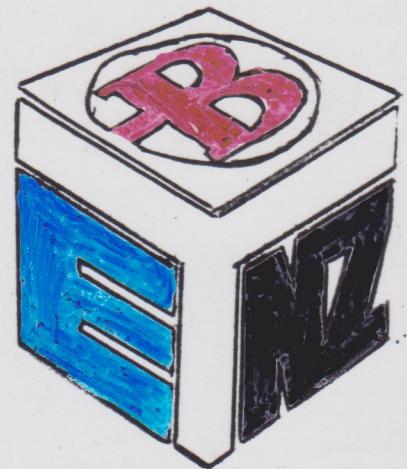


CAPERLICE YEAR 1974



M. T. R.

W A S

T H E

W A Y

T O G O

RELIABILITY

RESULTS IN

USER

ENDORSEMENT

LEARNING CURVES

SHOULD BE

TRANSPARENT

TO THE

CUSTOMER

NO

FAILURES

NO

PROBLEMS

NO

JOB

PER MAN PRODUCTIVITY

AND

CUSTOMER SATISFACTION

RESULT FROM

PROMPT RESPONSE

AND

QUICK FIX

THE OBJECTIVE

ACHIEVING

A

MINIMUM

M. T. T. R.

WE MUST

MAXIMISE SKILL

AND

MINIMISE FRUSTRATION

PRODUCT ARCHITECTURE



MAINTENANCE PHILOSOPHY

TODAY'S
TRAINING PHILOSOPHY

IS

M. T. R.

ORIENTATED.

CONSEQUENTLY

THE F. E.

IS NOT

PSYCHOLOGICALLY

PREPARED FOR

THE

INTERMITTENT

E . G .

FOR SOLID

MAINFRAME FAULTS

THE B 80

M . T . R .

I S

VERY GOOD

IN THE MAIN

THE CONSOLE
PRINTER MTR
EXERCISES VERY
THOROUGHLY

IS A GOOD
DIAGNOSTIC AID

A E 5 0 0

D O W N

O N E

W E E K

- 1) CONFIDENCE TEST WOULD NOT RUN SUCCESSFULLY
M.T.R. REPORTED A PROCESSOR FAILURE
- 2) THE KEYBOARD HAD BEEN CHANGED BY A DIFFERENT
F.E. ON A PREVIOUS CALL
- 3) CHANGED NOMINATED SUSPECTS ON PROCESSOR BOARD
- 4) THEN PERMANENT SECONDARY SUSPECTS
- 5) RAN ZEROES AND ONES TEST
- 6) CHANGED MEMORY AND MEMORY CONTROL
- 7) KEYBOARD DIED
- 8) CHANGED KEYBOARD CONTROLLER

HOWEVER
TO GET THE MOST
OUT OF MTR
MANUAL PROCEDURES
THE F.E.
SHOULD BE ABLE
TO READ & UNDERSTAND
THE SCHEMATICS
BECAUSE
HE MAY BE GIVEN

- 1) PRIMARY SUSPECTS
- 2) SECONDARY SUSPECTS
- 3) UP TO 15 SUSPECT COMPONENTS
- 4) COMPLETE BOARD SWAP
- 5) BUT VERY RARELY TO A SINGLE COMPONENT

THE E . P . G .

DOES NOT

SPECIFY

ANY BOARDS

FOR

S U B S I D I A R Y S T O C K

I N A N Y E V E N T

T H E R E E X I S T S

I N H E R E N T

T I M E C O N S U M I N G

P R O B L E M S

W I T H P . C . B .

O R

S E C T I O N S W A P P I N G

FOLLOWING THE SCHEMATIC

IN CONCERT WITH

THE M. T. R.

GREATLY INCREASES

THE PROBABILITY

OF IDENTIFYING THE

MOST LIKELY

FAILED COMPONENT

A SKILLED
ENGINEER
CAN SHORTEN
THE DIAGNOSTIC TIME
WHEN HE GETS
THE "FEEL"
OF THE MTR
WRITERS APPROACH

BLACK

BOXES

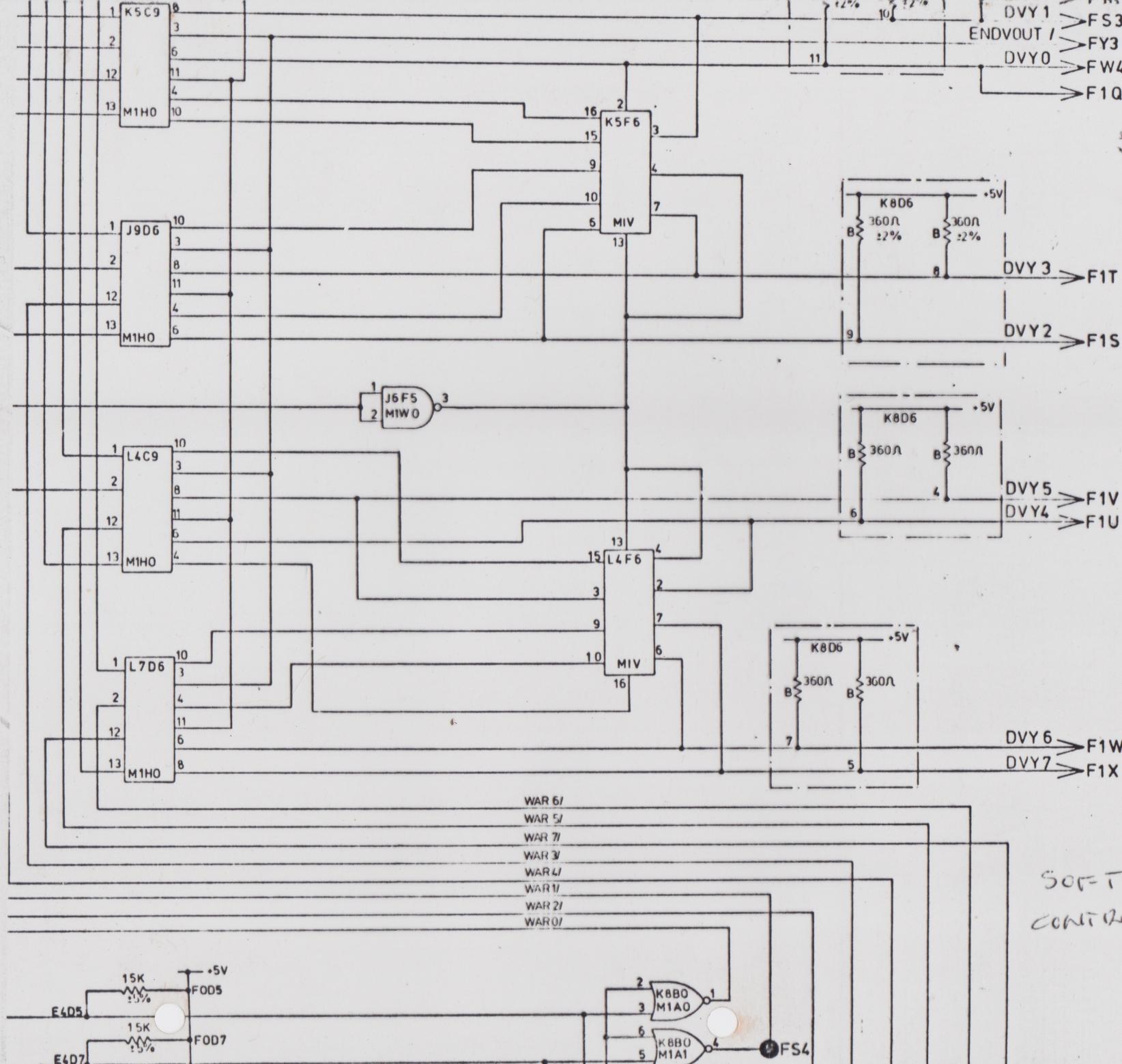
INCREASE

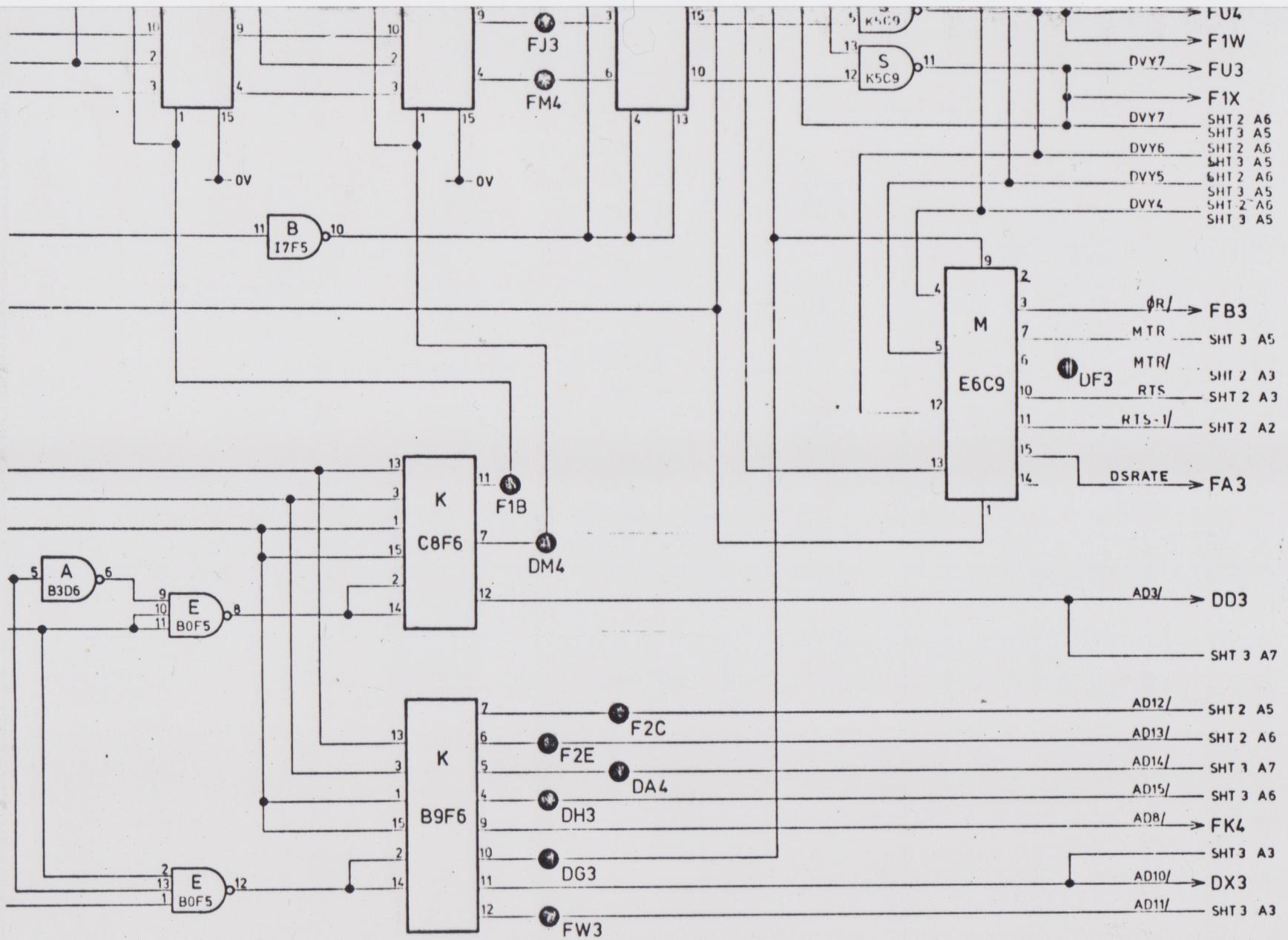
THE

DEGREE

OF

DIFFICULTY





1	RELEASER	SEPT 27/75
2	PAGE	1 OF 4
3	1234567890	1234567890
4	1234567890	1234567890
5	1234567890	1234567890

Burroughs

BURROUGHS MACHINES LIMITED
CUMBERNAULD, SCOTLAND, UK

PROPRIETARY TO BURROUGHS NOT TO BE REPRODUCED NOR USED FOR MANUFACTURING PURPOSES EXCEPT ON BURROUGHS ORDER OR PRIOR WRITTEN CONSENT

SCHEMATIC SDC-1					
ENG DES	DATE	DRAWN	DATE	DRAWING NO	
ROVED	DATE	J. R. L.	AUG 14, 74	2574 2008	
ENG COMP	DATE	CHECKED	DATE		
				2-9520	REV D
					PART 1 OF 4

1) REFER TO SCHEMATIC

COMPONENT LISTING

2) IDENTIFY APPROPRIATE

EIGHT DIGIT OR

MANUFACTURES NUMBER

3) REFER TO TECH. MANUAL

TO ASCERTAIN DEVICE TYPE

AND TRUTH TABLE

CASSETTE MTR

1) WRITE

WRITES ONE BLOCK OF 256 CHARACTERS AND READS BACK

2) READ

PERFORMS 16 READS OF THE 256 CHARACTER BLOCK AT
ONLY ONE LOCATION IN THE TAPE

3) OPTION

WRITE AND READ A SINGLE CHARACTER CONTINUOUSLY

4) SUGGESTION

PROVIDE AN OPTION TO WRITE A VARYING PATTERN TO
THE COMPLETE TAPE IN STOP/START MODE TO DUPLICATE
ACTUAL CUSTOMER USEAGE

D I S K

M T R

- 1) ONLY READ AND WRITES TO 3 CYLINDERS
- 2) HAS THE OPTION TO READ AND WRITE TO A SPECIFIED TRACK, BUT ONLY ONE TRACK AND ONE CHARACTER AT A TIME
- 3) THERE IS A STAND-ALONE DISK ALIGNMENT UTILITY (VERSION 3.02) BUT IS ON CASSETTE AND IT WON'T LOAD FROM DISK
- 4) SUGGESTION

PROVIDE RANDOM TRACK RANDOM CHARACTER ROUTINE AGAIN TO EXERCISE THE DRIVE AS THE CUSTOMER WOULD USE IT

MEMORY PARITY
ERROR DISPLAYED
IN THE LIGHTS
CAN BE A
CORRUPTED DISK
OR
FAULTY DISK DRIVE

B 8 0

MTR MANUALS

BASIC SYSTEM

60 CPS

180 CPS

DISK

CASSETTE

KEYBOARD

DATA COMM (ASYNCH)

DATA COMM (SYNC)

LINE PRINTER

S I N G L E C O N D E N S E D

M O S T L I K E L Y

F A U L T A R E A

· M A N U A L

T O M I N I M I S E

W I L D G O O S E

C H A S E S

TT 100

FAULTY DATA SEND LED
KILLS DATA COMM PROCESSOR
PROCEEDING THROUGH
MTR STEP BY STEP
TO FIND THE LED
IS OPEN CIRCUITED
WOULD TAKE
ONE MAN
8 HOURS

AIDS to crack down on drinking drivers

GROUPS of traffic officers, to be known as Aids — alcohol impaired driver squads — will be the main thrust behind the latest traffic enforcement campaign, which begins on April 1.

Basically a drinking-driving campaign, the blitz will be a nine-month long one aimed at reducing New Zealand's annual road toll to below 600.

"We are appealing for public co-operation in this campaign," the Minister of Transport (Mr McLachlan) said today.

"The campaign is in line with this year's aim to reduce road accident fatalities to under 600.

"It is fairly well established that alcohol is the major factor in about 50 percent of fatal road accidents — and in at least 20 percent of hospitalised accident cases.

"Therefore the campaign will be aimed at alcohol impaired drivers.

"Each area will form a group of traffic officers known as alcohol impaired driver squads — Aids. And on selected occasions each week the squads will be used to saturate an area or areas to detect drinking drivers."

Mr McLachlan said the emphasis would be on the drinking driver, "but it is also recognised that there are other seasonal aspects of driving which also play a big part in accident build-ups."

Vehicle lighting during the

winter months, vehicle fitness around public holiday periods and the proper use of seat belts are three aspects the traffic officers will pay special attention to.

"However, traffic officers have been asked to pay attention to the use of seat belts during the entire campaign," Mr McLachlan said.

"And in the interests of fuel conservation, traffic officers will continue their campaign against speeding.

"In approving such a long campaign, I have accepted that other aspects of traffic enforcement may be temporarily neglected."

• The Public Service Association today said that 50 percent more traffic officers are needed to adequately protect motorists and enforce any campaigns carried out.

"The lack of ability of the department to recruit sufficient traffic officers is making it impossible for them to give adequate coverage on the roads," said association president Mr D H Thorp.

"It is apparent the Government's restrictive 'sinking-lid' policy has meant that most areas throughout the country are under-manned.

"As a consequence, the public is not receiving the protection to which it is entitled.

B 1830

- 1) DIAGNOSTIC METHOD IS AIDS
- 2) SYSTEM CONTROL RUNS AIDS
- 3) THEREFORE AIDS CANNOT DIAGNOSE
SYSTEM CONTROL
- 4) MANUAL PROCEDURE USING BDM
FOR SYSTEM CONTROL CARDS
- 5) Q CARD TAKES TYPICALLY 4 HOURS
TO TROUBLE SHOOT WITH "QUOTE"
NO QUARANTEE OF PINPOINTING OR
EVEN IDENTIFYING THE FAILURE
- 6) RECOMMENDATION ORDER A SPARE
Q BOARD FOR YOUR SUBSIDIARY

UNIT TROUBLE-SHOOTING GUIDE.

B9499-6 206/7 DDEC

FEB. 17, 1978

PAGE 041

ENTRY FIELD ENGINEER INSTRUCTIONS:

AGREE DISAGREE

CHECK AND/OR REPLACE.

330225

CMODES

PLACE CARD 07 ON EXTENDER

GTO SCH 09.07.06.

CHECK LOGIC OF CMODE2*0 AND 2*1. USE EQUATIONS AND SCHEMATICS, REPLACE FAULTY CHIPS. IF OTHER SIGNALS AT FAULT, TRACE TO THEIR ORIGINS OR USE MTR.

330250 OBSERVE THAT THE CM STATE COUNTER (CMST2*-) IS OPERATING AS SHOWN IN CM TIMING DIAGRAMS. (CHECK FOR BOTH LENGTHS OF CM'S)

330255 330270

330255 OBSERVE THAT CMJMP30 DOES COME UP AS INDICATED IN TIMING DIAGRAMS.

330260 330275

330260 OBSERVE THAT CMS21*29 DOES COME UP AS INDICATED IN TIMING DIAGRAMS.

330265 330280

330265 OBSERVE THAT CMST30 DOES COME UP AS INDICATED IN TIMING DIAGRAMS.

330285

330270 FAULT MAY LIE IN CHIPS G3,H4 (AS WELL AS ASSOCIATED CHIPS G4,H5,H3,G1). CHECK AND/OR REPLACE.

330275 FAULT MAY LIE IN CHIPS G4,H5,H3. CHECK AND/OR REPLACE.

330280 FAULT MAY LIE IN CHIPS G4,H5,G3. CHECK AND/OR REPLACE.

330285 FAULT MAY LIE IN CHIPS G4,G5. CHECK AND/OR REPLACE.

330300 OBSERVE THAT INPUTS TO CMENCODER (SCH'S 09.14.02 AND 03) ARE CORRECT FOR TYPE OF CM BEING SENT.

330305 330325

330305 CHECK THAT SELECT INPUTS TO MPXR USED IN ENCODER ARE CORRECT FOR TYPE OF CM BEING SENT.

330310 330225

330310 OBSERVE THAT OUTPUTS OF MPXR USED IN ENCODER CORRESPOND TO INPUTS.

330080 330320

FROM A RECENT
BURROUGHS
PUBLICATION

TYPES OF THINKING

De Bono, in "The Mechanism of Mind", has distinguished four types of thinking: Natural, Logical, Mathematical and Lateral.

The mind is like an information system where data flows down a multitude of paths and cuts each path a little deeper as it goes. Natural thinking is very fast but full of errors, such as prejudice and clichés, such as "One field support man is a bad trouble-shooter, therefore all field support men are bad trouble-shooters".

Logical thinking is a deliberate attempt to restrain natural thinking. The problem with logical thinking is that the "logic" can be applied too early, causing completely wrong conclusions, such as "if the problem occurs when button X is depressed, then the depression of button X is the cause of the problem".

Mathematical thinking is the rigorous processing of information according to pre-selected algorithms. The limitation of mathematical thinking for problem-solving is that it provides no flexibility to generate new approaches to the problem.

Lateral thinking is a "jump" or "insight" approach. This involves overcoming the pattern involved by flow of previous ideas. This type of thinking is of great use in solving problems. It leads, for instance, to helpful ideas such as "this is the problem: let us see if it is really only a part of a more general problem". It gives a creative approach: it enables one to find answers where a more formal (and duller) approach may fail. It involves the imaginative part of one's mind, which can be termed "mental courage".

2012357-004

1) ENHANCE OUR
TRAINING SYLLABUS
TO ACHIEVE GREATER
F.E. SELF RELIANCE

2) THE STATED MAINTENANCE
PHILOSOPHY AND THE
RECOMMENDED SUBSIDIARY
SUPPORT POLICY

MUST BE IN
SYNC

