commodore TECHTOPICS

APRIL - JUNE 1990
ISSUE 29

1 INFO

29/1-1.1   SERVICE WARRANTY POLICY NUMBERS AND CONDITIONS.

THE INFO SECTION OF TECHTOPICS WILL INCLUDE, AS A STANDARD FEATURE, A LIST OF ACTIVE FIELD FIXES WHICH ARE COVERED UNDER WARRANTY.

THIS FEATURE WILL ALWAYS BE THE FIRST BULLETIN IN THE INFO SECTION, AND WILL BE UPDATED VIA THE SERVICE BULLETIN BOARD, CTOC, WHENEVER A CHANGE IN THE WARRANTY STATUS OF FIELD FIXES IS ISSUED.

A WARRANTY POLICY NUMBER HAS BEEN ASSIGNED TO EACH ACTIVE FIELD FIX COVERED UNDER WARRANTY. EFFECTIVE IMMEDIATELY, ALL CLAIMS BEING SUBMITTED BY AUTHORIZED SERVICE CENTERS MUST INCLUDE THE WARRANTY POLICY NUMBER, AS THE PART NUMBER, ON THE NARDA FORM.

ACTIVE COMMODORE FIELD SERVICE WARRANTY FIXES, AS OF 2/5/90

1) 1084S-P MONITOR
   WARRANTY POLICY NUMBER - W1084-1288
   (INSTRUCTIONS ARE INCLUDED WITH 1084S-P REPAIR KIT, CBM PN#
   314891-01).

2) A2000 REV6.0 PCB
   WARRANTY POLICY NUMBER - W2000-0989
   (SEE TECHTOPIC BULLETINS - 27/3-1.1, 27/3-2.1 & 27/3-3.1, IN AMIGA
   SECTION 3, UNDER A2000 PAST BULLETINS FOR DETAILS.

29/1-1.1   SERVICE WARRANTY POLICY NUMBERS AND CONDITIONS. (CONT)

3) A2286 AT BRIDGEBOARD
WARRANTY POLICY NUMBER - W2286-1289
(SEE TECHTOPIC BULLETIN - 28/3-3.1 IN AMIGA SECTION 3, UNDER
CURRENT BULLETINS FOR DETAILS).

4) PC30-III REV 1.4 PCB/COPROCESSOR -
WARRANTY POLICY NUMBER - WPC30-0590
(SEE TECHTOPIC BULLETIN 28/5-3.1 IN PC SECTION 5, UNDER
CURRENT BULLETINS FOR DETAILS).

29/1-2.1   SERVICE TRAINING SCHEDULE, JULY THRU SEPTEMBER 1990.

1990 TRAINING SCHEDULE, JULY THRU SEPTEMBER. PLEASE CONTACT
JOHN DIMEO FOR MORE INFORMATION.

MONTH	DATE	DAYS	LOCATION	PRODUCTS	STATUS
JULY	2-3	MON-TUE	WEST CHESTER	AMIGA	OPEN
JULY	5-6	THU-FRI	WEST CHESTER	PC	OPEN
JULY	9-10	MON-TUE	WEST CHESTER	PC	OPEN
JULY	12-13	THU-FRI	WEST CHESTER	AMIGA	OPEN
JULY	23-27	MON-FRI	DALLAS	AMIGA/PC	OPEN
AUGUST	6-7	MON-TUE	WEST CHESTER	AMIGA	OPEN
AUGUST	8-9	WED-THU	WEST CHESTER	PC	OPEN
AUGUST	13-14	MON-TUE	WEST CHESTER	PC	OPEN
AUGUST	15-16	WED-THU	WEST CHESTER	AMIGA	OPEN
AUGUST	27-31	MON-FRI	ATLANTA	AMIGA/PC	OPEN
SEPTEMBER	6-7	MON-TUE	WEST CHESTER	AMIGA	OPEN
SEPTEMBER	17-21	MON-FRI	SUNNYVALE	AMIGA/PC	OPEN
SEPTEMBER	24-28	MON-FRI	LONGBEACH	AMIGA/PC	OPEN

**29/1-2.2   ENCLOSURE: JULY THRU SEPTEMBER SERVICE TRAINING COURSE
            OUTLINE.**

INCLUDED WITH ISSUE 29 IS A COURSE OUTLINE FOR THE SERVICE
TRAINING PROGRAM, FROM JULY THRU SEPTEMBER 1990.

1 INFO

29/1-3.1   AMIGA CPU ONE YEAR WARRANTY.

EFFECTIVE APRIL 2, 1990 COMMODORE WILL OFFER A ONE YEAR
WARRANTY ON ALL AMIGA COMPUTERS. THIS NEW WARRANTY WILL
COVER PARTS AND LABOR ON THE CPU'S. THE WARRANTY INCLUDES
ALL UNITS PURCHASED AFTER JANUARY 1, 1990.

29/1-4.1   AMIGA ACCESSORIES ONE YEAR WARRANTY.

EFFECTIVE JUNE 1, 1990 COMMODORE WILL OFFER A ONE YEAR
WARRANTY ON ALL AMIGA ACCESSORIES. THIS NEW WARRANTY WILL
COVER PARTS AND LABOR ON THE ACCESSORIES. THE WARRANTY
INCLUDES ALL UNITS PURCHASED AFTER APRIL 1, 1990.

_____END 29/1

2 PARTS

29/2-1.1   A2091 SPARE PARTS LIST.

COMMODORE PARTS DEPARTMENT NOW HAVE THE FOLLOWING PARTS IN STOCK.

PART NUMBER	DESCRIPTION	PRODUCT	RETURN CREDIT	DEALER BILLING
314674-01	SYSTEM SCHEMATICS	A2091		$16.50
363227-02	USER MANUAL (ENG.)	A2091		4.00
317806-01	DISK ASSY. CNTRL PROGS/INSTALL	A2091		11.00
313440-01	HARD DRIVE 40MB SCSI (QUANTUM)	A2091	100.00	575.00
312769-01	PCB ASSY (REV 4)	A2091	165.00	280.00
390333-03	IC 16L8A RAM CONTRL.	A2091		5.50
390563-02	IC DMAC	A2091		78.50
390206-01	IC WD33C93	A2091		44.00
390722-01	IC EPROM ODD DRIVER	A2091		9.90
390721-01	IC EPROM EVEN DRIVER	A2091		9.90
312573-01	CABLE DATA	A2091		TBA
312646-01	CABLE POWER	A2091		TBA

[REPEAT OF 28/2-2.1]

29/2-2.1   NEW LEVEL 1 REPAIR KIT - PN 314032-21, INCLUDES A2091 AND A2630.

314032-21   A2000 LEVEL 1 REPAIR KIT   DEALER BILLING 2,966.00

PART NUMBER	DESCRIPTION	DEALER BILLING	RETURN CREDIT	COST
312769-01	A2091 PCB HDC	280.00	165.00	115.00
312716-02	KEYBOARD	82.50		82.50
312720-05	A2000PCB	920.00	625.00	295.00
312288-05	A2630 PCB ASSY	1500.00	800.00	700.00
314067-03	IC REPAIR KIT	***180.00		180.00
327124-03	MOUSE	49.50		49.50
380708-02	POWER SUPPLY	99.00		99.00
380752-01	DRIVE ASSY FDD 3.5	130.00		130.00
TOTAL		3241.00	1590.00	1651.00
KIT PRICE		2966.00	1590.00	1376.00
A2000 LEVEL 1 KIT SAVINGS		275.00		
*** IC KIT SAVINGS		75.35		
TOTAL SAVINGS		**$350.35**		

29/2-3.1   RODIME 40MB HARD DRIVE SUB TO QUANTUM 40MB HARD DRIVE.

SUB 311833-01 TO 314687-01.

SEE TECH TOPIC NUMBER 29/3-12.1 FOR MORE DETAILS.

2 **PARTS**

29/2-4.1   **A3000 SPARE PARTS LIST.**

COMMODORE PARTS DEPARTMENT NOW HAS THE FOLLOWING PARTS IN STOCK.

PART NUMBER	DESCRIPTION	DEALER BILLING	RETURN CREDIT
390500-02	POWER SUPPLY		155.25
313250-01	PCB ASSY - DAUGHTER PCB		57.10
313310-02	PCB ASSY - 16MHZ	600.00	1580.00
313310-04	PCB ASSY - 25MHZ	700.00	1780.00
313323-02	KEYBOARD		138.75
313315-01	DRIVE ASSY, FLOPPY		130.00
313440-01	DRIVE ASSY, HARD 40MB	100.00	675.00
311836-03	DRIVE ASSY, HD QUANTUM P105 100MB	200.00	1025.00
311836-04	DRIVE ASSY, HD QUATUM LP 100MB	200.00	1025.00
604400-08	BUTTON, A3000 CHINON FDD		1.30

END 29/2

3 AMIGA

29/3-1.1   A2091 MEMORY AUTO-CONFIGURATION LIMITATIONS.

THE A2091 HARD DISK CONTROLLER INCLUDES SOCKETS FOR THE INSTALLATION OF DRAM CHIPS FOR MEMORY EXPANSION. JUMPERS ARE PRESENT ON THE BOARD, AND ARE DESCRIBED IN THE USERS MANUAL WHICH SUPPORT THE PRESENCE OF NONE, 512K, 1M, 2MB OF MEMORY, HOWEVER ONLY THE NONE AND THE 2M-BYTE SETTINGS WORK CORRECTLY IN ALL SYSTEM CONFIGURATIONS.

IF EITHER THE 512K OR 1M SETTING IS USED THE BOARD MAY NOT FUNCTION CORRECTLY, DEPENDING ON WHETHER OTHER BOARDS CONTAINING MEMORY ARE PRESENT AND ARE IN SLOTS THAT ARE CONFIGURED BY THE SYSTEM BEFORE THE SLOT CONTAINING THE A2091. WHEN THIS SITUATION OCCURS THE WRONG "BANK" OF CHIPS ON THE A2091 IS SELECTED AND THE SYSTEM WILL NOT BOOT.

29/3-1.1   A2091 MEMORY AUTO-CONFIGURATION LIMITATIONS.   (CONT)

IN MOST CASES THE INITIAL INSTALLATION OF THE A2091 WILL NOT
CAUSE ANY IMMEDIATE PROBLEM, BUT CONCERN EXISTS THAT WHEN
THE CUSTOMER ADDS ADDITIONAL BOARDS TO THE SYSTEM, THE
CONFIRGUATION WILL CHANGE AND THE A2091 BOARD WILL NO LONGER
WORK. OBVIOUSLY, THIS WOULD LEAD TO SOME CONFUSION ABOUT
WHICH BOARD IS ACTUALLY CAUSING PROBLEMS.

WE STRONGLY RECOMMEND USING ONLY THE NONE AND 2M-BYTE
SETTINGS, HOWEVER IF THE SMALLER SETTINGS ARE REQUIRED THEN
THE BEST OPTION IS TO PUT THE A2091 BOARD IN THE "FIRST" SLOT. IN
ALL US PRODUCTION (REV4 AND REV6) MOTHERBOARDS, THIS IS THE
SLOT NEAREST THE POWER SUPPLY (NOT INCLUDING THE CO-PROCESSOR
SLOT). ON OLDER MOTHER BOARD REVISIONS, IT IS THE SLOT FARTHEST
AWAY FROM THE POWER SUPPLY.

[REPEAT OF 27/3-8.1 & 28/3-5.1]

29/3-2.1   A2091 IC MEMORY 262,144 ADDRESS X 4 BIT DRAMS.

COMMODORE PARTS DEPARTMENT DOES NOT SUPPLY DRAM IC'S
FOR MEMORY UPGRADES. THE FOLLOWING VENDORS (VENDOR
PART NUMBER INCLUDED) HAVE BEEN QUALIFIED FOR USE IN
THE A2091. THESE ARE "DIP" TYPE IC'S.

NEC	UPD424256C-10
TOSHIBA	TC514256P-10
MATSUSHITA	MN414256-10
TEXAS INSTR.	TMC44C2256-10N

PLEASE NOTE: USER MANUALS RECOMMEND CUSTOMERS TAKE THEIR
UNITS TO AN AUTHORIZED SERVICE CENTER TO HAVE
MEMORY UPGRADES DONE.

IMPROPER INSTALLATION WILL VOID CREDIT ISSUED
FOR A RETURNED REPAIRABLE UNIT.

[REPEAT OF 28/3-7.1]

3 AMIGA

29/3-3.1   A2091 HDC - POWER CABLE AND DATA CABLE AVAILABILITY.

THE A2091 HARD DISK CONTROLLER, PACKAGED WITHOUT A HARD DRIVE (THE A2091-40, CONTAINS A 40MB HARD DRIVE), SHOULD CONTAIN A POWER CABLE (CBM# 312646-01) AND A DATA CABLE (CBM# 312573-01) TO CONNECT TO THE DRIVE, AS INDICATED ON PAGE 3 OF THE USER MANUAL.

SEVERAL UNITS HAVE BEEN SHIPPED WITHOUT THESE ITEMS. ANY DEALER/SERVICER WHO HAS RECIEVED A2091'S WITHOUT CABLES SHOULD CALL THE 800 TECH HOT LINE AND REQUEST THE CABLES BE SENT OUT (THERE IS NO CHARGE). PLEASE HAVE THE COMMODORE INVOICE NUMBER TO GIVE TO THE TECHNICIAN WHEN YOU CALL.

[REPEAT OF 28/3-8.1]

29/3-4.1   A2091 ROM UPGRADE TO REVISION 6.1.

NEW ROMS ARE AVAILABLE FOR THE A2091 FROM THE PARTS DEPARTMENT. THESE NEW ROMS ARE USED IN BOTH THE A2091 AND THE A590.

> PART NUMBERS: 390722-01 IC ROM ODD REV 6.1
>   390721-01 IC ROM EVEN REV 6.1

THIS PREVENTS ILLEGAL READS AND WRITES TO LOCATION ZERO OF AMIGA WORKING STORAGE WHICH SOME THIRD PARTY APPLICATION SOFTWARE ATTEMPTS.

THIS IS CONSIDERED AN IN-LINE CHANGE, AND IS NOT COVERED UNDER WARRANTY. DEALER COST FOR THE NEW ROMS IS $33.00 EACH.

[REPEAT OF 28/3-10.1]

29/3-5.1   A590 ROM UPGRADE TO REVISION 6.1.

NEW ROMS ARE AVAILABLE FOR THE A2091 FROM THE PARTS
DEPARTMENT. THESE NEW ROMS ARE USED IN BOTH THE A2091 AND THE
A590.

PART NUMBERS: 390722-01 IC ROM ODD REV 6.1
                   390721-01 IC ROM EVEN REV 6.1

THIS PREVENTS ILLEGAL READS AND WRITES TO LOCATION ZERO OF
AMIGA WORKING STORAGE WHICH SOME THIRD PARTY APPLICATION
SOFTWARE ATTEMPTS.

THIS IS CONSIDERED AN IN-LINE CHANGE, AND IS NOT COVERED UNDER
WARRANTY. DEALER COST FOR THE NEW ROMS IS $33.00 EACH.

[REPEAT OF 28/3-11.1]

29/3-6.1   A590 HDD EXCHANGE KIT (EPSON HM755 TO WD93028-X-A).

WHEN REPLACING AN EPSON HM755 HARD DRIVE FROM AN A590, YOU
MUST ORDER KIT NUMBER 314678-01. THE HARD DRIVE COMES IN THE KIT.
THE KIT CONTAINS:

314679-01 CABLE ASSY 34P DATA W/BEND
314681-01 CABLE ASSY 4P POWER
312711-03 DRIVE ASSY HDD 20MB WD93028-X-A

THIS IS NECESSARY BECAUSE PCB ASSEMBLY 312615-01, (WHICH IS USED
WITH AN EPSON DRIVE), HAS THE CABLE CONNECTOR ON THE LEFT, AND
PCB ASSEMBLY 312615-02, (WHICH IS USED WITH WD DRIVE), HAS THE
CABLE CONNECTOR ON THE RIGHT. THE KIT ALLOWS YOU TO REPLACE
THE EPSON DRIVE WITH THE WD DRIVE WITHOUT REPLACING THE PCB.

[REPEAT OF 28/3-12.1]

29/3-7.1   A2286 PROBLEM WITH SETUP MENU

PROBLEM DESCRIPTION:

OCCASIONALLY, THE SETUP MENU WILL NOT ACCEPT KEYBOARD INPUT. WHEN THIS OCCURS, KEYBOARD INPUT TO THE AMIGA SIDE IS ALSO "GARBLED". IN THIS CASE, THE AMIGA AND PC SIDES ARE CONFUSED ABOUT THE STATE OF THE "CTRL" AND "ALT" KEYS. TWO (2) WORK AROUNDS HAVE BEEN IDENTIFIED:

> 1. HITTING THE "CTRL" AND "ALT" KEYS ONE (1) TIME EACH CLEARS UP THE PROBLEM. IF DONE IN PC WINDOW, BOTH PC AND AMIGA SIDES ARE FIXED. IF DONE ON THE AMIGA SIDE, ONLY KEYSTROKES ON THE AMIGA SIDE RETURN TO NORMAL.
>
> 2. REBOOT THE PC VIA "CTRL+ALT+DEL" AND BOTH PC AND AMIGA KEYBOARD ACTIVITY RETURNS TO NORMAL.

29/3-8.1   A3000 SYSTEM SCHEMATICS, CBM PN# 314677-02.

A SPECIAL MAILING IS BEING DONE FOR ALL AMIGA AUTHORIZED SERVICE CENTERS. ENCLOSED IS THE A3000 SYSTEM SCHEMATICS. PCB REVISION OF THIS MANUAL IS, REV 7.0.

29/3-8.2   ENCLOSURE: A3000 SYSTEM SCHEMATICS.

MAILED ON APRIL 24, 1990 WAS, CBM PN# 314677-02, A3000 SYSTEM SCHEMATICS.

3 AMIGA

29/3-9.1 **A2300 GENLOCK FIX TO WORK WITH A3000.**

THIS FIX IS TO CREATE THE CORRECT CLOCK FREQUENCY OF 28.375156MHZ NEEDED. THE FIX MUST BE DONE FOR THE NTSC AND PAL VERSIONS OF THE A2300 GENLOCK.

1. FOR NTSC A2300 GENLOCK (PN# 312803-01), A 0.1uf AXIAL CAPACITOR MUST BE CONNECTED FROM PIN 6 OF IC6, (SIGNAL N_VSYNC), TO GROUND.

2. FOR PAL A2300 GENLOCK (PN# 312803-02), THE ABOVE MODIFICATION IS ALSO REQUIRED IN ADDITION TO THE INCLUSION OF A JUMPER WIRE SHORTING PIN 13 OF IC4 TO PIN 2 OF IC1.

29/3-10.1 **A2300 USE WITH A1950 MONITOR.**

WHEN USING A 23 PIN ADAPTOR WITH THE A1950 TO A2300 GENLOCK, A JUMPER MUST BE CONNECTED TO PIN 23 OF THE 23 PIN VIDEO CONNECTOR (CN1), TO PIN 6 (+5V), OF THE EDGE CARD CONNECTOR ON THE A2300 GENLOCK. THIS ADDS +5VDC SUPPLY TO THE 23 PIN VIDEO PORT FOR USE WITH THE A1950 MONITOR.

THIS IS NOT COVERED UNDER WARRANTY.

29/3-11.1 **A2091 HARD DRIVE CONTROLLER - PROBLEM WITH TWO DEVICES.**

REPORTED PROBLEMS WITH THE A2091 HARD DRIVE CONTROLLER, WHICH CAUSE THE SYSTEM TO LOCK UP WHEN ACCESSING TWO OR MORE SCSI DEVICES AT THE SAME TIME, HAVE BEEN TRACED TO THE WESTERN DIGITAL SCSI CONTROLLER IC, WD33C93.

NEW ROMS, WHICH ARE CURRENTLY BEING TESTED, WILL BE AVAILABLE EARLY NEXT MONTH AND WILL CORRECT THIS PROBLEM WITHOUT HAVING TO REPLACE THE SCSI CONTROLLER.

YOU WILL BE NOTIFIED WHEN THESE NEW ROMS ARE AVAILABLE. THIS WILL BE TREATED AS AN IN-WARRANTY REPAIR.

29/3-12.1   RODIME 40MB HARD DRIVE SUB TO QUANTUM 40MB HARD DRIVE KIT.

RODIME 40MB HARD DRIVE CBM PN# 311833-01 IS BEING SUBED TO
QUANTUM PRODRIVE 40S HARD DRIVE KIT, CBM PN# 314687-01. THIS KIT
CONTAINS:

PART NUMBER	DESCRIPTION
313440-01	40MB QUANTUM DRIVE ASSY.
313439-01	CABLE, LONG SCSI
312748-01	INSOLATOR VIBRATION
905970-04	NUT KEPS #6-32

TO USE THIS DRIVE WITH THE 2090/2090A CONTROLLER, REMOVE JUMPERS
A1 AND A2 ON THE QUANTUM DRIVE BEFORE INSTALLING IT. TO INSTALL
OR PREP THE DRIVE, USE THE INSTALL PROGRAM FOUND ON THE
2090/2090A HARD DISK SOFTWARE. DURING INSTALLATION, MAKE SURE
TO MAKE SELECTIONS FOR A SCSI TYPE DRIVE AND THEN SELECT FIVE (5),
QUANTUM PRODRIVE 40S.

29/3-13.1   A3000 WARRANTY LABOR RATES - JUNE 1990.

FOLLOWING IS A LIST OF THE WARRANTY LABOR RATES AS OF JUNE, 1990:

DESCRIPTION	WARRANTY RATE
A3000 PCB REPLACEMENT	$45.00
A3000 KEYBOARD EXCHANGE	7.00
A3000 POWER SUPPLY EXCHANGE	27.00
NO DEFECT FOUND/MINOR REPAIR	15.00
A3000 FLOPPY DISK DRIVE REPLACEMENT	25.00
A3000 FLOPPY DISK DRIVE ALIGNMENT	35.00
A3000 HARD DISK DRIVE REPLACEMENT	40.00
1950 MONITOR - COMPONENT REPAIR	35.00
1950 MONITOR - NO DEFECT/MINOR REPAIR	12.00

29/3-14.1   A3000 SECOND DRIVE CONFIGUATION.

WHEN ADDING A SECOND 3 1/2" FLOPPY DRIVE TO AN A3000, THE FIRST
FLOPPY (DF0:) MUST BE MOVED TO THE OPEN SLOT TO THE RIGHT. THE
SECOND FLOPPY (DF1:) MUST BE PUT WHERE DF0: WAS ORIGANALLY.

NOTE: MAKE SURE THAT THE DRIVE SELECT ON THE SECOND DRIVE
        (DF1:) IS CONFIGURED TO D1, ALSO JUMPER 351 MUST BE
        MOVED TO PINS 1 AND 2 TO ENABLE THE DRIVE.

IF YOU NEED FURTHER INFORMATION, PLEASE CONTACT THE 800
TECHNICAL SUPPORT LINE.

29/3-15.1   1950 SYSTEM SCHEMATICS, CBM PN# 314036-01 RELEASE.

MAILED WITH TECHTOPICS ISSUE 29, FOR AMIGA AUTHORIZED SERVICE
CENTERS ONLY, ARE THE 1950 SYSTEM SCHEMATICS.

29/3-15.2   ENCLOSURE: 1950 SYSTEM SCHEMATICS.

ENCLOSED IN TECHTOPICS ISSUE 29, CBM PN# 314036-01, 1950 SYSTEM
SCHEMATICS.

END 29/3

4 CBM

29/4-1.1   WARRANTY CLAIMS FOR DISCONTINUED COMMODORE PRODUCTS.

EFFECTIVE IMMEDIATELY, ALL WARRANTY CLAIMS FOR DISCONTINUED
COMMODORE PRODUCTS INCLUDING, BUT NOT LIMITED TO THE
FOLLOWING, WILL REQUIRE A COPY OF THE CUSTOMER BILL OF SALE
TO BE RETURNED WITH THE WARRANTY CLAIM PAPERWORK. THE SERIAL
NUMBER OF THE UNIT MUST BE INCLUDED ON THE NARDA FORM. CLAIMS
WITHOUT THIS INFORMATION WILL BE REJECTED.

ANY QUESTIONS SHOULD BE DIRECTED TO THE TECHNICAL HOTLINE.

+4	1581	2002	1802	MPS802	1526
C16	C128	1701	1902	MPS803	
VIC 20	C128D	1702	1902A	DPS1101	
C64	1070	1702T	1084	1515	
1541	1080	CM141	MPS1000	1520	
1571	1080A	C1802	MPS801	1525	

[REPEAT OF 28/4-2.1]

29/4-2.1   1571 DRIVES ASSEMBLIES - ALPS AND NEWTRONICS.

1571 DRIVES USE TWO TYPES OF DRIVE ASSEMBLIES.

1) CBM PN# 252092-01 DRIVE ASSY - ALPS
2) CBM PN# 252083-01 DRIVE ASSY - NEWTRONICS

MOST UNITS IN THE UNITED STATES USE THE NEWTRONICS TYPE OF
DRIVE. THE ALPS DRIVE DOES NOT FIT IN THE NEWTRONICS BEZEL, AND
VISA-VERSA. PLEASE TAKE NOTE.

5   PC

29/5-1.1   **COPROCESSOR CIRCUIT MODIFICATION - PC30-III/COLT286.**

WARRANTY POLICY NUMBER - WPC30-0590.

INSTALLING A MATH COPROCESSOR (80287) IN THE PC30-III, OR COLT286, REVISION 1.4 (PCB ASSY# 313236-02) PCB WILL REQUIRE THE FOLLOWING MODIFICATIONS. NO REVISION IS NECESSARY WITH REVISION 8.1 (PCB ASSY# 313235-01).

1) SOLDER A #28 AWG WIRE FROM PIN 34 OF U302 (80287) TO PIN 49 OF U801 (FE3000).

2) ON SCHEMATIC #313236 REV 1.4, (PAGE 5-23 IN COLT286, OR PC30-III SERVICE MANUAL) INDICATE AN ACTIVE LOW ON SIGNAL NNPCS' (80287 - CHIP SELECT).

3) PC30-III, COLT286, PCB ASSEMBLY #313235-01, REVISION 1.4 BECOMES REVISION 1.5 WITH THIS MODIFICATION.

A NEW WARRANTY POLICY NUMBER - WPC30-0590, HAS BEEN ASSIGNED TO THIS FIELD FIX. THIS NUMBER MUST APPEAR IN THE "PART NUMBER" FIELD OF THE NARDA FORM. PROOF OF PURCHASE OF A 80287 MATH COPROCESSOR MUST BE SUBMITTED WITH THE NARDA FORM TO VALIDATE THE WARRANTY. A WARRANTY LABOR RATE OF $30.00 WILL BE ISSUED FOR THIS FIX.

5 PC

29/5-2.1   PC40-III PCB REVISION 8.X - DMA CHANNEL 7 ACKNOWLEDGE SIGNAL.

EXPANSION HARDWARE WHICH UTILIZES DMA CHANNEL 7 (DRQ7, NDACK7' ON PC40) REQUIRE A MODIFICATION TO THE PC40-III REVISION 8.X PCB.

CONNECT JUMPER, ON TRACE SIDE OF PCB, FROM U803 PIN #7 (74F138, SEE PAGE 5-26, PC40-III SERVICE MANUAL) TO CN502 PIN #32 (EXPANSION BUS, SEE PAGE 5-22, PC40-III SERVICE MANUAL). THIS MODIFICATION MAKES THE PCB REVISION 8.2C.

THIS IS CONSIDERED PART OF THIRD PARTY EXPANSION CARD INSTALLATION AND IS NOT COVERED UNDER WARRANTY.

_____END 29/5

Amiga Service Training
Course Outline

Objective To increase the technician's awareness of system operations and in the event of a failure, proper procedure to perform system diagnostics at the socketed chip level.

Prerequisite The technician should have no less than four years of formal electronics training.

Outline I. A500/A2000 Operation Theory
       A. Amiga Architecture
           1. Custom Chips
           2. Circuit Description

       B. Troubleshooting Tips

II. A500/A2000 Hands-on Lab
       A. Oscilloscope Usage
       B. Troubleshooting Techniques
       C. Defective Chip Determination

III. A500/A2000 Drive Diagnostics
       A. Loading and Running Drive Alignment Disk
       B. Physical Adjustment and Head Alignment
       C. Final Drive Test
           1. Speed
           2. Read/Write
           3. Alignment

PC Service Training
Course Outline

Objective To increase the technician's awareness of system operations and in the event of a failure, proper procedure to perform system diagnostics at the socketed chip level.

Prerequisite The technician should have no less than four years of formal electronics training.

Outline I. PC10/PC20-III Operation Theory
      A. PC Architecture
         1. Custom Chips
         2. Circuit Description
      B. Troubleshooting Tips

II. A500/A2000 Drive Diagnostics
      A. Loading and Running Disk-based Diagnostics
      B. System Board Troubleshooting
      C. Drive Diagnostics
         1. Speed
         2. Read/Write
         3. Alignment Check

III. PC10/PC20/PC40-III Hands-on Lab
      A. Oscilloscope Usage
      B. Troubleshooting Techniques
      C. Defective Chip Determination

IV. PC 60-III Operation Theory
      A. Board Level Architecture
      B. Removal from Tower Case

V. PC60-III Hands-on Lab
      A. Signal Tracing
      B. Component Identification
      C. Assembly Level Repair

To: All Service Centers

Please find the service training calendar for July through September.

Starting July 1, 1990 Commodore will be holding component level training in three (3) major cities per quarter in addition to the West Chester facility. A calendar will be released quarterly indicating the cities and dates of these seminars. There will be no charge to service centers or dealers for these classes.

The material to be covered in each course has been condensed into two (2) full days, starting at 9:00 AM and ending at 5:30 PM. It is imperative that attendees be present for the entire course in order to receive certification. Attendees should make travel arrangements accordingly. (Departure flight should be scheduled no earlier than 7:00 PM of the second day).

- Two day Amiga classes include A500/A2000 and A3000.
- Two day PC classes include PC10/20-III, PC40-III, and PC60-III.

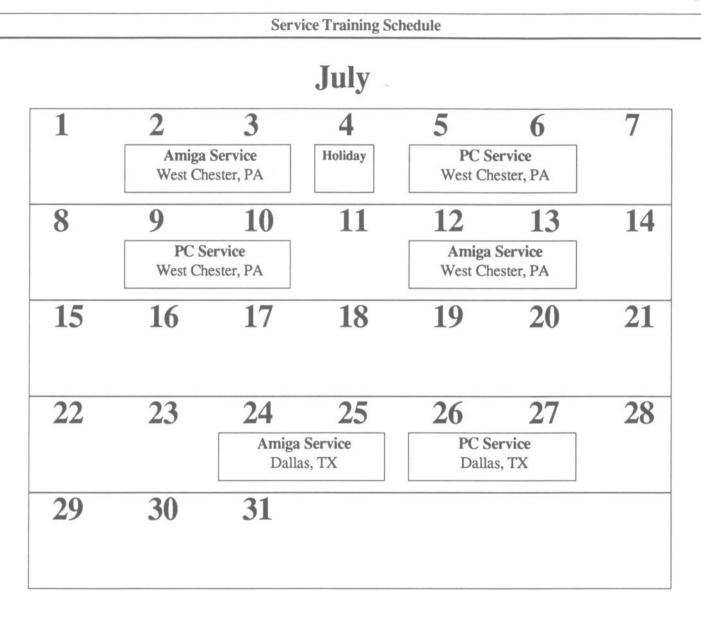Since class space is limited, requests should be submitted promptly.

To enroll in the course, complete the attached Training Request Form and return it to:

> Commodore Business Machines
> 1200 Wilson Drive
> West Chester, PA 19380
> Attention: John DiMeo, Technical Training

Please note that both an Amiga and PC class will be offered in the same city. Complete a separate application if you wish to attend both classes.

Service Training Schedule

July

1	2	3	4	5	6	7
	Amiga Service West Chester, PA		**Holiday**	**PC Service** West Chester, PA		
8	**9**	**10**	**11**	**12**	**13**	**14**
	PC Service West Chester, PA			**Amiga Service** West Chester, PA		
15	**16**	**17**	**18**	**19**	**20**	**21**
22	**23**	**24**	**25**	**26**	**27**	**28**
		Amiga Service Dallas, TX		**PC Service** Dallas, TX		
29	**30**	**31**				

August

				1	2	3	4
5	6	7	8	9	10	11
	Amiga Service West Chester, PA		PC Service West Chester, PA			
12	13	14	15	16	17	18
	PC Service West Chester, PA		Amiga Service West Chester, PA			
19	20	21	21	23	24	25
26	27	28	29	30	31	
		Amiga Service Atlanta, GA		PC Service Atlanta, GA		

Service Training Schedule

September

						1
2	3	4	5	6	7	8
				Amiga Service West Chester, PA		
9	10	11	12	13	14	15
16	17	18	19	20	21	22
		Amiga Service Sunnyvale, CA		**PC Service** Sunnyvale, CA		
23	24	25	26	27	28	29/30
		Amiga Service Long Beach, CA		**PC Service** Long Beach, CA		

Service Training

Please complete one per attendee. Return completed form 30-60 days prior to requested date.

1. Requested Course _____

2. Requested Date _____ Alternate Date _____

3. Technician _____

   Company Name _____

   Address _____

   City _____ State _____ Zip _____

   Telephone _____ Service Account Number _____

4. Briefly describe the skill level of attending technician.

_____   _____
       Authorized Signature   Date

Please return completed form to:
Commodore Business Machines
1200 Wilson Drive
West Chester, PA 19380
Attn: John DiMeo

CBM Use Only--Do not write in this space

CBM Approval: _____ Date: _____

Signature (attending technician): _____ Date: _____

Signature (service trainer): _____ Date: _____