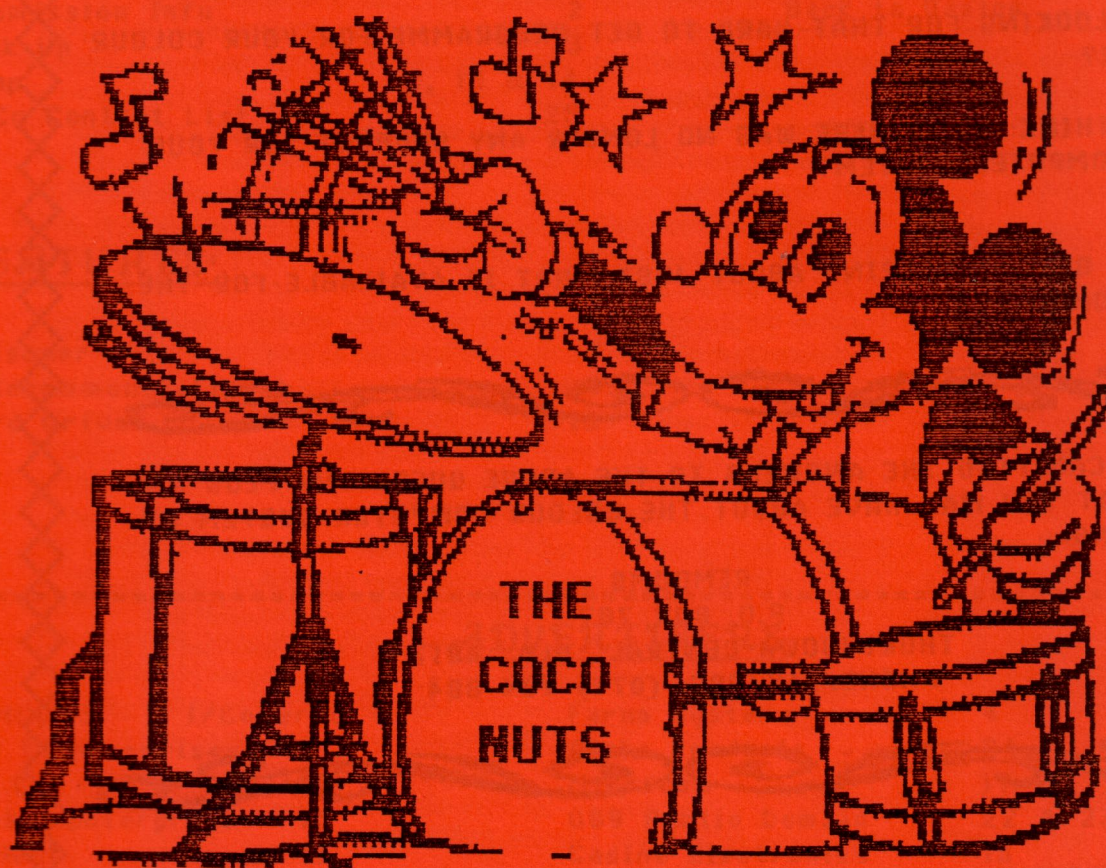


Vol 3 Issue 3

May/June 95

COCO - LINK

THE COLOUR COMPUTER MAGAZINE



THIS ISSUE

Operating System 9

Prisoner

Telecommunications

Back to Basics

with

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Remins Ramblings

Well folks the first thing I need to tell you about is a terrific piece of information in the form of The CoCo Registry.

The CoCo Registry was put together by Rick Cooper of Rick's Enterprise in the USA and contains the names, addresses and other information about over 400 cocoists world wide. It also contains information about over 20 companies and organisations that still support the CoCo.

The CCR is available from REMCONS for only \$20 (postage included) and at this price it is an absolute bargain, if you are a cocoist then this product is a "must have" simply because of the vast amount of information it contains.

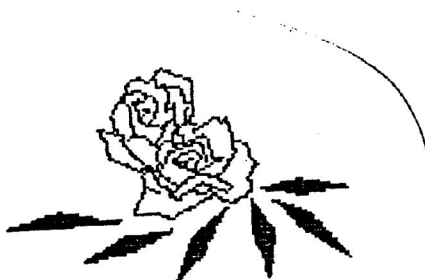
More good news, I have found a source for the Puppo PC/XT Keyboard Adaptor. This product will allow you to use the 84 - 101 keyboards with your CoCo. It has a menu burned into the the onboard EPROM for easy access to OS-9 or DECB and other options. With this product you can place your CoCo and MPI out of the way and have just the keyboard on the desk, saving a heap of room and making it look really nice and neat.

The price of the Puppo Adaptor in Australia rounds out to \$128 and is available through REMCONS. Postage will be confirmed when we place the order with America.

This is great news, everyone including Fred has been eagerly awaiting the Puppo Adaptor.

As you will read in "Letters to the Editor", I am contemplating making CoCo-Link a quarterly magazine instead of bi-monthly. Time restraints are making things very hard indeed. Now that I am working full-time and Fred is flitting between cities / towns and now countries, things are getting rather hectic. I don't at this stage see any need to increase the price (further investigation required). Let me know what you think. We don't want to give up CoCo-Link, so at the moment we are considering all options.

Although we have in the past let you know what is required for you to send us submissions, it became apparent that perhaps we should include this information in every issue, even if only for quick reference. Please help us to help you by sending us ANYTHING you might have written, even if you don't think too highly of it, CRITICISM is only meant to help NOT to DETER. So here is the info required for you to send us your submissions. I look forward to being inundated with your works of art.



SUBMISSIONS

What do you send to CoCo-Link and how?

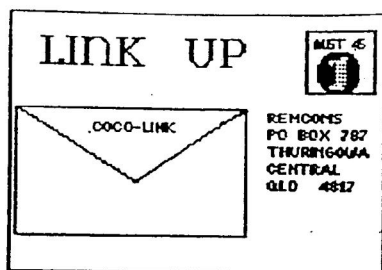
This is your magazine, the CoCo community. Anything of interest to the CoCo users is what we are after, from programmes to articles to reviews on your favourite game, word processor or utility.

How do you send it? There are a number of ways.

1. Send it on disk with at least two saves and one of these being in ASCII format. Ensure that you also send a text file using any word processor giving some information about your programme. If you do not have a word processor then a neatly hand written letter will do, but remember it has to be legible.
2. Using the same system as for a disk but on tape.

If you are sending a programme please ensure that you have tested it to make sure it works. If you do NOT wish to have your creation submitted to the Public Domain Library then please let us know, otherwise periodically we will transfer programmes over to PD.

ABOVE ALL REMEMBER that without your submissions, this magazine will fold, so help us to help you and send in your creations so that COCO LIVES!!



Dear Ros and Fred,

Your article under "Remins Ramblings" (Vol 3, issue 2) prompted a response from me as I felt so sorry that you had reached such a state of despair in the production of CoCo-Link due to the lack of feedback and input and perhaps unwarranted criticism of your efforts.

For my own situation, I was associated and am still a good friend of Wally Dunn who helped to configure my 128K CoCo 3 into a 512K system with dual drives and a printer. Wally was so helpful at this stage and I attended a user group meeting with him when time permitted in the far west of Sydney, which I found to be most helpful. Unfortunately, as time went by, I found the distance prohibitive and Wally suggested I become a subscriber to CoCo-Link as his own interests were such that he would not be in a position to continue with the CoCo for various personal reasons.

As I was now alienated, so to speak, I cannot tell you what it has meant to me to be able to be "in touch" with other Cocoists via CoCo-Link, even though I have not felt competent enough to write or contribute on a personal level. Even at this rather belated stage, I congratulate the both of you on a publication that keeps on keeping on, is a plethora of information, is indeed a "link" with other Coco enthusiasts, and a magazine which just gets better and better. I personally take my hat off to both of you.

When something is going well, unfortunately it is human nature not to comment. It is like the wife saying "did you like the meal?" (the husband eats his dinner without a word) and the standard answer from the husband is "if I didn't like it I would tell you". Although it is far from encouraging, it seems to be the "Australian way",

deceptive in "she's appeals". In saying this, it does not absolve us from silence or inactivity.

I was interested in the survey of the age of Cocoists and feel that this may have something to do with the poor response rate as the majority of us are in the 43-70 year bracket and may not have been exposed to computing until a rather late stage of life (as was my case) and are not and do not feel adequate or skilled enough to contribute - I throw this in for what it is worth.

If the workload in producing CoCo-Link is too demanding, might there be mileage in making it a quarterly publication at an increased price??

On a personal note, I have written a few programs in Color basic for the CoCo 3, 512K which are in the vicinity of 300 lines of programming and I would be happy to submit if you thought it might be of interest to other cocoists?

Specifically, I have written a yearly cashflow forward forecast (budget) program with all the necessary modules for display, printing, writing to disc, changing data, deleting data, adding data etc. I have used this and am still using this program for my own personal forward forecast and find it an invaluable tool. I also have a monthly diary program, and index program (the latter being used to keep track of titles of medical information from Pharmacy journals which I use in my work as a community Pharmacist - allows for 200 entries). If these may be of interest, perhaps you could let me know what to do?

In closing, I commend the time and effort you have put into the production of CoCo-Link and hope that you get the response you hope for from us silent, but perhaps very caring majority.

Sincerely

DAVID ROACHE.

David,

I have to say a BIG THANK YOU for your words of support. The "silent but perhaps very caring majority" (as you

called them) did in fact come out of the woodwork. The phone certainly ran hot for quite some time, all expressing similar thoughts as you have in your letter.

I think you have raised some interesting thoughts and an even more interesting suggestion.

Firstly, perhaps you are right when you talk about the age of our cocoists being a hurdle for some. Wanting to learn and having the confidence to contribute are certainly two different things. However, I would like to suggest to anyone who feels this is them to a tee, can it not help you learn more if you submit your work. Criticism given is ALWAYS given to help the author of a programme NEVER to put them down. In that sense, does the person learn. Think about it, hopefully we will get some fresh blood (not literally) into the magazine.

Your suggestion on making the magazine a quarterly publication certainly is worthy of consideration. My first thoughts were that I doubt if the price will need to change (further investigation needed), it simply means you will get a thicker issue, just every 3 months instead of 2. With time constraints as they are it certainly sounds like a viable suggestion to me. What does everyone else think. Drop me a line.

Your offer of the programmes is just what Fred and I have been asking for all this time. Something that is just handy or as you say "an invaluable tool" might be what someone else is struggling to find/write. Submitting them to the magazine helps in two ways. Rescuing another cocoist perhaps who has been trying to achieve what you already have done and also giving you confidence for other programming ventures. So please do send them to us (your fresh blood is what we are looking for).

Thanks again David and indeed all those who called, it was just the right morale boost Fred and I needed.

For information of what is required to submit a programme to the magazine see further in this issue.

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Prisoner

by

G. McLintock

This a computerised version of the game where you move the large (red) square to a specified "end" position on the board. It resolves around the moving of the other pieces around it. It includes the original games (and it's solution as a cheat mode), plus 10 variations of the game using the same pieces but with different start and end positions.

As is normal for me, this one was developed initially on an IBM and then converted to the CoCo. A difference with this one is that it was developed under Windows and the logic is designed around a drag and drop procedure for the moves, ie, the pieces that can be moved are identified as 'drag' objects and the empty squares are the 'drop' objects. During play, you can only pick up drag objects and can only drop them on the drop objects.

This is the reason for the timing delay between moves. A normal sequence would be to select the move and then check if it is legal before doing it, which would give a delay between selecting the move and doing it. With the approach here, all legal moves are identified in advance and these are the only ones that are allowed. Hence the move is done immediately, with a delay then incurred before the next move, which is due to calculation of legal moves etc.

Prison2 will run on any 32K CoCo but the programme will have to be compacted with REMOVE to remove all blanks and remarks from the programme (otherwise it will not fit in memory), but it has the same

line numbers for 'common code' as Prison3 (Prison3 will be in the next issue of CoCo-Link. ed)

The main reason Prison2 requires more memory is that the PUT arrays for the graphic screen are held in the normal programme memory area. As a matter of interest, the fastest execution speed is achieved with Prison2 running on a CoCo3 as the high speed POKE is used for this combination.

```
20 CLEAR1000:DIM F,X,T,H,G
30 DIM B(1,12,10),L(1,3,4),
  Q(2,6),OF(4,1),OG*(10)
34 DIM C1(4),C2(4),H1(25),H2(25)
35 DIM A0(25),A1(51),A2(61),
  A3(102),A4(25)
36 DIM B0(6),B1(12),B2(12),
  B3(25),B4(6),M(148,1),MT(16)
70 GOSUB3010:JL=16:
  GOSUB1240:GOSUB1980:GOSUB2070
80 JL=17:GOSUB1240
90 C9=0:R9=0:H=L(F,C9,R9):GOSUB1270
110 A*=INKEY$:IF A*=""THEN110
160 IF A*="Q" THEN SCREEN 0:IF
  PEEK(65456)<>126 THEN
  POKE&HFFD8,0:STOP ELSE STOP
170 IF A*=" " THEN GOSUB230
180 T=INSTR(K$,A*):IF T=0 THEN 110
190 GOSUB1340
200 ON T GOSUB 410,490,530,570,
  610,830,994,1010
210 GOTO110
230 IF DG>1 THEN 300
240 IF H>10 THEN SOUND$1,S2:GOTO440
260 IF B(F,H,0)=0 AND B(F,H,9)=0
  THEN SOUND $1,S2:GOTO440
270 DG=2:G=H:GOSUB1340
280 GOTO440
300 IF H>10 THEN 340
310 YC=H:DG=1:H=G:G=G+1:GOSUB1340
320 H=YC:G=G-1:GOTO260
340 YC=H:H=G:G=G+1:GOSUB 1340 :H=YC
  :G=G-1
350 JL=16:GOSUB1240
360 GOSUB1420:GOSUB1980:GOSUB2070
370 JL=17:GOSUB1240
380 G=0:DG=1
390 GOTO440
410 C9=C9-1:IF C9<0 THEN C9=0
  :GOTO440
420 IF H=L(F,C9,R9) THEN 410
440 H=L(F,C9,R9)
450 C9=B(F,H,COL):R9=B(F,H,ROW)
460 GOSUB1270
470 RETURN
```

```
490 C9=C9+1:IF C9>3 THEN C9=3
  :GOTO440
500 IF H=L(F,C9,R9) THEN 490
510 GOTO440
530 R9=R9-1:IF R9<0 THEN R9=0
  :GOTO440
540 IF H=L(F,C9,R9) THEN 530
550 GOTO440
570 R9=R9+1:IF R9>4 THEN R9=4
  :GOTO440
580 IF H=L(F,C9,R9) THEN 570
590 GOTO440
610 IF CT>0 THEN 670
620 X1=Q(2,CX)-4:Y1=Q(2,RX)-4:CT=1
630 X2=X1+4*Q(2,W)+8: Y2=Y1+5*Q
  (2,W)+8
640 LINE(X1,Y1)-(X2,Y2),PRESET,BF
650 GOTO440
670 X1=Q(2,CX):Y1=Q(2,RX)
680 X2=X1+4*Q(2,W):Y2=Y1+5*Q(2,W)
690 LINE(X1-4,Y1-4)-(X2,Y1),PSET,BF
700 LINE(X1-4,Y1-4)-(X1,Y2+4)
  ,PSET,BF
710 LINE(X2,Y1-4)-(X2+4,Y2+4)
  ,PSET,BF
720 LINE(X1-4,Y2)-(X2+4,Y2+4)
  ,PSET,BF
730 P=2:FOR X=1 TO 12
740 X1=Q(P,CX)+B(1,X,Q(P,C1))*Q
  (P,W)
750 Y1=Q(P,RX)+B(1,X,Q(P,R1))*Q
  (P,W)
760 X2=Q(P,CX)+(B(1,X,Q(P,C1))
  +B(1,X,WIDE))*Q(P,W)-1
770 Y2=Q(P,RX)+(B(1,X, Q(P,R1))
  +B(1,X,DEEP))*Q(P,W)-1
780 T1=B(1,X,ATYPE1):GOSUB940
800 NEXT X:P=0:CT=0
810 GOTO440
830 IF CT>0 THEN SOUND $1,S2
  :GOTO440
840 JL=16:GOSUB1240
850 IF CK<16 THEN 892
860 SCREEN0:CLS:PRINT"AT CORRECT
  END"
880 SOUND $1,S2
882 GOSUB1162
884 SCREEN1,0
890 GOTO896
892 F=1:P=2
894 GOSUB2550
896 F=0:P=0:G=0
898 JL=17:GOSUB1240
900 GOTO440
915 IF F=0 THEN 920 ELSE 940
920 IF T1=0 THEN PUT(X1,Y1)
  -(X2,Y2),A0,PSET
921 IF T1=1 THEN PUT(X1,Y1)
  -(X2,Y2),A1,PSET
922 IF T1=2 THEN PUT(X1,Y1)
```



```

-(X2,Y2),A2,PSET
923 IF T1=3 THEN PUT(X1,Y1)
-(X2,Y2),A3,PSET
924 IF T1=4 THEN PUT(X1,Y1)
-(X2,Y2),A4,PSET
925 RETURN
930 IF T1=0 THEN PUT(X1,Y1)
-(X2,Y2),A0,PSET
931 IF T1=1 THEN PUT(X1,Y1)
-(X2,Y2),A1,PSET
932 IF T1=2 THEN PUT(X1,Y1)
-(X2,Y2),A2,PSET
933 IF T1=3 THEN PUT(X1,Y1)
-(X2,Y2),A3,PSET
934 IF T1=4 THEN PUT(X1,Y1)
-(X2,Y2),A4,PSET
935 RETURN
940 IF T1=0 THEN PUT(X1,Y1)
-(X2,Y2),B0,PSET
941 IF T1=1 THEN PUT(X1,Y1)
-(X2,Y2),B1,PSET
942 IF T1=2 THEN PUT(X1,Y1)
-(X2,Y2),B2,PSET
943 IF T1=3 THEN PUT(X1,Y1)
-(X2,Y2),B3,PSET
944 IF T1=4 THEN PUT(X1,Y1)
-(X2,Y2),B4,PSET
945 RETURN
994 IF JK=0 THEN JK=1 ELSE JK=0
996 GOTO 440
1010 SX=1:YC=CT:CT=0:CM=0:GOSUB610
:SCREEN0:CLS
1020 PRINT"UP/DOWN KEYS CHANGE
GAME"
1040 PRINT:PRINT"PRESS ENTER OR YTO
SELECT GAME"
1050 PRINT:PRINT" USE N TO DISPLAY
GAME NUMBER"
1064 GOSUB1162:SCREEN1,0
1080 JL=16:GOSUB1240:GOSUB2920
:JL=17:GOSUB1240
1110 GOSUB1164:IF A$=CHR$(13) OR
A$="Y" THEN1 180
1114 IF A$="N" THEN
SCREEN0:PRINT"GAME NUMBER";SX
:GOSUB1162:SCREEN1,0
1120 T=INSTR(K$,A$)
1130 IF T<3 OR T>4 THEN 1110
1140 IF T=3 THEN SX=SX-1:IF SX<0
THEN SX=10
1150 IF T=4 THEN SX=SX+1:IF SX>10
THEN SX=0
1160 GOTO1080
1162 PRINT"PRESS ENTER TO CONTINUE"
1164 A$=INKEY$:IF A$="" THEN 1164
1166 RETURN
1180 CT=YC:IF SX=0 THEN CT=1
1200 IF CT=0 THEN CT=1:GOSUB610
:CT=0
1210 GOSUB1980:GOSUB2070

```

```

1220 GOTO440
1240 IF JL=16 THEN PUT(144,4)
-(175,35),H1,PSET
1244 IF JL=17 THEN PUT(144,4)
-(175,35),H2,PSET
1250 RETURN
1270 T1=B(F,H,ATYPE)
1280 X1=Q(P,CX)+B(F,H,COL) *Q(P,W)
+OF(T1,0)
1290 Y1=Q(P,RX)+B(F,H,ROW) *Q(P,W)
+OF(T1,1)
1300 X2=X1+11:Y2=Y1+11
1310 IF DG=1 THEN PUT(X1,Y1)
-(X2,Y2),C1,PSET ELSE PUT(X1,Y1)
-(X2,Y2),C2,PSET
1320 RETURN
1340 X1=Q(P,CX)+B(0,H,Q(P,C1))
*Q(P,W)
1350 Y1=Q(P,RX)+B(0,H,Q(P,R1))
*Q(P,W)
1360 X2=Q(P,CX)+(B(0,H,Q(P,C1))
+B(0,H,WIDE1))*Q(P,W)-1
1370 Y2=Q(P,RX)+(B(0,H,Q(P,R1))
+B(0,H,DEEP1))*Q(P,W)-1
1380 T1=B(0,H,ATYPE)
1390 IF G <>H THEN GOSUB 920 ELSE
GOSUB 930
1400 RETURN
1420 IF H=11 THEN DR=B(F,G,8) :IFB
(F,G,0)<>11 THEN SOUND S1,S2:RETURN
1430 IF H=12 THEN DR=B(F,G,10):IFB
(F,G,9)<>12 THEN SOUND S1,S2:RETURN
1440 T=B(F,G,1):B(F,G,1)= B(F,H,1)
:B(F,H,1)=T
1450 T=B(F,G,2):B(F,G,2)= B(F,H,2)
:B(F,H,2)=T
1460 IF B(F,G,3)=0 THEN 1810
1470 PA=ABS(G=10)
1480 ON DR GOTO 1500,1530,
1560,1590,1620,1670,1720,17700
1500 B(F,G,COL)=B(F,G,COL)-1
1510 GOTO1810
1530 B(F,H,COL)=B(F,H,COL)+1
1540 GOTO1810
1560 B(F,G,ROW)=B(F,G,ROW)-1
1570 GOTO1810
1590 B(F,H,ROW)=B(F,H,ROW)+1
1600 GOTO1810
1620 B(F,G,ROW)=MR:B(F,G,COL)=
B(F,G,COL)-PA
1630 B(F,11,COL)=MC-1-PA:B(F,12
,COL)=MC-1-PA
1640 B(F,11,OW)=MR:B(F,12,ROW)=MR+1
1650 GOTO1810
1670 B(F,G,ROW)=MR
1680 B(F,11,COL)=MC+1+PA:B(F,12
,COL)=MC+1+PA
1690 B(F,11,ROW)=MR:B(F,12,ROW)
=MR+1
1700 GOTO1810

```

```

1720 B(F,G,ROW)=B(F,G,ROW)-PA:
B(F,G,COL)=MC
1730 B(F,11,ROW)=MR-1-PA:B(F,12
,ROW)=MR-1-PA
1740 B(F,11,COL)=MC:B(F,12,COL)
=MC+1
1750 GOTO1810
1770 B(F,G,COL)=MC
1780 B(F,11,ROW)=MR+1+PA:B(F,12
,ROW)=MR+1+PA:
1790 B(F,11,COL)=MC:B(F,12,COL)
=MC+1
1810 X=G:GOSUB1900
1820 X=11:GOSUB1900:X=12:GOSUB1900
1830 IF B(0,10,1)=B(0,10,6) AND
B(0,10,2)=B(0,10,7) THEN 1850 ELSE
RETURN
1850 SCREEN0:CLS
1860 PRINT:PRINT"CONGRATULATIONS";
1870 PRINT:PRINT"YOU GOT IT"
1874 PRINT:GOSUB1162:SCREEN1,0
1880 RETURN
1900 X1=Q(P,CX)+B(F,X,Q(P,C1))
*Q(P,W)
1910 Y1=Q(P,RX)+B(F,X,Q(P,R1))
*Q(P,W)
1920 X2=Q(P,CX)+(B(F,X,Q(P,C1))
+B(F,X,WIDE1))*Q(P,W)-1
1930 Y2=Q(P,RX)+(B(F,X,Q(P,R1))
+B(F,X,DEEP1))*Q(P,W)-1
1940 T1=B(F,X,ATYPE):GOSUB915
1960 RETURN
1980 FOR X=1TO12
1990 TC=B(F,X,COL):TR=B(F,X,ROW)
:T=B(F,X,ATYPE)
2000 L(F,TC,TR)=X
2010 IF T=1 OR T=3 THEN L(F,TC
,TR+1)=X
2020 IF T=2 OR T=3 THEN L(F,TC+1
,TR)=X
2030 IF T=3 THEN L(F,TC+1,TR+1)=X
2040 NEXT X
2050 RETURN
2070 FOR X=1TO10:B(F,X,0)=0:B(F,X
,9)=0:NEXT X
2080 D=0:MC=B(F,11,COL):MR=B
(F,11,ROW)
2090 QC=B(F,12,COL):QR=B(F,12,ROW)
2100 IF (MC=QC AND ABS(MR-QR)=1)
THEN D=1
2110 IF (MR=QR AND ABS(MC-QC)=1)
THEN D=2
2120 IF QC<MC THEN MC=QC
2130 IF QR<MR THEN MR=QR
2140 K=1:FOR T=11TO12
2150 FOR X=B(F,T,COL)-1TO
B(F,T,COL)+1STEP2
2160 IF X<0 OR X>3 THEN 2200
2170 T1=L(F,X,B(F,T,ROW)):
T2=B(F,T1,3)

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2180 IF T2=0 OR T2=2 THEN GOSUB2510
2200 K=2:NEXT X:K=1:NEXT T
2210 K=3:FOR T=1 TO 12
2220 FOR Y=B(F,T,ROW)-1 TO
B(F,T,ROW)+1STEP2
2230 IF Y<0 OR Y>4 THEN 2270
2240 T1=L(F,B(F,T,COL),Y):
T2=B(F,T1,3)
2250 IF T2=0 OR T2=1 THEN GOSUB2510
2270 K=4:NEXT Y:K=3:NEXT T
2280 IF D=0 THEN RETURN
2290 IF D=2 THEN 2410
2310 K=5:FOR X=MC-1 TO MC+1STEP2
2320 IF X<0 OR X>3 THEN 2380
2330 T1=L(F,X,MR)
2340 IF T1<L(F,X,MR+1) THEN 2380
2350 T=11:GOSUB2510
2360 T=12:GOSUB2510
2380 K=6:NEXT X
2390 RETURN
2410 K=7:FOR Y=MR-1 TO MR+1STEP2
2420 IF Y<0 OR Y>4 THEN 2480
2430 T1=L(F,MC,Y)
2440 IF T1<L(F,MC+1,Y) THEN 2480
2450 T=11:GOSUB2510
2460 T=12:GOSUB2510
2480 K=8:NEXT Y
2490 RETURN
2510 IF T=11 THEN
B(F,T1,0)=T:B(F,T1,6)=K
2520 IF T=12 THEN
B(F,T1,9)=T:B(F,T1,10)=K
2530 RETURN
2550 FOR SY=MT(CM)+1 TO MT(CM+1)
2560 G=M(SY,0):TX=M(SY,1)
2570 H=-1:T1=B(F,G,COL):
T2=B(F,G,ROW):K=B(F,G,ATYPE)
2580 IF K=0 THEN X1=1:Y1=1
2590 IF K=1 THEN X1=1:Y1=2
2600 IF K=2 THEN X1=2:Y1=1
2610 IF K=3 THEN X1=2:Y1=2
2620 ON TX GOTO 2640,2760,2780,2820
2640 IF B(F,11,ROW)=T2-1 AND
B(F,11,COL)=T1 THEN H=11:Q=12
2650 IF B(F,12,ROW)=T2-1 AND
B(F,12,COL)=T1 THEN H=12:Q=11
2660 B(F,G,ROW)=T2-1:
B(F,H,ROW)=T2+Y1-1
2670 IF K=2 OR K=3 THEN
B(F,Q,ROW)=T2+Y1-1
2680 GOTO2860
2700 IF B(F,11,ROW)=T2+Y1 AND
B(F,11,COL)=T1 THEN H=11:Q=12
2710 IF B(F,12,ROW)=T2+Y1 AND
B(F,12,COL)=T1 THEN H=12:Q=11
2720 B(F,G,ROW)=T2+1:B(F,H,ROW)=T2
2730 IF K=2 OR K=3 THEN
B(F,Q,ROW)=T2+Y1-1
2740 GOTO2860
2760 IF B(F,11,COL)=T1+X1 AND
2780 IF B(F,11,COL)=T1+X1 AND
2800 IF B(F,11,COL)=T1+X1 AND
2820 IF B(F,12,COL)=T1+X1 AND


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,16,6,7,6,160,106,16,1,2,6
3280 DATA 8,8, 8,24, 24,8,
24,24,8,8
3310 DATA 8, 9, 94, 10
3314 GOSUB 4200:IF PEEK(65456)<>126
THEN POKE &HFFD9,0:WIDTH 32
3316 CLS:PRINT#264,"SETTING UP"
3320 RESTORE
3330 FOR X=1TO12:FOR Y=1TO7
3340 READ B(0,X,Y):B(1,X,Y)=
B(0,X,Y)
3350 NEXT Y,X
3360 M5=0:FOR X=0TO16:READ
MT(X):NEXT X
3370 FOR X=1TO148:FOR Y=0TO1:READ
M(X,Y):NEXT Y,X
3380 IF T>0 THEN RETURN
3390 FOR X=0TO2:FOR Y=1TO6
3400 READ Q(X,Y):NEXT Y,X
3410 FOR X=0TO4:FOR Y=0TO1
3420 READ OF(X,Y):NEXT Y,X
3450 K$="":FOR X=1TO4:READ
A:K$=K$+CHR$(A):NEXT X
3460 K$=K$+"1234"
3470 CB=8:CE=5:J1=4:J2=7
3480 COL=1:ROW=2:ATYPE=3:
WIDE=5:DEEP=4
3490 CX=1:RX=2:W=3:C1=4:R1=5:BN=6
3500 PMODE4,1:SCREEN1,0:
PCLS:S1=128:S2=6
3510 PCLS:LINE(0,0)-(11,11),
PRESET,BF
3520 LINE(4,0)-(7,11),PSET,BF:
LINE(0,4)-(11,7),PSET,BF
3530 GET(0,0)-(11,11),C1,G
3540 PCLS:LINE(0,0)-(11,11),
PRESET,BF
3550 LINE(3,3)-(8,8),PSET,BF
3560 GET(0,0)-(11,11),C2,G
3570 PCLS:LINE(0,0)-(31,31),
PRESET,BF
3580 GET(0,0)-(31,31),H2,G
3590 LINE(0,0)-(31,31),PRESET,BF
3600 FOR Y=0 TO
15:LINE(Y,Y)-(31-Y,Y), PSET:NEXT Y
3610 FOR Y=16 TO
31:LINE(31-Y,Y)-(Y,Y), PSET:NEXT Y
3620 GET(0,0)-(31,31),H1,G
3630 T=15:T1=47:X=31:X1=63:T2=4
3640 FOR Y=1TO6STEP5
3660 LINE(0,0)-(X,X),PRESET,
BF:LINE(2,2)-(X-2,X-2),PSET,BF
3670 CIRCLE(T,T),T2,0:
PAINT(T,T),0,0
3680 IF Y=1 THEN
GET(0,0)-(X,X),A0,G ELSE
GET(0,0)-(X,X),B0,G
3700 LINE(0,0)-(X,X1),PRESET,BF
:LINE(2,2)-(X-2,X1-2),PSET,BF
3710 CIRCLE(T,T),T2,0:

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PAINT(T,T),0,0
3720 CIRCLE(T,T1),T2,0:
PAINT(T,T1),0,0
3730 IF Y=1 THEN
GET(0,0)-(X,X1),A1,G ELSE
GET(0,0)-(X,X1),B1,G
3750 LINE(0,0)-(X1,X),PRESET,BF
:LINE(2,2)-(X1-1,X-1),PSET,BF
3760 CIRCLE(T,T),T2,0:
PAINT(T,T),0,0
3770 CIRCLE(T1,T),T2,0:
PAINT(T1,T),0,0
3780 IF Y=1 THEN
GET(0,0)-(X1,X),A2,G ELSE
GET(0,0)-(X1,X),B2,G
3800 LINE(0,0)-(X1,X1),PRESET,BF
:LINE(2,2)-(X1-2,X1-2),PSET,BF
3810 CIRCLE(T,T),T2,0:
PAINT(T,T),0,0
3820 CIRCLE(T,T1),T2,0:
PAINT(T,T1),0,0
3830 CIRCLE(T1,T),T2,0:
PAINT(T1,T),0,0
3840 CIRCLE(T1,T1),T2,0:
PAINT(T1,T1),0,0
3850 IF Y=1 THEN
GET(0,0)-(X1,X1),A3,G ELSE
GET(0,0)-(X1,X1),B3,G
3870 LINE(0,0)-(X,X),PRESET,BF
:LINE(2,2)-(X-2,X-2),PRESET,BF
3880 IF Y=1 THEN
GET(0,0)-(X,X),A4,G ELSE
GET(0,0)-(X,X),B4,G
3890 T=7:T1=23:X=15:X1=31:T2=2
3900 NEXT Y
3910 PCLS
3920 FOR P=0TO2
3930 X1=Q(P,CX):Y1=Q(P,RX)
3940 X2=X1+4*Q(P,W)-1:
Y2=Y1+5*Q(P,W)-1
3960 LINE(X1-4,Y1-4)-(X2,Y1),
PSET,BF
3970 LINE(X1-4,Y1-4)-(X1,Y2+4),
PSET,BF
3980 LINE(X2,Y1-4)-(X2+4,Y2+4),
PSET,BF
3990 LINE(X1-4,Y2)-(X2+4,Y2+4),
PSET,BF
4000 NEXT P
4020 IF CT=0 THEN Y=2 ELSE Y=1
4030 F=0:FOR P=0 TO Y
4040 FOR X=1TO12
4050 X1=Q(P,CX)+B(0,X,Q(P,C1))
*Q(P,W)
4060 Y1=Q(P,RX)+B(0,X,Q(P,R1))
*Q(P,W)
4070 X2=Q(P,CX)+(B(0,X,Q(P,C1))
+B(0,X,WIDE))*Q(P,W)-1
4080 Y2=Q(P,RX)+(B(0,X,Q(P,R1))
+B(0,X,DEEP))*Q(P,W)-1

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4090 T1=B(0,X,ATYPE):GOSUB915
4110 NEXT X:F=1:NEXT P
4130 F=0:P=0:CT=0:MC=0:DG=1
4140 RETURN
4200 CLS:PRINT"GAME OF PRISONER ON
PMODE SCREEN";
4210 PRINT"YOU MOVE THE PIECES TO
GET THEM INTO THE POSITION SHOWN AT
THE TOP RIGHT OF THE SCREEN"
4230 PRINT" KEYS DO FOLLOWING"
4240 PRINT"ARROW KEYS MOVE CURSOR"
4250 PRINT"SPACE BAR - TOGGLES MOVES
IE"
4260 PRINT"- SELECTS PIECE TO
MOVE;AND"
4270 PRINT"- PUTS THAT PIECE IN
NEWSPOT"
4280 PRINT"1 - TOGGLES
CHEATDISPLAY"
4290 PRINT"2 - DISPLAY NEXT
CHEATMOVES"
4300 PRINT"3 - TOGGLES HOW
CHEATMOVES"
4310 PRINT"4 - SELECT
ALTERNATIVEGAME"
4320 PRINT:GOSUB 1162
4330 CLS:PRINT"MOVES CAN ONLY
BEMADE WHEN THE CURSOR IS
DISPLAYED"
4340 PRINT:PRINT"THE HOURGLASS
ISDISPLAYED":PRINT"DURING EXTRA
LONGDELAYS"
4350 PRINT:GOSUB 1162
4600 RETURN
=====

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I am on the war-path (so to speak) for ROM-PAKS. If you have any to sell drop me a line, listing the ones you have for sale and the cost. We have a few here but I am particularly after any of the older, more unusual ones. So drop me a line. PRETTY PRETTY PLEASE!!!!

Telecommunications

by

Fred Remin

One of the results of the survey that we ran last year, in the area of terminal communications, was the fact that a rather large percentage of you were missing out on all the information available to you by this means.

By terminal communications I mean the process of communicating by way of your CoCo and the telephone, in other words using a Bulletin Board System (BBS).

I believe the reason for this is firstly a number of you are unaware that it is at all possible to do with a CoCo and secondly a number of you are probably thinking that it is too expensive.

Firstly, YES it IS possible to use your CoCo to access BBS's and upload and download information, with the right equipment you can even do it with a tape based system.

Secondly the expense, in a number of ways it can be less expensive than buying a commercial programme and paying postage costs. As an example, lets say you were after a communications (terminal) programme, the cost of a commercial programme could be anything up to \$40 to \$50 plus at least \$5 postage for an outlay of around \$55, this is to get it in Australia, obviously it would cost you more to get it for example from the USA. Compare this with a phone call from Hobart to Townsville (\$1 for 5 minutes at times), logging onto my BBS, which has almost 58 Megabytes of programmes for download, and downloading the public domain

programme Supercomm. The download would take about 30 seconds at 1200 baud and your total time on line would be approximately 3 to 4 minutes if all you do is download the programme. Total cost to you apart from the power to run your system (negligible) is \$1 and you have an excellent Terminal programme.

So you can see it is in fact not that expensive if you use the time on line smartly. Later in this article I will give you a few hints on how to do so.

What do I need to get started?

As I said earlier you can get into terminal communications even with a CoCo 2 and a tape system, but there are TWO very important pieces of hardware that you will need before you can even contemplate the information super highway. One is a modem and the other is an RS232 Communications Pak or it's equivalent.

At this stage I should tell you it IS possible to communicate through the serial port of the CoCo with a special cable at reliable speeds up to 2400 baud, but an RS232 Pak will allow much faster speeds, up to 14,400 in some cases.

Tandy used to sell an RS232 Communications Pak in the hey day of the CoCo for about \$175, some of these may still be available from ex cocoists and organisations like the Penninsular Colour Computer Club, they are also occasionally advertised in CoCo-Link in the For Sales column and are usually around the \$50 to \$70 mark. Another source of communications paks for the CoCo is through REMCOMS who can still get an enhanced version from CONECT in the USA for around \$140, this pak will allow speeds up to 9600 and more depending on your modem and terminal programme.

Next the modem. Basically any EXTERNAL modem with it's own power supply will work on a CoCo, as an example I am using a CommaCorp

V3242 Fax/Modem which allows speeds up to 14,400 baud. I have also used a Supercom 2400, an NEC and numerous other brands, all of them have worked with my CoCo. You MUST ensure that the modem you are purchasing is Telecom approved, failure to do so can cost you upwards of \$25,000 in fines.

Software?

There are a number of software packages available for the CoCo to get into the world of BBSing, I will start with one available for those of you with a tape system and work my way through just a few that I know about to give you some sort of an indication of what is available.

For those of you with a tape based system and starting at 16K Colour Basic there is a programme called AUTOTERM. The required equipment is a CoCo with a minimum of 16K (Extended is not required), a cassette recorder, Modem and cable (not required if communicating directly with another CoCo or another computer), and a printer if you want to print the information that you receive.

AUTOTERM will allow you to communicate at baud rates from 110 up to 1200, is Hayes compatible, can be set up to work automatically and is extremely easy to use. AUTOTERM has a fairly impressive amount of features for a tape based system and because it has baud rates up to only 1200, you can use the serial port of your CoCo with out the need of an RS232 Pak. REMCOMS has a few second hand copies of AUTOTERM on the shelf, they are going for only \$20 (includes postage).

Disk Based Packages.

From the survey we conducted it is apparent that a number of you are using a disk based system and that most of you have at least 64K with a majority of you using a CoCo 3 with at least 128K and in most cases 512K.

Lets start with a 64K disk based terminal package, this one comes either as a stand alone or as a part of the VIP Desktop package and is called VIP Terminal. It is very user friendly (ie, easy to use) and will handle baud rates from 110 through to 9600, this means that you can use the serial port and a cable for bauds up to 2400 or use an RS232 Pak for the higher baud rates. Both the stand alone and the desktop package copyright is currently held by MICROCOM

TECHNOLOGIES who deal through REMCOMS in Australia. You may be able to obtain a second hand ORIGINAL package from an ex cocoists HOWEVER be aware that it MUST be an original, if not, the hefty fine and confiscation of all your equipment is not worth the "cheaper" price of a pirated copy.

ULTIMATERM. This is a freeware package and is available on both my BBS and Stan's BBS in Melbourne.

Ultimaterm is an RSDOS based terminal package and it's features are excellent, in fact I used this package for many years before I went to an OS9 based system.

Ultimaterm will handle baud rates up to 14,400, is Hayes compatible, allows auto dialing, and a host of other features too numerous to mention here. Suffice to say that in my opinion this is the BEST RSDOS terminal package available for FREE.

To obtain a copy of ULTIMATERM you can logon to either Stan's board in Melbourne or mine in Townsville (if you already have some other terminal package) or, send me a blank disk and for the price of the postage I will furnish you with a copy. If you do not have a printer, then send me \$5 and I will print the 40 page manual for you as well.

OS9 Terminal Packages. There are a number of public domain terminal packages that operate under OS9, the best two that I have used are OSTERM and Supercomm. Again both of these packages are available for download on both Stan's and my BBS.

Personally I prefer OSTERM due to it's many features and I have used it for some time to logon to a number of BBS's including DELPHI in the USA and numerous other boards around Australia and Europe. As with Ultimaterm, if you do not currently have a terminal package then just send me a blank disk and I will give you a copy for the price of postage or \$5 + postage if you want me to reproduce the manual for you.

The above are just some of the packages available to get you started in the world of BBSing, once you get onto your first BBS you will find numerous other packages as well as a new world of information opening up for you. For all cocoists there are two excellent BBS's that fully support the CoCo, one in Melbourne and the other in Townsville, their details are;

In Melbourne;

PCCCBBS

Telephone: (03) 580 4605

Baud Rates: 300 to 2400

Operates daily from 21:30 to 06:30

Sysop: Stan Blazejewski

Features: RSDOS, OS9, OSK + lots more.

In Townsville:

FRED's BBS

Telephone: (077) 734 884

Baud Rates: 1200 to 9600

Operates Fri/Sat/Sun 20:30 to 05:00

Sysop: Fred Remin

Features: RSDOS, OS9, OSK, Pics,

EuroS9, OnLine Games, Message

Bases, On Line orders (REMCOMS) +

lots more (58 Meg available for download).

If you have a CoCo 3 and two disk drives and you wish to start your own BBS then simply send me 5 formatted disks and the price of postage, I will give you a copy of RiBBs which is the BBS package that both Stan and I use for our boards. You would be surprised how easy it is to become a CoCo supporting BBS.

Earlier in this article I said I would give you a few hints on how to use your BBS time more efficiently, well here they are.

Hint No 1: On my board, if you do not wish to use up valuable online time filling out the application form which is asked for when you first logon to my system as a new user, then send me a letter with your name, state, address, baud rate, initial password, age, type of system you are using and your main interests. I will manually place this information on my BBS so that when you do logon you will save time by being able to go directly to the files etc areas without filling in the application form, this will save you at least 3 or 4 minutes initially on line.

Hint No 2: When you first logon to a board whether it be mine or anyone elses, open the buffer on your terminal programme and simply get a listing of all available downloads. Once you have done this then logoff, on both Stan's and my BBS'S this would take only a few minutes. Once you have logged off you can then at your leisure peruse what is available on the BBS and write down the relevant information as to the files you wish to download.

You can then log on again and go directly to the area and file or files that you wish to download, thereby saving valuable online time. Mind you if you are ringing from Perth and the price of the call after 6pm is only \$1 for 5 minutes (during special telecommunication promotion times), then does it really matter if you use 4 minutes downloading?

Hint No 3: Where ever possible use batch downloads, both OSTERM and aSupercomm allow this facility. By using hint 2 in conjunction with a batch download you again save valuable online time.

Hint No 4: Know what you want to do before you make the call. As an example lets say you are playing a

game of chess between yourself in Hobart and someone in Darwin, through my BBS. Make a note of the position of pieces and your move before you logoff, now you can sit down at your leisure and plan your next move taking into account those that may be made by your opponent. When you next logon, you can go directly to the games area, into the game of chess, select your opponent and spend very little time making your move, because it has been all thought out before hand.

The same system applies for a game of chess as it does for reading messages or placing an order. Do not wait until you are online to decide what you want to do, decide before hand, it simply makes sense and saves you money.

I could go on and on and on about the world of communication and the CoCo but this is only an article in a magazine not a hard cover 1000 page book. I hope I have given you enough information to get you started or at least wet your appetite. Remember, for the price of a phone call the world is at your feet and you DO NOT need a mega expensive IBM to get onto the information highway that is being mooted today. Your CoCo, some additional hardware and a terminal package will serve you well into the future.

If you need more information or just a helping hand, then CoCo-Link is here for you as is RENCOMS and both Stan's and my BBS.

See you on the electronic highway.

XPANDER

The XPANDER started out as one part of the PoCo project, it was never designed to replace the Multipak but to eliminate it entirely.

The layout of an Xpander CoCo is the first feature to catch the eye, - a floppy and/or a hard drive case is plugged directly into the computer. Likewise, the modem is connected directly to the CoCo. The ROMPak port is still available, and in fact a ROMPak may be inserted and run. The only external evidence of the Xpander is an aluminium case bottom.

The 'CoCo Kit' version provides a new lower case shell, moving the motherboard as far down as is practical. Still, it is a fairly crowded package! There is no easy way to install the 2 Meg upgrade when both internal slots are filled, it can be done - but it is a real challenge.

The Xpander is an excellent way to install a CoCo into a PC style case, the entire electronics package is 12"x7"x3.25" and fits nicely in a baby AT case! For such repackaging a board only version is available without the lower case half or 12/-12V power supply.

PRICE:

CoCo Kit;
(Xpander, lower case shell, 12/-12V power supply).....\$230

Xpander Board Only.....\$175

(Please allow a minimum of 21 days for delivery from the USA.)

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MINI RS232 PORT

The Mini is CoNects low cost replacement for the Tandy Deluxe RS232 Pak. It is completely compatible with existing software and therefore is the port of choice for disk basic users. Users of more esoteric OS-9 drivers, such as the serial mouse package, will also find this unit a 'drop in' replacement.

The 'Mini' is so named because of it's size - it is housed in a ROMPak game case! Modem connection is made by a female DB25 connector on the top. This unit requires a 12V source, either the Multipak or external supply connected through a mini plug on the units side.

PRICE:

Mini RS232\$85

Power Supply.....\$15
(Y cable systems)

P.C.C.C.

Peninsular Colour Computer Club

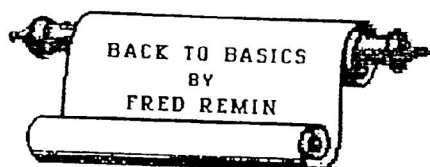
The PCCC is a user group which could arguably be the longest running CoCo user group in Australia. The club has been going strong for over 12 years that I know of and is still a plethora of information on the CoCo.

They are based on the Mornington Peninsular (Frankston), and can be contacted by telephoning:

Greg MacKenzie (059) 838 991;

Bob Charleston (059) 791 922; or

Stan Blazejewski (03) 580 4605
Don't forget the PCCC's bulletin board which operates between 9:30pm and 6:30am daily. The number to ring is (03) 580 4605.



Firstly my apologies for not having this article in the last issue, I just did not have the time to write it due to my job having me travelling all over the country side.

I have still received no feed back on what you want in this article or even if you want it at all so I will continue as I have been with whatever comes off the top of the head at the time.

While I was away over the last few weeks, Ros received a number of phone calls and letters from cocoists who, when trying to run a programme or even load it in the first place, received some sort of an error message. Some of the most frustrating ones for a novice are, I/O error, FC error or SYNTAX error.

I will deal with the SYNTAX error first, what this means in simple terms is that the computer has received an instruction, in most cases, that has been spelled incorrectly. To remedy this problem simply check the line in which the error occurred, you will find there will be a spelling mistake of some sort. Either a command has been incorrectly entered or an "O" has been entered instead of a "0" (zero) to name just a few. Another common one is where a "," is in the line instead of an ";" or vice versa.

All you need to do in these cases is to either edit the line to make a correction or re-enter the line in it's entirety. Once this is done it is always a good idea to re-save the programme on a new tape or disk before running it.

By the way, how many of you have

been caught out while sitting at your computer and when the above happens or the programme asks you to insert a blank formatted disk or new tape, you do not have one readily at hand? I have many times, so what I do now is I have a ready supply of formatted disks and new tapes in a separate draw, just in case. Takeing ten minutes to format some disks or ensuring that you have a few blank tapes set aside can save you a great deal of frustration in these circumstances, particularly for those of you who are using a tape system and it has just taken you 7 minutes to load the damn programme in the first place and now you have to exit out of the thing and then start all over again.

Anyway back to the errors, the I/O error I have covered before in Back to Basics Vol 2 Issue 2. I won't reprint all that here but if you do not have that issue then drop me a line, we still have some back issues left (\$3 each + \$1.50 postage).

The FC error can be a little more difficult to fix, especially for the novice because the error itself a number of times is not in the line indicated but in either a routine or variable well before the offending line.

As an example, if the offending line contains a variable that had been dimensioned in the beginning of the programme it can be a sure bet that the error has occurred because the command in the offending line is trying to do something with the variable but outside the dimensioned parameter.

In the back of your manual there is a list of errors and a reason as to why they occur, it would be a good idea to have a read of this information and even re-print it on a separate sheet for quick reference when these dreaded errors occur.

As I sit here trying to come up with ideas as to how best help all

you novices out there, I thought back to when I first started out with my CoCo 2 16K and I remember that the reason I could not do a lot of things with my new machine was because of fear. Yes FEAR, I was afraid that if I did something wrong the damn thing would blow up on me or at the least would fry some of it's insides and cost me a fortune to fix.

I then remembered back to when I was a young 18 year old soldier in Airborne Platoon and the motto which was drummed into us at the time, it was "KNOWLEDGE DISPELS FEAR". By obtaining the knowledge about our parachutes, the rates of descent, the methods of landing and steering while under canopy, our fears were dispelled because of that knowledge and over 150 descents later that knowledge still allows me to parachute without fear.

The same applies to computing, by obtaining knowledge about our computer and it's capabilities, the fear of the unknown is dispelled and we can enjoy our system more. But how do we gain this intimate knowledge?

Well I am about to reveal the secret of how to obtain knowledge about your computer. You realise of course that by doing so I will be forever hounded by every computer programmer to the ends of the earth and will suffer a million lashes with a cat-o-nine-tails for giving you this deep, dark secret which has been jealously guarded since the very first computer was invented.

But I do not care, because as a CoCo owner you deserve to know the secret of obtaining this knowledge, it is, as I look over my shoulder, lock the door and lightly tap the keyboard to type it in, USE THE COMPUTER!!!!!!!!!!!!!!

Yep, now I am on a roll, get those back issues of CoCo-Link, Rainbow, CoCo, Softgold and numerous other magazines that have in the past

Well I am now going to check my mine fields, barbed wire and ensure that all the windows are locked against those irate computer programmers, what you need to do is READ THE INSTRUCTIONS, and, USE YOUR COMPUTER.



 * SALE ITEMS *

REMCOMS has just received a swag of brand new books and software on disk and tape. These items are being sold at prices designed to clear the shelves.

BOOKS:-

TRS80 Computer Reference Handbook	\$2
Colour Computer Graphics by William Barden, Jr	\$5
Making the Most of your TRS80 by Peter Vernon	\$2
TRS80 Assembly Language Programming	\$5
Network Primer by William Barden, Jr	\$2
Circuit Analysis Methods	\$5

These are just some of the books we have in stock at ridiculously low prices, we do have a lot more, if it was printed for the CoCo then we more than likely have it.

SOFTWARE:-

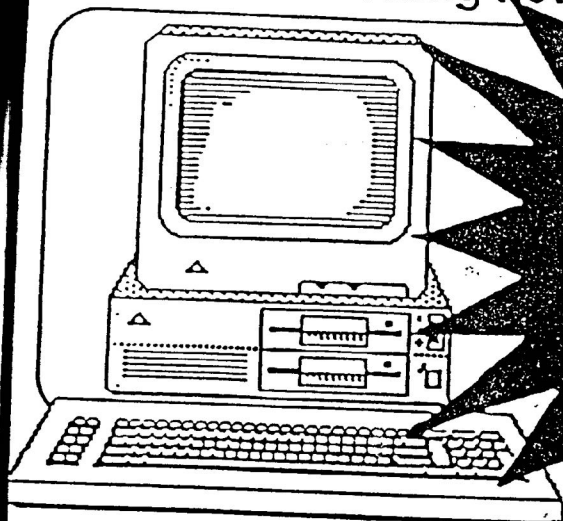
Shanghai (128K RomPak)	\$10
DL LOGO (128K OS9)	\$40
Dynacalc (64K OS9)	\$30
Investograph (32K)	\$20
Phantomgraph (OS9)	\$20
Home Publisher (OS9)	\$20
DeskMate (64K)	\$20
DeskMate3 (128K)	\$30
Typing Tutor (CoCo3 Tape)	\$10
Moby Maths (CoCo3 Tape)	\$10
KidWriter (32K Disk)	\$10
Alphabet Zoo (16K RomPak)	\$5
FaceMaker (16K RomPak)	\$5
Fraction Fever (16K RomPak)	\$5
Kinder Comp (16K RomPak)	\$5
Kids On Keys (16K RomPak)	\$5
CoCo Cook Book (32K Disk)	\$10
Colour Computer Artist (128K)	\$10
Colour File II (16K RomPak)	\$5
Personal Finance II (16K RomPAk)	\$5
EDTASM+ (16K RomPak)	\$5
Micro Illustrator (64K Disk)	\$10
Zone Runner (128K Disk)	\$10
Shamus (16K Disk)	\$10
Springster (128K RomPak)	\$10
Tetris (128K RomPak)	\$10
FlightSim I (32K Disk)	\$10

There are literally hundreds of tapes available as well ranging from 16K up to 128K games, applications, utilities and heaps more.

For more information about the above or any other CoCo product contact REMCOMS, (077) 734 884 Fax/Phone.

COCO FRIENDS DISK MAGAZINE

"The most exciting new product for the CoCo Since....?"



COCO FRIENDS DISK MAGAZINE (CFDM) is devoted exclusively to those who still enjoy running under RS Dos. The standard system needed to use CFDM is CoCo 3, RGB monitor, at least one disk drive, and the RS Dos which came with your CoCo 3.

CFDM is a monthly disk based publication which is produced on a "flippie" disk. When you "Run" the "magazine" side of CFDM, you'll be greeted with a beautiful cover picture by CoCo Friend James Gibbons. Pressing any key takes you to the magazine's colorful Main Menu. There you'll find 14 sections which are filled with entries. Sections Included are: About CFDM; About this Issue; Active CoCo; Advertisements; CoCo Friends Art Gallery; Articles of the Month; Family Tree; Forum; From the Editor; Letters to the Editor; Polpourri; Programs of the Month; Reviews; and Question & Answers.

Next you will enter a Section and find a number of entries written by our CoCo Friends from all over the world. Each issue of CFDM contains from 60 to 80 entries. Some sections contain documentation about the many programs and graphics found on the "flip-side" of CFDM.

The "flip-side" or "program" side of CFDM is filled with contributions of wonderful programs and graphics from our many CoCo Friends! Each issue has from 2 to 4 hi-res pics and from 8 to 15 never-before-seen programs.

**8 to 15
never-before-seen
programs**

The above software is available in
Australia through REMCOMS

RICK'S COMPUTER
ENTERPRISE

PRICES:

1 issue = \$9.00
3 issues = \$25.00
6 issues = \$45.00

Hard Drives

by

Fred Remin

In the survey conducted by CoCo-Link last year we had a question asking what sort of drives both floppy and hard that you were using on your CoCo. The results showed that a great number of you were not using hard drives at all.

Personally I am a firm believer that you do not fully utilize the potential of your CoCo system until you are using OS9 Level II with a hard drive, so, to that end I have decided to put fingers to keyboard to give you an insight as to how to achieve this goal.

Where to start? Well there are a number of requirements to begin with. These are a hard drive, power supply, controller, hard drive card (8 bit), drivers and OS9 Level II.

Lets take each of these in turn, firstly a hard drive. What sort of you get? Any MFM hard drive will suffice and up to 120Meg will work fine, as an example I am using an MFM 42Meg Seagate drive on one system and my other system consists of 1 x 60 Meg and 1 x 30 Meg.

Power supply. I am using an AT case with a 200watt power supply, you can pick up a case with anything from 150 up to 300 watt power supplies from \$60 and up. Remember that you CANNOT use the power supply that you are currently using for your floppy drives for a hard drive because they simply do not have enough power to run a hard drive, let alone both a hard drive and a floppy. Besides by getting a case with power supply you can put everything in a nice neat little package.

Controller. Here is where it may get a little difficult, as far as I know Burke & Burke have gone out of business, this is where I purchased my hard drive controller from. DISTO are still selling hard drive controllers in their product line and FARNA systems also are selling a complete system. I believe there is a generic controller available here in Australia for around the \$30 - \$50 mark, but I will have to check this one out if any of you are interested.

Hard Drive Card. This is a card from the older PC's but you must ensure that it is an 8 bit card, the one I use is a DTC 5150. Some other ones that I know will work are some of the Western Digitals, Adaptec and some of the 8 bit RLL cards.

Drivers/Software. You need to have in your possession OS9 Level II to start with, OS9 Level I will work, but, Level II is one hell of a lot better. You will also need the software to produce or install ready made drivers for your hard drive into your boot file. This is not as hard as it may sound. I am a complete novice but after being shown how to do it once I have produced and installed a number of drivers with the Burke & Burke software.

Putting it all together is not that difficult, simply place your floppy and hard drive into the case and connect them to your power supply. Connect your hard drive card to your controller card and put this into slot three of your Multi-Pak-Interface (not required if using a DISTO). Place your disk drive controller into slot 4, boot up with the supplied software and then produce or install your hard drive drivers, format your hard drive, transfer the needed files and directories and you are up and running. The whole process from start to finish last time took me about an hour, this was using the Burke & Burke system.

By connecting a hard drive to your CoCo and using OS9 Level II you are taking a step into the future with your CoCo. There are a number of ways to achieve the aim;

1. Purchase a complete system from Farna systems, this is ready to plug in and use, (85MB, \$840 Aust)
2. Purchase the individual parts and do the installation yourself, or
3. Purchase the required parts and send them to me and I will set the whole thing up for you for a nominal fee.

The bottom line is, why spend thousands of dollars to purchase a new system, probably messy Dos, when for a fraction of this outlay you can take a step into the future with a system that you are familiar with and is easier to use.

In my humble opinion, OS9 with a hard drive on the CoCo3 makes an IBM using messy Dos look like a sick puppy. I am forced to use an IBM at work, this is a 486 with windows. I can load OS9 on my CoCo, write an article, play a game, draw a picture and have a cup of coffee in the time it takes for this useless 486 so called super machine to boot up, and my CoCo has not cost me \$3000 dollars to set up as an initial outlay.

So go for it, obtain the knowledge, take the plunge and move forward to fully utilise your CoCo, and, if you need help to do so, then we are here to do just that, drop us a line or give us a call, it just might brighten your computing future.

MICROCOM TECHNOLOGIES, Inc

THE FOLLOWING IS A LIST OF BOOKS AND SOFTWARE STILL AVAILABLE FOR THE COCO3 FROM MICROCOM TECHNOLOGIES, Inc.

BOOKS:-

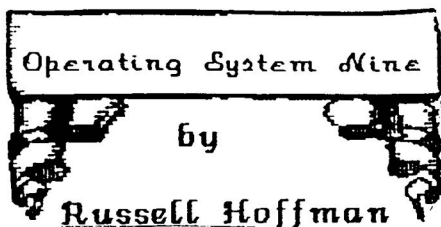
	<u>UNIT COST:-</u>
500 POKES, PEEKS & EXECS	25.00
SUPPLEMENT TO 500 POKES	15.00
300 POKES, PEEKS & EXECS FOR COCO3	25.00
UTILITY ROUTINES VOL 1	20.00

SOFTWARE:-

	<u>UNIT COST:-</u>
WORD POWER 3.3	55.00
CALANDER MAKER)	
SCREEN DUMP)	
SUPER TAPE/DISK TRANSFER)	25.00 EACH
VCR TAPE ORGANIZER)	
HOME BILL MANAGER)	
COMPUTERIZED CHECQUEBOOK)	
BASIC WINDOWS PROGRAMME	20.00
DISK UTILITY 2.1	20.00
FILE TRANSFER UTILITY MULTIVUE VERSION	25.00
MULTI EDIT	12.00
TW-80	12.00
VIP WRITER III	50.00
AUTOTERM	35.00
COCO #OS-9 RAMDISK	20.00
MULTIPROGRAMMING OS-9 OPERATING SYSTEM	35.00
MEWMORY MASTER	20.00
WILD & MV (DIRECTORY ASSISTANT FOR OS-9)	20.00
COLOUR DEMON SEED	20.00
XT-ROM	25.00

POSTAGE TO BE CONFIRMED WHEN PLACING ORDER. PLEASE ALLOW MINIMUM OF 21 DAYS FOR POSTAGE FROM THE USA.

IF THERE IS ANYTHING HERE YOU ARE INTERESTED IN PLEASE CONTACT US ON 077-734 884 (FAX/PHONE).



Permanently change drive options,
frequently asked questions.

(Well, Rick is a bit busy at the
moment, so we obtained some
interesting information to keep
readers informed until the next
issue. ED)

Floppy Drive Step Rate.

The first tid-bit comes from a
problem I was having. It seems that
no matter how many times I used DMODE
to change my disk drive step rate, it
refused to stay that way. I followed
the instructions in the OS-9 Manuals
and made sure I used COBBLER to make
the changes permanent, but they
didn't change it! It seems that
Cobbler won't save changes made to
the disk drivers using DMODE, but
there IS a way to easily make the
changes permanent.

LOAD MODPATCH

at the prompt, type (don't type the
comments)

```
L /D0 (link to module /D0)
C 14 00 03 (change byte 14 to 03)
V (verify)
```

Now use Cobbler and the changes will
be permanent. Repeat for all disk
drives as needed simply by changing
the /Dx. 03 changes them to a 6ms
step rate.

OS-9 FAQ.

This is the sixth edition of the OS-9
FAQ (Frequently Asked Questions).
Addresses will be referenced by
number (e.g. (1)) and the address
will be listed at the end of this
article. ## indicates a question I

do not know the answer for. If there
are any additions, corrections,
suggestions, comments, flames or
contributions, please respond in kind
to me, Russell Hoffman,
rh2y+@andrew.cmu.edu (I will pass
along any comments for those without
Internet access. ED)

Q: What is OS-9?

A: OS-9 is a real-time, multiuser,
multitasking operating system
developed by Microware Systems
Corporation. It was originally
developed for the 6809
microprocessor, in a joint effort
between Microware and Motorola. The
original Level I OS-9 was capable of
addressing 64 Kilobytes of memory.
The Level II OS-9 took advantage of
dynamic address translation hardware
and allowed a mapped address
space of 1 Megabyte on most systems,
and up to two megabytes on others,
most notably the Tandy Colour
Computer III. In the 1980's,
Microware ported OS-9 to the 68000
family of microprocessors, creating
OS-9/68000. Code is mostly portable
from OS-9/6809 to OS-9/68000 at the
high level language source code
level. Code is compatible within
either OS-9/6809 or OS-9/68000 at the
binary level. OS-9/6809 provides
synchronization and mutual exclusion
primitives in the form of events,
which are similar to semaphores. It
also allows communication between
processes in the form of named and
unnamed pipes, as well as shared
memory in the form of data modules.
OS-9 is modular, allowing new devices
to be added to the system simply by
writing new device drivers, or if a
similar device already exists, by
simply creating a new device
descriptor. All i/o devices can be
treated as files, which unifies the
i/o system. In addition, the kernel
and all user programs are ROMable.
Thus, OS-9 can run on any 680x0 based
hardware platform from simple
diskless embedded control systems to
large multiuser minicomputers.

Q: What is OSK?

A: OSK is an abbreviation for
OS-9/68000. This is probably due to
the common abbreviation '68K' for the
68000 microprocessor. Also sometimes
called OS-9/68K.

Q: Where can I get OS-9?

A: Generally the hardware vendor will
ship a version of OS-9 with the
product upon which OS-9 is intended
to be run. Alternatively, OS-9 can be
purchased from Microware (1) itself,
for certain hardware platforms. In
addition, several software vendors
sell customized and enhanced OS-9
packages for certain models of
computers (see "Nine Flavors of
OS-9". Editors Notes: This article
will be in the next CoCo-Link, we are
awaiting it's arrival from USA.)

Q: What machines run OS-9?

A: OS-9/6809 runs on a variety of
platforms, perhaps the most
(in)famous being the Tandy Color
Computer. Other systems include the
SWTPC SCB-69, the Gimix 6809, Smoke
Signal Broadcasting's Chieftain 6809,
FHL's TC-9, the Febe, and many
others, most of which are SS-50 bus
machines. Note that OS-9/6809 is no
longer supported by Microware, but
many user groups, BBSes, and a
handful of FTP sites offer help and
maintain software collections for
OS-9/6809. OS-9/6809 runs on quite a
multitude of machines, including a
variety of systems from Hazelwood
(such as the UniQuad I and II), the
Gimix Micro-20, the Atari ST,
Commodore Amiga, Apple Macintosh, IMS
MM/1, FHLTC-70, and a large number of
680x0-based VME systems, manufactured
by such companies as, Motorola,
Heurikon, Inducom (13), Gimix (18),
Force, Mizare, PEP Modular Computers
(15), and others. Gespac (11) also
makes machines based on their G-64
and G-96 bus.

Q: Where do I get OS-9/68000 for the Macintosh, Commodore Amiga, and the Atari ST?

A: See "Nine Flavors of OS-9". In Australia you can get it from Microprocessing Consultants (22).

Q: What is OS-9000?

A: OS-9000 is a portable version of OS-9, written primarily in C. It can potentially run on any 68020 or higher 680x0 family member, and any 80386sx or higher 80x86 member. Code is portable across OS-9000 platforms at the source level. Theoretically, OS-9000 can be ported to any modern computer architecture, though 680x0 and 80x86 are the only supported microprocessor families at present.

Q: What software is available for OS-9?

A: Nearly any user application can be found either commercially or in the public domain/shareware /freeware. Many wordprocessor, spreadsheets, databases and time management software packages are available from a variety of vendors. A list of much of the available commercial software is available from Microware. They publish the "OS-9 Sourcebook", a listing of hardware and software vendors who sell both 6809 and 68000 software and hardware. It is advisable to contact the individual companies listed in the Sourcebook and request a recent catalogue, as the information in the Sourcebook is a tad outdated. Microware's quarterly magazine Pipelines also carries new product announcements.

Q: Where can I get public-domain/shareware/freeware software for OS-9?

A: There are many private bulletin boards around. In addition, there is the Princeton Listserver, which acts as a mailing server that will mail requested software. To begin using the Listserver, send electronic mail to LISTSERV@PUCC.PRINCETON.EDU, with the single line HELP in your message. Also, the OS-9 User's Group (18) maintains a library of public domain software, as well as distributes a

newsletter. Finally, there are a few anonymous FTP servers worldwide with OS-9 software on them:

cabrales.cs.wisc.edu - Contains mostly OS-9/68000 software, including the complete TOP package, many EFFO disks, GCC and G++, (and many other GNU products such as flex and bison), ka9q, k5jb, TeX, LaTeX and quite a bit of 6809 software.

wuarchive.wustl.edu - Has mostly 6809 OS-9 software.

lucy.ifi.unibas.ch - Meant to be a European duplicate of cabrales.

Don't forget the often overlooked mailserver on cabrales. The e-mail address is OS-9archive@cabrales.cs.wisc.edu, and a message with "help" as the body will return some help text. This provides some access through mail for those without FTP.

Q: What is the TOP package?

A: TOP is an acronym for "The OS-9 Project". It is a collection of OS-9/68000 software developed primarily in Germany. Much of it seems to be an attempt to make OS-9 a little more UNIX-like. Many standard unix utilities are provided, as well as a complete UUCP mail implementation and a more secure password file and login program. Many traditional unix games are also provided. The total package consumes approximately 16 MB of disk space, though much of this is source code.

Q: Who/what is the EFFO?

A: EFFO, The European Forum For OS-9, maintains a large library of PD Software for OS-9, e.g. the new C-Kermit 5A (188), an improved KA9Q Software called SLIP for OSK, Ghostscript and many other fine products. The software is available at a nominal handling fee, including written instruction or even a complete users manual.

Need EFFO address

Q: Are there any independent magazines covering OS-9?

A: There is the "OS-9 Underground Magazine" (16), "OS-9 International" (14), and "the world of 68' micros" (17) is in English, OS-9 International (14) is 50% English, 50% German.

Q: Are there alternative shells for OS-9?

A: Yes, there are. Microware sells mshell, an enhanced shell. There are also several public domain shells available. The most notable is the Bourne shell, sh, available in the TOP package (OS-9/68000). It supports aliasing, command-line editing, history, environment variable replacement, shell scripting, the 'command' operator (uses output of command as arguments to called program), and a startup file. A PD version of ksh is available on cabrales. For OS-9/6809, there is Shell+ and of course if you have a Color Computer, there is always Gshell, a graphical shell.

Q: Can one read/write MS-DOS format disks under OS-9?

A: There are several public-domain and commercial utilities to accomplish this task for both OS-9/6809 and OSK. One of the more interesting is the MSFM file manager which appears in OS-9 Insights, a book by Peter Dibble, available through Microware. MSFM is an actual file manager, which allows you to mount an MS-DOS floppy as part of the OS-9 file system. For the CoCo, there is a set of utilities called RSDOS and PCDOS that read/writes CoCo(DECBC) and MS-DOS disks from OS-9, respectively. They do not format disks though. These are available on the Patch OS-9 disk set from FARNA Systems (17) or on several BBSes.

Q: What sorts of communications software is available?

A: Many public domain utilities, available from your local BBS, include terminal emulators and file

transfer utilities (such as xmodem, ymodem, zmodem, and kermit protocols.) Stern, a non-commercial package, also supports Compuserve B+ protocol. Many software vendors sell various equivalent packages. C-kermit is available in source and executable form for OS-9/68000 on cabrales. Microware sells the NFM Network File Manager, which is a local-area networking protocol for small networks of strictly OS-9 based computers. NFM runs on virtually any network interface (direct serial links, ARCnet, Ethernet, and others).

Microware also sells ISP, or Internet Support Package, which is a relatively complete TCP/IP package, including telnet client and server applications, and FTP client and server. It also provides a C BSD 4.2 compatible socket library. Closely related is ESP, or Ethernet Support Package. This is similar to ISP, but is for particular Ethernet boards. Current word from Microware says that the ESP is now obsolete, and has been replaced by a preconfigured version of ISP. ISP supports Ethernet and SLIP, although ISP supports Ethernet and SLIP, although there is no current SLIP driver supported by Microware. Microware also sells NFS, or Network File System, for OS-9/68000. This allows an OS-9 system to share files in a heterogeneous environment (ie. not all the machines on the network run OS-9). NFS requires ISP or ESP. Finally, there is a port of the Phil Karn ka9q internet software package, which supports a single-user interface to TCP/IP. It includes a telnet client, an FTP client and server, and SMTP. Source and executables may be found on cabrales. Note that the executables on cabrales have a bug in the FTP server. The k5jb code should correct this.

Q: What about usenet and news?

A: Several ports of UUCP software are available for both OS-9/6809 and OS-9/68K. A port of C news and Rn are available on cabrales. TOP has ported Notes, which maintains Notesfiles. There is a program which will transfer between Notesfiles and

netnews. The TOP package in its entirety may be found on cabrales. Rick Adams' UUCP port for the Color Computer may be found on wuarchive, as well as on Delphi and Compuserve.

##Need info on the latest ELM port##

Q: Is gcc available for OS-9?

A: gcc and g++ are available for OS-9/68000, both in OS-9 executable form and cross-compiler form. Versions 1.37, 1.39 and 1.40 were ported to OS-9/68000 primarily via the work of Stephan Paschedag. Source and binaries are available on cabrales.cs.wisc.edu via anonymous FTP. The 1.40 version supports 68040 optimizations.

Q: Can I run Z11 on OS-9?

A: Yes. Microware (1) sells a port of Z11R4 (client and server plus optional Motif), as well as do Eltek Elektronik GmbH (9).

Need info on Keith Thompson's Z11R5 port

Q: What other graphics alternatives are there?

A: Several other organizations have various graphics packages for OS-9. Reccoware Systems (10) has a port of the Bellcore MGR window manager. Gspac (11) produces G-windows, a portable windowing package which has device windows and a very Motif-looking interface. For the MM/1, BlackHawk Inc. (12) is producing K-windows, a window manager similar to Multi-View, the OS-9 window package for the Tandy Color Computer III. Microware (1) also sells RAVE, the Real-Time Audio Video Environment.

Q: What is a Real Time system?

A: A real-time system is any system whose correctness depends not only on the correctness of the applied algorithms, but also in the timing of the execution of those algorithms. Refer to the netnews comp.realtime newsgroup for more information.

Q: Are there analytical frameworks for reasoning about timing correctness of real-time applications written under OS-9, ala Lehocsky, Sha and Ding analysis?

A: PLEASE! Somebody find out! Otherwise, I'll be forced to make an OS-9 operating system model myself....

Q: Does OS-9 support multiple threads within a program?

A: Not directly, but through the use of user installed periodic interrupts or alarms, a program can support it's own threads.

FAQ Addresses, by reference number:

(1) Microware Systems Corporation
1900 N.W. 114th St
Des Moines, IOWA U.S.A. 50322
Phone: 0011-1-515-224-1929
Fax: 0011-1-515-224-1352

(2) Microware Systems Corporation
Western Regional Office
2041 Mission College Boulevard
Santa Clara, CALIFORNIA U.S.A 95054
Phone: 0011-1-408-980-0201
Fax: 0011-1-408-980-1671

(3) Northern Regional Office
One Crank Rd
Hampton Falls, NH U.S.A. 03844
Phone: 0011-1-603-929-4107
Fax: 0011-1-603-929-4233

(4) Southeastern Regional Office
PO Box 510358
Melbourne Beach, FL U.S.A. 32951-0348
Phone: 0011-1-407-725-2840
Fax: 0011-1-407-725-2487

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AUSTRALIAN OS-9 USERGROUP
PUBLIC DOMAIN LIBRARY

21 Virgo Street
INALA. Qld. 4077
Australia.

INTRODUCTION

Welcome to the Australian OS-9 Usergroup Public Domain Library!

WHERE I AM:

My address you'll see at the top of the page.
My phone number is:

(07) 2787209

Please only call me between the hours of 10:00 AM and 9:00 PM.

Also, I can be reached by FAX on:

(07) 3728325

Please mark your FAX: **ATTENTION: Bob Devries**

WHAT I HAVE:

Currently in the PD Library I have a large quantity of OS-9/6809, OS-9/68000, OS9000, and RSDOS software. The list is made up of:

- OS-9 Community Network Library files
approx 23MB
- Australian OS-9 Usergroup archives
12 disks (80 trk CoCo OS-9)
- OS-9 Usergroup (USA) disks
11 disks (80 trk CoCo OS-9)
- The OS-9 Project (TOP - OS-9/68000)
15 disks (80 trk CoCo OS-9)
- OS-9 listserver files from Princeton
Size unknown at this stage
- COCO listserver files from princeton
Size unknown at this stage

Also, I will make available the file lists from the Internet sites, wuarchive, and chestnut.

There are, of course, many duplications in the libraries, except for the TOP library, which is somewhat unique. In the OCN library, there are 322 RSDOS programmes of various types, mostly BASIC, but some picture files (Pmode 4), some MUSICA files, and others.

GETTING FILE LISTS

You can get lists of the files in the PD Library, by sending me up to four OS-9 formatted blank disks. On them I will put text files which will list the file names, and in some cases, a short description. These can be read with the OS-9 'list' command, or 'more' (which I can supply), or they can be loaded into a word processor. Listing them to a printer would work, too, however, the list is very long, so be prepared!

WHAT DOES IT COST:

I will supply the text files FREE, except for return postage!

After that, I will charge \$2.00 PER DISK, plus return postage. You supply the disk(s), formatted on your computer.

Quantity discounts are available, please ask.

DISK FORMATS:

I can read and write the following formats:

COCO OS-9

80 track double or single sided, 5.25" or 3.5"
40 track double or single sided, 5.25"
35 track single or double sided, 5.25"

OS-9/68000

Currently any Microware supported 3.5" format, but only double density, I can't do high-density disks.

COCO RSDOS

35 track double or single sided, 5.25"

Other disk formats MAY be available, please ask me.

CONCLUSION:

Membership of this PD Library is NOT restricted to members of the Australian OS-9 Usergroup, so show this letter to fellow OS-9 and CoCo users.

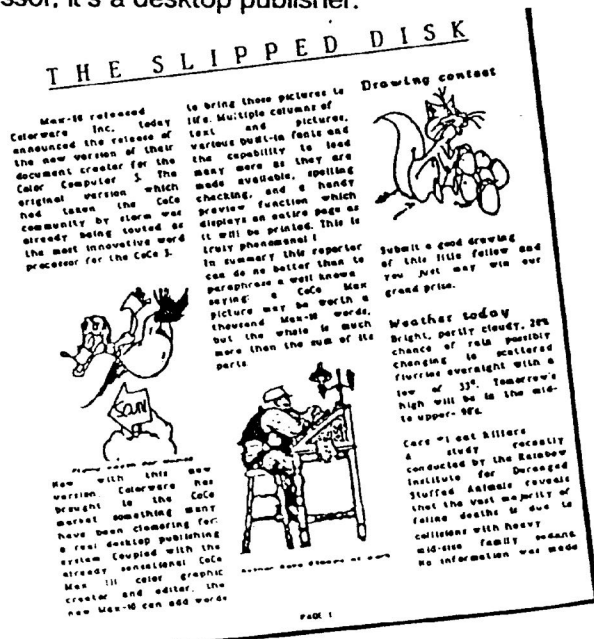
This is your best opportunity to get OS-9 and RSDOS PD software. Put some new life into your computer! Get some PD programmes today!

Regards, Bob Devries
Australian OS-9 Usergroup
PD Library

You probably already have a word processor, and you probably wish it had these features:

- ▶ Fully menu driven (CoCo Max style) with point and click marking of text. You don't need the arrow keys!
- ▶ True WYSIWYG (What You See Is What You Get) including variable size fonts, styles (bold, italics, etc.) and graphics.
- ▶ Can print multiple columns on a page.
- ▶ Not limited by printer capabilities: fonts up to 24 points (1/3") high, superscripts, small print, etc.
- ▶ Fully integrated spelling checker (incredibly fast), no need to exit program to check spelling.
- ▶ Graphics can be imported from just about anything (CoCo Max; MGE; BASIC; even Macintosh pictures from a BBS) and resized to fit your document.
- ▶ Full screen preview including graphics.

Max-10 has all these unique features, plus all the features you are used to in your current word processor. Even with all this, you don't give up anything. **Max-10** is easier to use, more intuitive, faster and more powerful than anything else. It's not just a word processor, it's a desktop publisher.



Max-10 requires a CoCo 3, at least 1 disk, & joystick or mouse
Printer drivers Included: IBM/Epson and compatibles; DMP
 105, DMP106, DMP130; CGP220 (B&W); Gemini/Star



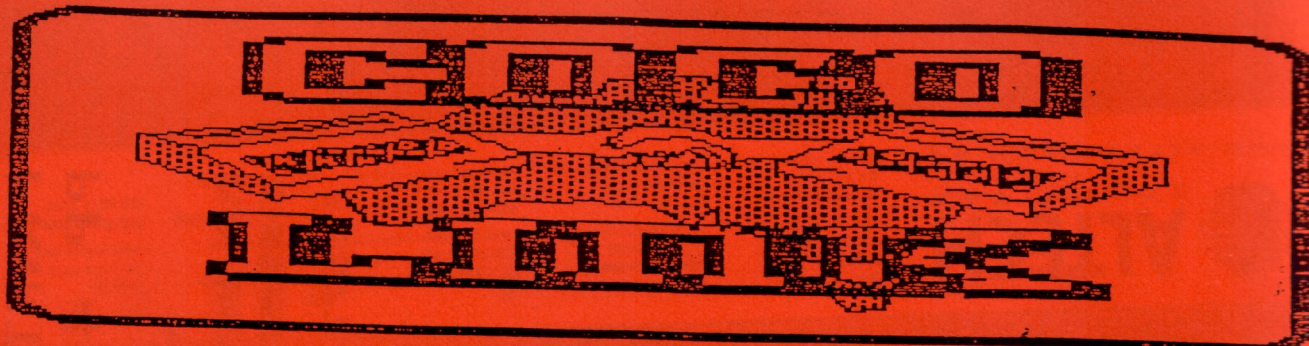
- Blinding speed - printing in multiple columns - online dictionary
- spell checking - graphics can be mixed with text - full justification
- of proportionally sized characters - bold, italic, underline
- superscript and subscript type styles - superb file support, just point and click - "Undo" lets you correct mistakes - easy to use, no commands to remember - any graphics program can be used
- pictures can be shrunk or stretched to fit - right and left alignment
- centering - variable line spacing - page numbering - current page number displayed on the screen - variable tab stops - left and right margins - tabs and margins can vary in the same document
- cut and paste text and graphics anywhere in the file - page break shows on the screen - pull down menus are quick and simple to use
- lightning fast access to any point in the document with the scroll box - twenty fonts (styles and sizes), more available - any number of character sizes and styles can be mixed on the same line - up to more than 120 characters per line, depending on font size, style and letters - headers and footers, even with graphics - file compatibility with other word processors - right, left, bottom and top margins
- word wrap - set starting page - type ahead - key repeat - key click - scroll up and down - ASCII file output for compatibility
- disk directory - kill files- block cut, copy and move - global search and replace - paragraph indent - clipboard - merge
- show file (on disk) - free memory display - page count
- paragraph count - word count - graphics can be resized and moved - multiple fonts - error recovery - true lowercase - 512K memory support (all features work with 128K too) - complete point and click cursor control - moving, clearing and changing blocks of text is ridiculously easy, just point and click at each end of the text block - onscreen ruler - preview file before loading - search and replace - disk is not copy protected, - more than 35 pages of text

CoCo Max III and Max-10 Perfect Together

You do not *need* CoCo Max III to insert and print graphics in Max-10. Max-10 works with any graphics creation program, and you can also use graphics downloaded from bulletin boards.

Similarly, you do not *need* **Max-10** to create graphics with text in **CoCo Max III**. There are tremendous lettering capabilities in **CoCo Max III**, with its many fonts, styles, and sizes.

Together **Max-10** and **CoCo Max III** are an unbeatable combination. This desktop publishing system is better than anything you've ever seen on a CoCo. We are so confident that you will use, and enjoy using the two software packages, that we offer an unconditional money back guarantee. Stop wasting your time and effort using inferior or obsolete products. Move up to the new generation of CoCo software now.



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Blazewski Stan		Mordiallic/VIC	03 560 4605
Boardman William	10 Eltham Ave	Pt Lincoln/SA 5606	086 82 2365
Bye Graham	9 Airlie Bank Rd	Morwell/VIC 3840	051 34 5954
Brady Gaye	Mocatta's Corner W/S 501	Dalby/QLD 4405	076 696 241
Cameron William	2/22 Warren St	St Lucia/QLD 4067	07 371 4736
Colls Jason	46/21 Usher Ave	Labrador/QLD 4215	(015 594 6271) OR 075 325 639
Cooper Len & Shirley	223 Elswick St	Leichardt/NSW 2040	
Cosier W.F	32 Argyll St	Coffs Harbour/NSW 2450	066 524 056
Cunnigham Eric	7 Nuthatch St	Inala/QLD 4077	07 372 2980
Dalzell Robbie	31 Nedland Cres	Pt Hoarlonga/SA 5167	08 386 1647
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Hester Joseph	49 Truscott Rd	Koe/VIC 3825	051 271 158
Holder Garry	229 Esplanade	Seaford/SA 5161	08 306 1139
Hutchinson Simon	10 Ascit Court	Nth Dandenong/VIC 3175	03 790 0967
Ikin John	42 Spruce Dve	Rowville/VIC 3178	03 759 6253
Johnson Fraser	35 Robson Ave	Gorokan/NSW 2263	043 923 298
Kenny Bob	3/14 Bellingen Rd	Coffs Harbour/NSW 2450	066 51 2205
Lidgard Ron	17 Acacia St	Thornlands/QLD 4164	07 286 2776
McGrath John	53 Lemon Gums Dve	Tamworth/NSW 2340	067 618 071
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Munro Ron	91 Blackburn Rd	Elizabeth E/SA 5112	08 252 2616
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If you would like your name included in the above list in order to help other cocoists and to maintain contact between us, then send in the above information to me for inclusion in the magazine.

Do you know of the existence of a user group in your area or are you considering starting one up again? Let me know the detail including the contact names and phone numbers, meeting place, times etc, and I will print it in this magazine.

REMEMBER, USER GROUPS ARE THE BACKBONE OF THE COCO COMMUNITY!

COCO LINK

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