOT both at the same time.

SIMM'S INSTALLED — EXTENDED MEMORY ONLY: To use all the added RAM as Extended Memory, Enable the Shadow Bios Rom, and Disable the 640-1024 Relocation option.

SIMM'S INSTALLED — EXPANDED (EMS) MEMORY: There are many ways to configure system memory and many possible combinations to consider. The table below illustrates four possible settings, based on Memory size, to configure RAM as Expanded Memory.

Shadow should be Enabled, and the NEMM.SYS driver must be installed in CONFIG.SYS.

	<i>Sample 1</i>	<i>Sample 2</i>
EMS Base Memory Address	c800	c800
EMS Base I/O Address	208h/209h	218h/219h
EMS Page 0 Reg. Extension	4M to 6M	1M to 2M
EMS Page 1 Reg. Extension	4M to 6M	1M to 2M
EMS Page 2 Reg. Extension	4M to 6M	1M to 2M
EMS Page 3 Reg. Extension	4M to 6M	1M to 2M
EMS Memory Size	1.0M	2.0M
EMS Wait States	2 Wait States	2 Wait States
EMS Memory	Enabled	Enabled

	<i>Sample 3</i>	<i>Sample 4</i>
EMS Base Memory Address	c800	c800
EMS Base I/O Address	208h/209h	218h/219h
EMS Page 0 Reg. Extension	2M to 4M	1M to 2M
EMS Page 1 Reg. Extension	2M to 4M	1M to 2M
EMS Page 2 Reg. Extension	2M to 4M	1M to 2M
EMS Page 3 Reg. Extension	2M to 4M	1M to 2M
EMS Memory Size	3.0M	4.0M
EMS Wait States	2 Wait States	2 Wait States
EMS Memory	Enabled	Enabled

IMPORTANT NOTE: If the configuration is not setup correctly PARITY ERROR messages may be generated. For instance if you try to specify only ONE Wait State. Consult User manual for more details.