JANUARY - MARCH 1989
ISSUE 24

commodore
TECHTOPICS
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NOTE: ISSUE 25 ON-LINE APRIL 3, 1989

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1   INFO

24/1-0.0   INDEX - INFO SECTION TECHTOPICS 24.

24/1-1.1   SERVICE TRAINING SCHEDULE FOR 1989, APRIL THUR JUNE.

24/1-2.1   WARRANTY LABOR FOR CARD REPLACEMENT.

24/1-1.1   SERVICE TRAINING SCHEDULE FOR 1989, APRIL THUR JUNE.

COMMODORE SERVICE WILL BE CONDUCTING TRAINING CLASSES
THROUGHOUT 1989. A OUTLINE WAS INCLUDED WITH MAILING
OF ISSUE 23 DETAILING THE COURSES.

THE 1989 TRAINING SCHEDULE, JANUARY THUR JUNE.

MONTH	DATE	TRAINING DAYS	PRODUCTS	STATUS
APR	4-7	TUES-FRI	CBM	CLOSED
APR	10-14	MON-FRI	MONITORS	CLOSED
MAY	8-12	MON-FRI	AMIGA	OPEN
MAY	15-19	MON-FRI	MONITORS	OPEN
JUN	7-9	WED-FRI	PC	OPEN
JUN	12-16	MON-FRI	MONITORS	OPEN

24/1-2.1   WARRANTY LABOR FOR CARD REPLACEMENT.

NEW WARRANTY LABOR RATES, EFFECTIVE JANUARY 1, 1989
WHERE MAILED WITH TECHTOPICS ISSUE 23.

UNDER PC-XX AND A2XXX, CARD REPLACEMENT, NOTE 6 STATES:
NO LABOR REIMBURSEMENTS WILL BE ISSUED FOR INSTALLATION
OR EXCHANGE OF NON-FACTORY INSTALLED OPTION CARDS. ONLY
CBM PARTS ARE COVERED.

THIS MEANS THE $25.00 WARRANTY LABOR RATE ONLY APPLIES
TO THE FOLLOWING CARDS:

ON PC10-1, PC10-2 : THE RAM EXPANDER CARD OR THE ATI
                    VIDEO CARD.

ON 2000HD, A2500 : THE A2090A HD CONTROLLER CARD OR
                   THE A2620 CO-PROCESSOR CARD.

NO OTHER CARDS ARE INSTALLED BY CBM AT THE FACTORY.

                                                    END 24/1.

2 PARTS

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24/2-1.1 UPDATE # 2 FOR YELLOW PARTS PRICE BOOK.

THE FOLLOWING PCB ASSEMBLIES ARE NO LONGER PART OF THE
PCB EXCHANGE PROGRAM, AND NO CREDIT FOR A RETURNED
REPAIRABLE UNIT WILL BE ISSUED.

REPLACEMENTS FOR THE FOLLOWING PCB ASSEMBLIES MUST BE
ORDERED DIRECT FROM THE PARTS DEPARTMENT, AND SERVICE
CENTERS WILL BE BILLED THE FULL DEALER BILLING AMOUNT
AS LISTED IN THE YELLOW PARTS PRICE BOOK OF OCTOBER 88.

PART NUMBER	DESCRIPTION	UNIT	RETURN CREDIT	DEALER BILLING	SUGGESTED RETAIL
326298-01	PCB ASSY C64 5 PIN	C64	NONE	-	-
601201-79	PCB ASSY 1526/802		NONE	104.50	174.15
250408-01	PCB ASSY CPU	SX64	NONE	104.50	
310163-01	PCB ASSY	+4	NONE	82.50	
250443-01	PCB ASSY	C16	NONE	82.50	
250410-01	PCB ASSY FDC	SX64	NONE	104.50	
250409-01	PCB ASSY I/O	SX64	NONE	104.50	
1540001-03	PCB ASSY LONG	1540/1541	NONE	88.00	
325519-03	DRIVE ASSY	SX64	NONE	88.00	

24/2-2.1 UPDATE #3 FOR YELLOW PARTS PRICE BOOK.

PLEASE MAKE THE FOLLOWING ADDITIONS AND SUSTITUTIONS
IN THE YELLOW PARTS PRICE BOOK, RELEASED OCTOBER 1, 1988.

PART NUMBER	DESCRIPTION	UNIT	RETURN CREDIT	DEALER BILLING	SUGGESTED RETAIL
311979-02	PCB ASSY	A2090A	145.00	260.00	
312370-03	PCB ASSY	A2058	225.00	560.00	
312828-01	PCB ASSY 2MB	A2620	800.00	1200.00	
353307-02	KNOB, DRIVE	1541-II	SUB TO : 353307-06		
353307-03	KNOB, DRIVE	1541-II	SUB TO : 353307-07		
353307-04	KNOB, DRIVE	1541-II	SUB TO : 353307-05		
380728-01	CASE, BOTTOM	A2000	SUB TO : 380728-02		
314891-01	KIT, 1084S-P REPAIR			44.00	

3 AMIGA

24/3-1.1   USING A2090A WITH 1.3 WORKBENCH AND 1.2 ROM.

THE A2090A HARD DRIVE CONTROLLER WILL WORK WITH THE
1.3 WORKBENCH AND THE 1.2 ROM. YOU MUST REMOVE THE
TWO EPROMS, U50, AND, U51 FROM THE A2090A AND LEAVE
THE SOCKETS BLANK.

NOTE: ON THE INSTALL OPTIONS DO NOT DELETE THE PRINTER
      DRIVERS OR KEY MAPS. THEY ARE ON THE EXTRAS DISKETTE.

24/3-2.1   3.5 FLOPPY DISKETTE MEDIA.

ONLY HIGH QUALITY DISKETTES SHOULD BE USED WITH AMIGA
3.5 FLOPPY DISK DRIVES.

DISKETTES SUCH AS, SONY, MAXELL, AND FUJI, ARE ALL HIGH
QUALITY AND SHOULD BE USED WHEN RUNNING TESTS ON AMIGA
DRIVES.

THIRD PARTY SOFTWARE VENDORS HAVE BEEN KNOWN TO USE
LOW QUALITY DISKETTES IN BULK PRODUCTION. THIS CAN
CREATE PROBLEMS LOADING THE SOFTWARE.

DRIVE ASSEMBLIES RETURNED TO THE PARTS DEPOT ARE BEING
TESTED BY COMMODORE TECHNICIANS AND COULD BE RETURNED
TO THE SERVICE CENTER IF FOUND TO BE FREE OF DEFECTS.

24/3-3.1   A2000 74ALS245 BUS TRANSCEIVER RESISTOR.

AMIGA A2000 SYSTEMS USING SOME EXPANSION HARDWARE, SUCH
AS A2090A, IN CONJUNCTION WITH A COPROCESSOR CARD (A2620)
REQUIRE A 3.3K OHM RESISTOR TO BE SOLDERED FROM PIN 11
TO PIN 20 ON THE 74ALS245 BUS TRANSCEIVER CHIP LOCATED AT
U605. THIS RESISTOR IS TO BE CONSIDERED PART OF STANDARD
INSTALLATION PROCEEDURES PERFORMED BY AUTHORIZED SERVICE
CENTERS WHEN INSTALLING A A2620 CARD.

24/3-4.1   A500/A2000 SYSTEM TEST RELEASE.

              INCLUDED WITH TECHTOPICS ISSUE 24 MAILING PLEASE FIND
              THE AMIGA SYSTEM TEST DISKETTE, COMMODORE PART NUMBER
              314879-01, AND INSTRUCTION SHEET. THE AMIGA SYSTEST
              DISKETTE IS ONLY MAILED TO SERVICE CENTERS WHICH ARE
              AMIGA AUTHORIZED.

24/3-4.2   ENCLOSURE: A500/A2000 SYSTEST PROGRAM DISKETTE 314879-01.

              MAILED WITH TECHTOPICS ISSUE 24, TO AMIGA AUTHORIZED
              SERVICE CENTERS.

24/3-4.3   ATTACHMENT: A500/A2000 SYSTEST INSTRUCTIONS.

              ATTACHED IN TECHTOPICS ISSUE 24 PLEASE FIND ONE (1) PAGE
              OF INSTRUCTIONS FOR THE A500/A2000 SYSTEST PROGRAM.

                                                              END 24/3.

A500/A2000 SYSTEM TEST INSTRUCTIONS

System Test is an auto-boot diskette. Once booted its own cli window will open. Type the commands listed below in order to run each test.

KEYTEST

- Full keyboard test
- press all keys to confirm proper operation
- click left mouse button in upper left corner to EXIT

KB

- Keyboard matrix test
- pressing the keys indicated by the program will test the matrix and seven dedicated key functions

SCREENTEST

- Screentest is low resolution graphic screen made up of 6 bit planes. Used to test RGB linearity and HALF BRIGHTS.
- screentest will display a RGB COLOR BAR scale and a 16 level gray scale in both normal and half bright mode. Normal scales are on top.
- Press space bar to EXIT screen.

SHOW.HIRES.TEST.

- Hires.Test is a 4 bit plane high resolution 640 by 400 screen that displays NTSC color bars, 8 level gray scales, horizontal resolution lines, and an interlace test.
- Press space bar to EXIT screen.

SHOW BALLOON

- Balloon is a 6 bit plane hold and modify picture used to verify proper HAM decoding.
- This will test for a bad Agnus or Denise chip.
- Press space bar to EXIT screen.

CUBEROTE

- Cuberote is an animated cube whose speed and direction is controlled by the mouse X-Y position. The cube is blue with shading of three visible sides. Cuberote uses double buffering for a smooth animation. Direct manipulation of the Copper List permits the display of 16 shades blue while only using 2 bit planes.
- Click left mouse button in upper left corner to EXIT screen.

SYSTEST

- Systest will run the following test: Realtime clock, Blit, Chip/Fast Ram Sprites/Bliter, and Disk I/O.
- Reboot computer to EXIT program.

Type the following for customizing systest.

Command	Description	Mode
SYSTEST 246d	; A500 NO A501	
SYSTEST 2436cd	; A500 WITH A501 OR A2000	
SYSTEST 1245679d	; A500 NO A501	BURN-IN
SYSTEST 12345679cd	; A500 WITH A501 OR A2000	BURN-IN
SYSTEST 12345678d	; A500 NO A501	AGING
SYSTEST 12345678cd	; A500 WITH A501 OR A2000	AGING

4 CBM

24/4-0.0   INDEX – CBM SECTION TECHTOPICS ISSUE 24.

24/4-1.1   NO CREDIT FOR 5 PIN VIDEO C64.

24/4-2.1   C64C VIC CHIPS – NTSC AND PAL.

24/4-3.1   1084S-D MONITOR SERVICE MANUAL RELEASE.

24/4-3.2   ENCLOSURE: 1084S-D MONITOR SERVICE MANUAL 314996-01.

24/4-1.1   NO CREDIT FOR 5 PIN VIDEO C64.

THE 5 PIN VIDEO C64 PCB ASSEMBLY, PART NUMBER 326298-01,
IS NOT INCLUDED IN THE PCB EXCHANGE PROGRAM. THERE WILL
BE NO CREDIT ISSUED FOR THE RETURN OF THIS PCB ASSEMBLY.

UNITS REQUIRING A PCB REPLACEMENT MUST BE RETRO-FITTED
WITH ONE OF THE 8 PIN VIDEO PCB ASSEMBLIES. THE NEW
8 PIN PCBS MUST BE ORDERED THROUGH THE PARTS DEPARTMENT,
AND SERVICE CENTERS WILL BE BILLED AT THE FULL DEALER
BILLING PRICE AS LISTED IN THE YELLOW PARTS PRICE BOOK
ISSUED IN OCTOBER 1988.

NOTE: PCB # 250407-04 USES THE SAME TYPE OF SHIELD AS
      THE 5 PIN, OTHER 8 PIN PCB ASSEMBLIES WILL REQUIRE
      THE PURCHASE OF A NEW SHIELD.

[REPEAT OF 23/4-3.1]

24/4-2.1   C64C VIC CHIPS – NTSC AND PAL.

THE C64C SERVICE MANUAL ADDENDUM HAS THE NTSC AND PAL
CHIP NUMBERS FOR THE VIC CHIP REVERSED. THE FOLLOWING
IS THE CORRECT DESIGNATION.

64E PCB – 318014-01 VIC 8562 NTSC
           318027-01 VIC 8565 PAL

64 B3 PCB – 906109-01 VIC 6567 REV8 NTSC
            906111-01 VIC 6569 REV3 PAL

NOTE: ONLY NTSC VERSIONS ARE AVAILABLE FROM CBM PARTS.

24/4-3.1   1084S-D MONITOR SERVICE MANUAL RELEASE.

INCLUDED WITH TECHTOPICS ISSUE 24 MAILING PLEASE FIND
THE 1084S-D MONITOR SERVICE MANUAL. MAILED TO ALL
AUTHORIZED SERVICE CENTERS.

24/4-3.2   ENCLOSURE: 1084S-D MONITOR SERVICE MANUAL 314996-01.

MAILED WITH TECHTOPICS ISSUE 24, TO ALL AUTHORIZED
SERVICE CENTERS.

5 PC

24/5-1.1   AUTO-CONFIG - THIRD PARTY MOUSES.

THE PC10-III, PC20-III AND COLT HAVE A MOUSE PORT
WHICH IS USED BY THE COMMODORE 1352 MOUSE.

THIRD PARTY MOUSE CARDS USED IN THE EXPANSION SLOTS
OVERRIDE THE BUILD IN MOUSE DRIVER WHEN THE SYSTEM
RUNS AUTO-CONFIG PROGRAM DURING THE POWER UP SEQUENCE.

THE COMMODORE MOUSE USES INTERRUPT 2, THIS CONFLICTS
WITH CERTAIN THIRD PARTY MOUSES, SUCH AS LOGITECH,
WHICH ALSO USE INTERRUPT 2.

A PROGRAM IS AVAILABLE FROM SERVICE WHICH DISABLES
COMMODORE MOUSE INTERRUPT AND ALLOWS THE THIRD PARTY
MOUSE TO USE INTERRUPT 2.

REFER TO CTOC SECTION 7 DOWNLOAD, OF CURRENT
ON-LINE ISSUE 25 TECHTOPICS FOR INSTRUCTIONS.

CHGMOUSE - IS THE PROGRAM FILE.
README - FILE CONTAINS INFORMATION ON THE PROGRAM.

24/5-2.1   PC40-III SERVICE MANUAL RELEASE.

INCLUDED WITH TECHTOPICS ISSUE 24 MAILING PLEASE FIND
THE PC40-III SERVICE MANUAL. MAILED ONLY TO SERVICE
CENTERS WHICH ARE PC AUTHORIZED.

24/5-2.2   ENCLOSURE: PC40-III SERVICE MANUAL 314134-01.

MAILED WITH TECHTOPICS ISSUE 24, TO PC AUTHORIZED
SERVICE CENTERS.

END 24/5.

6 C-TOC

24/6-1.1   EXTENDED CTOC SERVICES – PAST BULLETINS ACCESSIBLE BY MODEL.

STARTING WITH ON-LINE ISSUE 25, PAST BULLETINS WILL
BE ACCESSIBLE BY MODEL NUMBER.

NEW MENUS ARE ON-LINE WHICH ALLOW TECHNICIANS DIRECT
ACCESS, UNDER PRODUCT LINE (AMIGA, CBM, OR PC), BY
UNIT MODEL NUMBER TO ANY BULLETINS ISSUED FOR THAT UNIT,
STARTING FROM ISSUE 18 (NOVEMBER 1987).

NOTE THAT ONLY REPAIR BULLETINS WILL BE LISTED,
INFORMATION REGUARDING RELEASE OF NEW TESTS, SERVICE
MANUALS OR OTHER ENCLOSURES HAVE BEEN REMOVED IN ORDER
TO KEEP THE HISTORY FILES AS CONCISE AS POSSIBLE.

IN ADDITION, IN THE PARTS SECTION A PARTS LIST, BY
UNIT IS NOW ON-LINE. THIS PARTS LIST IS FOR COMMODORE
STOCKED PARTS ONLY AND DOES NOT CONTAIN PRICES,
AVAILABLITY, OR SUBSTITUTIONS. CONSULT YOUR CURRENT
PARTS PRICE BOOK AND THE CURRENT ON-LINE PARTS UPDATES
FOR INFORMATION ON COSTS.

_____END 24/6.