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Tonto Query / Solution Report

Ref No |

Keywords

PRINTER PRINTING IN INVERSE COLOURS.

Description

WHEN USING PRINTER IT PRINTS
WHITE CHARACTERS ON BLACK BACKGROUND.

Explanation / Action

PRINTING OPTION SET TO COLOUR

ACTION.

HOUSEKEEPING

OPTION 9

SET IMAGE PRINT TO BLACK AND WHITE.

USING f3.

Tonto Query / Solution Report

Ref No 2

Keywords

VOICE GARBLED

Description

WHEN CREATING A VOICE RESPONSE
USING F6 TO SPEAK. VOICE IS GARBLED &
UNINTELLIGABLE

Explanation / Action

RESET PERMENANT STORE
USING CONFIG PROGRAM.
THIS IS DUE TO A CORRUPTION
OF THE PERMENANT STORE.

Keywords

PRINTER BLACK BLOCKS

Description

M1880 PRINTS BLACK LINES ACROSS
PAGE. SELF TEST ON PRINTER OK.

Explanation / Action

RESET PERMANENT STORE USING
CONFIG PROGRAM. THEN USE
CONPRIN AND INSTALL M1880.

THIS USUALLY OCCURS ON MACHINES WHICH
HAVE BEEN INSTALLED WITH ILL THERMAL
AT SOME STAGE.

Tonto Query / Solution Report

Ref No

4

Keywords

XCHANGE INHIBITS SAVE/LOAD

Description

ATTEMPTING TO SAVE STORE
AND MESSAGE

"XCHANGE INHIBITS SAVE/LOAD"

APPEARS.

PLUS TONTO KEEPS BEEPING.

Explanation / Action

SELECT APPLICATIONS

AND ENTER XCHANGE

EXIT FROM XCHANGE USING.

F7. QUIT.

THEN SAVE STORE

Keywords

Easel, columns, delete

Description

Requirement to reduce number of columns in Easel, i.e. to a number smaller than the initial 12.

Explanation / Action

Use f4 to delete numeric value in a column. Then use edit label and f4 to delete label. Then use view command to re-display.

Keywords COPY CARTRIDGE and IMAGE PRINT
SIMULTANEOUSLY

Description

When performing an image print (SHIFT/PRINT) while at the same time copying a cartridge in Microdrive Utilities, the system time shares between these operations.

Explanation / Action

This is normal.

Tonto Query / Solution Report

Ref No

7

Keywords

MESSAGING, FAILED 12

Description

MESSAGING CONSISTANTLY FAILS WITH
MESSAGE "FAILED 12"

Explanation / Action

THE RECEIVING TONTO IS CONFIGURED
INCORRECTLY. IF THE RECEIVING TONTO
IS A ONE LINE TONTO REFER
TO MESSAGING MANUAL PAGES A3-3
& A3-4.

Keywords Screen display of Abacus formulae

Description

Abacus formulae normally can only be printed out on a printer. No provision in Abacus to display formulae on screen.

Explanation / Action

"Print" formulae to a '.lis' file

F7, P, F, $\leftarrow$, $\leftarrow$, F, <filename>

Initiate Quill task and import the "Print" file.

F7, O, F, I, <filename>(.lis?) .

(if you have not specified an extension to filename then add .lis)

Displays formulae distribution on 1st page with actual formulae on 2nd page.

Tonto Query / Solution Report

Ref No 9

Keywords Herald, functionality

Description

What Herald functionality remains when
a TONTO is used

Explanation / Action

Dwelt on no reply ; cancel Same
Recall to another switch .

Keywords

Tonto - MDX DIAGNOSTICS

Description

USING TONTO TO ACCESS THE REMOTE DIAGNOSTICS PORT ON AN MDX SWITCH. UNABLE TO GAIN ACCESS. MODEM DIALS BUT FAILS TO CONNECT.

Explanation / Action

WHEN ENTERING THE TELEPHONE NUMBER IN DIRECTORY A SERIES OF "FULL STOPS" (4 or 5) SHOULD BE ENTERED IN THE NUMBER FIELD AS SHOWN BELOW.

01 450 9999....

THIS SHOULD ENABLE THE CONNECTION.

Appendix D: ASCII/Character Code Table

ASCII TABLE

HEX	DEC	CHAR	HEX	DEC	CHAR	HEX	DEC	CHAR
01	1	SOH ^A	2C	44	,	57	87	W
02	2	STX ^B	2D	45	.	58	88	X
03	3	ETX ^C	2E	46	:	59	89	Y
04	4	EOT ^D	2F	47	/	5A	90	Z
05	5	ENQ ^E	30	48	0	5B	91	[
06	6	ACK ^F	31	49	1	5C	92	\
07	7	BEL ^G	32	50	2	5D	93	]
08	8	BS ^H	33	51	3	5E	94	^
09	9	HT ^I	34	52	4	5F	95	_
0A	10	LF ^J	35	53	5	60	96	`
0B	11	VT ^K	36	54	6	61	97	a
0C	12	FF ^L	37	55	7	62	98	b
0D	13	CR ^M	38	56	8	63	99	c
0E	14	SO ^N	39	57	9	64	100	d
0F	15	SI ^O	3A	58	:	65	101	e
10	16	DLE ^P	3B	59	;	66	102	f
11	17	DC1 ^Q	3C	60	<	67	103	g
12	18	DC2 ^R	3D	61	=	68	104	h
13	19	DC3 ^S	3E	62	>	69	105	i
14	20	DC4 ^T	3F	63	?	6A	106	j
15	21	NAK ^U	40	64	@	6B	107	k
16	22	SYN ^V	41	65	A	6C	108	l
17	23	ETB ^W	42	66	B	6D	109	m
18	24	CAN ^X	43	67	C	6E	110	n
19	25	EM ^Y	44	68	D	6F	111	o
1A	26	SUB ^Z	45	69	E	70	112	p
1B	27	ESC ^[	46	70	F	71	113	q
1C	28	FS ^\	47	71	G	72	114	r
1D	29	GS ^]	48	72	H	73	115	s
1E	30	RS ^_	49	73	I	74	116	t
1F	31	US ^`	4A	74	J	75	117	u
20	32	SPACE	4B	75	K	76	118	v
21	33	!	4C	76	L	77	119	w
22	34	"	4D	77	M	78	120	x
23	35	#	4E	78	N	79	121	y
24	36	\$	4F	79	O	7A	122	z
25	37	%	50	80	P	7B	123	{
26	38	&	51	81	Q	7C	124	
27	39	'	52	82	R	7D	125	}
28	40	(	53	83	S	7E	126	~
29	41	)	54	84	T	7F	127	DEL
2A	42	*	55	85	U			
2B	43	+	56	86	V			

Tonto Query / Solution Report

Ref No

11

Keywords

TONTO - ICL SYSTEM 25

Description

CAN TONTO WORK TO AN ICL
SYSTEM 25

Explanation / Action

THE TONTO COULD BE USED AS A
GLASS TELETYPE IF IT IS CONNECTED
VIA A SPECIAL ASYNCHRONOUS CONNECTOR
BOX CALLED A "MITE" WHICH IS
AVAILABLE FROM

BARRON McCANN LTD
BARRON McCANN HOUSE
SHORT MEAD SG.

BIGGLESWADE

BEDFORDSHIRE
SG18 0AT

tel. 0767 - 316286.

UNVERN SYSTEMS

12-1-1977

UNDER INVESTIGATION

Keywords PRINTER BOLD

Description

Daisy wheel printer produces BOLD characters on top line

Explanation / Action

You have got "Correspondence" set in Housekeeping 8-9.

Set it to draft

[Corres means print double density for the matrix printer. (i.e. thermal) It caused double strike i.e. Bold for the daisy]

Tonto Query / Solution Report

Ref No 13

Keywords System 34, System 36, System 38, IBM,
5250 terminals

Description Is it possible to connect TONTO
to an IBM system/34, 36 or 38?

Explanation / Action

Yes, using VT100 emulation and an X-data
protocol converter.

X-data's address:

X-data Ltd.,
Computer Peripheral Suppliers,
750, Deed Way,
SLOUGH

0753.

Tele: 847728 X DATA &

Keywords Cartridge blocks per A4 page

Description

Information is quite often required on how much space is required to store an A4 Quill page of text on Microdrive cartridge.

Explanation / Action

Created 6 pages of text with paragraph separation of one blank line. 2500 words. 64 lines/page

Average 416 words per page

64 lines per page

Approximate margins 10 & 70

ie 60 chars/line

Cartridge space required 35 blocks

2 blocks = 1 kbyte

∴ Number of blocks per page is 6 or 3 kbytes

Approximately 30 pages per cartridge (assumes 180 blocks) Paul Maden.

Keywords Save Store Files not recoverable.

Description After performing a "Save store" (housekeeping) with several files in memory, subsequent ~~the~~ "load store" did not restore those files to memory.

Explanation / Action

The user when first supplied with his Tonto had performed a "save store" without setting the date correctly. This date had been in the future by 6 months. The date and time is used to name the "save store" file so Tonto can always load the latest version. Although this user did a successful "save" each time (and had many of these on his cartridge) when he did a "load store", the file selected was always the one he had created first with the incorrect date. By removing this or renaming, the other ones could be accessed.

Paul Maden

Tonto Query / Solution Report

Ref No 16

Keywords

MICROLINE 82 or 83 PRINTER

Description

CAN I USE MY MICROLINE 82 or
83 WITH TONTO.

Explanation / Action

CAN BE USED BUT WILL NOT
FORM FEED CORRECTLY. ALSO ALL
PRINT ATTRIBUTES ARE LOST.
E.G. UNDERLINE, BOLD etc.
A NEW PRINTER LEAD WILL BE
REQUIRED. INFORMATION ATTACHED
ALSO CONFIGURATION ATTACHED.

PRINTER PARAMETERS

Screen 1 of 3

Printer name XXXXXXXXXX

Baud rate 1200
 Lines/page 7
 Characters/line 80
 New line CR,LF
 New page FF
 Home print head CR
 Cancel print CAN
 Line feed LF
 Print # NUL
 Correspondence quality on NUL
 Correspondence quality off NUL
 Underlined on NUL
 Underlined off NUL

↑ ↓ select item or other screen

↵ return to main screen

↵ amend item

↵ delete configurator

PRINTER PARAMETERS

Screen 2 of 3

Printer name

~~XXXXXXXXXX~~

Subscript on NUL

Subscript off NUL

Superscript on NUL

Superscript off NUL

Perforation skip on ESC, VT, 54

Perforation skip off ESC, VT, 48

Image linefeed NUL

Image single density NUL

Image double density NUL

Set form length ~~ESC, 70, 66~~

ESC, 70, 55, 48

Text line feed LF

Ignore paper end signal NUL

↑ ↓ select item or other screen

↑ return to main screen

↑ amend item

↑ delete configurator

16
40PS

PRINTER PARAMETERS

Screen 3 of 3

Printer name

XXXXXXXXXX

Enable paper end signal NUL

Print graphics block NUL

Enlarged off RS

Enlarged on US

↑ ↓ select item or other screen

f7 return to main screen

f1 amend item

f8 delete configurator

4 of 5

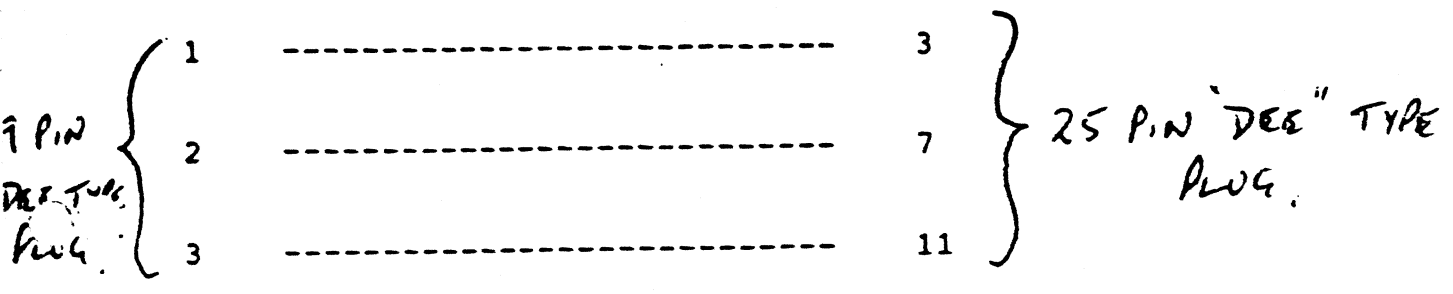
Using Microline Printers with Tonto

The Ricoh RP1600 printer has the BTE BS title Printer MP1860.

The interface cable to be used should be made up as shown below. It should be possible to modify on of the existing Tonto printer cables.

Tonto

MICROLINE 82 or 83



CREATED; 15:47 27/01/87 RECEIVED; 15:56 27/01/87

FROM: BOB FARISH, OM11, MANX TELECOM, ISLE OF MAN
NUMBER: 062473711

TO: TONY FISHPOOL, TONTO SUPPORT
NUMBER: 016267726

SUBJECT: USE OF TONTO ON BT "MIRACLE" UNITS

STANDARD TONTO CAN NOT BE USED TO ACCESS AN EXCHANGE "MIRACLE" UNIT AS THE MESSAGE "WAITING" IS DISPLAYED ON THE NOTICEBOARD, AND NO FURTHER ACTION CAN TAKE PLACE. A TONTO FITTED WITH DATALINK CAN BE USED WITH A PROFILE AS FOLLOWS :

LINE SPEED:300
PARITY: NONE
STOP BITS:1
AUTO LF:N
LOCAL ECHO:Y
SEND LF:N
ALT/X:SQ--M

THE ABOVE IS OBVIOUSLY ONLY OF USE TO BT STAFF, BUT DOES ALLOW A QUICK MEANS OF ACCESS FOR ANYONE INVOLVED WITH "MIRACLES" (IN CASE YOU DIDN'T KNOW, A MIRACLE IS USED IN A TELEPHONE EXCHANGE AS A MEANS CHECKING THE WORKING OF A CUSTOMER'S METER(- AS WITH PMC'S))

REGARDS BOB.

The waiting message on the notice board indicated that the remotely access device had signaled to Tonto to stop transmitting, it had sent a control S (known also as XOFF or DC3). The problem was that the software controlling the miracle unit never sent the control Q (known also as XON or DC1) even though it was ready to receive data. The solution was to tell Tonto to ignore incoming XON's & XOFF's.

Datalink 2.

The ICL bug list shows no reported problems with the original Datalink and it has never been clear what the difference was between it and version 2. This support duty has never had reports of Datalink problems other than mis-operations. The Tonto product group advised that it should be fitted in place of version 1 if the customer obtained or upgraded to VT-Link 2.

Note: Only 7 bit working is available on either version of Datalink.

Keywords EGO COMPUTERS

Description

CAN TONTO BE USED WITH EGO
COMPUTERS

Explanation / Action

EGO computer is apparently a machine that is quite common in the motor trade.

It is a system designed to lock the user into their hardware. So there are no standard V24 interfaces.

Therefore unlikely that any terminal except EGO's can be connected to it.

EGO 01-207-4466.

Keywords Texas Instruments (TI) 990

Description

Can Tonto connect to a Texas Instruments (TI) 990 computer.

Explanation / Action

The Texas Computer uses a Terminal (TI 931) which is significantly different to the Dec VT100. To make a connection impracticable.

Answer is therefore NO. cannot be connected.

Keywords

Archive printing in new order

Description

After using the "order" command, records were not printed in the new order although both "display" and "look" showed the records in the new order.

Explanation / Action

The user was using the "all" command in a procedure to print out all the records.

The "All" causes a scan through the records in the fastest possible time and in general is not in any particular sequence.

(See Archive Reference Section E10-17)

The "While not eof()" should be used instead.

Paul Mader.
ISD 2.2.1

Keywords

MESSAGING FAILED 24

Description

WHEN A MESSAGE IS SENT FROM NOTEPAD
USING F9. IMMEDIATELY 'F' APPEARS IN
NOTICE BOARD

Explanation / Action

INSERT FORMATTED CARTRIDGE

PRESS START

PRESS 8 (HOUSEKEEPING)

PRESS 4 (SAVE STORE)

WHEN STORE SAVED THEN SWITCH
TONTO OFF AND BACK ON. LOAD
STORE BY PRESSING START, 8, 5.
MACHINE SHOULD NOW BE RESTORED
WITH MESSAGING WORKING. THIS PROBLEM
WILL NOT OCCUR IN MACHINES LEAVING
THE FACTORY AFTER JULY 85.

Tonto Query / Solution Report

Ref No 21.

Keywords

RADIO PICK UP

Description

RADIO INTERFERENCE ON TONTO HANDSET
AND OR LOUDSPEAKER.

Explanation / Action

THIS PROBLEM SHOULD BE REFERRED
TO AREA MAINTENANCE. THE SUGGESTED
SOLUTION IS TO FIT A:-

BLOCK TERMINAL SA/RFI
RATE BOOK ITEM CODE = 870157.

See Q/s 80.

Tonto Query / Solution Report

Ref No 22

Keywords LARGE FILES
SAVE/LOAD FAILURE

Description A LARGE FILE THAT HAS
BEEN SAVED ON CARTRIDGE WILL NOT
LOAD PROPERLY.

Explanation / Action

DUE TO A BUG IN THE BASE SOFTWARE.
NO SIMPLE USER ACTION TO GET ROUND
THE PROBLEM, OTHER THAN USING SMALLER
FILES AND LOAD/MERGE. (WHERE POSSIBLE).
FIXED IN F1.2.

A PATCH EXISTS FOR FO.7 ONLY :-
LOAD AND RUN PROGRAM SET-CHANGE-1
VIA THE CARTRIDGE MENU. REPEAT
WHenever THE MACHINE IS SWITCHED
OFF. NB THIS PROGRAM IS UNOFFICIAL,
IE. NOT SUPPORTED BY BT OR ICL

Keywords EXPANDED DIRECTORY,
TD-FAIL

Description All attempts to highlight one particular entry in the telephone directory led to a TD-FAIL message

Explanation / Action

Create two telephone directories; one containing all entries below the offending entry; the other containing all entries above the offending entry. Then merge the two directories. The result will be the original directory without the offending entry. This can then be inserted.

(N.B. it does not work just to delete the offending entry, problem will simply occur on other entries).

Keywords

NOTICE BOARD CORRUPTION.

Description

BOTTOM TWO LINES ON SCREEN CORRUPT.
OR ODD CHARACTERS APPEARING RANDOMLY.

Explanation / Action

SAVE STORE

THEN SWITCH OFF AND ON AGAIN.

(MAKE SURE THAT THE PERSON CONCERNED
HAS TAKEN PREVIOUS "SAVE PERMENANT STORE"
OR WARN THAT THEY WILL HAVE TO
RE CONFIGURE THEIR MACHINE AS REQUIRED).
SELECT APPLICATIONS AND INSERT BASIC CARTRIDGE
USING 'CONFIG' RESET PERMENANT STORE
(f3). THEN EITHER:
LOAD PERMENANT STORE OR CONFIGURE
MACHINE AS REQUIRED.

Tonto Query / Solution Report

Ref No

25

Keywords Printer Double Line Feeds

Description M1880 Printer (WM80 Walters)
giving double line feeds.

Explanation / Action

Switch SW2-3 on main printed circuit board can be set to automatically give a line feed every time a carriage return is received.

This switch should be set to OFF so no line feed is given.

Remove left knob and 4 screws from base to remove cover.

The main pcb is situated beneath the RS232C Serial Interface pcb. Do not confuse the switches on this board with those on the main pcb.

Main pcb. SW1 to 6 OFF SW1-7 & 8 ON SW2 ALL OFF

RS232C Interface SW1-1, 5 & 7 ON SW1-2 & 4, 6, 8 OFF
SW2-2, 4 ON SW2-1 & 3 OFF

PRJ Maden

Keywords UNABLE TO START QUILL

Description Through insufficient memory probably, while working in Quill and trying to save a document, following a message "I/O incomplete ----" you find you cannot restart Quill with the error message "UNABLE TO START QUILL .. PRESS SPACE TO CONTINUE ... PRESS ESC TO ABANDON".

Explanation / Action

Pressing the SPACE to continue just reproduces the same message.

SOLUTION:

Press F6 to return to Xchange Task Control. The Quill temporary file will probably still be open.

Press F7, Q, ↵ to quit Xchange and close the Quill ".tmp" file.

(You may need to go to Housekeeping Store Report to delete as many memory files as possible to make more memory available)

Press 4, 2 to restart Xchange and start a new Quill task.

Press F7, L, to load the ".tmp" file and continue. It is not always possible, however, to recover documents from Quill ".tmp" files depending on their state at the time.

Keywords

INDENTED PRINTING IN ABACUS

Description

SOME LINES ARE PRINTED INCORRECTLY
IN ABACUS. CAUSING COLUMNS NOT TO
LINE UP.

Explanation / Action

IN ABACUS

SELECT "COMMANDS" (F7)

"DESIGN" (D).

"PRINTER paper width (character)" (P).

Change this value from 80 to 76

This overcomes some software shortcomings
in ABACUS.

Keywords

DATA COMMS TO CROMEMCO MICRO

Description

CAN I CONNECT AT. TONTO WITH DATA
COMMS ADAPTOR TO A CROMEMCO MICRO-
COMPUTER.

Explanation / Action

YES BECAUSE CROMEMCO SUPPORT
VTECO TERMINALS.

Keywords

RANDOM LINE INDENT: PRINTING: BASIC: M1880

Description

Under some circumstances when printing out a basic program listing, a line will be printed which has been indented to the right.

Was observed on Alcorac printer.
Later observed happening in Quill.

Explanation / Action

The ~~same~~ fault can be prevented by making the M1880 dot matrix printer always print from left to right, rather than its normal Bidirectional, logic seeking print direction.

To achieve left to right only printing change the TONTO printer parameter Home print head to :-

ESC, 60, CR, ESC, 85, 49
by using CONPRIN.
Note printing will be slower.

Keywords

CONNECTION APPROVAL.

Description

IS TONTO APPROVED FOR CONNECTION
TO XXXXX ?

Explanation / Action

TONTO IS APPROVED FOR CONNECTION
TO i) HULL & BT PSTN's
ii) LIST 2 & LIST 4
RE PRIVATE EXCHANGES.

THESE LISTS ARE HELD ON PRESTEL
DATABASE (RADAR) AND USED BY AREAS
TO CHECK CONNECTIVITY.

Keywords

9 VERTICAL BARS ON POWER UP.

Description

MACHINE ALWAYS STOPS AT 9 VERTICAL BARS WHEN POWERED OFF + ON AGAIN.

Explanation / Action

POWER TONTO OFF AND WAIT OVER 1 MINUTE BEFORE POWERING ON AGAIN. THE REASON IS THAT THE CRYSTAL STOPS RUNNING WHEN THE POWER RAIL DROPS AT ALL, BUT THE REST OF THE CIRCUITRY REQUIRES A FULL MINUTE TO STOP WORKING IF THE PROBLEM PERSISTS THEN A MAINTENANCE VISIT WILL BE REQUIRED.

C.W

Tonto Query / Solution Report

Ref No 32.

Keywords

TONTO - TELEXES VIA HASSLER TELEX BOX

Description

CAN TONTO BE USED WITH HASSLER
TELEX BOX?

Explanation / Action

No.

Reason:- THE HASSLER BOX REQUIRES
SPECIAL SOFTWARE IN THE TONTO
THIS WILL NEVER BE AVAILABLE.

P.P.

Keywords Transfer of files to remote equipment.

Description Microdrive cartridge files can be transferred to another Tonto, etc.

* EXPORT FILES only

Explanation / Action

Use the data comms adaptor M1887 with the Tonto which allows up and down loading of files from microdrive to the RS423 port.

A modem can then be connected to this port for transmission of the files over the PSTN to a similar set up at the other end.

The adaptor is software controlled with its own menus.

* NOTE: THE FILES MUST BE EXPORTED FILES FROM ANY APPLICATION. THEY WILL HAVE A.D. EXTENSION

Tonto Query / Solution Report

Ref No 34

Keywords VOICE MAIL ~~ERR~~

Description FORCED DELIVERY CALLS FROM
VOICE MAIL MAY BE ANSWERED FROM TONTO.
TO

Explanation / Action

TO ANSWER A FORCED DELIVERY CALL
WHEN VOICE MAIL ASK'S FOR SECURITY
CODE, THE KEYPAD MUST BE ENABLED
FIRST, BY PRESSING SHIFT/4 (DIAL)

Keywords FILE TRANSFER AT 300 BAUD

Description

Using M1887 DataComms Adaptor
I cannot file transfer at 300 baud
or slower.

Explanation / Action

This is a known fault. We have referred it to manufacturers and they will fix it in the next release. We have also arranged for all existing units to be modified by them on a 48 hour turn round free of charge.

Please send the unit WITH A RETURN ADDRESS to

Walkbury Consultants, 1 Alfric Square
Woodston, PETERBOROUGH, PE2 0JA

ALT/key sequences also cause lockups. The way out is to press "START" "8" "8" and delete the "terminal" which uses 12 or more blocks, this will release the terminal. Cured in

02/08 Software.

TELEPHONE CHARGE BANDS ON TONTO - EFFECT OF INCREASE IN TARIFF

Keywords

TELEPHONE CHARGES CONTEL CONFIG

Description

As from the 1st November, there has been an increase in telephone charge rates. These increases mean that Tonto's now in stock are no longer correctly configured. This change in tariff may cause some users to query the service desks on the procedure for changing the charge rates. If the customer wishes to use call charging he will have to use the CONFIG and CONTEL programs to make the necessary adjustments. Both these programs are on the BASIC tape. This note briefly explains how to implement the new call charging rates. More information about how to run CONFIG and CONTEL can be found in the Advanced Operations manual.

Explanation / Action

CONFIG must be used to change the cost of the charge unit. On arrival, this figure will be set to £0.054, i.e. 5.4p. This figure includes VAT. The new figure, inclusive of VAT, should be £0.0575, i.e. 5.75p. CONTEL must be used to change the time for one unit of charge at each rate. The inland charge bands screen should read:

Charge Band	Cheap mmss	Standard mmss	Peak mmss
L	0800	0200	0130
a	0200	0040	0030
b1	0100	0030	0023
b	0048	0023	0017
IR	0015	0008	0008
m	0015	0008	0008

The overseas charge bands screen should read:

Charge Band	Cheap sshh	Standard sshh	Peak sshh
OA	0990	0810	0810
OB	0750	0615	0615
OC	0590	0505	0465
OD	0425	0345	0345
OE	0425	0345	0425
OF	0380	0320	0320
OG	0305	0305	0305
C2	0520	0425	0425

N.B. Call charging cannot always be performed exactly. In the case of the inland charge bands, where the above reads 17ss and 23ss it should really be 17.1ss and 22.5ss respectively. Furthermore, in the overseas charge bands, charge band E cannot be mapped exactly into the Tonto call charging scheme.

TONTO QUERY / SOLUTION REPORT		REFERENCE NO.	36
KEYWORDS			
TELEPHONE CHARGES CONTEL CONFIG			
DESCRIPTION OF QUERY			
As from the 3rd November, there has been an increase in telephone charge rates. These increases mean that Tonto's now in stock are no longer correctly configured. This change in tariff may cause some users to query the service desks on the procedure for changing the charge rates. If the customer wishes to use call charging he will have to use the CONFIG and CONTEL programs to make the necessary adjustments. Both these programs are on the BASIC tape. This note briefly explains how to implement the new call charging rates. More information about how to run CONFIG and CONTEL can be found in the Advanced Operations manual.			
EXPLANATION / ACTION			
CONFIG must be used to change the cost of the charge unit. On arrival, this figure will be set to £0.054, i.e. 5.4p. This figure includes VAT. The new figure, inclusive of VAT, should be £0.0506, i.e. 5.06p. CONTEL must be used to change the time for one unit of charge at each rate. The inland charge bands screen should read:			
Charge Band	Cheap mmss	Standard mmss	Peak mmss
L	0600	0130	0100
a	0140	0034	0026
bl	0100	0030	0023
b	0045	0024	0018
IR	0012	0008	0008
m	0012	0008	0008
The overseas charge bands screen should read:			
Charge Band	Cheap sshh	Standard sshh	Peak sshh
OA	0900	0720	0720
OB	0665	0545	0545
OC	0525	0450	0410
OD	0375	0305	0305
OE	0375	0305	0375
OF	0275	0230	0230
OG	0220	0220	0220
C2	0375	0305	0305
A2	0795	0650	0650
N.B. Call charging cannot always be performed exactly. In the case of the inland charge bands, where the above reads 26ss and 34ss it should really be 25.7ss and 34.3ss.			
AUTHOR		DATE	
Paul Maden, BTIC/CPE/ITMD6.3		5th December86 Issue 2	

Tonto Query / Solution Report

Ref No 37

Keywords MP1713, ON LINE SWITCH/LIGHT,
PRINTER, POWER ON.

Description

MP1713 DOT MATRIX PRINTER
NOT COMING "ON LINE" WHEN SWITCHED
ON, OR WHEN ON LINE SWITCH IS
PRESSED

Explanation / Action

THE PRINTER INTERFACE CABLE
HAS TO BE CONNECTED TO TONTO
IN ORDER THAT THE PRINTER
POWERS UP ON LINE OR CAN BE
SWITCHED ON LINE.

THIS IS A "FEATURE" OF THE MP1713
WHICH DOES NOT OCCUR ON THE MP1711
(M1980).

Bob Parley
12/11/85

Tonto Query / Solution Report

Ref No 38

Keywords

TRAINING, COURSES

Description

TO OBTAIN DETAILS OF
AVAILABLE TONTO TRAINING
COURSES FOR CUSTOMERS
AND B.T. STAFF

Explanation / Action

CONTACT:-

MRS C. A. LOKER

BSSU 2

8 QUEBEC ST.

LEEDS

LS1 2HN

TELE (0532) 451000

TELEX 55226

FAX 460446

R.P.

Keywords

CANNOT DELETE MESSAGE

Description

WHEN TRYING TO DELETE A MESSAGE

NOTHING APPEARS TO HAPPEN.

Explanation / Action

KNOWN BUG.

PRESS "START" THEN "RESUME"

THEN DELETE AS NORMAL (fs)

QW.

Keywords SELF STUDY PACKS, TONTO,
INTRODUCTION TO, EASEL, QUILL, ARCHIVE, ABACUS

Description

MARCH 85 TONTO LAUNCH CIRCULAR (Sec 13.4)
REFERS TO SELF STUDY PACKS.

Q/ ARE THEY AVAILABLE?

A/ SEE BELOW

Explanation / Action

5 PACKS EXPECTED APPROX NEW YEAR
i.e. 1st QTR 86 FOR BT AND CUSTOMERS.

1/ INTRODUCTION TO TONTO * SEE BELOW.

2/ EASEL, 3/ QUILL, 4/ ARCHIVE, 5/ ABACUS.

EACH PACK CONTAINS:- MANUAL, TONTO CARTRIDGE,
AUDIO CASSETTE.

FULL DETAILS WILL BE ISSUED IN DUE COURSE.

* FOR INTERNAL BT USE ONLY, THE
CURRENT VERSION OF SELF TEACH PACK
"INTRODUCTION TO TONTO" 984429
IS AVAILABLE, CONTACT RENÉ BIRD
ON 01-631-2303.

THIS ITEM IS CURRENTLY NOT FOR SALE
OR TO BE GIVEN TO CUSTOMERS; A CUSTOMER
VERSION WILL BE AVAILABLE 1st QTR 86.

Keywords MDX , MERLIN DX, MOVES AND CHANGES,
GE TERMINET 2030, RAS

Description

Q. CAN TONTO BE USED TO DO
"MOVES AND CHANGES" ON THE
MERLIN DX?

A/ YES

Explanation / Action

DETAILS WILL BE ISSUED IN THE
COURSE.

TONTO CAN REPLACE THE GE TERMINET
STANDARD "TELETYPE" TERMINAL USED TO
DO "MOVES AND CHANGES" AND

"MOVES AND CHANGES" IS TERM USED
RE CHANGING THE MAX EXTENSION NUMBERS
AND FACILITIES ETC.

ALSO SEE SOLUTION REPORT No. 10

Keywords TELEPHONE DIRECTORY,
SAME NAME AND INITIALS,
OVERWRITING ENTRIES, INSERT ENTRY

Description
INSERTING A DIRECTORY ENTRY WHICH HAS THE
SAME "NAME" AND "INITIALS" AS AN EXISTING
ENTRY CAUSES THE EXISTING ENTRY TO BE
OVERWRITTEN, EVEN IF THE OTHER DETAILS
EG. 'TELEPHONE NUMBER', 'TITLE', ARE
DIFFERENT.

Explanation / Action

TONTO ONLY LOOKS AT THE "NAME"
AND "INITIAL" FIELDS; IF THEY ARE
THE SAME AS AN EXISTING ENTRY, THE
EXISTING ENTRY IS REPLACED BY THE
NEW ENTRY.

ACTION

ADD A DIFFERENT NUMBER TO EITHER
THE NAME OR THE INITIAL FOR
EACH ENTRY.

EG

SMITH (Ø)	A
SMITH (1)	A
SMITH (2)	A
SMITH (3)	A

etc.

18

Keywords FILE TRANSFER FROM OR TO M2200

Description

TO SEND OR RECEIVE TEXT FILES FROM
M2200

Explanation / Action

To set M2200

ASSIGN LST: = TTY n: (where 'n' is required port)

TTYSET TTY n: DTR=OFF XON=ON SPEED=9600

PIP LST: = A: filename

(where A is source drive & filename is name of file to transfer including any extension).

USING M1887 DATA COMMS ADAPTOR:

USE TELETYPE @ 9600, EVEN PARITY,
7 BITS, 1 STOP BIT, XON/XOFF = ON

BARE CR. THEN USE FILE XFER OPTION,
MONITOR TO FILE.

G.U.

Tonto Query / Solution Report

Ref. No 44

Keywords

THORN ERICSON MD110 PABX.

Description

Explanation / Action

AT FIRST GLANCE TONTO DOES NOT
APPEAR COMPATIBLE WITH THIS EXCHANGE,
HOWEVER PRACTICAL TESTS SHOW
THAT IT WORKS OK.

GU

Keywords

TILT & SWIVEL

Description

Explanation / Action

A TILT & SWIVEL UNIT HAS BEEN
DESIGNED TO FIT UNDER THE BLACK
& WHITE MONITOR. IF USED IN
CONJUNCTION WITH THE DATA COMMS.
ADAPTOR GIVES A VERY GOOD SOLUTION.

REF. DATA COMMS ADAPTOR and VT LINK
LAUNCH CIRCULAR

PAGE 36.

Tonto Query / Solution Report

Ref No 46.

Keywords

IBM PC AT. CONNECTION.

Description

CAN TONTO CONNECT TO AN IBM AT

Explanation / Action

THIS WILL DEPEND ON WHAT SOFTWARE IS
BEING RUN.

WE HAVE USED TONTO + M1877 AS
A REMOTE SCREEN ON TO AN IBM PC AT.
THIS REQUIRES RUNNING.

'MULTILINK ADVANCED' ON THE PC.

IF THE CUSTOMER REQUIRES TO RUN "WORDSTAR"
THEY SHOULD BE WARNED THAT IT IS SLOW
AND CAN ONLY BE USED AT 1200 BAUD DUE
TO FLOW CONTROL PROBLEMS.

Keywords

TONTO ON SENATOR

Description

CAN TONTO BIZ USED ON
SENATOR.

Explanation / Action

YES USING AN "EXTERNAL EXTENSION
ADAPTOR".

SOME FUNCTIONALITY OF SENATOR
WILL BE LOST

Keywords

PRINTERS FOR TONTO .

Description

WHAT PRINTERS CAN BE USED
WITH TONTO

Explanation / Action

SEE ATTACHED LIST.

NOTE CONFIGURATIONS EXIST FOR
THE PRINTERS LISTED UNDER ICL.
AND SOME LISTED UNDER
MICRO NOLOGY. IN NEARLY ALL CASES
SOME LEVEL OF FUNCTIONALITY IS
LOST.

QV.

PRINTERS THAT WILL WORK WITH TONTO

Brother HR15/25/35
 Brother M-1009
 Canon PW-1080A
 Dyneer DW16
 Epson HI-80 Plotter
 Juki 6100
 OKI ML82A, 83A
 OKI ML84
 OKI TTP24
 Olivetti ET121/Interlink
 Ricoh RP1200N
 Ricoh RP1300/RP1600
 Standard RX80
 Taxan Kaga KP.810 (same as canon)

ICL

Canon PW1080
 Centronics GLP
 Centronics H80-4
 Centronics 240-4
 Dataproducts 8010
 Dataproducts 8050
 Epson LX80
 Hewlett Packard HP2225DU
 Mannesmann Tally MT80
 Mannesmann Tally MT85
 Mannesmann Tally MT290
 OKI Microline 83A

Micronology

MP 192

UP 58608201

* * * NON ICL PRINTER CONNECTION DETAILS * * *

INTRODUCTION

This application sheet is intended to offer help and guidance for connecting printers other than the 'ICL Colour Printer' to OPD.

It must be emphasized that this document forms no part of any contract or specification and may contain errors or omissions. Consequently ICL cannot be held liable for any matters arising from its use, moreover the inclusion of a particular printer is not a recommendation of that printer, nor a definitive list of its deficiencies. The technical resource required to investigate connection difficulties with devices other than those provided by ICL is limited and therefore this application sheet represents the extent of ICL's support service for such devices. If you experience difficulties which are not resolved by this application sheet, we suggest you contact the dealer who supplied your non-ICL equipment.

Generally speaking, if a printer other than the ICL Colour Printer is attached, you will enjoy certain restrictions. These restrictions will range from the inability to print in colour on standard ribbon printers, to complete loss of image printing on daisywheel printers.

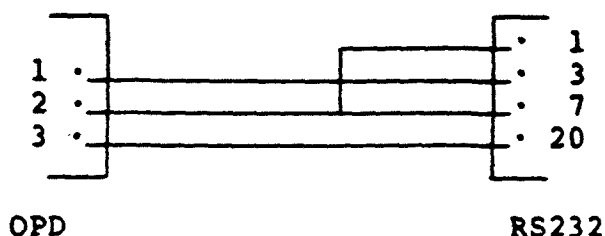
OPD HARDWARE INTERFACE

The hardware has been designed to be the simplest possible in order to offer the widest range of connection capability. Although OPD provides RS423 this is electrically compatible with RS232 for the purposes of connecting a serial RS232 printer (although in its communications rôle there are more important differences).

The RS423 is provided on a 9-pin 'D' type connector and the pin assignment are as follows:

Pin 1 - Data out
 Pin 2 - Common return
 Pin 3 - Printer busy/not available

A cable suitable for many printers (eg Epson RX80) can be fabricated as shown:



The wire connected to pin 20 frequently varies and is often found on pin 11 and sometimes pin 4. You should consult your printer manual to establish this. The OPD does not support XON XOFF protocols and it is recommended that your printer has a buffered serial interface. The OPD does not have a parallel port and therefore does not support any form of Centronix interface.

SYSTEM SOFTWARE

A flexible printer driver application is provided on OPD and is accessed via 'CONPRIN' as described in the "Advanced Operations Guide" supplied with the OPD. This program allows various control codes to be defined according to the requirements of the printer. The necessary codes are supplied as defaults for the Epson RX80, the ICL Colour Printer and the printer specified for use with the British Telecom variant of OPD. You may define different codes to suit your own printer, but it is strongly recommended that you take a copy of permanent store (Advanced Operations) in case you make an error and wish to recover the 'old' settings. Because of these 'standard' default settings the printer connection details which follow frequently refer to the 'Standard Epson' or 'Standard ICL Thermal' settings. The use of the word 'standard' should not be understood to mean 'recommended' except where explicitly stated.

NOTE

Any device connected to OPD which uses an independant electrical supply must conform to PELV requirements, as described in BSi6204 in order to avoid any infringement of the BABT "green spot" connection regulations. If in any doubt, consult your dealer.

STANDARD RX80

Cable

The standard Epson cable is suitable.

The RX80 should be fitted with the serial interface option. Validation has been carried out against only the intelligent serial interface option (Epson catalogue 8148).

Switch Settings

On masterboard - accessible before installation of serial interface option.

SW1 - 6 ON others OFF - English character set
SW2 - 1 and 2 ON others OFF

On Serial interface board:

SW1 - 6 ON others OFF
SW2 - 1 and 2 ON others OFF

Control Chars

These are installed under the RX80 option in OPD by ICL manufacturing and need only be specified by "CONPRIN" install printer as described in Advanced Operations.

Note

On printers other than the ICL colour printer or Epson RX80 it may not be possible to print screen images. Since image printing is initiated using the 'PRINT' key function may be entirely lost and printing only possible using the 'print commands' available in Xchange, BASIC and Messaging.

OPD Printer Connection Details : Brother M-1009Cable

The standard Epson cable is suitable.

Printer switch settings

The configuration switches are located under the top cover to the right of the print head. SW1 is the left of these switches when viewed from the front.

SW1 - 1,2,3,4 & 5 on; 6,7 & 8 off

SW2 - 1,2,4 & 8 on; 3,5,6 & 7 off

OPD Configurator Parameters

The standard Epson RX80 values should be used with the following exceptions:

<u>Parameter</u>	<u>Required Value</u>
Printer Name	Bro M-1009
Print graphics block	27,75,6,0,254,254,254,254,254

Notes

1. The lines/page is set assuming continuous A4 stationery. For single sheet A4 paper, the value should be reduced to 64.
2. It is realised that the term correspondence quality is misleading when applied to a printer which is capable of producing only one print quality. In the case of dot-matrix printers, this should be taken as meaning "Emphasised Print".
3. The Brother printer will underline spaces when underlining.

Unsupported OPD features (not guaranteed definitive)

- a. The copyright symbol is printed as italic K (As Epson RX80).

OPD Printer Connection Details : Canon PW - 1080A

Cable

The standard Epson cable is changed to: OPD pin 3 connects to RS232 Pin 4.

Printer Logic Board: SW1: 1,2,5 & 7 on; 3,4,6 & 8 off
SW2: 1,2,3,4,5,6,7 & 8 off
SW3: 1 & 3 on; 2 & 4 off

RS232C Interface Board: 1,6 & 8 on; 2,3,4,5 & 7 off

OPD Configurator Parameters

The standard Epson RX80 values may be used.

Near Letter Quality Printing

The printer is capable of NLQ printing but when doing so is unable to print subscripts or superscripts. Further, it is not possible to embolden or emphasize NLQ print.

As it is possible to select NLQ from the operator panel, the parameter values for Correspondence quality configuration remain unaltered from the Epson and thus produce Emphasized print.

Underlining

When in auto-answering mode, the printer will underline spaces. However, the underline produced in this mode is in a slightly different vertical position to that produced as a result of printing an underline character received from the host. The effect of underlining an underline character is to produce a double underline.

NOTE: TAXAN KAGA KP.810 is essentially the same printer.

OPD Printer Connection Details : Dyneer DW16Cable

The standard Epson cable is suitable.

Printer switch settings

Behind front panel: SW1 : 3 on; 1,2*,4 & 5 off
SW2 : 2,5,6,7 & 8 on; 1,3 & 4 off

* For 12 pitch, SW1-2 should be on : but see note 5 below.

OPD Configurator Parameters

<u>Parameter</u>	<u>Required Value</u>	<u>Notes</u>
Printer Name	Dyneer DW16	
Baud Rate	9600	
Lines/page	64	1
Characters/line	80	2
New Line	CR,LF	
New Page	FF,CR	3
Home print head	CR	
Cancel print	NUL	4
Line feed	LF	
Print #	ESC,US,BEL,47,47,ESC,US,CR,BS,61	5
Corr. quality on	ESC,87	6
Corr. quality off	ESC,38	6
Underlined on	ESC,69	7
Underlined off	ESC,82	
Subscript on	ESC,RS,ENQ,ESC,85,ESC,RS,HT	
Subscript off	ESC,RS,ENQ,ESC,68,ESC,RS,HT	
Superscript on	ESC,RS,ENQ,ESC,68,ESC,RS,HT	
Superscript off	ESC,RS,ENQ,ESC,85,ESC,RS,HT	
Perf. skip on	NUL	
Perf. skip off	NUL	
Image line feed	ESC,BEL,BEL,DC3,BEL,ESC,BEL	8
Image single density	ESC,BEL,BEL,DC3,BEL,ESC,BEL	8
Image double density	ESC,BEL,BEL,DC3,BEL,ESC,BEL	8
Set form length	ESC,FF	
Text line feed	ESC,RS,HT	
Ignore paper end	NUL	
Enable paper end	NUL	
Print graphics block	37,BS,38	9
Enlarged off	NUL	
Enlarged on	NUL	

Notes

1. The lines/page is set to 70 assuming single sheet A4 paper and no sheet-feeder. For continuous stationery or single sheet A4 paper in conjunction with a sheet-feeder has not been tested however.
2. This value may be increased to a maximum of 101 at 10 pitch or 121 at 12 pitch.
3. The Carriage return character is appended for the benefit of Quill which assumes a return to print position 1 after a form-feed operation.
4. The Dyneer has no Cancel print facility. This should not prove to be a problem in normal operation but has an effect as noted in (8) below.
5. The hash character is generated using the = sign in conjunction with two obliques and is far from perfect. Further, the parameter value assumes 10 pitch. If using 12 pitch, the following string should be used instead:

ESC,US,ACK,47,47,ESC,US,VT,BS,61
6. It is realised that the term correspondence quality is misleading when applied to a printer which is capable of producing only one print quality. In the case of daisywheel printers, this should be taken as meaning "Emphasis Print" which in the case of the Dyneer is implemented as Shadow Print.
7. The Dyneer printer will underline spaces when underlining.
8. The parameter given to invoke image printing is such that the effect of a user pressing ALT/PRINT will be for the printer to sound an error tone and enter deselect state. In order to continue, the user should abandon the print using the Resume key and re-power the printer.
9. The "graphics block" character is printed as two over-printed characters.

Unsupported OPD features (not guaranteed definitive)

- a. The Dyneer has no perforation skip facility. This however should not affect the operation of Quill or Abacus since these utilise a user-specified page length.
The effect on Basic and Messaging will be print content dependent.
- b. Screen image and Easel graphics printing is not supported. See note 8 above.
- c. Enlarged characters cannot be printed. Attempting to do so will yield incorrect line lengths.
- d. The copyright symbol is printed as a capital K.

Unsupported Printer Features

The following notes are aimed primarily at the Quill user.

- a. Proportional spacing cannot be used.
- b. There is no facility for changing the print wheel in the middle of a page.
- c. The printer is capable of printing bi-directionally but with the loss of functionality. The parameter values quoted effectively preclude the use of the bi-directional printing capability.

OPD Printer Connection Details : Brother HR15/25/35Cable

A suitable cable may be produced from the standard Epson cable by connecting together pins 4,5,6 and 8 at the printer end.

Printer switch settings

Rear panel: SW1 - 1,3,5 & 6 open, 2,4,7 & 8 closed
SW2 - 3 open, 1,2,4,5,6 & 7 closed

Daisywheel

The above switch settings and the configuration parameters below assume the use of a UK ASCII (not English) wheel.

Configurator Parameters

<u>Parameter</u>	<u>Required Value</u>	<u>Notes</u>
Printer Name	Brother HR15	
Baud Rate	9600	
Lines/page	62	1
Characters/line	80	2
New Line	CR,LF	
New Page	FF,CR	3
Home print head	ESC,92,CR,ESC,6	
Cancel print	CAN	
Line feed	LF	
Print #	ESC,89	
Corr. quality on	ESC,87	4
Corr. quality off	ESC,38	4
Underlined on	ESC,69	5
Underlined off	ESC,82	
Subscript on	ESC,RS,ENQ,ESC,85,ESC,RS,HT	
Subscript off	ESC,RS,ENQ,ESC,68,ESC,RS,HT	
Superscript on	ESC,RS,ENQ,ESC,68,ESC,RS,HT	
Superscript off	ESC,RS,ENQ,ESC,85,ESC,RS,HT	
Perf. skip on	NUL	
Per. skip off	NUL	
Image linefeed	CR,CAN,BEL,DC3,32	6
Image single density	BEL,DC3,32	6
Image double density	BEL,DC3,32	6
Set form length	ESC,FF	
Text line feed	ESC,RS,HT	
Ignore paper end	NUL	
Enable paper end	NUL	
Print graphics block	37,BS,38	7
Enlarged off	NUL	
Enlarged on	NUL	7

Notes

1. The lines/page is set assuming single sheet A4 paper and no sheet-feeder. For continuous A4 stationery or single sheet A4 paper in conjunction with a sheet-feeder, the value should be 70. The use of a sheet-feeder has not been tested however.
2. This value may be increased to a maximum of 110 at 10 pitch or 132 at 12 pitch.
3. The Carriage return character is appended for the benefit of Quill which assumes a return to print position 1 after a form-feed operation.
4. It is realised that the term correspondence quality is misleading when applied to a printer which is capable of producing only one print quality. In the case of daisywheel printers, this should be taken as meaning Shadow Print.
5. The Brother printer will not underline spaces when underlining.
6. The parameter given to invoke image printing is such that the effect of a user pressing ALT/PRINT will be for the printer to sound an error tone and enter deselect state. In order to continue, the user should abandon the print using the Resume key and re-power the printer.
7. The "graphics block" character is printed as two over-printed characters.

Unsupported OPD features (not guaranteed definitive)

- a. The Brother printer's perforation skip facility is selected only by a hardware switch and for the OPD, must be deselected. This however should not affect the operation of Quill or Abacus since these utilise a user-specified page length. The effect on Basic and messaging will be print content dependant.
- b. Screen image and Easel graphics printing is not supported. See note 6 above.
- c. Enlarged characters cannot be printed. Attempting to do so will yield incorrect line lengths.

Unsupported printer features

The following notes are aimed primarily at the Quill user:

- a. Proportional spacing cannot be used.
- b. There is no facility for changing the print wheel in the middle of a page.
- c. Printing in Red is not supported.

OPD Printer Connection Details : OKI ML84Cable

A suitable cable may be produced from the standard Epson cable by removing the wire attached to Pin 20 and connecting it to Pin 11 and interconnecting pins 6 & 20 at the printer end.

Printer switch settings

Main logic (inner) board : 3 & 6 on; 1,2,4,5,7 & 8 off

Serial interface (outer) board:

SW1: 2,4,5,6,7 & 8 on; 1 & 3 off

SW2: 1,2,3 & 4 on; 5,6,7 & 8 off

OPD Configurator Parameters

<u>Parameter</u>	<u>Required Value</u>	<u>Notes</u>
Printer Name	OKI ML84	1
Baud Rate	9600	
Lines/page	54	
Characters/line	136	
New Line	CR/LF	
New Page	FF	
Home print head	CR	
Cancel print	CAN	
Line Feed	LF	
Print #	227	2
Corr. quality on	ESC,72	3
Corr. quality off	ESC,73	3
Underlined on	ESC,67	4
Underlined off	ESC,68	
Subscript on	ESC,76	
Subscript off	ESC,77	
Superscript on	ESC,74	
Superscript off	ESC,75	
Perf. skip on	NUL	
Perf. skip off	NUL	
Image linefeed	ESC,37,57,SI	
Image single density	ESC,37,50,EXT,96	
Image double density	ESC,37,49,EXT,96	
Set form length	ESC,53,ESC,70,54	1
Text line feed	ESC,54	
Ignore paper end	NUL	
Enable paper end	NUL	
Print graphics block	142	
Enlarged off	RS	
Enlarged on	US	

Notes

1. The Set form length and Lines/page are set assuming 11" continuous stationery (with or without a tractor-feed). If A4 continuous stationery is required, the parameter values should be:

Lines/page 55
Set form length ESC,70,48

Because the OKI requires the form length to be specified as two ascii characters, whilst Printer Manager uses the binary value of the Lines/page field when dealing with Single sheet printing, the selection of Single Sheet stationery from Housekeeping must not be made.

2. It is not possible to select the national character set by software and the printer will not respond to the backspace character. Accordingly, the hash character bears only a passing resemblance to the real thing.
3. The ML84 has a correspondence quality option, but unfortunately its selection automatically invokes proportional spacing. Because this is not what is required and to retain a highlighting capability, the parameter values shown invoke emphasized print.

Unsupported OPD features (not guaranteed definitive)

- a. The printer has no perforation skip facility. This may require that great care is taken when aligning stationery.
- b. Subscript and superscript characters may not be emphasised. Any attempt to do so will be ignored.
- c. The use of single sheet stationery is not supported: see not 1 above.
- d. The copyright sign is printed as a smaller version of a graphics block.

Unsupported printer features

The following notes are aimed primarily at the Quill and Easel user.

- a. Correspondence quality printing and proportional spacing cannot be used.
- b. Image printing from Easel is not supported.

OPD Printer report : Ricoh RP1300/RP1600Cable

A suitable cable may be produced from the standard Epson cable by removing the wire attached to Pin 20 and connecting it to Pin 11 at the printer end.

Printer switch settings

Rear panel: Baud Rate: 2 & 4 closed, 1 & 3 open
 Protocol: 1,4 & 5 closed, 2,3,6,7 & 8 open

Front panel: Code: 1 Up, rest Down
 Wheel: 1 Up, rest Down (for standard wheels)
 Auto Line: Off
 Space pitch: According to wheel

OPD Configurator Parameters

<u>Parameter</u>	<u>Required Value</u>	<u>Notes</u>
Printer Name	Ricoh 1300	
Baud Rate	9600	
Lines/page	62	2
Characters/Line	80	3
New Line	CR,LF	
New Page	FF,CR	4
Home print head	CR	5
Cancel print	NUL	1
Line feed	LF	
Print #	163	
Corr. quality on	ESC,87	6
Corr. quality off	ESC,38	6
Underlined on	ESC,95	7
Underlined off	ESC,82	
Subscript on	ESC,RS,ENQ,ESC,85,ESC,RS,HT	
Subscript off	ESC,RS,ENQ,ESC,68,ESC,RS,HT	
Superscript on	ESC,RS,ENQ,ESC,68,ESC,RS,HT	
Superscript off	ESC,RS,ENQ,ESC,85,ESC,RS,HT	
Perf. skip on	NUL	
Perf. skip off	NUL	
Image linefeed	NUL	
Image single density	ESC,45	8
Image double density	ESC,45	8
Set form length	ESC,FF	
Text line feed	ESC,RS,HT	
Ignore paper end	NUL	
Enable paper end	NUL	
Print graphics block	192,BS,63	9
Enlarged off	NUL	
Enlarged on	NUL	

Notes

1. There is no Cancel Print function on the Ricoh printer. This should not affect normal operation however.
2. The lines/page is set assuming single sheet A4 paper and no sheet-feeder. For continuous A4 stationery or single sheet A4 paper in conjunction with a sheet-feeder, the value should be 70. The use of a sheet-feeder has not been tested however.
3. This value may be increased to a maximum of 136 at 10 pitch or 160 at 12 pitch.
4. The Carriage return character is appended for the benefit of Quill which assumes a return to print position 1 after a form-feed operation.
5. The Ricoh printer defaults to uni-directional printing. The home head command assumes that this mode has not been changed by the user.
6. It is realised that the term correspondence quality is misleading when applied to a printer which is capable of producing only one print quality. In the case of daisywheel printers, this should be taken as meaning "Emphasized Print" which in the case of the Ricoh is implemented as Shadow Print.
7. The Ricoh printer will underline spaces when underlining.
8. The parameter given to invoke image printing is invalid. The effect of a user pressing ALT/PRINT or SHIFT/PRINT will be for the printer to sound an error tone and enter pause mode. In order to continue, the user should abandon the print using the Resume key and re-power the printer.
9. The "graphics block" character is printed as two over-printed characters.

Unsupported OPD features (not guaranteed definitive)

- a. The Ricoh printer has no perforation skip facility. This however should not affect the operation of Quill or Abacus since these utilise a user-specified page length. The effect of Basic and messaging will be print content dependant.
- b. Screen image and Easel graphics printing is not supported. See note 8 above.
- c. Paper-end is not notified to the OPD. This is only of concern when using continuous stationery or a sheet-feeder.

- d. Enlarged characters cannot be printed. Attempting to do so will yield incorrect line lengths.

Unsupported printer features

The following notes are aimed primarily at the Quill user.

- a. Proportional spacing cannot be used.
- b. There is no facility for changing the print wheel in the middle of a page.
- c. The printer is capable of printing both the italic f and copyright symbols (Codes 171 and 191) but the OPD is not capable of generating the codes. This is a conceivable future enhancement to Print Manager and Configurator (cf. #).
- d. The printer cannot be driven bi-directionally using Quill.

Deficiencies

- 1. At the end of each printing job (when the printer is closed) an error tone is sounded and the printer enters the Pause state. This is a characteristic of the Print Manager.

OPD Printer Connection Details : JUKI 6100Cable

The standard Epson cable is suitable.

Printer switch settings

RS232 Board: 1,4,5 & 6 on, 2 & 3 off

Behind front panel: 4 & 5 on, 1,2,3,6 & 7 off

OPD Configurator Parameters

<u>Parameter</u>	<u>Required Value</u>	<u>Notes</u>
Printer Name	JUKI 6100	
Baud Rate	1200	
Lines/page	60	1
Characters/line	80	2
New Line	CR,LF	
New Page	FF,CR	3
Home print head	ESC,92,CR,ESC,47	
Cancel print	NUL	4
Line feed	LF	
Print #	ESC,US,BEL,47,47,ESC,US,CR,BS,61	5
Corr. quality on	ESC,87	6
Corr. quality off	ESC,38	6
Underlined on	ESC,69	7
Underlined off	ESC,82	
Subscript on	ESC,RS,ENQ,ESC,85,ESC,RS,HT	
Subscript off	ESC,RS,ENQ,ESC,68,ESC,RS,HT	
Superscript on	ESC,RS,ENQ,ESC,68,ESC,RS,HT	
Superscript off	ESC,RS,ENQ,ESC,85,ESC,RS,HT	
Perf. skip on	NUL	
Perf. skip off	NUL	
Image linefeed	ESC,BEL,BEL,DC3,BEL,ESC,BEL	8
Image single density	ESC,BEL,BEL,DC3,BEL,ESC,BEL	8
Image double density	ESC,BEL,BEL,DC3,BEL,ESC,BEL	8
Set form length	ESC,FF	
Text line feed	ESC,RS,HT	
Ignore paper end	NUL	
Enable paper end	NUL	
Print graphics block	37,BS,38	9
Enlarged off	NUL	
Enlarged on	NUL	

Notes

1. The lines/page is set assuming single sheet A4 paper and no sheet-feeder. For continuous A4 stationery or single sheet A4 paper in conjunction with a sheet-feeder, the value should be 70. The use of a sheet-feeder has not been tested however.
2. This value may be increased to a maximum of 110 at 10 pitch or 132 at 12 pitch.
3. The Carriage return character is appended for the benefit of Quill which assumes a return to print position 1 after a form-feed operation.
4. The Juki has no Cancel print facility. This should not prove to be a problem in normal operation but has an effect as noted in (8) below:
5. The hash character is generated using the = sign in conjunction with two obliques and is far from perfect. Further, the parameter value assumes 10 pitch. If using 12 pitch, the following string should be used instead:

ESC,US,ACK,47,47;ESC,US,VT,BS,61

6. It is realised that the term correspondence quality is misleading when applied to a printer which is capable of producing only one print quality. In the case of daisywheel printers, this should be taken as meaning "Emphasized Print" which in the case of the JUKI is implemented as Shadow Print.
7. The JUKI printer will underline spaces between words when underlining.
8. The parameter given to invoke image printing is such that the effect of a user pressing ALT/PRINT or SHIFT/PRINT will be for the printer to sound an error tone and enter deselect state. In order to continue, the user should abandon the print using the Resume key and re-power the printer.

However, the lack of a Cancel print facility renders the technique less than foolproof as the printer may be "woken up" by subsequent bit patterns being interpreted as commands that cancel the commands given. In the interests of paper conservation, the user is advised to avoid graphics printing.

9. The "graphics block" character is printed as two over-printed characters.

Unsupported OPD Features (not guaranteed definitive)

- a. The JUKI has no perforation skip facility. This however should not affect the operation of Quill or Abacus since these utilise a user-specified page length. The effect on Basic and messaging will be print content dependent.
- b. Screen image and Easel graphics printing is not supported. See note 8 above.
- c. Enlarged characters cannot be printed. Attempting to do so will yield incorrect line lengths.
- d. The copyright symbol is not printed, it is ignored.

Unsupported printer features

The following notes are aimed primarily at the Quill user.

- a. Proportional spacing cannot be used.
- b. There is no facility for changing the print wheel in the middle of a page.

Deficiencies

1. Subscript and superscript printing is achieved using forward and reverse half-linefeeds. On the Juki, reverse half-linefeed is achieved by reverse feeding the paper somewhat further than the amount required with a subsequent forward feed operation. Because Print Manager ensures that neither of these modes is in effect when the printer is "opened", a reverse paper feed operation is performed. If paper is loaded too close to the top of the sheet, this operation may result in the paper being removed from under the paper bail with subsequent paper-wreck. If preferred, the four parameters associated with superscript and subscript printing may be set to NUL which will overcome the problem at the expense of the capability.

OPD Printer Connection Details : Ricoh RP1200NCable

The standard Epson cable is suitable.

Printer switch settings

Rear panel: Baud Rate: 2 & 4 on, 1 & 3 off.
 Protocol: 1,4 & 5 on, 2,3,6,7 & 8 off.

Interface Card: 1 on, 2,3 & 4 off

* * See note under Deficiencies below * *

Front panel: Space pitch: According to wheel

OPD Configurator Parameters

<u>Parameter</u>	<u>Required Value</u>	<u>Notes</u>
Printer Name	Ricoh 1200	
Baud Rate	9600	
Lines/page	62	2
Characters/line	80	3
New Line	CR,LF	
New Page	FF,CR	4
Home print head	CR	5
Cancel print	NUL	1
Line feed	LF	
Print #	163	
Corr. quality on	ESC,87	6
Corr. quality off	ESC,38	6
Underlined on	ESC,69	7
Underlined off	ESC,82	
Subscript on	ESC,RS,ENQ,ESC,85,ESC,RS,HT	
Subscript off	ESC,RS,ENQ,ESC,68,ESC,RS,HT	
Superscript on	ESC,RS,ENQ,ESC,68,ESC,RS,HT	
Superscript off	ESC,RS,ENQ,ESC,85,ESC,RS,HT	
Perf. skip on	NUL	
Perf. skip off	NUL	
Image linefeed	NUL	
Image single density	ESC,SUB,85	8
Image double density	ESC,SUB,85	8
Set form length	ESC,FF	
Text line feed	ESC,RS,HT	
Ignore paper end	NUL	
Enable paper end	NUL	
Print graphics block	192,BS,63	9
Enlarged off	NUL	
Enlarged on	NUL	

Notes

1. There is no Cancel Print function on the Ricoh printer. This should not affect normal operation however.
2. The lines/page is set assuming single sheet A4 paper and no sheet-feeder. For continuous A4 stationery or single sheet A4 paper in conjunction with a sheet-feeder, the value should be 70. The use of a sheet-feeder has not been tested however.
3. This value may be increased to a maximum of 110 at 10 pitch or 132 at 12 pitch.
4. The Carriage return character is appended for the benefit of Quill which assumes a return to print position 1 after a form-feed operation.
5. The Ricoh printer defaults to uni-directional printing. The home head command assumes that this mode has not been changed by the user.
6. It is realised that the term correspondence quality is misleading when applied to a printer which is capable of producing only one print quality. In the case of daisywheel printers, this should be taken as meaning "Emphasized Print" which in the case of the Ricoh is implemented as Shadow Print.
7. The Ricoh printer will underline spaces when underlining.
8. The parameter given to invoke image printing has the effect of initiating a self-test. Since the printer ignores both the BEL and DC3 code, a self-test is considered to be less annoying than the alternative of allowing the printer to interpret the dot graphic bit patterns as data, behaviour which can waste a lot of paper. In order to continue following an inadvertant ALT/PRINT or SHIFT/PRINT, the user should abandon the print using the Resume key and re-power the printer.
9. The "graphics block" character is printed as two over-printed characters.

Unsupported OPD Features (not guaranteed definitive)

- a. The Ricoh printer has no perforation skip facility. This however should not affect the operation of Quill or Abacus since these utilise a user-specified page length. The effect on Basic and messaging will be print content dependent.
- b. Screen image and Easel graphics printing is not supported. See note 8 above.

- c. Paper-end is not notified to the OPD. This is only of concern when using continuous stationery or a sheet-feeder.
- d. Enlarged characters cannot be printed. Attempting to do so will yield incorrect line lengths.

Unsupported printer features

The following notes are aimed primarily at the Quill user.

- a. Proportional spacing cannot be used.
- b. There is no facility for changing the print wheel in the middle of a page.
- c. The printer is capable of printing both the italic f and copyright symbols (Codes 171 and 191) but the OPD is not capable of generating the codes.

Deficiencies

- 1. At the end of each printing job (when the printer is closed), the ERROR LED flashes. This is a characteristic of the Print Manager.
- 2. The DIP switch for selecting the character set is set for US ASCII upon delivery. The switch is located on the serial interface board which is itself located between the main logic board and the PSU. Changing this switch setting entails extensive dismantling.

OPD Printer Connection Details : OKI ML82A, 83ACable

A suitable cable may be produced from the standard Epson cable by removing the wire attached to Pin 20 and connecting it to Pin 11 and interconnecting Pins 6 & 20 at the printer end.

Printer switch settings

Main logic (inner) board: 1,2,4 & 6 on; 3 & 5 off

Operator panel board: 2,7 & 8 on; 1,3,4,5 & 6 off

OPD Configurator Parameters:

<u>Parameter</u>	<u>Required Value</u>	<u>Notes</u>
Printer Name	OKI ML82A	
Baud Rate	1200	
Lines/page	54	1
Characters/line	80 (136 for 83A)	
New Line	CR,LF	
New Page	FF	
Home print head	CR	
Cancel print	CAN	
Line feed	LF	
Print #	198	2
Corr. quality on	NUL	
Corr. quality off	NUL	
Underlined on	NUL	
Underlined off	NUL	
Subscript on	NUL	
Subscript off	NUL	
Superscript on	NUL	
Superscript off	NUL	
Perf. skip on	NUL	
Perf. skip off	NUL	
Image linefeed	CAN,DC3,DC3	3
Image single density	DC3,DC3	3
Image double density	DC3,DC3	3
Set form length	ESC,53,ESC,70,54	1
Text line feed	ESC,54	
Ignore paper end	NUL	
Enable paper end	NUL	
Print graphics block	255	
Enlarged off	RS	
Enlarged on	US	

Notes

1. The Set form length and Lines/page are set assuming 11" continuous stationery (with or without a tractor-feed). If A4 continuous stationery is required, the parameter values should be:

Lines/page	55
Set form length	ESC,53,ESC,70,48

Because the OKI requires the form length to be specified as two ascii characters, whilst Printer Manager uses the binary value of the Lines/page field when dealing with Single sheet printing, the selection of Single sheet stationery from Housekeeping must not be made.

2. It is not possible to select the national character set by software and the printer will not respond to the backspace character.
3. The parameter values given for operations involving bit graphic printing operations have the effect of deselecting the printer. In order to continue following an inadvertant ALT/PRINT or SHIFT/PRINT, the user should abandon the print by means of the RESUME key and re-power the printer.

Unsupported OPD Features (not guaranteed definitive)

- a. The printer has no perforation skip facility. This may require that great care is taken when aligning stationery.
- b. The following are not supported, their attempted use will be ignored:

Subscript and superscript characters
Underlining
Emphasized or correspondence quality printing

- c. The use of single sheet stationery is not supported: see note 1.
- d. The copyright sign is not printed.
- e. Screen image and Easel graphics printing is not supported. See note 3 above.

OPD Printer Connection Details : OKI TTP24Cable

The standard Epson cable is suitable.

Printer switch settingsRS232 interface board:

SW1: 1,2 & 5 on; 3,4 & 6 off
SW2: 2 on; 1,3,4,5 & 6 off

OPD Configurator Parameters

<u>Parameter</u>	<u>Required Value</u>	<u>Notes</u>
Printer Name	OKI TTP24	
Baud Rate	9600	
Lines/page	62	1
Characters/line	80	
New Line	CR,LF	
New Page	FF	
Home print head	CR	
Cancel print	CAN	
Line feed	LF	
Print #	ESC,33,64,35,ESC,33,66	
Corr. quality on	ESC,49	
Corr. quality off	ESC,48	
Underlined on	ESC,67	2
Underlined off	ESC,68	
Subscript on	ESC,76	
Subscript off	ESC,77	
Superscript on	ESC,74	
Superscript off	ESC,75	
Perf. skip on	ESC,37,83,51	
Perf. skip off	ESC,37,83,48	
Image linefeed		3
Image single density		3
Image double density		3
Set form length	ESC,70,54	1
Text line feed	ESC,54	
Ignore paper end	ESC,70,48,55	1
Enable paper end	ESC,70,54,54	1
Print graphics block	142	
Enlarged off	RS	
Enlarged on	US	

Notes

1. The Set form length, Lines/page, Ignore paper end and Enable paper end are set assuming 11" stationery when Continuous is specified under the printing options of Housekeeping and A4 stationery when Single sheet is specified. This note attempts to explain the reasoning behind the choice of parameters:

Lines/page: This value is appended to the value given under Set form length in order to form an escape sequence which is sent to the printer when it is opened. It is also used by Printer Manager when operating in Single sheet mode. It is the latter which determines the value of the parameter; in the former role, it completes an invalid escape sequence which the printer will ignore.

Set form length: As described above, this value, when concatenated with the value above, forms an invalid escape sequence.

Ignore paper end: This parameter is sent when opening the printer in single sheet mode. The TTP24 has no facility for disabling paper-end detection. The value given here is in fact an escape sequence which sets the printer form length to 70 lines. Note that the form length is in the form of two ASCII characters, unlike the binary value used with most other printers.

Enable paper end: This parameter is sent when opening the printer when the stationery type is declared as Continuous. In this case, the value declares a form length of 66 lines. If continuous A4 stationery is being used, the value should be changed to the same as that for Ignore paper end.

2. The printer will underline spaces when underlining.
3. APA graphics printing on the TTP24 utilises different bit mapping to the OPD, resulting in a fundamental incompatibility between the two. Consequently, the parameters required to produce a meaningless image print have not been ascertained.

Unsupported OPD features (not guaranteed definitive)

- a. Easel and screen-image printing is not supported (see note 3 above).

OPD Printer Connection Details : OLIVETTI ET121/INTERLINKCable

The interface is supplied with a flying lead which is normally terminated with a 25-way D-type connector. A 9-way plug suitable for the OPD may be connected. The Red wire is connected to Pin 1, the White and Violet wires to Pin 2 and the Black wire to Pin 3. All others remain unconnected.

Interface switch settings

4 on; 1,2 & 3 off

OPD Configurator Parameters

<u>Parameter</u>	<u>Required Value</u>	<u>Notes</u>
Printer Name	ET121	
Baud Rate	1200	1
Lines/page	62	2
Characters/line	80	
New Line	CR,LF	
New Page	CR,LF	2
Home print head	CR	
Cancel print	ESC,CR,80	
Line feed	LF	
Print #	GS	3
Corr. quality on	ESC,79	4
Corr. quality off	ESC,38	
Underlined on	ESC,69	5
Underlined off	ESC,82	
Subscript on	NUL	
Subscript off	NUL	
Superscript on	NUL	
Superscript off	NUL	
Perf. skip on	NUL	
Perf. skip off	NUL	
Image linefeed	BEL	6
Image single density	BEL	6
Image double density	BEL	6
Set form length	ESC,CR	7
Text line feed	NUL	
Ignore paper end	NUL	
Enable paper end	NUL	
Print graphics block	GS,BS,85,BS,84	8
Enlarged off	NUL	
Enlarged on	NUL	

Notes

1. The maximum speed of the Interlink interface is used.
2. The ET121 is only suitable for use with single-sheet stationery; these parameters assume that Housekeeping print options are set thereto and A4 stationery is used. The device does not respond to Form feed and has no means of skipping perforation or detecting paper-end.
3. The device cannot print a hash character when set to be able to print the £ sign. The Yen currency symbol is used instead.
4. Correspondence quality is obviously meaningless when applied to a letter quality device. In this case bold printing is employed for highlighting purposes: each character is over-printed three times.
5. The printer will not underline spaces when underlining.
6. Bit image graphics printing is not possible. The parameter values given alert the user to an inadvertant initiation of Easel or screen image printing, following which the user is recommended to abort the print operation.
7. The concept of paper-length and form-feeding is foreign to this device. The parameter value given, when the Lines/page value is appended, constitutes an invalid escape sequence which the device will ignore.
8. The graphics block is constructed from three overprinted characters, rendering a reasonable facsimile of the character required.

Unsupported OPD features (not guaranteed definitive)

- a. Easel and screen-image printing is not supported (see note 6 above).
- b. Subscript and superscript character printing is not supported.
- c. Enlarged character printing is not supported.
- d. The use of continous printing is not supported (see notes 2 and 7 above).

DeficienciesCharacter rendition

A number of OPD (& standard ASCII) characters are not present on the Olivetti daisywheel. The following characters are printed as shown:

Carat: •

Open single quote: 3/8

Timeout

The speed with which 'bold' characters are printed may result in a print-manager timeout occurring when there are a large number of such characters or when such characters are accompanied by a large amount of underlining. Accordingly, the amount of highlighting must be kept to a minimum and on no account should be the Housekeeping Print Option of Correspondence quality be selected.

OPD Printer Connection Details : EPSON HI-80 PLOTTER

Cable

The standard Epson cable is suitable.

Printer switch settings

Main logic board: 1,3 & 6 on; 2,4 & 5 off

Note: The above settings specify the use of US standard size stationery, resulting in the loss of about two-thirds of an inch in vertical printing space but simpler operation of the device. The sacrifice is considered worthwhile.

RS232 Interface board:

SW1 - 1,5,6 & 7 on; 2,3,4 & 8 off
SW2 - 2 & 4 on; 1 & 3 off

OPD Configurator Parameters

The standard Epson RX80 values should be used with the following 5 exceptions:

<u>Parameter</u>	<u>Required Value</u>
Printer Name	Epson HI-80
Lines/page	60
Cancel print	DC2
Text line feed	DC2,ESC,82,ETX,ESC,50
Print graphics block	27,75,6,0,0,254,254,254,254,254

Notes

1. The lines/page is set assuming A4 continuous stationery (but see note above). The use of continuous stationery is not recommended because of the way in which the paper is manipulated.
2. It is assumed that the plotter is fitted with the optional Printer Expansion ROM and optional extension RAM. Should this not be the case, the configuration parameters in respect of image printing (which would then not be possible) and Print graphics block (which would have to be implemented less elegantly) will be wrong. Also, the problems associated with printing speed (described below) would be exacerbated to the point where the device could prove useless as a printer.
3. The printer will underline spaces when underlining. However, it will also underline underline characters.

Unsupported OPD features (not guaranteed definitive)

- a. The copyright symbol is printed as Italic K (As Epson RX80).

Unsupported device features

- a. No plotting support is offered on the OPD. The parameter value for Text linefeed first selects printer mode (or cancels Condensed print if already in printer mode) and then selects the UK character set (which is not hardware selectable). If an application program is to be used for plotting, it must open the printer in transparent mode and first send the two ASCII characters represented by the denary numbers 29 & 71.

Deficiencies

1. The relatively slow printing speed of the device may result in a timeout occurring when a page contains a large number of characters or where a large proportion of a lesser number of characters are underlined or printed in bold script. Data will not be lost unless the buffer RAM is unable to contain the contents of each entire page: an unlikely occurrence with the extension RAM fitted. However, a multi-page document may have to be printed one page at a time.
2. The Epson RX80 value for the 'Cancel print' function (initialise printer) is not used because the device appears to ignore subsequent data until the lengthy initialization process is complete.

PRINTER PARAMETERS

Screen 1 of 3

Printer name

SIEMENS PT88

Baud rate	9600
Lines/page	66
Characters/line	80
New line	CR,LF
New page	FF
Home print head	ESC,60,CR
Cancel print	ESC,64
Line feed	LF
Print #	ESC,82,NUL,35,ESC,82,ETX
Correspondence quality on	ESC,69
Correspondence quality off	ESC,70
Underlined on	ESC,45,49
Underlined off	ESC,45,48

↑ ↓ select item or other screen

↵ return to main screen

1 amend item

↵ delete configurator

PRINTER PARAMETERS

Screen 1 of 3

Printer name

SIEMENS PT88

Baud rate	9600
Lines/page	66
Characters/line	80
New line	CR,LF
New page	FF
Home print head	ESC,60,CR
Cancel print	ESC,64
Line feed	LF
Print #	ESC,82,NUL,35,ESC,82,ETX
Correspondence quality on	ESC,69
Correspondence quality off	ESC,70
Underlined on	ESC,45,49
Underlined off	ESC,45,48

↑ ↓ select item or other screen

↵ return to main screen

1 amend item

↵ delete configurator

PRINTER PARAMETERS

Screen 2 3

Printer name

SIEMENS PT88

Subscript on	ESC,59
Subscript off	DC2
Superscript on	SI
Superscript off	DC2
Perforation skip on	ESC,78,ACK
Perforation skip off	ESC,79
Image linefeed	ESC,51,CAN
Image single density	ESC,75,224,80H
Image double density	ESC,76,224,80H
Set form length	ESC,67
Text line feed	ESC,58
Ignore paper end signal	ESC,56

? ↓ select item or other screen

}7 return to main screen

! amend item

}8 delete configurator

PRINTER PARAMETERS

Screen 3 of 3

Printer name

SIEMENS PT88

Enable paper end signal

ESC,57

Print graphics block

ESC,109,EDT,140,ESC,109,NUL

Enlarged off

ESC,87,48

Enlarged on

ESC,87,49

↑ ↓ select item or other screen

↵ return to main screen

1 amend item

↵ delete configurator

Keywords Cannot Reload Large Save Store

Description A "save store" resulted in 144 blocks which could not subsequently be reloaded because of insufficient memory

Explanation / Action

Power down and remove Messaging capsule(s).

Reload saved store and reduce the size of stored files to safeguard future save/loads.

See Q/s 80

Tonto Query / Solution Report

Ref No 50

Keywords Condensed Character Mode on M1880

Description Several people have requested information on getting 120 + chars per line

Explanation / Action

My solution follows:

Paul Mader
28/1/86

50

NOTES ON THE USE OF CONDENSED CHARACTER MODE ON THE MERLIN M1880
(Walters WMS0) PRINTER

The configurator for the M1880 has been amended to provide the condensed character mode facility. This version is called M1880CC and is in the form of a saved permanent store file on a microdrive cartridge called M1880CC. This cartridge is not part of a standard release and so is not supported.

When printing condensed characters, the data capacity of the print buffer will become 142 characters per line (in terms of condensed size character). These 142 characters are printed in the same line length as the 80 characters of normal size.

Because the characters are actually smaller in size, normal line spacing is too large, so the line spacing has been altered to provide 84 lines/page

INSTALLATION:

Before installing this configuration you may wish to first save your present permanent store for subsequent reloading if necessary (See Advanced Operations manual, page 4.). You may have set up some features in your present system which will not be in the permanent store you are about to load. These features will have to be re-established after the loading. It is then recommended that you save this composite permanent store on a separate cartridge. You will then have two separate cartridges; one to print normal size characters and one to print condensed characters but both including your chosen features.

To install this permanent store, quit from Xchange, remove all cartridges from the microdrives and insert the M1880CC cartridge in either drive. From the Top level menu select:

8 (Housekeeping)

7 (Load permanent store)

and the new configuration will be installed.

The actual CONPRIN configuration parameters altered are listed below in order of their appearance:

	OLD (M1880)	NEW (M1880CC)
Lines/page	70	84
Home print head	ESC,60,CR	ESC,60,CR,SI (SI switches on condensed character mode)
Correspondence quality on	ESC,69	ESC,70 (Switches off correspondence quality. It is not available with condensed characters.)
Text line feed	ESC,50	ESC,65,LF (Decreases linespacing from 12/72" to 10/72" or from 70 to 84 lines per A4 page.)

The 10/72" line spacing is chosen to be a whole number multiple of the A4 page, which is 840/72". If this was not so, the text would not be positioned in the same relative place on the second and any subsequent pages printed.

It is not necessary to amend the characters/line as using condensed characters over-rides the characters/line parameter setting.

Emphasised mode (bold typeface) does not work when in condensed character mode and so has been turned off. If it isn't turned off then bold characters appear as normal size characters amongst the condensed characters.

Using this configuration enables large Abacus spreadsheets to be printed out without breaking them up into small parts. The example Abacus printout attached shows a typical 12 columns of 10 characters each by 76 rows totalling 912 cells, which is quite a feat for an A4 page. An example Quill file is also attached showing how quite readable it still is.

It should be remembered, however, that to take full advantage of the new character density, the parameters must be changed within the Design command of the various Xchange tasks. Remember to allow 6 lines* for the skip-over-perforation feature. Design command parameter printouts are attached for both the Abacus and Quill examples given.

11th July 1985
PRJM

* For Abacus, Xchange version 2.3, allow 7 lines, otherwise a blank form feed is generated.

This document is Quill file CONDCHAR.DOC and can be accessed from the M1880CC microdrive cartridge.

3 of 14

PRINTER PARAMETERS

Screen 1 of 3

Printer name	BERLINERDRUCK
Baud rate	9600
Lines/page	84 *
Characters/line	80
New line	CR,LF
New page	FF
Home print head	ESC,60,CR,SI
Cancel print	ESC,64
Line feed	LF
Print #	ESC,82,NUL,35,ESC,82,ETX
Correspondence quality on	ESC,70
Correspondence quality off	ESC,70
Underlined on	ESC,45,49
Underlined off	ESC,45,48

↑ ↓ select item or other screen f7 return to main screen

f1 amend item f8 delete configurator

PRINTER PARAMETERS

Screen 2 of 3

Printer name	BERLIN8800
Subscript on	ESC,83,49
Subscript off	ESC,72
Superscript on	ESC,83,48
Superscript off	ESC,72
Perforation skip on	ESC,78,ACK
Perforation skip off	ESC,79
Image linefeed	ESC,51,NAK
Image single density	ESC,75,224,SOH
Image double density	ESC,76,224,SOH
Set form length	ESC,67
Text line feed	ESC,65,LF
Ignore paper end signal	ESC,56

↑ ↓ select item or other screen

f7 return to main screen

f1 amend item

f8 delete configurator

PRINTER PARAMETERS

Screen 3 of 3

Printer name **VERLIN189800**

Enable paper end signal ESC,57

Print graphics block DC1

Enlarged off ESC,87,48

Enlarged on ESC,87,49

↑ ↓ select item or other screen

f7 return to main screen

f1 amend item

f8 delete configurator

PRINTING OPTIONS

Type of stationery CONTINUOUS

Print quality DRAFT

Image print BLACK AND WHITE

f1 change stationery

f2 change print quality

f3 change image print f8 main menu

ABACUS

HELP press f1	DESIGN allows modification of options Press first letter of option Press ← when finished	COMMANDS press f7
PROMPTS press f2		XCHANGE task f6

AUTO-CALCULATE on input..... YES

BLANK if zero..... NO

CALCULATION order row or column..... ROW

DISPLAY 80,40 columns..... 80

FORM feed between pages..... YES

GAPS between lines on printer..... 0

LINES per page of printer paper..... 77

MONETARY symbol (e.g. f,\$)..... £

PRINTER paper width (characters)..... 142

QUILL

HELP press f1	DESIGN the FORMAT of the printed page. Press ← when finished	COMMANDS press f7
PROMPTS press f2		XCHANGE task f6

Bottom margin..... 0

Display width - 80 or 40 columns..... 80

Gaps between lines (0,1,2)..... 0

Page size (No. lines)..... 78

Start page no..... 1

Type colour - Green or White..... GRN

Upper margin..... 3

70

77:	77.01	77.02	77.03	77.04	77.05	77.06	77.07	77.08	77.09	77.1	77.11	77.12
78:	78.01	78.02	78.03	78.04	78.05	78.06	78.07	78.08	78.09	78.1	78.11	78.12
79:	79.01	79.02	79.03	79.04	79.05	79.06	79.07	79.08	79.09	79.1	79.11	79.12
80:	80.01	80.02	80.03	80.04	80.05	80.06	80.07	80.08	80.09	80.1	80.11	80.12
81:	81.01	81.02	81.03	81.04	81.05	81.06	81.07	81.08	81.09	81.1	81.11	81.12
82:	82.01	82.02	82.03	82.04	82.05	82.06	82.07	82.08	82.09	82.1	82.11	82.12
83:	83.01	83.02	83.03	83.04	83.05	83.06	83.07	83.08	83.09	83.1	83.11	83.12
84:	84.01	84.02	84.03	84.04	84.05	84.06	84.07	84.08	84.09	84.1	84.11	84.12
85:	85.01	85.02	85.03	85.04	85.05	85.06	85.07	85.08	85.09	85.1	85.11	85.12
86:	86.01	86.02	86.03	86.04	86.05	86.06	86.07	86.08	86.09	86.1	86.11	86.12
87:	87.01	87.02	87.03	87.04	87.05	87.06	87.07	87.08	87.09	87.1	87.11	87.12
88:	88.01	88.02	88.03	88.04	88.05	88.06	88.07	88.08	88.09	88.1	88.11	88.12
89:	89.01	89.02	89.03	89.04	89.05	89.06	89.07	89.08	89.09	89.1	89.11	89.12
90:	90.01	90.02	90.03	90.04	90.05	90.06	90.07	90.08	90.09	90.1	90.11	90.12
91:	91.01	91.02	91.03	91.04	91.05	91.06	91.07	91.08	91.09	91.1	91.11	91.12
92:	92.01	92.02	92.03	92.04	92.05	92.06	92.07	92.08	92.09	92.1	92.11	92.12
93:	93.01	93.02	93.03	93.04	93.05	93.06	93.07	93.08	93.09	93.1	93.11	93.12
94:	94.01	94.02	94.03	94.04	94.05	94.06	94.07	94.08	94.09	94.1	94.11	94.12
95:	95.01	95.02	95.03	95.04	95.05	95.06	95.07	95.08	95.09	95.1	95.11	95.12
96:	96.01	96.02	96.03	96.04	96.05	96.06	96.07	96.08	96.09	96.1	96.11	96.12
97:	97.01	97.02	97.03	97.04	97.05	97.06	97.07	97.08	97.09	97.1	97.11	97.12
98:	98.01	98.02	98.03	98.04	98.05	98.06	98.07	98.08	98.09	98.1	98.11	98.12
99:	99.01	99.02	99.03	99.04	99.05	99.06	99.07	99.08	99.09	99.1	99.11	99.12
00:	100.01	100.02	100.03	100.04	100.05	100.06	100.07	100.08	100.09	100.1	100.11	100.12

Welcome to QULL

Quill is a sophisticated word processor. It's powerful and flexible, yet is still easy to learn and use. You can use a word processor for anything you'd otherwise want typed on a typewriter. While the two are similar in function, a word processor has many advantages over a typewriter. The big advantage of a word processor like Quill is the ease with which mistakes can be corrected, formats are automatic and can be changed without retyping. You don't even have to press the carriage return key at the end of each line - Quill does this for you. Quill does not split long words at the end of a line but moves the whole word down to the next line and then spaces out the words on the previous line so that the text is lined up on the margins. To avoid large gaps when large words are encountered at the end of a line, the word can be hyphenated using the Hyphenate command. Insert a hyphen at the most appropriate position in the word, using this command, causing the word to be split between the two lines at this point. However if this hyphenated word does not occur at the end of a line then the hyphen is ignored and not even apparent.

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This paragraph and the next displays differences between lines with and without hyphenation.

This paragraph and the last displays differences between lines with and without hyphenation.

Text formatting commands include left, centre, right and decimal Tab stops. The appearance of text typed at each of the four types of tab stops is shown below.

L	C	R	D
a piece of text	a piece of text	a piece of text	a piece of text
12.345	12.345	12.345	12.345
123.4	123.4	123.4	123.4
1234.56	1234.56	1234.56	1234.56

Typefaces include Bold, underline, high script, low script and normal in any combination except high script and low script together.

Margin settings can be changed with separate control over left margin, indented margin and right margin for each paragraph. This and the last paragraph both show examples of margin settings.

Types of justification for each paragraph presents the text in different ways with aligned left margin or aligned centre margin or aligned right and left margins. The paragraph above is right and left justified. This paragraph is left justified and the one below is centre justified.

Blocks of text can be Erased, Copied or Replaced with great ease. The Goto command can be used to move the cursor to the top or bottom of the document or to the top of any desired page. Alternatively the cursor can be moved by Searching for a unique string of text.

A Header has been created for this document which will be printed at the top of each page when you use the Print command. Similarly a Footer will be printed at the bottom of the page with the page number which can be in any of three forms:

1. Numbers: 1, 2, 3, 4 etc
2. Roman numerals: I, II, I II, IV, V etc
3. Letters: a, b, c, d, e etc

The Footer need not include the page number and/or it could be in the Header. The Footer for this document contains examples of all three forms of page numbering.

Print formatting can be altered using the Design command giving control over such things as the margin at top and bottom of page, the number of blank lines between lines of text, number of lines to a page, start page number etc.

Finally when you save a Quill document to one of the microdrive cartridges, all the information about formatting and layout of that document is also saved with the actual text. This assures an identical document when subsequently reloaded.

Keywords

VALID KEY SEQUENCES

Description

WHAT IS TRANSMITTED WHEN I
PRESS ?

Explanation / Action

ATTACHED IS A TABLE SHOWING
THE OUTPUT FROM TONTO WHEN
ANY KEYS ARE PRESSED.
THIS INFORMATION WILL BE VERY
IMPORTANT FOR CUSTOMERS USING
PROTOCOL CONVERTERS.

CJ.W 29/1/86

Valid Key Combination Codes

51

The tables that follow show the key code produced for each valid combination of key depressions

Notes:

- a) codes are given in hexadecimal
- b) where conventional meanings appertain and space permits, those meanings are shown
- c) '////' means the combination has yet to be assigned a value and is treated as an illegal combination by the keyboard device routine

LEGEND	no shifts	SHIFT	ALT	CTL
A	61 a	41 A	A1	01 soh
B	62 b	42 B	A2	02 stx
C	63 c	43 C	A3	03 etx
D	64 d	44 D	A4	04 eot
E	65 e	45 E	A5	05 enq
F	66 f	46 F	A6	06 ack
G	67 g	47 G	A7	07 bel
H	68 h	48 H	A8	08 bs
I	69 i	49 I	A9	09 ht
J	6A j	4A J	AA	0A lf
K	6B k	4B K	AB	0B vt
L	6C l	4C L	AC	0C ff
M	6D m	4D M	AD	0D cr
N	6E n	4E N	AE	0E so
O	6F o	4F O	AF	0F si
P	70 p	50 P	B0	10 dlc
Q	71 q	51 Q	B1	11 dcl
R	72 r	52 R	B2	12 dc2
S	73 s	53 S	B3	13 dc3
T	74 t	54 T	B4	14 dc4
U	75 u	55 U	B5	15 nak
V	76 v	56 V	B6	16 syn
W	77 w	57 W	B7	17 etb
X	78 x	58 X	B8	18 can
Y	79 y	59 Y	B9	19 em
Z	7A z	5A Z	BA	1A sub

LEGEND	no shifts	SHIFT	ALT	CTL
1	31 1	21	7C	1C fs
@ 2	32 2	40 @	CB @	1D qs
£ # 3	33 3	23 £	CA #	1E rs
\$ 4	34 4	24 \$	60 `	1F us
¥ \ 5	35 5	25 ¥	5C \	BB
^ ~ 6	36 6	5E ^	7E tilde	BC
& { 7	37 7	26 &	7B {	BD
* } 8	38 8	2A *	7D }	BE
([9	39 9	28 (	5B [	BF
)] 0	30 0	29)	5D]	00 nul
- -	2D -	5F -	7F del	////
+ =	3D =	2B +	////	////
: ;	3B ;	3A :	////	////
" '	27 '	22 "	////	////
< ,	2C ,	3C <	////	////
> .	2E .	3E >	////	////
? /	2F /	3F ?	////	////

Note : the third engraved legend (where appropriate) is shown in the middle of the shifted and non-shifted legends.

LEGEND	no shifts	SHIFT	ALT	CTL
START	D0 start	D9 blank	////	DA reset
RESUME	D1 resume	D1 resume	////	////
REVIEW	D2 review	D2 review	////	////
TAB	09 tab	C5 back-tab	////	C6 format
INS DEL	C2 delete	C3 insert	C9	C4 remove
ENTER RET	0D cr	0A lf	C7	////
(space)	20 space	20 space	20 space	C8 break-in
RECALL	E0 recall	D3 list	////	////
SPKR	E1 spkr	DF auto	////	////
REDIAL	E2 redial	D4 last	////	////
H/S 1	31 1	E3 h/s	F1 f1	1C fs
SEL 2	32 2	E4 sel	F2 f2	1D gs
END 3	33 3	E5 end	F3 f3	1E rs
DIAL 4	34 4	E6 dial	F4 f4	1F us
HOLD 5	35 5	E7 hold	F5 f5	BB
SHOW 6	36 6	D6 show	F6 f6	BC
CAPS 7	37 7	C0/1 caps	F7 f7	BD
TIME 8	38 8	E8 time	F8 f8	BE
LOOK 9	39 9	D7 look	F9 f9	BF
0	30 0	////	F0 f10	00 nul
ESC *	2A *	1B esc	////	////
PRNT #	CA #	D8 print	DB printa	CF printm

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LEGEND	no shifts	SHIFT	ALT	CTL
<-	80 left	84	81	82
->	88 right	8C	89	8A
↑	90 up	94	91	92
↓	98 down	9C	99	9A

	CTL + ALT	SHIFT + ALT	SHIFT + CTL	SHIFT + ALT + CTL
<-	83	85	86	87
->	8B	8D	8E	8F
↑	93	95	96	97
↓	9B	9D	9E	9F

Keywords. Quill, M1080, Superscript, Subscript

Description. When changing to superscript in a Quill document printer output changes from normal print to bold.

Explanation / Action

Modify the Printer Parameters to as shown below. The additions are indicated.

PRINTER PARAMETERS

Screen 2 of 3

Printer name

VERLIN M1080

Subscript on	ESC,83,49
Subscript off	ESC,84,ESC,72
Superscript on	ESC,83,48
Superscript off	ESC,84,ESC,72
Perforation skip on	ESC,78,ACK
Perforation skip off	ESC,79
Image linefeed	ESC,51,NAK
Image single density	ESC,75,224,SOH
Image double density	ESC,76,224,SOH
Set form length	ESC,67
Text line feed	ESC,58
Ignore paper end signal	ESC,56

← Add.
←

select item on other screen

f7 return to main screen

amend item

f8 delete configurator

T.N.E.

Tonto Query / Solution Report

Ref No 53

Keywords

CORRESPONDENCE QUALITY RESET WHEN PRINTING.

Description

USING M1880 PRINTER, CORRESPONDENCE
QUALITY GETS TURNED OFF AFTER
SUBSCRIPT OR SUPERSCRIPT PRINTING.

Explanation / Action

PARAMETER INCORRECT: MODIFY
AS PER ATTACHED PARAMETER.

C.W.

PRINTER PARAMETERS

Screen 1 of 3

Printer name **MERLIN-11880**

Baud rate 9600
 Lines/page 70
 Characters/line 080
 New line CR,LF
 New page FF
 Home print head ESC,60,CR
 Cancel print ESC,64
 Line feed LF
 Print # ESC,82,HUL,35,ESC,82,ETX
 Correspondence quality on ESC,71
 Correspondence quality off ESC,72
 Underlined on ESC,45,43
 Underlined off ESC,45,48

*
*

Printer name **MERLIN-11880**

Subscript on ESC,83,49
 Subscript off ESC,84
 Superscript on ESC,83,48
 Superscript off ESC,84
 Perforation skip on ESC,78,ACK
 Perforation skip off ESC,79
 Image linefeed ESC,51,NAK
 Image single density ESC,75,224,SOH
 Image double density ESC,76,224,SOH
 Set form length ESC,67
 Text line feed ESC,50
 Ignore paper end signal ESC,56

*
*

Printer name **MERLIN-11880**

Enable paper end signal ESC,57
 Print graphics block DC1
 Enlarged off ESC,87,48
 Enlarged on ESC,87,49

TONTTO QUERY / SOLUTION REPORT	REFERENCE NO.	54
KEYWORDS ML193 or ML192 PRINTERS		
DESCRIPTION OF QUERY CAN I USE AN ML193 OR ML192 PRINTER WITH TONTO? <i>Note this is for <u>Micro-line</u> budget printers not BT MP192/3</i>		
EXPLANATION / ACTION YES, BUT IT WILL REQUIRE A SPECIFIC SET OF ROMS TO BE INSTALLED IN PRINTER. CONTACT X-DATA ON 0753 72331 AND EXPLAIN THAT THE PRINTER IS TO BE USED ON TONTO, THEY WILL ARRANGE FOR NEW FIRMWARE TO BE INSTALLED.		
AUTHOR Colin Whitlum, BT Business Systems	DATE 28th Feb 86	

TONTU QUERY / SOLUTION REPORT	REFERENCE NO .	55
KEYWORDS "PICK" ON MENTOR 4000		
DESCRIPTION OF QUERY CAN TONTU WORK IN VT100 MODE ON A MENTOR 4000 USING "PICK" OPERATING SYSTEM.		
EXPLANATION / ACTION NO . ALTHOUGH GLASS TELETYPE ACCESS IS POSSIBLE.		
AUTHOR Colin Whitlum, BT Business Systems		DATE 27th Feb 86

TONTU QUERY / SOLUTION REPORT	REFERENCE NO .	56
KEYWORDS CENTRONICS GLP PRINTER CONFIGURATION		
DESCRIPTION OF QUERY		
EXPLANATION / ACTION CONFIGURATION ATTACHED. NOTE: USING THIS PRINTER, WHEN BOLD IS USED IN QUILL IT WILL RESULT IN 'NEAR LETTER QUALITY' (NLQ) TEXT FROM PRINTER. CORRESPONDENCE = "NLQ" SHEET 1 of 2		
AUTHOR Colin Whitlum, BT Business Systems		DATE 27th Feb 86

PRINTER PARAMETERS

Screen 1 of 3

Printer name	Centronics
Baud rate	9600
Lines/page	70
Characters/line	080
New line	CR,LF
New page	FF
Home print head	CR
Cancel print	CAN,ESC,65,FF
Line feed	LF
Print #	ESC,54,35,ESC,55
Correspondence quality on	ESC,120,SOH
Correspondence quality off	ESC,120,NUL
Underlined on	ESC,45,49
Underlined off	ESC,45,48

Printer name	Centronics
Subscript on	ESC,83,49
Subscript off	ESC,84
Superscript on	ESC,83,48
Superscript off	ESC,84
Perforation skip on	ESC,78,ACK
Perforation skip off	ESC,79
Image linefeed	ESC,51,CAN
Image single density	ESC,75,224,SOH
Image double density	ESC,76,224,SOH
Set form length	ESC,67
Text line feed	ESC,50
Ignore paper end signal	ESC,56

Printer name	Centronics
Enable paper end signal	ESC,57
Print graphics block	219
Enlarged off	ESC,87,48
Enlarged on	ESC,87,49

TONTU QUERY / SOLUTION REPORT		REFERENCE NO.	57
KEYWORDS Data Comms Adaptor, Interconnection with ROMPACK			
DESCRIPTION OF QUERY There is no full interconnectivity between all versions of Data Comms Adaptor and all versions of ROMPACK.			
EXPLANATION / ACTION No Data Comms Adaptor will work on early versions of ROMPACK. That is, M1810 ROMPACK with Xchange serial no. < XXX/002550 M1811 ROMPACK without Xchange serial no. < XXX/002751 where XXX is the date code. All current versions of Data Comms Adaptor MUST be plugged into the LEFT-HAND SLOT of a 2 slot ROMPACK and WILL NOT FUNCTION AT ALL in a 4 slot ROMPACK. If problems occur in the use of a Data Comms Adaptor, first check the above, then open the Adaptor by pressing the sides of the bottom and removing the top. Check the integrated circuit nearest to the ribbon cable for version number. If this is BT 1985-01 and Scicon 1985-01 then the Data Comms Adaptor should be sent, in its original packing if possible and with a return address, to Walkbury Consultants, 1 Alfric Square, Woodstone, PETERBOROUGH, PE2 0JA, Telephone 0733 235187, who will upgrade and return it free of charge. If resets occur when connecting, then return the Adaptor via normal stores procedure to Walkbury, stating the circumstances of failure. If a lockup occurs then move to Housekeeping and Store Report and delete the 2nd "Terminal" entry. The new software version will be available soon which will work at a faster speed and with all ROMPACKS except the very early ones identified above. Arrangements are being made to upgrade existing Data Comms Adaptors to the new version for a small charge of £6.			
AUTHOR		DATE	
Paul Maden ISD2.1.3		27th Feb 86	

TONTU QUERY / SOLUTION REPORT	REFERENCE NO.	57
KEYWORDS Data Comms Adaptor, Interconnection with ROMPACK		
DESCRIPTION OF QUERY There is no full interconnectivity between all versions of Data Comms Adaptor and all versions of ROMPACK.		
EXPLANATION / ACTION No Data Comms Adaptor will work on early versions of ROMPACK. That is, M1810 ROMPACK with Xchange serial no. < XXX/002550 M1811 ROMPACK without Xchange serial no. < XXX/002751 where XXX is the date code. If problems occur in the use of a Data Comms Adaptor, first check the above, then open the Adaptor by pressing the sides and removing the top. Check the integrated circuit nearest to the ribbon cable for version number. If this is BT 1985-01/SCICON 1985-01 then the Data Comms Adaptor should be sent, in its original packing if possible and with a return address, to Walkbury Consultants, 1 Alfric Square, Woodstone, PETERBOROUGH, PE2 0JA, Telephone 0733 235187, who will upgrade to latest version and return it free of charge. If the version is BT 1985-02/SCICON 1986-06 the Data Comms Adaptor WILL ONLY FUNCTION in the LEFT-HAND SLOT of a 2 slot ROMPACK and IT WILL NOT FUNCTION AT ALL in a 4 slot ROMPACK. These can be upgraded though, see below. The latest version, BT 1985-02/SCICON 1986-08, works at a faster speed, with all ROMPACKS except the very early ones identified above and in any slot. Arrangements have been made to upgrade BT 1985-02/SCICON 1986-06 versions to BT 1985-02/SCICON 1986-08 for a small charge of £6 which includes postage and packaging for its return from Walkbury Consultants. If resets occur when connecting, then return the Adaptor via normal stores procedure to Walkbury, stating the circumstances of failure. If a lockup occurs then move to Housekeeping and Store Report and delete the 2nd "Terminal" entry. NOTE: Data Comms Adaptors do not currently work with PCML Disc Unit.		
AUTHOR Paul Maden BT Bus Systems, ISD2.1.3	DATE 13th Jun 86	

TONTU QUERY / SOLUTION REPORT	REFERENCE NO.	58
KEYWORDS DYNEER MOA MP1881 DAISYWHEEL PRINTER PAPER SLIPPING		
DESCRIPTION OF QUERY AFTER A PERIOD OF USE THE PAPER IS NOT GRIPPED FIRMLY AGAINST THE PLATEN WHICH ALLOWS THE PAPER TO SLIP.		
EXPLANATION / ACTION X-DATA <u>PREVENTIVE MAINTENANCE</u> (When using cut sheet feeder) To prevent paper mis-feeding problems it is recommended that the platen is not allowed to become polished or shiny in appearance. Please carefully follow these instructions so the printer and cut sheet feeder will always perform with the optimum efficiency.		
AUTHOR Paul Maden, BT Business Systems	DATE 28th Feb 86	

PLATEN REMOVAL PROCEDURE

- 1.1 Open and lift the top cover to remove (Fig 1.)
- 1.2 Loosen 2 grub - screws fixing platen knob to the platen and pull out the platen knob (Fig 2.)
- 1.3 Remove 4 screws fixing the upper cover and remove, at the same time carefully unplug the paper out sensor from the main P.C.B. (Fig 1.)
- 1.4 Loosen 2 grub - screws fixing the platen shaft (Fig 3.) and pull the platen shaft to the right and the platen to the left and remove platen.

Cover

TOP COVER



UPPER COVER

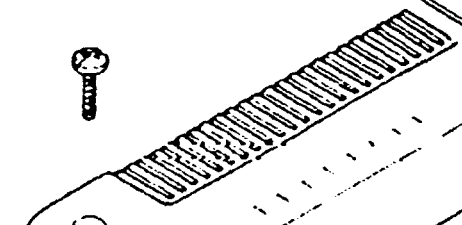


FIG 1.

Platen

GRUB SCREWS

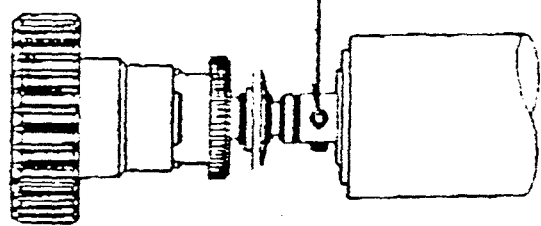


FIG 2.

GRUB SCREWS

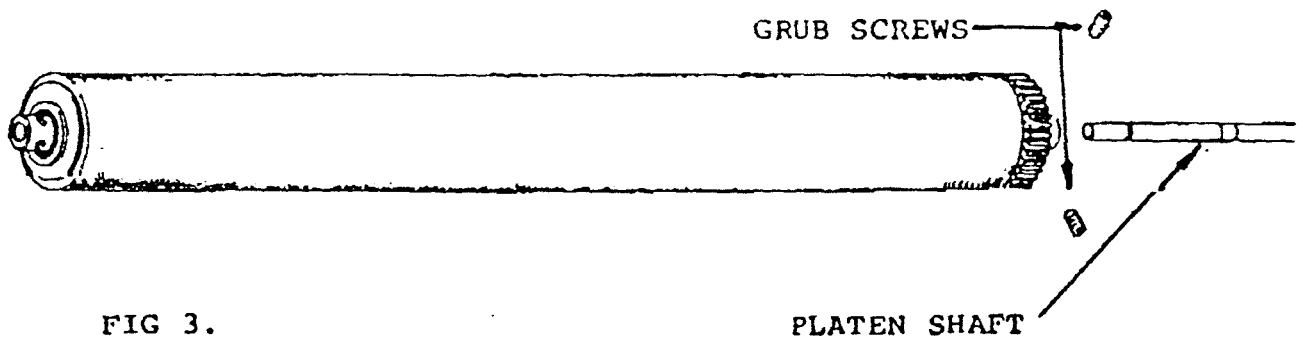


FIG 3.

PLATEN SHAFT

PLATEN CLEANING PROCEDURE

- 2.1 To soften the ink build up on the platen surface, wet the platen with a foaming cleaner.
(Do not use an organic solvent like thinner).
- 2.2 Using a fine grade waterproof emery paper (wet and dry) no heavier than a grade 400, lightly rub along the length of the platen (Fig 4.) until the whole platen has been effectively de-inked.
(It is recommended that disposable gloves are worn for this operation).

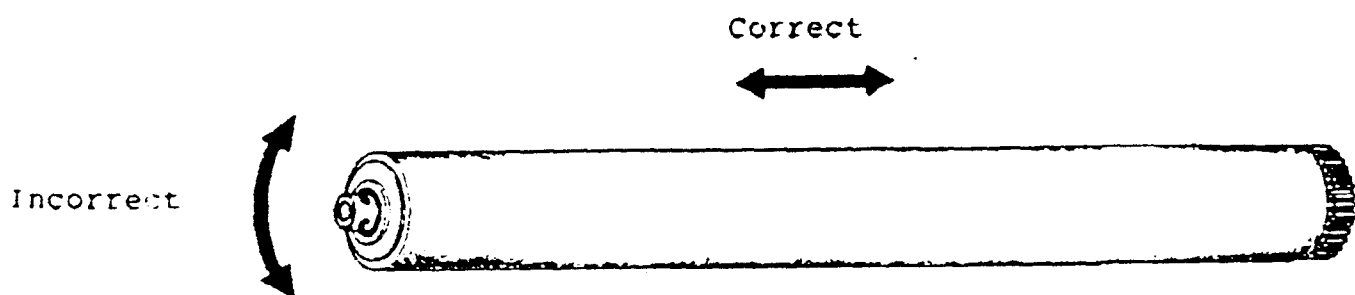


Fig 4

- 2.3 Wash off thoroughly all residue ink using a soft cloth until an even matt/dull finish is obtained.
Platen is now ready for re-assembling.

3. PLATEN RE-ASSEMBLE

2.1 Reverse Step 1.4

3.2 Before tightening the platen knob "A" lightly push the knob against the hub "C" then tighten the two grub screws "B".

The platen should turn smoothly with no clattering in a lateral direction.

(Fig 5 Refers)

3.3 Reverse steps 1.3 through to 1.1

Printer is now ready for operation with a cut sheet feeder.

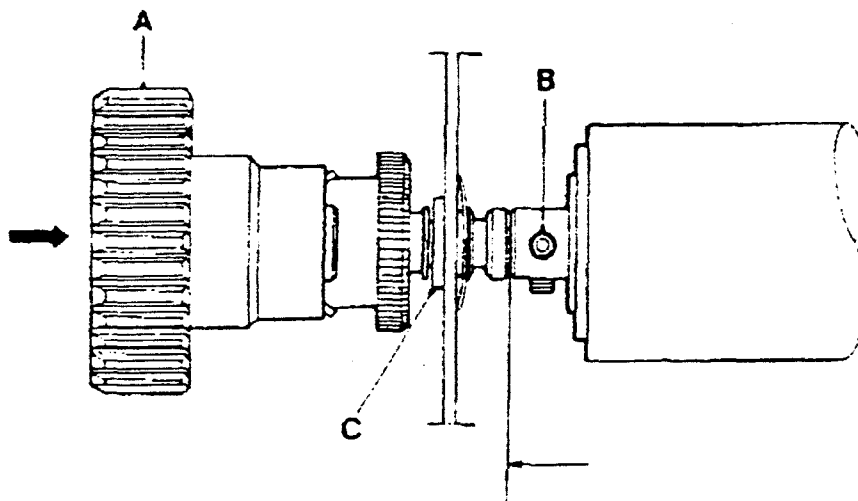


Figure 5

TONTU QUERY / SOLUTION REPORT		REFERENCE NO.	59
KEYWORDS Diary Application for Tonto			
DESCRIPTION OF QUERY Is there a Diary for Tonto?			
EXPLANATION / ACTION Yes from 31/3/86. It can be obtained from Satellite Computing. They are willing to supply a demo cartridge for testing purposes. Their telephone number is 01 940 1810. The application takes up approximately 37 blocks of memory in Tonto. Their address is: Satellite Computing 236 Sandycombe Road, Richmond, Surrey. TW9 2EQ.			
AUTHOR Colin Whitlum, BT Business Systems		DATE 4/3/86	

TONTO QUERY / SOLUTION REPORT	REFERENCE NO.	60
KEYWORDS Interfile Advanced Messaging Installation problems.		
DESCRIPTION OF QUERY Both Interfile and advanced messaging are designed to work T-Link 09. This means that very early Rompacks will not work with Interfile or MAP2.		
EXPLANATION / ACTION The following rules apply: 1. If Rompack (M1810) without Xchange is fitted, its Serial number must be greater than 001351. 2. If Rompack (M1811) with Xchange is fitted, its Serial number must be greater than 001301. It should be noted that the vast majority of these Rompacks are installed within BT.		
AUTHOR C. D. Whitlum	DATE 5/3/86	

TONTU QUERY / SOLUTION REPORT	REFERENCE NO.	61
KEYWORDS SOFTWARE & HARDWARE DEVELOPMENT COMPANIES FOR TONTO		
DESCRIPTION OF QUERY WHAT SOFTWARE & HARDWARE SYSTEMS ARE THERE FOR TONTO?		
EXPLANATION / ACTION NOTE Please first check if an item is available through BT BuyLines: Telephone Northern Districts 021 236 6616 Southern Districts 01-281 4422 CALIBRE COMPUTING, Weir Bank, BRAY-ON-THAMES, Berks, SL6 2ED Tel: 0628 34281 Calibre have developed a Synchronous Comms Unit (SCU) for Tonto. They have implemented the 'X' modem protocol and may develop X25 later this year. The device is called "INFORMER". COMPUTER ONE Ltd, Science Park, Milton Road, CAMBRIDGE Contact Jon Styles Tel: (0223) 862616 Computer One are about to launch a single disk unit for Tonto at £350 single end user. C compiler and Linker Hosted Software Development system for the Tonto. MC BASIC Development System includes BASIC interpreter and compiler. Assembler Toolkit. A Hosted Assembler Development System for the Tonto. A 68000 assembler with editor and linker and Monitor for debugging. Technical Support and Consultancy service. Intelligence (IRL) Limited, Nagor House, Dundrum Road, Windy Arbour, DUBLIN 14, Ireland. Tel: Dublin 988555/988243 These people are involved with putting an insurance brokerage application, Mediat, on Tonto. They are also developing an E-Pad modem application for the Tonto. continued		
AUTHOR Colin Whitlum, BT Business Systems	DATE 24th JUN 86	

METACOMCO PLC, 26 Portland Square, BRISTOL, BS2 8RZ
Tel: (0272) 428781

The Metacomco Cross Development System allows software for the Tonto to be developed using ICL or IBM PC's and then downloaded to the Tonto. Includes C cross compiler and Macro cross assembler and linker as well as technical support.

MGB Micro Products Ltd., 77 Garamonde Drive, Wymbush,
Milton Keynes, MK8 8DD Tel: 0908 568366

MGB are an OPD distributor who develop bespoke software for their customers. They have under development an auto-answer application for computer access, this allows reverted working as a terminal.

They also offer a TILL solution. This is a cash drawer operated from the Tonto running their software. Needs to be seen before recommending to customer.

PCML, Royal Mills, Esher, Surrey, KT10 8AS
Tel. 0372 467282

PCML offer a twin disk unit at present. They intend to offer a single disk version and also a single disk version with Ramdisk. Prices £350 and £395 respectively. They are talking about synch. and asynch comms attachments at a later date and also about such lovelies as card swipes and memory expansion.

Psion, Harcourt Street, LONDON, W1
Tel. 01 723 9408

Psion offer a CHESS program on microdrive.

Satellite Computing, Sandycombe Road, Richmond,
Surrey, TW9 2EQ Tel. 01 940 1810

Satellite offer a DIARY program which is sold on micro-drive cartridge.

Systembuild, 2 Church Street, Deeping St. James,
Peterborough, Cambs., PE6 8HD Tel: 0778 344388

Systembuild offer a spreadsheet application on micro-drive cartridge.

continued

OTHERS:

There are a number of offerings in the wings waiting to come on line these are as follows:

1. Forecaster on cartridge.
2. Brainstorm in capsule.
3. Planner in capsule.
4. T-Sketch on tape initially & finally in capsule.

NOTE: This Query Solution report will be upgraded when these come on line.

Control-C Software used
 PC 486 19 55-5 BAC-85
 WORKING WITH
 R.G. 11 2DW
 0734-7500 9 74-323
 1 - 1000
 2 - 1000
 3 - 1000
 4 - 1000

PC 486 19 55-5 BAC-85
 SDC 11

end

TONTTO QUERY / SOLUTION REPORT	REFERENCE NO.	62
KEYWORDS EASEL PRODUCTION OF LINE GRAPH ON BAR CHART		
DESCRIPTION OF QUERY HOW CAN I PRODUCE THE LINE GRAPH SUPER-IMPOSED ON A BAR CHART AS SHOWN ON PAGE 125 OF THE XCHANGE MANUAL?		
EXPLANATION / ACTION CREATE THE NUMBER OF SETS OF DATA THAT YOU WANT. SELECT THE ONE TO BE CHANGED TO A LINE GRAPH AND USING f7(Commands), C(hange), L(ine), AND THEN SELECT THE TYPE OF LINE REQUIRED. FINALLY, V(iew), A(ll).		
AUTHOR Paul Maden, BT Business Systems		DATE 6th Mar 86

TONTO QUERY / SOLUTION REPORT		REFERENCE NO.	63
KEYWORDS CONNECTION OF TONTO TO OTHER COMPUTERS USING VT-LINK OR DATA COMMS ADAPTOR			
DESCRIPTION OF QUERY LIST OF COMPUTERS TO WHICH TONTO CAN BE CONNECTED			
EXPLANATION / ACTION			
<u>COMPUTER</u>	<u>YES/NO</u>	<u>METHOD</u>	
ADDS MENTOR 4000	Yes	QSP 406 protocol converter	
CIC	Yes	Running under OASIS supports VT100	
CMC SOVEREIGN	Yes	Glass teletype	
CROMEMCO MICRO-COMPUTER	Yes	With VT100 support	
EGO COMPUTERS	No		
HEWLETT PACKARD 3000	Yes	Glass Teletype option in Data Comms Adaptor	
HONEYWELL DPS-7 MAINFRAME	Yes	Use Lucidata protocol converters VIP7700, VIP 7001 or VIP 7800	
IBM SYSTEM 34, 36 & 38	Yes	Use IPAC protocol converter	
IBM 43xx SERIES AND 30xx SERIES MAINFRAME USING BISYNCH PROTOCOL	Yes	Use MicroSCOPE 8274 BSC protocol converter -	
IBM 43xx SERIES AND 30xx SERIES MAINFRAME USING SNA PROTOCOL	Yes	Use MicroSCOPE 8274 SNA protocol converter -	
ICL MAINFRAME USING CO3 PROTOCOL	Yes	Use MicroSCOPE CO3 CLUSTER CONTROLLER -	
ICL SYSTEM 25	Yes	Use Barron McCann "MITE" box or Wyvern software	
continued			
AUTHOR		DATE	
Paul Maden, BT Business Systems, ISD2.1.3		23rd Jun 86	

COMPUTERYES/NOMETHOD

MCDONNELL DOUGLAS
INFORMATION SYSTEMS

SEQUOYA (Microdata) Yes
& REALITY (CNC)

Use QSP Ltd protocol converter
QSP 406. (See attached info.)

SPERRY, HONEYWELL ?
OR BURROUGHS

Use Zircon protocol converter
Custom-made - No production
items available

TEXAS INSTRUMENTS Yes
(TI) 990

Operating system needs to be
loaded with VT100 driver s/w

WANG No

ADDRESSES FOR PROTOCOL CONVERTERS

Barron McCann Ltd, Barron McCann House, Short Mead Street,
BIGGLESWADE, Bedfordshire, SG18 0AT
Tel: (0767) 316286

Lucidata, PO Box 128, CAMBRIDGE, CB1 1DQ
Contact: Dr Bennee,
Tel: Cambridge (0223) 356846

MICROSCOPE PLC. VANWALL ROAD, MAIDENHEAD, BERKS. SL6 4UN
0628 33221 (Contact COLIN ARCHER)

QSP Limited, Victoria House, Queen Street,
HENLEY-ON-THAMES, Oxon, RG9 1AR
Tel: (0491) 576522

Wyvern Business Systems Ltd, Church Bank House,
Church Bank, BRADFORD, BD1 4DY
Contact: Ian Cuthbertson, Tel: (0274) 391151

IPAC (INTEGRATED PROCESSING & COMMUNICATION LTD)
SUITE 12, CHERRY ORCHARD WEST, KENBURY, SWINDON
WILTS. SN2 6UP. 0793 611677 (JULIUS WILDERBEER)

Zircon, 866 Uxbridge Road, HAYES, Middlesex, UB4 0RR
Contact: Bill Comben, Tel: 01-573 8319

continued

QSP 406

INTRODUCTION

QSP 406 is a compact, low cost, asynchronous protocol converter unit which may be configured and installed in a matter of minutes thus providing access to McDonnell Douglas Information Systems (MDIS) Mini Computers by British Telecom Tonto and M2105 Messaging Terminals, or indeed, most low cost ASCII terminals.

CONFIGURATION

QSP 406 may be connected in a variety of modes (see over).

- i. To a local, hard wired VDU
- ii. Between a MDIS port and auto-answer modem (for occasional dial-up access by a number of VDU's)
- iii. To a Private Circuit

The unit does not normally require any change to existing cabling.

QSP 406 may be installed on any asynchronous communications link, full or half duplex at speeds of up to 9600 bps. Indeed, the equipment at either end of the link may be operated at different speeds if required. Thus, the host end of the link may be set to operate at 1200, 2400, 4800 or 9600 bps whilst the remote end may be set to operate at 75/1200, 1200/75, 300, 1200, 2400, 4800 or 9600 bps.

INSTALLATION

QSP 406 comprises two separate units

The protocol converter itself
The power unit with integral A.C. Plug

Before installation, the operational/functional requirements of QSP 406 must be set-up. This task is accomplished simply by appropriate selection of an 'ON' or 'OFF' condition of a bank of ten switches selecting speed, parity and flow control.

NOTE: Due to limitations of M2105 and Tonto screen attribute handling, it is not possible to produce a full McDonnell Douglas emulation.

QSP 406

SPECIFICATION

INTERFACE

Conforms to EIA RS-232C/CCITT V24.

MODEM DATA RATES

75/1200, 1200/75, 300, 1200, 2400,
4800, 9600, bps.

TERMINAL/HOST DATA RATES

1200, 2400, 4800, 9600, bps.

CODE SET

7-bit odd/even parity, or 8-bit,
no parity.

FLOW CONTROL

RTS/CTS or XON/XOFF.

INDICATORS

"On" and "Data" LED's on front
panel.

DIMENSIONS

147mm x 207mm x 40mm

WEIGHT

QSP 406 - 450gm
Mains transformer unit - 250gm

POWER REQUIREMENTS

220-240V AC (110V AC option),
50/60Hz. Less than 10VA.

OPERATING TEMPERATURE

+ 5 C to + 30 C

STORAGE TEMPERATURE

0 to + 70 C

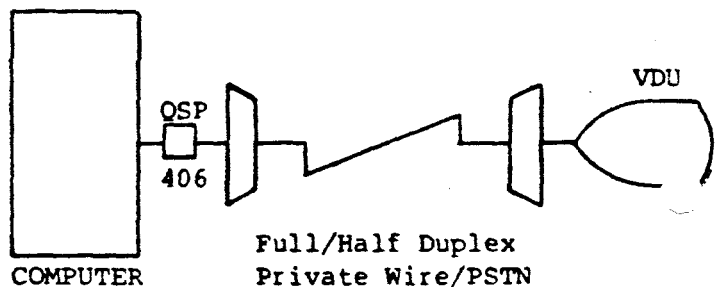
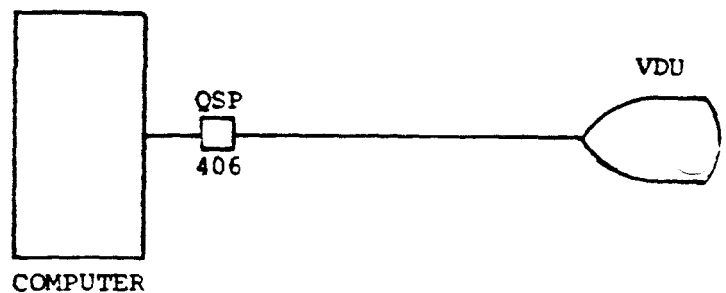
RELATIVE HUMIDITY

20% to 85% non-condensing at
1,000 metres altitude

COLOUR

Cream and chocolate

TYPICAL APPLICATIONS



QSP LIMITED,
Victoria House,
Queen Street,
Henley-On-Thames,
Oxon. RG9 1AR

Telephone: (0491) 576522

TONTO QUERY / SOLUTION REPORT	REFERENCE NO.	64
KEYWORDS MANUALS: AMENDMENTS TO INSTALLATION, XCHANGE AND ADVANCED OPERATIONS MANUALS		
DESCRIPTION OF QUERY SEVERAL AMENDMENTS ARE NECESSARY TO THE MANUALS.		
EXPLANATION / ACTION The attached report describes amendments necessary to those manuals listed above. Some of these are fundamental errors or omissions and some are trivia. They may not all have necessarily been agreed as actual amendments for implementation in the next edition of the manuals.		
AUTHOR Paul Maden, BT Business Systems	DATE 7th Mar 86	

REPORT ON THE FOLLOWING DOCUMENTATION

- 1 **Installation Manual**
- 2 **Advanced Operations Manual**
- 3 **Xchange Manual**

1 Installation Manual

The Xchange manual has quite a good presentation with excellent diagrams of various parts of the Tonto where these are needed to clarify points. Its simplicity, use of two colours, black and blue, as well as different sizes and styles of lettering is a major contribution to this easily referenced booklet. It goes a long way to inspire confidence in the naive user's first confrontation with the product and its installation.

However, one procedure could be improved on, the point at which the battery is installed and connected up. Fitting the battery should be moved to later in the procedure, probably just prior to connecting the mains but certainly after dealing with the telephony section.

Many operations involve either having the handset off-hook or it being displaced by subsequent manoeuvres, a state which is to be avoided according to the manual. The result is a discharged battery.

2 Advanced Operations Manual

The following amendments are recommended:

PAGE 5 & 6: Last sentence of last paragraph on page 5, "Note that the programs may be in a different order on your screen.", should be moved to next page, page 6, and associated with the screen representation of the CARTRIDGE MENU.

PAGE 11 & 12: The Configurator allows an Application to be run either on power-up or by selecting the 9th item of the Top Level Menu. A list of such permissible applications should be given. Feedback from users indicate a great deal of confusion about what can be inserted as an application. This needs expanding.

PAGE 13 & 14: DATA AUTO-ANSWER PROTOCOL NAME. There is insufficient detailed information given to enable the user to access an alternative protocol. Does "MDV1 or 2" precede the program name to identify the source as microdrive, for example? At the very least a reference should be given as where further information may be obtained.

PAGE 16: Paragraph commencing "Other protocols ...". Pennultimate line: "19)" should read "18)".

PAGE 20: Pennultimate line of last paragraph. Insert "be" between "to" and "printed".

PAGE 32: 1st paragraph of "INLAND CHARGE BANDS", last line should refer to page 34 and not 33.

PAGE 34: The screen image of "INLAND TELEPHONE CHARGE RATE TIMES" needs amendment to that currently displayed. The cheap rate period from time 00 for Saturday and Sunday has been deleted.

PAGE 36: Add "TIMES" to title to read "OVERSEAS TELEPHONE CHARGE RATE TIMES".

PAGE 39: Screen image of "Printer Configuration". "f1 install current printer" should read "f2 install current printer".

PAGE 40: Fourth paragraph, halfway down page, last line: replace "on page 41" with "below".

PAGE 42 & 43: The Screen images, "PRINTER PARAMETERS" should resemble those actually presented on the screen. Those which have been found to be incorrect are as follows with new values:

Lines/page	70
Home print head	ESC,60,CR
Cancel print	ESC,64
Print £(hash)	ESC,82,NUL,35,ESC,82,ETX

Subscript off	ESC,72
Superscript off	ESC,72
Perforation skip on	ESC,78,ACK
Image linefeed	ESC,51,NAK

"Initialise printer" should now be "Set form length"
 "Set 1/16" Line spacing" should now be "Text line feed"

Print graphics block DC1

PAGE 45: "Initialise printer" and "Set 1/16" line spacing" need updating with parameters now presented: "Set form length" and "Text line feed". "Enlarged on" and "Enlarged off" with descriptions need transposing to put in same order as the screen presentation.

PAGE 49: Paragraph commencing "Correspondence." For "Epson RX80 substitute "M1880".

PAGE 50: "CLEAR CALL-FAILED RECORDS" section, 1st line: insert "(when available)" after "facilities".

INDEX PAGE 53: "Call timing" should refer to page 27 and not page 28.

SUMMARY

Generally this manual is a concise easy to read document giving all the necessary information to enable a user to change the permanent store features of Tonto. However there are two areas where it is necessary to include more information:

i) APPLICATIONS FOR TOP LEVEL MENU ENTRY

A list of acceptable applications should be given with information as to how applications can be made acceptable. For example it has been found that Archive is not acceptable but Xchange is.

ii) DATA AUTO-ANSWER PROTOCOL NAME

Insufficient information as to how to use this facility or how Tonto knows where to look for the protocol program, Rompack, capsule or microdrive cartridge? Does it scan them all until it is found? Does the protocol name have to include designations such as "m:" etc?

Most of the screen image representations need updating to those currently presented on Tonto.

Section 5, Housekeeping operations should not be in this manual but in the Handbook with the other housekeeping operations.

Paul Maden
ISD2.1.3

3 Xchange Manual

The following amendments are recommended.

General

Application separators are reversed. The Merlin logo should appear in the odd numbered page position.

An inconsistent use of heavy type has been used throughout the manual to denote actual key-strokes required to initiate an operation.

A great deal of trouble was gone to, to try and get the manual representation of display or printout to resemble that actually obtained. It gives a great deal of confidence to a user to obtain on the screen what is actually printed in the manual. This colour version has set that all back again.

Why are all the examples now using upper case characters throughout?

PAGE 1: Insert at bottom of page:

"Contents

401"

PAGE 8: Under the heading "Saving a task", add a second paragraph: "The maximum number of memory files permitted to exist at any one time is 8."

PAGE 13: (14) 3rd paragraph, line 3: amend "distinguished" to read "indistinguishable" and amend "different" to read "the same".

PAGE 15: Screen image needs updating to that currently presented. Report under "PRINTER STATUS" should read "not printing". A new heading "DEVICES" is missing with "default m:" and "help 1:" beneath.

PAGE 19: (48) Insert new paragraph at end of page: "Easel graphs can only be printed within Easel".

PAGE 29,35,43,45,46: Screen image representation needs amendment in status area. Insert "TASK: name" and re-align "LINE: 1" and "PAGE: 1".

PAGE 35: Screen image status area is not correct. "INSERT" should not be shown against "MODE:".

PAGE 44: Last line of 1st paragraph, after "different typeface" insert " and anything inserted will be in this typeface".

PAGE 52: Fourth paragraph commencing "As with the Copy ..", 2nd & 3rd lines, delete "You then have to move the cursor to the end of the text" and insert "Now position the cursor after the last character of the text to be erased". (Only the text to the left of the cursor end marker is highlighted to be erased and does not include the cursor position. This brings the wording in line with the Copy command on page 51.)

Last paragraph on page 52: Line 4, after "document" insert ", from the top,". Also, in the same paragraph, delete 1st sentence completely. (Initiating a search from either top or cursor position is not an available option. It always starts from the top on initiation.)

PAGE 53: (45) Delete penultimate paragraph commencing "Press the RETURN key...". (This facility is not available.)

PAGE 54: (44) Line 1: Delete "three" and insert "two". Delete 2nd line entirely. 1st sentence of next paragraph: Delete "In the last two cases,". (The "A" option is not available.)

PAGE 58: DESIGN screen is incorrect and also has the option "Type colour - Green or White ..." missing.

PAGE 59: 1st paragraph, 4th line, "The upper and lower margins...". Delete "lower" and insert "bottom".

Paragraph commencing "A page size of 66 lines...". Delete "66" and insert "64".

PAGE 67: (51) Initial values should be amended as follows:

Indent margin	10
Upper margin	3
Bottom margin	0
Justification	Left
Page size	64

PAGE 70: Screen image for 40 character width display shows "XCHANGE f3", should read "XCHANGE f6".

PAGE 71: "Bottom margin" option, last line, delete "3" and insert "0".

"Page size" option, last line, delete "66" and insert "64".

PAGE 72: Penultimate line, delete "6" and insert "3".

PAGE 74: 1st Paragraph under the heading "Import", 2nd line, after "(the spreadsheet)" delete "or" and insert ",". Line 3, after "database)" insert "or Quill". A description of importing by line and paragraph is required.

(57): A section on Export is required following the "Import" section.

PAGE 77: (56) Section 2, after line 1 insert "Note that long headers can affect page layout (lines per page).".

PAGE 87: (5) Delete second paragraph numbered 1.

(5a) Renumber third paragraph (numbered 2) as 1. Renumber fourth paragraph (numbered 3) as 2.

(5b) Delete penultimate paragraph.

PAGE 88: (41) Second paragraph (numbered 1), line 6, after "key" insert " followed by Y to overwrite the old version. If you wish to save the current document with a different name then press ESC and type in the new name."

PAGE 89: (4) Delete 2nd paragraph commencing "After you've".

PAGE 106: After last paragraph insert new section entitled "Colour With an 80 character width display (Defaults command) a range of four colours are available. With a 40 character width display this range is increased to eight.

See Advanced Operations manual, main system configuration for details of colours and printing etc."

PAGE 108: Screen image representation, missing text. Add to centre menu in control area: "For a new design select the last (?)." Add an "s" to "Your Bar" to make it plural.

PAGE 111: (30) Section "Ordinary text", paragraph 3, line 4, delete "space bar" and insert "<RETURN ARROW SYMBOL> key".

Line 5, after "nearest" insert " start of a".

PAGE 131: (1) Delete 3rd paragraph commencing "You can also "dump" the ...".

PAGE 132: (2) 2nd paragraph, line 2, delete "f0" and insert "f3". Line 5, after "using" insert " f0 or".

PAGE 133: (3) Line commencing "f0", change "f0" to "f3" and "staus" to "status" on the same line.

PAGE 137: Insert new paragraph between paragraphs 2 and 3: "The default is an 80 character wide display allowing a choice of four colours. When the display is changed to 40 characters, eight colours are available.

PAGE 145: Delete 2nd paragraph and insert new paragraph describing the option to install a new graphics printer.

PAGE 150: (26) Replace whole paragraph with the following: "This command erases all data within the current task and returns Easel to the state it was in when you selected the task, ready for a fresh start."

PAGE 155,162,164,176,177,179,180,243,246,250: Screen image representation, bottom line of status area, "CELL EMPTY" should read "CONTENTS EMPTY". "TASK NAME ..." is also missing.

PAGE 157: At end of "The status area" section add new item:
" - Task name".

PAGE 175: Pennultimate paragraph, line 2, change "A to column A" to "D". Replace the next sentence entirely by:
"Change this by typing the correct value, A, (don't forget to press the <RETURN ARROW SYMBOL> key) and type the correct value C for the the second."

PAGE 188: The printout from the cashflow model should be identical with that actually printed:

- 1) the border column and row separators are missing
- 2) the number of spaces between columns is greater in the actual printout
- 3) border column headings (A, B, C etc) do not line up properly
- 4) the month headings should be shown right justified
- 5) using the function month(n) produces text in lower case with first character in upper case etc.

In order to give the user confidence in what he has done the manual should show a true representation of resulting printout.

(27) The cashflow model should have partitioned names separated with underlines in preference to hyphens which gives a more continuous line.

PAGE 196: Not a true representation of actual display or printout. See reference to PAGE 188 above.

PAGE 200: (42) "WINDOW,VERTICAL,SEPARATE" should read "WINDOW,VERTICAL,SEPARATELY".

PAGE 201: Insert warning sign (exclamation mark in triangle) against the paragraph commencing "In general, ...".

PAGE 204: Not a true representation of actual display or printout. See reference to PAGE 188 above.

PAGE 208: Not a true representation of actual display or printout. See reference to PAGE 188 above. Asterisks should line up with the hyphens at the bottom, months printed using the month(n) function produces lower case text with upper case first character.

PAGE 214: Not a true representation of actual display or printout. See reference to PAGE 188 above. Row 18 & 33, year numbers should not be centre justified, there is no instruction in the example to this effect. "END-OF-YEAR BALANCE" should all be on one line.

PAGE 219: Not a true representation of actual display or printout. See reference to PAGE 188 above.

PAGE 228: After line commencing "rept(="....", insert two new paragraphs:

"In general, a formula should only refer to cells that are in the region above and to the left of the cell containing the formula - including the row and column containing the formula.

If you don't follow this rule, it is likely that the results may be incorrect. In most cases you can obtain a correct result by forcing a recalculation of the grid with the Xecute command or calculating the grid in column order."

Insert the warning symbol (exclamation mark in triangle) against the first paragraph.

PAGE 237: (55) Function str(num,type,dp), last paragraph, end of line 3, after ".... formats." insert dp is treated modulo 15.

PAGE 283: (10) 3rd paragraph commencing 'You can use ..', after '"Gazetteer"' insert ' on "DEMO" cartridge'.

PAGE 284: (13) After 1st paragraph insert new line: "Keywords are not acceptable as field variable names."

PAGE 288: (18) At top of page insert new paragraph: "Records may be selected by specifying the contents of one or more particular fields."

Last paragraph, 1st line, "The a following .." should read "The "a" following .." (add quotes).

PAGE 289: After 2nd paragraph insert new paragraph: "If the file is closed properly, subsequent access will produce the records in the new order."

PAGE 291: (19) About halfway down the page, line commencing "first", after the word "first" insert "(not strictly required)".

PAGE 293: (25) 2nd paragraph, line 5, after "editor" insert "(see page 10)".

PAGE 296: (59) Pennultimate paragraph, line 4, after "row of dots." insert "Data area length, for input, has to be one greater than the anticipated maximum size of variable value."

PAGE 297: At the end of the 4th paragraph add new sentence:
"To change the ink of existing text, select the new ink colour and then overtype the text."

Paragraph 6, lines 2 and 3, delete "Then move the cursor to the end of the region and" and insert "Type the text you want in that colour and then".

At the end of paragraph 6 insert new sentence: "To change the paper colour of existing text, select the new paper colour and then overtype the text."

PAGE 299: (16) Add new paragraph at the bottom of the page:
"Setting variable field length will terminate automatically at column 80. Variable field space has to be created one character longer than planned length of longest variable."

PAGE 302: (22) Paragraph 3, line 1, after "procedure," insert "you're placed in insert mode to allow the entry of your procedure. To enter edit mode, press the ESC key and".

PAGE 303: (35)(36) After the 3rd paragraph insert a new paragraph:

"When a procedure is being executed, f3, f4, f5, f7, f8 and f9 are available for use by that procedure. The other function keys have the following effect:

f1, f2 are ignored (ie as far as the user is concerned they have no effect).

f6 returns the user to the Xchange main screen.

f0 tells the procedure to redraw its current screen."

PAGE 332: (31) 6th line from the bottom of page:

"let e.population\$=population\$"
should read:
"let e.population=pop".

PAGE 345: 1st paragraph of section "Variables", line 2, after "digit (0 to 9)" insert: "or be one of the reserved words (listed in Appendix page n)".

NOTE: The appendix should include a list of reserved words.

PAGE 347: (40) After 3rd paragraph insert new paragraph:
"String comparisons are only generally valid if they are of equal length. ie Print "576" > "1756" will print "1" (true). "576" is compared with "175"."

(53) Paragraph 5, Amend "at nexp,nexp" to read "at nexp(line),nexp(column)" to inform which is line or column. Add new sentence: "Using tab introduces spaces."

PAGE 355: (11) Function "atn(nexp)", "radians" incorrectly spelt.

PAGE 357: (8) Function "inkey()", at end of text insert:
 "Using inkey() on ASCII codes less than 32 can have unusual results since these are normally control codes and not printable characters."

PAGE 363: (17) "Alter" section, insert new 4th paragraph:
 "Overtyping first character of field destroys rest of field."

PAGE 376: (8) Command "Lprint", add "Using Lprint on ASCII codes less than 32 can have unusual results since these are normal control codes and not printable characters."

(39) Command "Mode", add "Mode 0 is really intended for use by procedures and not for use in direct mode."

PAGE 380: (8) Command "Print", add "Using Print on ASCII codes less than 32 can have unusual results since these are normally control codes and not printable characters."

PAGE 384: (49) Spoolon command, 1st line, vertical bar missing between "export" and "dump".

4th paragraph, last line, should have quotes around "lprint at".

PAGE 385: (34) Add the following second paragraph to the Trace command:

"Trace can also be switched on or off while a program is running by pressing 'ALT' and 'A' keys simultaneously."

PAGE 388: (60) Between error no.18 and 50 insert:
 "21 file already exists".

Between error no. 71 and 73 insert:
 "72 type mismatch".

PAGE 389: Error no. 91, delete "file transfer" and substitute "I/O".

PAGE 391: Error 91, 1st line, delete "file transfer" and substitute "I/O".

PAGE 393: 3rd paragraph, line 2, after "Abacus" insert
 ", Quill".

4th paragraph, 1st line, delete "not possible" and substitute "restricted to being imported by Quill only".

PAGE 394: Line 8 from top of page, "names" should read "named".

(52) At the end of the section on Abacus insert a new paragraph:

"If the first cell of a row or column to be exported contains numeric data then this cell will be overwritten with text. The text will be the name of the row (ROWn) or column (COLn), where n is the row or column identifier (1-255 or A-BL) and is allocated by Abacus. The numeric data in the first row or column overwritten will be lost."

PAGE 396: Quill section, 1st line, after "Abacus" insert
", Quill".

5th line from bottom of page, "typed" should read "type".

4th line from bottom of page, "therefor" should read
"therefore".

PAGE 398: Arithmetic section, 1st line, delete "+or-2.9E-39"
and substitute "+ or -1.0E-38".

PAGE 399: String Slicing section, 1st & 2nd lines, delete
"in a form similar to that of BASIC". Insert new sentence
"String slicing may be performed only on the righthand side
of an assignment."

Insert new paragraph at bottom of page:
-"The maximum string or formula length is 255 characters but
this will be further limited by the maximum number of
characters allowed on the two input lines."

PAGE 403: Under Database, after "assignment 287"
insert "at 347".

PAGE 404: Under Business Graphics, amend "colour" to
"Colour 106".

PAGE 405: Under Spreadsheet, after "Copy.." insert
"count 230".

PAGE 419: Under Database, before "text" insert
"tab ... 347".

SUMMARY

This is a very complex manual which takes the reader through each of the applications step by step adding to the knowledge already attained. However, many users just do not have the time to spend working through it. They want to refer to selected parts which is very difficult with the present structure. A more comprehensive index system is required covering all keywords, functions and commands. This should not be a very difficult task if the manual is in a word processor form anyway.

Information on any subject is split between the basic concept in the body of the application and the reference section. An attempt has been made not to duplicate information in the reference section which is already described in the application thus keeping down the size of the manual. However it would have been useful for all reference sections to include a page number where the topic is first introduced in the main body of the application.

One very great improvement made since the first edition was the grouping together of the index for all four applications at an opening.

Although in examples, text is input in lower case it is being shown as being in upper case when displayed. This must add to any insecurity a user may already have in using the system. A particular example of this is when the manual states that Month(1) returns the text JANUARY which should be January.

Information is needed on how headers and footers are positioned with respect to margin settings.

A list of reserved words needs to be added to the Reference section at the end of the manual.

Paul Maden
ISD2.1.3

TONTO QUERY / SOLUTION REPORT	REFERENCE NO .	65
KEYWORDS BASIC MANUAL SUPPLEMENT 1		
DESCRIPTION OF QUERY A SUPPLEMENT TO THE BASIC MANUAL HAS BEEN ISSUED.		
EXPLANATION / ACTION COPY OF SUPPLEMENT 1 TO THE BASIC MANUAL IS ATTACHED.		
AUTHOR Paul Maden, BT Business Systems		DATE 12th Mar 86

BASIC SUPPLEMENT 1

Introduction

This document provides the latest information on BASIC.

Chapter 1 is subdivided into sections, where section A contains information for inclusion in Part B, Beginner's Guide, section B provides additional information on certain concepts for inclusion in Part C, section 2 Concepts, and section C defines keywords for inclusion in Part D, section 2 Keywords. Instructions are given at the beginning of each new entry to tell you where the information fits into the manual.

Chapter 2 provides updates to various pages of the manual and each entry is defined by Part letter/ section number and sub-section heading to indicate its position.

Contents

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Section B	For addition to/replacement of certain concepts in Part C	
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Section C	For addition to/replacement of keywords in Part D	
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CHAPTER 1

A BEGINNER'S GUIDE

For insertion in Beginner's Guide, Part B at the end of section 4

SELF TEST ON SECTION 4

You can score a maximum of 11 points from the following test. Check your score with the answers given below.

- 1 Describe the effect of a GOTO statement
- 2 Describe the effect of a REPEAT statement with a matching END REPEAT statement
- 3 Explain what will happen if the following line is obeyed
10 GOTO 10
- 4 Explain what will happen if the following lines are obeyed
10 REPEAT loop
20 PRINT 'A'
30 END REPEAT loop
- 5 What statement is normally used to get out of a REPEAT loop?
- 6 What are the four parts of an IF statement?
- 7 What is the purpose of the loop identifier in a REPEAT loop?
- 8 What values can the condition in an IF statement yield?

ANSWERS TO SELF TEST ON SECTION 4

- 1 A GOTO statement causes the line specified in the statement to be the next one to be obeyed, rather than the one that is next in numerical sequence
- 2 Statements between the REPEAT and END REPEAT will be obeyed repeatedly, until a statement is encountered which transfers control out of the loop
- 3 The statement will be obeyed repeatedly until the program is stopped by use of the BREAK key sequence
- 4 The program will print A repeatedly, until it is stopped by use of the BREAK key sequence

- 5 The EXIT statement is normally used to get out of a REPEAT loop
- 6 The four parts of an IF statement are
 - IF
 - condition
 - THEN
 - required action
- 7 The loop identifier allows BASIC to relate the matching REPEAT and END REPEAT statements when there is more than one loop in the program
- 8 The condition in an IF statement can only yield the values true and false

CHECK YOUR SCORE

10 or 11 is very good. Carry on reading.

8 or 9 is good, but re-read some parts of section 4.

6 or 7 is fair, but re-read some parts of section 4 and do the test again.

Under 6. You should work carefully through section 4 again and repeat the test.

EXERCISES ON SECTION 4

- 1 Write a program that prints the numbers 1 to 9, each one on a new line:
 - (a) Use a GOTO statement to control the loop
 - (b) Use a REPEAT statement to control the loop
- 2 Write a program that accepts input from the keyboard until it receives the letter X, and then stops
- 3 Modify the path laying program so that:
 - (a) The number of paving stones available is input at the start of the program

and

 - (b) The program stops and prints a suitable message if the paving stones are used up before the path is complete, otherwise when the path is complete the program prints the number of paving stones left

B CONCEPTS

For insertion into Part C, section 2 Concepts in alphabetical order

Character set and keys

To completely replace the existing concept Character set and keys

KEYBOARD CHARACTER SET

Characters may be read from the keyboard using INPUT and INKEY\$ on a console channel. The keyboard generates the internal code for a character only when a valid combination of keys is pressed, that is

- a single key
- one of SHIFT, CTRL or ALT with one other key
- any combination of SHIFT, CTRL and ALT with one of the cursor keys

Not all character codes can be generated. Of those that can be generated by the keyboard, some cannot be read from a BASIC program. Some of the codes are reserved for system functions, e.g. START and ALT/PRINT. BASIC itself uses the key combination CTRL/SPACE to cause a BREAK.

INPUT will not read any characters that cannot be displayed on the screen. It will output an error tone if a key combination produces the code of such a character, except where the code is that of an editing function such as DEL, ENTER or a cursor movement. INKEY\$ allows the input of any character for which there is a valid key combination that is not a system key combination or CTRL/SPACE.

The following tables give the codes in hexadecimal of all key combinations available to a BASIC program. The first table is for all non-cursor keys that may be used alone or in combination with one of SHIFT, CTRL or ALT. The keys on the numeric pad are prefixed by "k". Where a combination is not available the hex value is replaced by "--". The second table shows all the cursor key combinations.

Table 1
Non-cursor keys

<u>Key</u>	<u>Unshifted</u>	<u>with SHIFT</u>	<u>with CTRL</u>	<u>with ALT</u>
A	61	41	01	A1
B	62	42	02	A2
C	63	43	03	A3
D	64	44	04	A4
E	65	45	05	A5
F	66	46	06	A6
G	67	47	07	A7
H	68	48	08	A8
I	69	49	09	A9
J	6A	4A	0A	AA
K	6B	4B	0B	AB
L	6C	4C	0C	AC
M	6D	4D	0D	AD
N	6E	4E	0E	AE
O	6F	4F	0F	AF
P	70	50	10	B0
Q	71	51	11	B1
R	72	52	12	B2
S	73	53	13	B3
T	74	54	14	B4
U	75	55	15	B5
V	76	56	16	B6
W	77	57	17	B7
X	78	58	18	B8
Y	79	59	19	B9
Z	7A	5A	1A	BA
0	30	29	00	5D
1	31	21	1C	7C
2	32	40	1D	CB
3	33	23	1E	CA
4	34	24	1F	60
5	35	25	BB	5C
6	36	5E	BC	7E
7	37	26	BD	7B
8	38	2A	BE	7D
9	39	28	BF	5B
space	20	20	--	20
-	2D	5F	--	7F
=	3D	2B	--	--
;	3B	3A	--	--
,	27	22	--	--
.	2C	3C	--	--
/	2E	3E	--	--
TAB	2F	3F	--	--
DEL	09	C5	C6	--
ENTER	C2	C3	C4	C9
	0D	0A	--	C7

Key	<u>Unshifted</u>	<u>with SHIFT</u>	<u>with CTRL</u>	<u>with ALT</u>
k1	31	--	1C	F1
k2	32	--	1D	F2
k3	33	--	1E	F3
k4	34	--	1F	F4
k5	35	--	8B	F5
k6	36	--	BC	F6
k7	37	--	BD	F7
k8	38	--	BE	F8
k9	39	--	BF	F9
k*	2A	1B	--	--
k0	30	--	00	F0
k#	CA	--	--	--

Table 2
Cursor keys

	<u>left</u>	<u>right</u>	<u>up</u>	<u>down</u>
unshifted	80	88	90	98
with ALT	81	89	91	99
with CTRL	82	8A	92	9A
with CTRL/ALT	83	8B	93	9B
with SHIFT	84	8C	94	9C
with SHIFT/ALT	85	8D	95	9D
with SHIFT/CTRL	86	8E	96	9E
with SHIFT/CTRL/ALT	87	8F	97	9F

SCREEN CHARACTER SET

The table below shows those characters for which a screen image is defined. Any character may be output using PRINT on a screen or console channel. If the character does not have a defined screen image it is displayed as a block character, except for the character with the hexadecimal code 0A. The latter causes a "pending new line" on the associated window.

If a character is sent to a window for which there is a pending new line, the cursor is moved down to the start of the next line (scrolling if necessary) and the pending new line cleared before the character is displayed.

Single character entries in the table below indicate a displayable character. The entry "nd" indicates that there is no unique display for this character and it will be replaced by a block character. A key to the two-character entries is given at the end of the table.

		Second hex digit of code															
		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
<u>First hex digit of code</u>	0	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nl	nd	nd	nd	nd	nd
	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	2	sp	!	*	f	\$	%	&	'	(	)	*	+	,	-	.	/
	3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
	4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	5	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
	6	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
	7	p	q	r	s	t	u	v	w	x	y	z	{		}	td	bl
	8	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	9	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	A	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	B	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	C	cf	la	hf	ra	ua	da	qf	pd	tf	ds	#	sc	wu	cl	c2	wh
	D	ga	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	E	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	F	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

Key:

bl	a filled block
cf	curly f - the function key symbol
cl	left half of double character copyright sign
c2	right half of double character copyright sign
da	down arrow
ds	divide sign
hf	$\frac{1}{2}$ - half fraction
la	left arrow
nd	no display - shown as block
nl	pending new line
pd	Prestel double bars
qf	$\frac{1}{4}$ - quarter fraction
ra	right arrow
sp	space
tf	$\frac{3}{4}$ - three quarter fraction
ua	up arrow
wu	full width underline
td	tilde
sc	small copyright sign
wh	full width hyphen
ga	Greek alpha

PRINTER
CHARACTER
SET

BASIC printer channels are not connected directly to the hardware device. Instead, the Printer Manager application provides a consistent image by intercepting control code sequences and replacing them with sequences suitable for the actual printer in use. The mapping of Printer Manager control codes onto those of the printer is governed by the contents of an entry in the Permanent Store, and may be

changed using the Configurator (see the Advanced Operations manual).

The character set supported by the printer is obviously device dependent. However, certain generalisations may be made. In particular, characters with hexadecimal codes in the range 00 to 1F are considered to be control codes; and characters with hexadecimal codes in the range 20 to 7E may be assumed to be printable and represent the same characters as for the screen driver.

Except for the Printer Manager control codes listed below, no translation is performed by Printer Manager on the characters being sent to the printer. Printer Manager keeps track of the current position on the page in terms of the number of characters sent and the control codes it has processed. There is no mechanism for it to inspect the hardware and determine the actual line and character position. If a character sent to the printer causes an unrecognised effect on the printer, such as a null (no head movement) or changing the line spacing, the Printer Manager will get out of step.

BASIC relies on the print position returned from the Printer Manager when processing print separators such as ! and , . Peculiar effects can result if that position is incorrect. To limit the impact of this problem, BASIC provides two kinds of printer channel, normal (PRN) and transparent (PRT).

PRN behaves like a window channel. Apart from line feed and hash, any character with a hexadecimal code outside the range 20 to 7F is replaced by a space before output to Printer Manager. Line feed (OA) is treated in the same way as for a window channel - it is replaced by a new line control code but is not output until the next character is received and certain actions will clear the pending new line. Hash (CA) is actually a Printer Manager control code since output of a hash often involves changing character sets. (The standard ASCII code 23 represents £ in the English character set and ¢ in the American). Note that 7F is also a control code, representing the block character. PRN provides controlled access to the Printer Manager control codes by supporting forms of CLS, AT, CSIZE and UNDER.

Any characters PRINTed on a PRT channel are, on the other hand, sent directly to the Printer Manager. PRT may thus be used to drive the Printer Manager (and by escapes the printer itself) directly. Two points should be noted when using PRT channel:

1 BASIC generates a line feed (OA) rather than a new line (LC) at the end of the PRINT statement and in response to a backslash (\) separator

2 The separators , and ! may not behave as expected. It is better to separate all PRINT items by ; (with the exception of items following the escape code - see below) and handle the formatting yourself using the appropriate control codes

The Printer Manager control codes are:

00	Escape - see below
03	Correspondence quality off
04	Correspondence quality on
05	Underline off
06	Underline on
07	Initialise printer
09 xx	xx=00 : tab to last character position on line xx<00: tab to character position xx on line
0A	Line feed
0C	New page
0D	Carriage return
10 xx	xx=00 : enlarged print off xx=01 : enlarged print on
14	Clear buffer/Cancel print
15	Subscript print off
16	Subscript print on
17	Superscript print off
18	Superscript print on
19	Perforation skip off
1A	Perforation skip on
1C	New line
1F cc nn	(nn >=0, cc >=0) Move to line nn, column cc on current page. Attempts to move backward are ignored
7F	ASCII block character
CA	Print hash character

Where a control code is a sequence of two or more bytes, all bytes must be present. The effects of an incomplete control code are undefined.

The escape code (00) is used to send device-specific control codes to the printer. In the print statement, each byte of the device-specific control code must be preceded by the escape code, separated from it by & so that it effectively occurs in the same print item. When Printer Manager finds an escape code it skips it and sends the byte following & to the printer unchanged. It assumes that such a byte is not a printable character and does not change the current printer position.

As well as the character printing mode described here, Printer Manager may operate in a graphics mode. That mode is not available through BASIC and the graphics control codes (01, 02 and 1E) should not be used.

Devices

To replace entry for prn in concept Devices

Printer

prM

Printer output

[M] - mode: N = normal, T = transparent

Default

prn

Examples

OPEN #3, PRT

SAVE PR

For an explanation of the different printer modes, see Printer character set, page 7.

Various screen commands are accepted on a printer channel in normal mode, so that it is easy to redirect output to that device. The commands accepted, and their meanings are as follows

AT r,c Send the control code sequence to position at line r, character c. Any pending new line is cancelled

CLS If a parameter is specified, the command is ignored: otherwise a formfeed control code is sent to the printer. Any pending new line is cancelled

CSIZE w,q Control codes are sent to the printer as follows

w=0 or 1 : enlarged print off

w=2 or 3 : enlarged print on

q=0 : correspondence quality off

q=1 : correspondence quality on

Any pending new line is output before the codes are sent. Note that double height printing is not supported

UNDER s **s=0** : send underline off control code to
printer

 s=1 : send underline on control code to
printer

The commands **INK**, **PAPER** and **WINDOW** are accepted but have no effect.

WIDTH applied to a printer channel has no effect. Where **BASIC** needs to know the width of a page, the information is obtained from the Printer Manager.

There is no timeout on printer channels other than that provided by Printer Manager. If **BREAK** is used during printing, printing continues until all the characters present in the printer's buffer have been printed. The only way to stop printing immediately is to switch off the printer.

Error handling For addition to concept Error handling

- BASIC out of memory
BASIC has insufficient free store to continue execution
- Zero step
The step value in a FOR statement is zero

SYSTEM ERROR MESSAGES

Certain error conditions cannot be intercepted by the BASIC program and they give rise to error messages on channel #0 or in the noticeboard.

- xxxxxxxx - No store
This message is output to the noticeboard if there is insufficient store for BASIC to complete its initialisation; where xxxxxxxx is "BASIC" or the first eight characters of the name of the BASIC application for which the BASIC interpreter was entered. The interpreter is abandoned
- xxxxxxxx - Fail fff
This message is output to the noticeboard if BASIC receives an unexpected error code from the operating system; where xxxxxxxx is "BASIC" or the first eight characters of the name of the BASIC application for which the BASIC interpreter was entered and fff is a diagnostic code. The interpreter is abandoned
- BASIC restarted
Following an error or BREAK during loading of a BASIC program created with TK SAVE or a BASIC application created with TK PUBLISH, the internal state of BASIC is undefined and must be re-initialised. This message marks the completion of the re-initialisation
- PROC/FN cleared
A program may be halted by STOP, BREAK or an error while it is executing a procedure or function. If this happens, the current state of program execution (in particular, the state of incomplete procedures and functions) is preserved so that CONTINUE and RETRY may be used to resume execution. While the program is halted, a user might alter the state of the program by, for instance, changing the value of a variable or editing the program. Some changes can make the preserved program state meaningless and cause it to be discarded, after which CONTINUE and RETRY cannot restart execution. The above message is output whenever this occurs

- **No store : f1 Retry f2 Continue f8 Abandon BASIC**
The BASIC interpreter uses a variable length segment to hold the current program and its variables. If the interpreter requires to extend its data segment but there is insufficient contiguous free store to do so, this message is output to channel #0 and BASIC waits for a reply. The main reason for providing this message is that it is possible to have sufficient store available to read a command line without having enough to process it, and this option prevents the user becoming locked out.

On receipt of the message you have three options:

- 1 Increase the free store by (backing up and) deleting a database or application via the store report. Press f1 and BASIC retries the expansion. If successful, it continues processing. If unsuccessful, it repeats the message
- 2 Press f2 to continue, accepting the error. The interpreter will halt with the error message "BASIC out of memory" and prompt for a command. It is likely that any active functions and or procedures will be cleared (see PROC/FN cleared above) and variable values may be cleared also
- 3 Press f8 to abandon. The interpreter is abandoned

UNDETECTED ERRORS

Incorrect BASIC structures are not detected, e.g. IF without the necessary END IF, REPEAT without END REPEAT. The effect of such errors is for BASIC to encounter the end of the program before discovering the absence of the necessary terminator, thereby terminating execution without any indication of error. In such circumstances the program may not have been executed in the way that you intended. You should design thorough tests of your programs to show up any errors of this nature.

If a BASIC program or statement is abandoned while writing to a cartridge (or in the case of the SBYTES command as a result of invalid parameters), a zero length file is catalogued. An attempt to re-run the program fails "Already exists".

FOR loops

For addition to Concepts (Part C) in alphabetical order

FOR loops make the computer repeat a number of statements a controlled number of times. In a statement of the form

```
FOR J=1 TO 12
```

the FOR statement initiates the loop and creates a variable (J) which is given a starting value (1) and a final value (12). The starting and final values can themselves be variables.

If you want to increment the value of J by a value other than 1 you must include the STEP keyword, followed by the required value. STEP 2 increases the value of J by 2 each time giving, in the above example, values for J of 1, 3, 5, 7, 9 and 11.

```
FOR J=10 TO 1 STEP -1
```

causes the count to be decremented rather than incremented.

A single value can be specified, rather than a range of values, for example

```
FOR J=5
```

Alternatively, a series of values and ranges can be given, for example

```
FOR J=1 TO 3,5,7,11
```

In this BASIC, the FOR loop is represented by a clause which defines a structure. It has two forms.

Short form

BASIC statements of the loop follow the FOR statement on the same logical line. For example

```
FOR J=1 TO 12 : PRINT J * 9
```

prints the nine times table. Unlike other BASICS, the short form FOR loop of this BASIC does not require a loop terminator. Short form FOR loops cannot be nested.

Long form

The long form FOR loop has a keyword combination unique to this BASIC using the loop terminator END FOR and enables a group of BASIC statements to be written under the control of

each FOR loop. Using a long form FOR loop the 9 times table program is

```
10 FOR J=1 TO 12
20   PRINT "9 times ";J;"="
30   PRINT J*9
40 END FOR J
```

A FOR clause can be used to repeat another FOR clause. Each inner FOR clause must be terminated by its matching END FOR and be wholly contained within the outer loop. For example

```
10 FOR I=2 TO 12
20   FOR J=1 TO 12
30     PRINT J; "x"; I; "="; J * I
40   END FOR J
50 END FOR I
```

prints the 2 to 12 times tables.

In other BASICS, the NEXT keyword is necessary to increment and delimit FOR loops. You can use NEXT in the long form FOR loops of this BASIC to perform a similar function as in other BASICS except you must complete the loop with an END FOR statement. This enables you to write additional statements between the NEXT and END FOR which will be obeyed just once providing the repetition part of the loop (the statements between FOR and NEXT) reaches a successful conclusion. If the FOR loop ends for some reason other than normal completion (e.g. a conditional statement causing transfer out of the loop), the statements between NEXT and END FOR are not executed. For example

```
100 FOR i=1 TO 10
110   INPUT a
120   IF a < 0 THEN PRINT 'Negative input': EXIT i
130   PRINT SQR(a)
140 NEXT i
150   PRINT 'Loop completed with ten square roots'
160 END FOR i
```

You will appreciate the simplicity and flexibility of this BASIC's FOR loops provided you remember the following points:

- 1 Short form FOR loops do not have a loop terminator
- 2 Short form FOR loops cannot be nested
- 3 In long form FOR loops, the FOR statement is terminated by the end of line and therefore the structure of the

loop differs from that required by other BASICs

- 4 Each FOR clause is terminated by its matching END FOR and not by NEXT. Statements between a NEXT and END FOR form part of the FOR clause and are executed once only following the last iteration of the loop. Such statements are not executed if the loop itself is not executed to completion

C KEYWORDS

The following keywords should be inserted into Part D,
Keywords in alphabetical order

To replace existing COPY, COPY_N

COPY
 COPY_N

Type	BASIC command
Purpose	To copy data from one device to another
Examples	COPY mdv1 text TO SCR COPY_N mdv1_master TO mdv2_backup COPY mdv2_report1 TO PRN
Description	COPY and COPY N copy data from one device to another until end-of-file is detected. If the source device is a console, end-of-file is assumed when the key combination CTRL/Z is detected as the first character of the file or immediately following a line feed (SHIFT/ENTER). If the destination device is a microdrive file, it must not exist. Both COPY and COPY_N copy the file information exactly. COPY also copies the catalogue entry exactly, but COPY_N gives the output file a catalogue entry indicating that the file is a data file rather than, say, a program file.
Format	COPY <device specification> TO <device specification> COPY_N <device specification> TO <device specification>
Associated keywords	SAVE, PUBLISH, PRINT

CSIZE Add as warning to CSIZE

Character widths To ensure compatibility with future versions of BASIC, your programs should use width code 0 for single width characters (6 pixels) and width code 2 for double width characters (12 pixels). Codes 1 and 3 should be regarded as reserved for future use. Current programs using width codes 1 or 3 which are run on future versions of BASIC may give unexpected results.

Windows For compatibility with future versions of BASIC, you should define windows such that the width is a multiple of 6 pixels and the height is a multiple of 10 pixels. Use CSIZE width code 0 for single width characters and width code 2 for double width characters as described above.

Note: The current version of BASIC as described in this document is version 07. You can use the VER\$ keyword to discover which version of the interpreter you are using.

END WHEN

Type BASIC command structure

Purpose To terminate a WHEN clause

Example 200 END WHEN

Description A statement marking the end of a WHEN clause. When a long form of WHEN or WHEN ERROR is executed, the statements of the clause are skipped until an END WHEN is found. When the statements of a WHEN or WHEN ERROR are themselves executed as a result of the associated condition or error occurring, the END WHEN causes execution to continue, if possible, at the statement following that which caused entry to the WHEN.

Format END WHEN

Associated keywords CONTINUE, ERLIN, ERNUM, REPORT, RETRY, WHEN, WHEN ERROR

ERLIN

Type	Exception handling
Purpose	To obtain the line number of a failing line
Examples	85 IF ERLIN < 200 THEN STOP PRINT ERLIN
Description	Whenever an error is detected, the number of the failing line (zero for a command line) is remembered by BASIC and may be obtained using ERLIN. The line number remains available until another error is detected. Note: In the above example, the line number appearing in the condition is not updated during any RENUM.
Format	ERLIN
Associated keywords	CONTINUE, END WHEN, ERNUM, REPORT, RETRY, WHEN, WHEN ERROR

ERNUM

Type Exception handling

Purpose To return the current error number

Examples 200 IF ERNUM = -57 THEN PRINT "Numeric input expected"
PRINT ERNUM

Description Whenever an error is detected, BASIC stores a numeric value describing the error. The error number remains available until another error is detected and can be obtained using ERNUM.

The possible error numbers (which are all negative) are:

-2 not a valid activity	-30 out of sectors
-3 out of memory	-32 catalogue in use
-4 out of range	-33 not formatted
-5 buffer full	-34 media failure
-6 channel not open	-36 write protected
-7 not found	-37 wrong format
-8 already exists	-38 parity error
-9 in use	-51 end of file
-12 not implemented	-53 bad name
-14 device error	-57 error in expression
-15 bad parameter	-58 overflow
-22 sound queue full	-59 read only
-24 bad medium	-60 zero step
-28 internal tables full	

Format ERNUM

Associated keywords CONTINUE, END WHEN, ERLIN, REPORT, RETRY, WHEN, WHEN ERROR

REPORT

Type	Exception handling
Purpose	To produce an error report
Examples	<pre>100 REPORT {Print error report on #0} 30 IF ERNUM <> -22 : REPORT #3 {Print error report on #3}</pre>
Description	REPORT constructs a message from the current error number and line (as returned from ERNUM and ERLIN) and outputs the message to a specified channel or to channel 0 if no channel is specified. The message is usually of the form At line 20 error in expression There are two exceptions to this: 1 If the line number is 0 (command line failure), the first part of the message may be omitted 2 If there is no associated error description for the current error, the error number is output in numeric form Note: Descriptions are available for all the errors detected by BASIC itself. An unrecognised error number may be produced from a CALL, or as a result of invoking a procedure, function or device-drive added to BASIC by INCLUDE.
Format	REPORT [<u>#<channel number></u>] {default#0}
Associated keywords	CONTINUE, END WHEN, ERLIN, ERNUM, RETRY, WHEN, WHEN ERROR

TK_PUBLISH

Type	Program storage command
Purpose	To save a BASIC program on cartridge in a form that allows the program to be loaded via the Applications menu.
Example	TK PUBLISH mdv1 prog1
Description	This command differs from PUBLISH in that PUBLISH writes an ASCII representation of the program, while TK PUBLISH writes a binary representation (known as the tokenised form) of the program. The tokenised form of the program includes all names and variable values known to BASIC at the time of the TK PUBLISH call and allows faster loading of the program at the expense of a larger file-size. LOAD and LRUN will load either ASCII or tokenised programs, but only ASCII programs may be used with MERGE and MRUN.
Format	TK PUBLISH <u><file specification></u>
Associated keywords	LOAD, LRUN, MERGE, MRUN, PUBLISH, SAVE, TK SAVE

TK_SAVE

Type	Program storage command
Purpose	To save a BASIC program on cartridge
Example	TK SAVE mdv1 devprog1
Description	This command differs from SAVE in that SAVE writes an ASCII representation of the program, while TK SAVE writes a binary representation (known as the tokenised form) of the program. The tokenised form of the program includes all names and variable values known to BASIC at the time of the TK_SAVE call and allows faster load.
Format	TK SAVE <u><file specification></u>
Associated keywords	LOAD, LRUN, MERGE, MRUN, PUBLISH, SAVE, TK PUBLISH

TRACE

Type	BASIC command
Purpose	To enable or disable line tracing
Examples	<pre>TRACE 1 {enable tracing to channel 1} 40 TRACE #0,1 {enable tracing to channel 0} TRACE 0 {disable tracing}</pre>
Description	When tracing is enabled, each change of line number during execution causes BASIC to output the number of the next line to be executed. Output is to the channel specified when TRACE is enabled or to channel 1 by default. The output consists of the line number followed by a single space. Tracing is disabled automatically by NEW, CLEAR, LOAD, LRUN or if the trace channel is closed. A channel number may be specified when disabling TRACE, but is ignored.
Format	<pre>TRACE [# <channel number>], <switch></pre>
Note	A line immediately following a LOCAL statement will not be TRACEd when tracing is enabled.

WHEN

Type	Exception handling
Purpose	To specify an action to be performed when a specified condition applying to a particular variable becomes true
Examples	<pre> WHEN a < 3 : TRACE #0,1 50 WHEN buffer_pointer = buffer_length 60 PRINT #6,buffer\$ 70 buffer_pointer = 1 80 END WHEN 130 WHEN a {cancels WHEN action(s) for this variable} </pre>
Description	WHEN may be used in three ways: <u>Short form</u> The statements to be performed when the condition becomes true follow on the same line as the WHEN condition, separated from it by a colon <u>Long form</u> There are no statements on the same line following the WHEN condition. The statements to be performed are in the lines following the WHEN and are terminated by END WHEN. <u>Cancel form</u> Use of WHEN with a variable and no condition cancels any association of conditions and actions with that variable. In all cases the WHEN must be executed for it to take effect (unlike procedures, for instance, which may appear anywhere in the program and which may be called from command level without executing the program first). Executing a WHEN has no effect other than to associate an action with a variable or to cancel all actions for a variable.

At the end of each LET statement, BASIC checks if there is a condition associated with the variable on the left hand side of the equals sign. If there is a condition, this is evaluated using the new value of the variable. If the condition is true, the associated statements are executed. Execution continues with the statement following the LET statement, unless otherwise directed by the WHEN action.

There may be several WHENs for a particular variable but only one is ever actioned for a single LET statement. If more than one condition is made true by a LET statement, the action performed is that associated with the first condition that BASIC checks and finds true. You should not rely on any particular search order.

Format

```
WHEN <simple variable>
WHEN <when condition> : <BASIC statements>
WHEN <when condition>
    <BASIC statements>
END WHEN
```

Syntax

```
<when condition> ::= <simple variable>
<comparison operator> <expression>
```

Associated keywords

END WHEN, WHEN ERROR

Notes

- 1 A WHEN condition can only refer to a single variable. Compound expressions are not permitted
- 2 A WHEN statement cannot be nested within another WHEN or WHEN ERROR statement

WHEN ERROR

Type	Exception handling
Purpose	To specify an action to be performed in the event of an error
Examples	<pre> 10 WHEN ERROR 20 IF ERNUM = -7 AND ERLIN = 200 THEN 30 Drive = Drive ^3 : REM try other drive 40 RETRY 50 ELSE 60 REPORT:STOP 70 END IF 80 END WHEN 200 OPEN "MOV"&Drives" mydata" 300 WHEN ERROR:CONTINUE {ignore all errors} </pre>
Description	WHEN ERROR may be used in two forms: <u>Short form</u> The statements to be performed when an error is detected follow on the same line as the WHEN ERROR, separated from it by a colon. <u>Long form</u> There are no statements on the same line following the WHEN ERROR. The statements to be performed are in the lines following the WHEN ERROR and are terminated by END WHEN. In both cases the WHEN ERROR must be executed for it to take effect (unlike procedures, for instance, which may appear anywhere in the program and which may be called from command level without executing the program first). Executing a WHEN ERROR has no effect other than to register the association between the statements of the WHEN ERROR and error detection. Following the execution of a WHEN ERROR, the detection of an error other than "Not complete" causes execution of the statements of that WHEN ERROR. If any error occurs in the statements of the WHEN ERROR, the error is reported and the program stops with the message During WHEN processing

If the program stops during WHEN ERROR processing, either because a second error is detected or as a result of an explicit STOP, then CONTINUE and RETRY will act as though the program stopped at the end of the statement that caused the entry into WHEN processing. Similarly, the statements of WHEN ERROR may include CONTINUE and RETRY. There is an implicit CONTINUE as the last statement of any WHEN ERROR.

If a program has a set WHEN ERROR, it can be cancelled at command level by

WHEN ERROR

Restrictions

- If the error is detected while a function (or a procedure invoked by a function) is being executed, it is not possible to CONTINUE or RETRY
- A WHEN ERROR statement cannot be nested within another WHEN or WHEN ERROR statement
- A WHEN ERROR that includes statements must not be used as a direct command

Format

WHEN ERROR : <BASIC statements>

WHEN ERROR
 <BASIC statements>
END WHEN

Associated keywords

CONTINUE, END WHEN, ERLIN, ERNUM, REPORT, RETRY, WHEN

CHAPTER 2

<u>Part/ Section</u>	<u>Sub-section heading</u>	<u>Description</u>
B2	A stored program	Insert new paragraph before the program When you enter a stored program you must use the CLS keyword for the first program line. If the screen is not cleared by CLS, the output from the program overwrites the listed program lines at the top of the screen. Insert 5 CLS as the first line of the program.
B3	Program design	Line 60 of the first program should read 60 LET length3=LEN(month\$) Line 40 of the second program should read 40 LET phrase\$=day number\$&word\$&month\$ Line 20 of the third program should read 20 LET phrase\$=day number\$&word\$&month\$
B5	The REMark statement	Insert new paragraph after existing paragraph A REMark statement is delimited only by the end of a logical line. That is, a REMark statement must be the last of a line.
B8	Alphabetic comparisons	Add the following lines to the stored program 5 CLS 40 IF item1\$>item2\$ THEN PRINT item2\$
B8	Logical variables and simple procedures	Add new first program line 10 CLS Add line numbers to the remaining program lines in increments of 10

<u>Part/ Section</u>	<u>Sub-section heading</u>	<u>Description</u>
B8	Nested loops	Line 80 of the second program should read 80 PRINT !score! Insert new line 105 105 PRINT
B8	Subroutines and procedures	Line 70 of program 2 should read 70 PAPER #15,colour:CLS #15
B13	Two- dimensional arrays	Line 110 of program should read 110 FOR num=0 TO 9
B16	Simulation of card playing	Add program line 5 CLS Line 20 of program should read 20 DIM suitname\$(3,8),cardval\$(13,5) Line 150 of program should read 150 FOR s=0 TO 3:READ suitname\$(s)
D2	DIM	Format should read DIM {,<variable>(<maximum index>{,<maximum index>}})
D2	SAVE	Example 2 should read SAVE mdv1_library, TO 90
App.1	<enclosed string>	Should read <u><enclosed string></u> ::='{any character except ''}'

<u>Part/ section</u>	<u>Sub-section heading</u>	<u>Description</u>
App.1	<required values>	Should read <u><required values>::=<for range>{,<for range>}</u>
App.2		The last sentence should be replaced by: The actual case used at the keyboard is not significant. In filenames, the case of letters is retained for display but is not used in any search or comparison of names.
App.2		Add the following keywords to the list of reserved words TK PUBLISH_TK_SAVE Remove ALL from the list of reserved words.
App.3		Add warning after final paragraph The end-of-file condition must be trapped using WHEN ERROR processing because the EOF function will not work with Xchange export files. Each record of an Xchange export file has an extra character (CR - code 13) appended. BASIC programs should be written so they ignore this character.

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TONTO QUERY / SOLUTION REPORT		REFERENCE NO.	66
KEYWORDS CONDENSED CHARACTER PRINTING			
DESCRIPTION OF QUERY How can I use the "condensed character" mode of my printer? This will enable up to 142 characters/line printing, depending on which printer is used, in ABACUS, QUILL and ARCHIVE tasks as well as others.			
EXPLANATION / ACTION The simplest way of sending the appropriate control character to the printer is by creating a simple one line procedure in ARCHIVE as follows: 1. From Start Menu select Xchange and initiate an ARCHIVE task. 2. Type "edit" and then give the procedure a name, "cond" for example. 3. Now type in the command line: "LPRINT CHR(0)+CHR(15)" 4. Press ESCape twice to leave the procedure. 5. In Housekeeping set "Printing Options" to "Draft". 6. When you type "cond" now, the printer will be instructed to go into condensed character mode. NOTE: Right margin settings are automatically changed to suit character mode chosen for a particular printer; check your printer manual. 7. The easiest way to revert to normal character mode is to switch the printer off and on again. 8. The Tonto Printer Manager generates printer initialisation codes on commencement of a print command and as a result only the condensed character mode can be activated in this way.			
AUTHOR Paul Maden, BT Business Systems		DATE 17th Mar 86	

TOMTO QUERY / SOLUTION REPORT	REFERENCE NO.	67
KEYWORDS Four Slot Rompack		
DESCRIPTION OF QUERY Problems with Quill?		
EXPLANATION / ACTION The Four Slot Rompack is not a solution for problems in Quill. If the customer gets told that the Four Slotter can cure problems in Quill, BT will have to foot the bill for upgrading the machine. The Four Slot Rompack alone will not cure all the problems in Quill and must not be issued as a solution to these. The Four Slot Rompack is an enhancement and must be sold to the customer as such.		
AUTHOR C. D. Whitlum	DATE 1/4/86	

Keywords Using Tonto for remote Monarch Data Entry/VT-Link2

Description

Using Glass teletype restricts entries to less than 80 characters as there is no "wrap" and subsequent characters overprint on column 80.

Expanation / Action

This can be overcome by the use of VT-Link.

Set up the VT-Link profile according to the required line speed, parity etc. and set the N.L. (Newline) to CR,LF. Set the Wrap to ON.

VT-Link has been superceeded by VT-Link 2 and when stocks are exhausted will no longer be available.

VT Link 2 (item code 983129) offers the additional features:

- Supports VT102
- Host Controllable printing
- Supports 132 Column working
- 8 bit control code working.

Datalink 2 (item code 983131) offers the additional feature of being able to export files that have been placed in page store by a new facility "Monitor to page store" in VT-Link2.

It must be emphasised that Datalink (item code 983116) will not work as described above with VT-Link 2.

TONTO QUERY / SOLUTION REPORT		REFERENCE NO.	069
KEYWORDS			
PRINTING, QUILL, FILE I/O INCOMPLETE			
DESCRIPTION OF QUERY			
When trying to print a Quill file, instead of printing, Tonto reports "File I/O Incomplete". This occurs at every attempt to print.			
EXPLANATION / ACTION			
Clear sufficient room in memory and load CONFIG from the Basic Cartridge. Select f3 (reset permanent store). Load CONPRIN and ensure that Tonto is configured for the customers printer. Re-establish other permanent store features as required by customer. eg Data auto-answer protocol and application specifications for Interfile etc. Format a new cartridge. Enter Housekeeping and save permanent store. This then becomes an archived copy of permanent store for subsequent reloading if needed. TELEDRIIVE DISC UNIT NOTE: It is not possible to load permanent store from a Teledrive disc unit unless it has been saved to a microdrive cartridge first and then copied to a disc on a Teledrive unit.			
AUTHOR		DATE	
Tony Fishpool, BSSU1, Cutlers Court		19th June 86	

TONTU QUERY / SOLUTION REPORT		REFERENCE NO.	070
KEYWORDS VIEWDATA CHARACTER TRANSMISSION			
DESCRIPTION OF QUERY How can I check my Tonto is sending Viewdata Characters including graphics?			
EXPLANATION / ACTION Access Prestel and select page 88 (*88#). See below. Enter your own Prestel User Number, as shown at top of Prestel page, followed by a # to terminate it. Anything typed in now, including viewdata characters and graphics (Mosaics) will appear on the screen in the appropriate colour (if you have a colour monitor). eg "ESC A A" will produce a red "A". "ESC S m" responds with a yellow mosaic as shown in black and white on the attached. NOTE: The viewdata control codes are preceded by ESC.			
<pre> P R E S T E L 88a 0p From STEVE CRAMMOND 394411177 THU 12 JUN 1986 14:20 To 394411177# STEVE CRAMMOND A 4 # </pre>			
AUTHOR Paul Maden, BT Bus Systems, ISD2.1.3		DATE 12th Jun 86	

TONTU QUERY / SOLUTION REPORT	REFERENCE NO.	071
KEYWORDS TELEPHONE DIRECTORY SIZE.		
DESCRIPTION OF QUERY How many telephone numbers can Tonto hold in directory?		
EXPLANATION / ACTION The Telephone Directory is not limited to the 300 entries stated in the brochures, this figure is only a guide for maximum number of COMPLETED entries making use of all the fields (Name, Initial, Title Description, Voice Number, Data Number, both extension fields, line, shortcode, charge band and priority entry). If only the Name field and the Voice number field are used, then the number of entries increases dramatically to about 2000 entries. This would be very useful to a tele-selling type application. NOTE: The use of any other field reduces the useful size of the directory. Also no other applications can be run, or capsules used, with a directory of 2000 entries, as this is based on a memory availability of 156 blocks. Please note this figure is only an estimate, but gives an indication of what can be done. MP182 981919 Serial Interface 989092 Both Together 981941		
AUTHOR Colin Whitlum, BT Bus Systems, ISD2.1.3	DATE 20th Jun 86	

TONTO QUERY / SOLUTION REPORT		REFERENCE NO.	72																																				
KEYWORDS MP182 PRINTER ON TONTO																																							
DESCRIPTION OF QUERY The MP182 printer will replace the existing MP1710, MP1712 and MP1713 printers. Serial Interface card and and cable will have to be ordered separately. The first 600 printers supplied did not have the switches set correctly for use on Tonto. Subsequent supplies will have the switches set correctly.																																							
EXPLANATION / ACTION ITEM CODES TO BE ORDERED 981919* Printer MP182 1A (Dot Matrix - Parallel I/F) 981926* MP182 Serial Interface Card 989092 MOA Cable I/F 15A NOTE: When Item Codes 981919 and 981926 are supplied at the same time to a customer, the price is less than supplying them separately eg currently £309 together, £325 separately. THE INTERFACE CARD NEEDS TO BE INSTALLED IN THE PRINTER. NOTE: *The two Items marked with asterisk can be ordered as Item Code 981941 - Printer MP182 2A - BUT WILL STILL CONSIST OF TWO PARTS REQUIRING THE INTERFACE CARD TO BE INSTALLED IN THE PRINTER. The Interface Card switches should be set as follows: <table border="1"> <thead> <tr> <th>SWITCH NO.</th> <th>MOTHER PCB DIP SW</th> <th>SERIAL I/F CARD SW1</th> <th>SERIAL I/F CARD SW2</th> </tr> </thead> <tbody> <tr><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>2</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>3</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>4</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>5</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>6</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>7</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>8</td><td>0</td><td>1</td><td>0</td></tr> </tbody> </table>				SWITCH NO.	MOTHER PCB DIP SW	SERIAL I/F CARD SW1	SERIAL I/F CARD SW2	1	1	1	0	2	0	1	1	3	0	1	1	4	1	1	0	5	1	1	0	6	0	1	0	7	1	1	0	8	0	1	0
SWITCH NO.	MOTHER PCB DIP SW	SERIAL I/F CARD SW1	SERIAL I/F CARD SW2																																				
1	1	1	0																																				
2	0	1	1																																				
3	0	1	1																																				
4	1	1	0																																				
5	1	1	0																																				
6	0	1	0																																				
7	1	1	0																																				
8	0	1	0																																				
AUTHOR Paul Maden, BTIC/CPE/ITMD6.3		DATE 5th Dec 1986																																					

TONTU QUERY / SOLUTION REPORT	REFERENCE NO.	72
KEYWORDS MP182 PRINTER ON TONTO		
CONTINUED The printer should be installed in the Tonto as an EPSON RX80 using CONPRIN. The printer will function without any alteration to the EPSON parameters but the correspondence quality will not be the NLQ (Near Letter Quality) function of the printer. The Epson parameters uses ESC,69 and ESC,70 to set correspondence quality on and off which is "emphasised mode" in the MP182. The NLQ can be turned on manually by powering down the printer and then powering up again while holding down the "formfeed" button. As the correspondence quality (bold) uses emphasised mode, turning bold off will not affect the NLQ setting. To use NLQ in "Correspondence mode" it would be necessary to change the parameters for Correspondence ON to ESC,73,3 and OFF to ESC,73,1 BUT however, this reduces the functionality as ,for example, there is no bold high script or bold low script availability then. Also the manual setting of NLQ will be turned off when bold reverts to normal in the text. The best combination, which is recommended, is to use the default parameters of the EPSON RX80 for the MP182 (emphasised mode) and then turn on the NLQ when required manually by powering up the printer while holding down the formfeed button. IT IS NOT RECOMMENDED TO CHANGE THE PARAMETERS TO NLQ.		
AUTHOR Paul Maden, BTIC/CPE/ITMD6.3	DATE 5th Dec 1986	

TONTO QUERY / SOLUTION REPORT		REFERENCE NO.	073
KEYWORDS			
VERTICAL BARS ON POWER UP			
DESCRIPTION OF QUERY			
When the Tonto is powered up the display stops with a number of vertical bars, what do they mean?			
EXPLANATION / ACTION			
The number of white vertical bars at which the display stops can identify where the problem lies. See chart below.			
Problem board or area		No. of Bars	
OK		0	
Status Register (Base PCB)		1	
Data Registers (Base PCB)		2	
"		3	
Rom sumcheck (Base PCB)		4	
SRAM fault (Base PCB)		5	
DRAM fault (Base PCB)		6	
Exception processing (Base PCB)		7	
Vsynch fault (Base PCB)		8	
Real Time Clock (Base PCB)		9	
Device interface. Check all plug in modules for bad connection		10	
Telephony Module		11	
Speech Synthesiser		12	
NB This is only a guide and all sensible checks should be carried out before changing any given board. Also the customer should be asked to reset permanent store if they do manage to get through the initialisation process.			
AUTHOR		DATE	
C.D. Whitlum		20/6/86	

Keywords Messaging via a Switchboard

Description

Page A3-2 of the messaging manual suggests this is not possible.

Explanation / Action

Using a Adapter 10/3A (Item Code 666790) connect the data line of the Tonto in parallel with another telephone ie Skintel. Prepare the message and place in the number field the digit 1 only. Call the switchboard and ask for the data extension of the recipient. When the receiving Tonto auto answers press 9 to send, when Tonto seizes its data line clear down on the Skintel.

T. FISHPOOL IC/CPE/BSS 4 21.32

Checked and produced and sent to Bob Carter 11/2/86

TONTU QUERY / SOLUTION REPORT	REFERENCE NO.	075
KEYWORDS PRINTING ON ALL 70 LINES OF A4 PAPER - PRINTER CONTROL CODES		
DESCRIPTION OF QUERY Sometimes it is necessary to be able to print on all 70 lines of A4 paper. For instance completing sections of an invoice. It may also be necessary to control other features of the printer from within an application such as Abacus or Archive.		
EXPLANATION / ACTION Any of the PRINTER CONTROL CODES can be included in an Archive program, keyed in directly in Archive or included in an Abacus cell. These codes will be found in the printer manual but are usually identical to those used by EPSON printers and are reproduced on page 2. The statement: LPRINT chr(0)+chr(27)+chr(79) in Archive will turn off the "SKIP-OVER-PERFORATIONS" default of your printer, allowing access to the first three and last three lines of each page. chr(27) tells the printer to print the ASCII character whose decimal value is 27, ie ESC. NOTE: Any decimal value less than 32 has no effect on the screen but is sent to the printer if it is preceded by an ASCII null, ie chr(0), each time. In order to prevent a formfeed, and hence a blank page, at the end of a page, set form length to 1 with: LPRINT chr(0)+chr(27)+chr(67)+chr(0)+chr(1) If the last print statement of your page does not generate a new line, by having a semicolon terminating it, then the formfeed of one line will linespace correctly to the top of the next page. Dont forget to generate control codes at the end of your program to set the printer back again otherwise it will be necessary to power the printer down and up again to revert it to the default settings. Entering chr(0)+chr(27)+chr(79) in an Abacus cell as a value will have a similar effect but remember if you are printing the border, nothing will change until that cell is reached.		
AUTHOR	DATE	

TONTQ QUERY / SOLUTION REPORT			REFERENCE NO.	075
CODE		FUNCTION		
	Dec	Symbol		
	7	BEL	Sounds the buzzer	
	8	BS	Prints and backs by one character	
	9	HT	Horizontal tabulation	
	10	LF	Advances paper one line	
	11	VT	Vertical tabulation	
	12	FF	Advances paper to next Top of Form	
	13	CR	Starts printing	
	14	SO	Sets Enlarged print mode	
	15	SI	Sets Condensed print mode	
	18	DC2	Cancels Condensed print mode	
	20	DC4	Cancels Enlarged print mode	
	27	ESC	Escape. ASCII code for Escape	
<ESC>	14	SO	Same as SO code	
<ESC>	15	SI	Same as SI code	
<ESC>	42	*	Selects Bit image mode	

Tonto Query / Solution Report

Ref No 76

Keywords ELITE character set M1713

Description

How is the Elite character set selected permanently.

Explanation / Action

Enter CONPRIN and set New line to CR, LF, ESC, 77

Tony Fishpool 01-623 4982

5-1-87

Keywords PCML / COMPUTER ONE

DISC Compatibility

Description

There is a degree of compatibility between both drives
providing the Computer One disk is formatted in NORMAL MODE.

Explanation / Action

The compatibility is however one way, COMPUTER ONE disks can be read by PCML drives which have version 2 software (or presumably higher), the disk can be written to by the PCML drive however the new files cannot be read subsequently by the Computer One drive. It has not proven possible to read PCML disks on the Computer One drive.

Note: Computer One ceased trading recently.

Keywords D.I.P switches on Tonto Printers.

Description

What are the proper, settings for

- 1) M1880
- 2) M1713
- 3) MP1881

Explanation / Action

1. M1880

MAIN PCB.	SW1	1	2	3	4	5	6	7	8
		0	0	0	0	0	0	1	1
	SW2	1	2	3	4				
		0	0	0	0				
RS 232 I/F PCB	SW1	1	2	3	4	5	6	7	8
		1	0	0	0	1	1	1	0
	SW2	1	2	3	4				
		1	0	1	0				

2. M1713

MAIN PCB	1	2	3	4	5	6	7	8	9	10	11	12
	0	0	0	0	0	0	0	1	0	1	1	0
RS 232 I/F PCB	1	2	3	4	5	6	7	8	9	10	11	12
	1	0	0	0	0	0	0	1	0	0	0	0

AUTO FEED - - - NOT FIX.

Keywords D.I.P switches on Tonto printers.

Description

Explanation / Action

3. MP1881

SW1	1	2	3	4	5			
	0	0	0	0	0			
SW2	1	2	3	4	5	6	7	8
	0	1	0	0	1	1	1	1

Keywords Archive files not shrinking

Description

If records in an Archive file are deleted the file sizes remain the same.

Explanation / Action

This seems common to Xchange on M5000 as well. The file size can be reduced by.

1 Opening a new Archive task and "Xchanging data between tasks

or

2 From within Archive use the BACKUP command and copy the file from memory to micro-drive. The copy will "shrink" to its proper size.

***** Uncontrolled Document *****	
Tonto Query / Solution Report	Ref No. 80
Keywords <i>large file problems</i>	
Description <i>See below.</i>	
Expanation / Action It has been observed that on occasions a large file (approx. 25k or greater) may not once saved be reloaded. This is due to a defect in the base system software F0.7. The corruption occurs on saving and when an attempt is made to re-load the file an out of memory error is given. To establish whether the installation has an F0.7 operating system press the Start key and then holding the Alt key down press Z. The system will respond with a beep and display the Version number in the bottom left hand corner of the screen. The solution is to fit a base P.C.B. with operating system version F1.2. These have not however been purchased from ICL and are not therefore seperately item coded. Fortunately when ARC'S send base P.C.B's to ICL for repair a fully upgraded board is sent back, this can be identified by a label on the packing which declares the modification level as: BB38=18 & BC01=10 so the first action should be to investigate section stock for F1.2 availability. If there is none available the alternative is to send a version F0.7 P.C.B. (Working or not) via the ICL repair loop. The address is : ICL World wide Spares Distribution Centre Babbage Road Stevenage Herts. Include a) A Purchase Order (The current cost is £145) b) Return Address c) Fault Report A8807A It would be advisable to mark the installation in some way to indicate that an upgrade has occurred.	
Source: Tony Fishpool IC/BSSU/2.1.3.2	9/4/87
01 623 4982	page 1 of 1 Issue No. 1

Tonto Query / Solution Report

Ref No. 81

Keywords Tonto to M5000/IBM file Xchange file Transfer

Description

Can files created under Xchange on Tonto be transfered to an M5000/IBM also running Xchange?

Explanation / Action

Yes, if the Tonto is fitted with the PCML disc drive (now available via B.T. Buylines) and if an 40 track 5¹/₄" with separate power supply is available. A suitable disc drive is one that can be purchased for use with a BBC micro for about £150. The PCML disc unit has a Shugart interface on the rear of the case where the 5¹/₄" drive plugs in.

The Disc Utility software in the PCML unit already caters for up to two drives to be connected to this interface which it addresses as drives C & D.

The following cannot be transfered at all:

1. Quill (.doc) files, the file must first be Exported and then Imported into Quill on the M5000/IBM.
2. Abacus (.aba) files.
3. Archive screen templates (.scn files).
4. Archive database files (.dba), however if the file is Exported on the Tonto and Imported on the M5000/IBM this seems to work and may subsequently be saved on the M5000/IBM using the Backup command.

Archive program files (.prg) copy over and run without any apparent problems, however references to the micro drives (L: & R:) should be changed to conform with PC-DOS standards.

Method.

The disk must be formatted on the M5000/IBM, or if it is an AT model then the /4 option should be used, (i.e. FORMAT A:/4). The disk should be placed in the 5¹/₄" drive and using the Disk Utilities provided redirect L: or R: to either C or D.

The programs can be saved (or exported) as indicated above and the disk placed in the M5000/IBM and then Loaded or Imported into Xchange. PLEASE NOTE the customer should be advised that this procedure cannot be supported by B.T.

Tonto Query / Solution Report

Ref No.. 82

Keywords One line Tonto's & TXE4 Exchanges.

Description

When making a data call on the 1st line when parented off a TXE4 the Tonto will disconnect on answer.

Explanation / Action

This problem does not appear to occur when the 2nd line is used and must therefore be a design problem with Tonto.

There are three ways of overcoming the problem:

1. If the Tonto is connected to a Pentara the addition of an Adapter 60A across the line alters the line characteristics sufficiently to prevent cut off on answer. This modification was approved originally to improve sidetone levels on "two wire terminals" and is therefore only permitted on this PABX. (see Herald/Pentara Information note No. 102 - Feb 1985).
2. The Computer access Directory may include a series of full stops after the digits to be dialled in the Number field. Each full stop represents a pause of about 4 seconds (see Tonto Handbook page 101), this prevents the modem being connected to line until after the service called has answered.
3. While the Tonto is still in the process of dialling the Computer Access number the line can be switched to voice by pressing f4. This means that the modem will not be looking at line when the call is answered and will not therefore cut off. When the carrier is heard f4 is pressed again and the modem is connected to line.

This problem will be raised with the Tonto Product Group.

Tonto Query / Solution Report

Ref No.. 83

Keywords USE OF PRINTERS MP182 & MP192 WITH TONTODescription

Inability of printers MP182 and MP192 to accept continuous A4 paper.

Explanation / Action

With the introduction of the MP182 and MP192 printers for use with Tonto, a problem has arisen in that these printers are unable to accomodate the continuous A4 paper previously used for Tonto (Item codes 985127 & 985134). This is because the platen mounted sprocket feeds will not adjust to a narrow enough width for this paper.

If a user wishes to use continuous A4 paper with these machines then there are two options available:

1. Fit a tractor feed unit to the machine. The item code for this unit is 981933, and the rate list value £25.
2. Use continuous A4 paper with a wider perforated edging strip. This paper should be available from BT Buylines by August 1987 (Item code).

If standard 11" continuous listing paper is used with Tonto, then the user will need to configure the Tonto for this paper size, and also change the page design everytime a new Quill document is started. The following settings have been found to work well with this paper:

1. Set "Lines per page" in Conprin to 66.
2. Using the Design command set "Page length" in Quill to 60.