

# CPC

ISSN 0296-6689

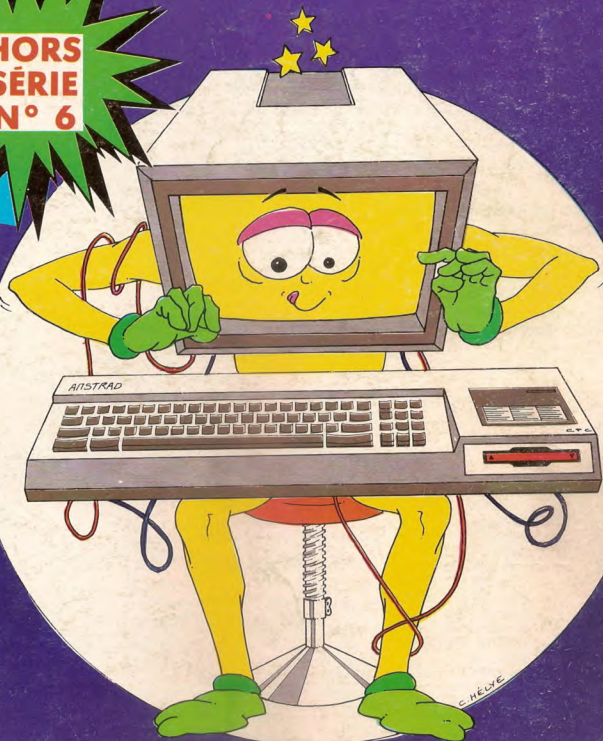
REVUE DES STANDARDS AMSTRAD

HORS  
SÉRIE  
N° 6

EDUCATIF  
CALCUL MENTAL  
DRAPEAUX &  
CAPITALES  
NUCLEAR  
BIORYTHMES

JEU  
FLIPPER  
AUTO-CHOC

UTILITAIRE  
JACQUETTES



M 2604 - 6 - 15,00 F-RD



# SOMMAIRE



FLIPPER

3

CALCUL MENTAL

6

AUTO-CHOC

9

JAQUETTE

17

DRAPEAUX &  
CAPITALES

21

NUCLEAR

27

BIORYTHMES

31

BULLETIN  
D'ABONNEMENT

34



CPC est une publication du  
groupe de presse FAUREZ-  
MELLET

**Directeur de publication**  
Sylvio FAUREZ  
**Rédacteur en chef**  
Marcel LE JEUNE – Denis BONOMO  
**Rédaction**  
Catherine VIARD  
Olivier SAOILETTI  
**Secrétaire de rédaction**  
Florence MELLET  
**Directeur de fabrication**  
Edmond COUDERT  
**Maquette**  
Jean-Luc AULNETTE – Patricia  
MANGIN  
**Abonnements – Vente au  
numéro**  
Catherine FAUREZ  
Tél. 99.52.98.11  
**Service ressort – Réseau**  
Gérard PELLAN  
Tél. vert 05.48.20.98  
**Inspection des ventes :**  
Christian CHOUARD.

**Photocomposition**  
SORACOM  
Nathalie CHAPPE –  
**Photogravure couleur**  
BRETAGNE PHOTOGRAVURE  
IMPRESSION :  
RFI  
**Secrétariat-Rédaction**  
SORACOM Editions  
La Haie de Pan  
35170 BRUZ  
RCS Rennes B319 816 302  
Tél. 99.52.98.11 +  
Télex 741.042 F  
Serveur 3615 + MHZ  
CCP Rennes 794.17V  
Distribution NMPP  
Dépôt légal à parution  
Code APE 5120

AMSTRAD est une marque déposée.  
CPC est une revue mensuelle totalement indé-  
pendante d'AMSTRAD GB et d'AMSTRAD  
FRANCE.

Distribué en Suisse par SEMAPHORE  
Tél. 022.54.11.95

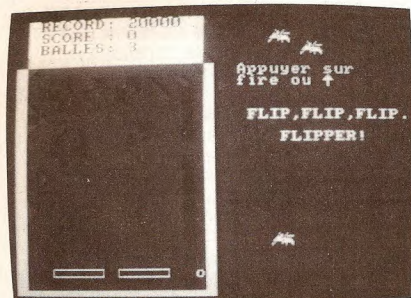
et en Belgique par COMPUTER  
MARKET  
170, rue Antoine Dansaert  
1000 BRUXELLES – tél. 513.53.58

**Règle publicitaire**  
IZARD CREATION  
15, rue St-Melaine  
35000 RENNES  
Tél. 99.38.95.33

*Les noms, prénoms et adresses de nos abonnés  
sont communiqués à nos services internes du grou-  
pe, ainsi qu'aux organismes liés contractuellement  
pour le routage. Les informations peuvent faire l'ob-  
jet d'un droit d'accès et de rectification dans le ca-  
dré légal.*

Les articles et programmes que nous publions dans  
ce numéro bénéficient, pour une grande part, du  
droit d'auteur. De ce fait, ils ne peuvent être imités,  
contrefaits, copiés par quelque procédé que ce soit,  
même partiellement sans l'autorisation écrite de la  
Société SORACOM et de l'auteur concerné. Les opi-  
nions exprimées n'engagent que la responsabilité  
de leurs auteurs. Les différents montages présentés  
ne peuvent être réalisés que dans un but privé ou  
scientifique mais non commercial. Ces réserves  
s'appliquent également aux logiciels publiés dans  
la revue.





# FLIPPER

Benoit PIRO



*Au lieu de traîner dans les bars louches pour  
dépenser désinvoltement votre argent en parties de billard  
électronique, vous devriez rester devant votre AMSTRAD et  
taper ce programme : c'est beaucoup plus économique, petits garnements !*

```

1 REM ----->NB<
2 REM ----->XC<
3 REM ----->ND<
4 REM --- Benoit PIRO ----->BE<
5 REM ----->RF<
6 REM ----->ZG<
7 REM ----- FLIPPER ----->NH<
8 REM ----->BJ<
9 REM ----->EK<
10 CLS:GOSUB 1740
20 SPEED INK 1,1:DIM f(20,26):mu:=1:>RC<
n$="P.benoit":ms=20000
30 SYMBOL AFTER 32:SYMBOL 158,0,0,>ND<
,&0,&0,&0,&78&&6,&18,&18
40 SYMBOL 157,&0,&20,&20,&80&&6,&8>HE<
0&&60,&20,&20,&80
50 SYMBOL 155,&18,&18,&78&&6>CF<
51 SYMBOL 173,0,4,3,11,30,63,127,33>UG<
52 SYMBOL 174,0,16,32,95,64,252,126>LH<
,>55
53 SYMBOL 175,193,128,0,0,0,0,0>EJ<
54 SYMBOL 176,35,33,0,0,0,0,0>RK<
55 REM ----->JL<
60 MODE 1
70 ba=4:sc=0:t=0:se=500:vic=0>DH<
75 WHILE sd$="" :sd$=INKEY$:WEND>CN<
76 WHILE sd$="" :sd$=INKEY$:WEND>PC<
80 c=18:1=23:so=d=0:g=0:ba=1:I>JJ<
F ba=0 THEN 1580
90 FOR q=3 TO 18:LOCATE q,4:PRINT C>PK<
HR$(143):f(q,4)=207:NEXT
95 PEN 1:BORDER 0:PAPER 4
100 FOR q=5 TO 24:LOCATE 2,q:PRINT>HB<
CHR$(143):f(2,q)=207:LOCATE 19,q:PR
INT CHR$(143):f(19,q)=207:NEXT
101 BORDER x25>CC<
110 FOR q=2 TO 19:LOCATE q,25:PRINT>MC<
CHR$(131):f(q,25)=131:NEXT
120 FOR q=1 TO 81>KD<
125 a=a+1>YJ<
130 READ k,km, ch>NE<
140 LOCATE k,km:FEN 3:PRINT CHR$(ch)>NF<
)
143 ENT 9,1,2,1,1,0,2,1,0,2,1,-2,1>YJ<
1,0,4
144 ENV 9,1,15,1,1,-3,2,1,0,1,1,0,1>MK<
,>12,-1,4
145 IF a>80 THEN 150 ELSE SOUND 1+1>PL<
6,ch,10,15,9,9:SOUND 2+8,ch-100,10,
15,9,9:SOUND 4+32,ch+400,10,15,9,9
150 f(k,km)=ch>PG<
160 NEXT>LH<
164 REM ----->NM<
165 PEN 6:LOCATE 25,2:PRINT CHR$(17>LN<
3)CHR$(174):LOCATE 25,3:PRINT CHR$(
175)CHR$(176):LOCATE 28,3:PRINT C
$(173)CHR$(174):LOCATE 28,4:PRINT CH
R$(175)CHR$(176)
166 LOCATE 25,20:PRINT CHR$(173)CHR>NP<
$(174):LOCATE 25,21:PRINT CHR$(175)
CHR$(176)
167 LOCATE 23,9:PRINT"FLIP,FLIP,FLI>YQ<
P...":LOCATE 26,11:PRINT"FLIPPER!"
170 DATA 2,4,214,19,4,215,3,5,212,>NJ<
18,5,213,5,6,214,6,6,207,8,6,214,9,
6,207,11,6,214,12,6,207,14,6,215,16
,>6,213,17,6,215,5,7,207,6,7,212,8,7
,>207,9,7,212,11,7,207,12,7,212,14,7
,>213,15,7,215,17,7,207,3,8,215,8,8,
155,11,8,155,15,8,155,17,8,207
171 DATA 4,9,215,5,8,213>CK<
180 DATA 3,9,207,13,9,158,17,9,207,>LK<
3,10,212,5,10,214,6,10,212,12,10,21
4,13,10,207,5,11,207,17,10,207,7,11
,>214,12,11,207,13,11,212,17,11,207,
5,12,207,7,12,207,12,12,155,5,13,21
3,7,13,212,13,13,164,17,13,207
190 DATA 4,14,215,10,14,164,16,14,>LL<
14,17,14,207,4,15,212,13,15,164,16,
15,213,17,15,207,17,16,207,3,17,215
,>8,17,164,17,17,207,3,18,212,6,19,1
64,12,18,164,17,18,207,17,19,207,17
,>20,207,15,21,214,17,21,207,4,22,21
5,17,22,207,4,23,207,5,23,144,15,23
,>144
200 DATA 3,24,158,4,24,207,5,24,207>JC<
,>17,24,207,18,24,158,16,24,214
210 RESTORE>FD<
215 REM ----->KJ<
220 f(4,23)=215>ME<
230 GOSUB 790:GOSUB 820:DI:LOCATE 1>NF<
8,23:PEN 1:PRINT "0":PEN 3
240 WINDOW#1,3,18,1,3:PAPER#1,2:PEN>YG<
#1,3:CLS#1:LOCATE#1,2,1:PRINT#1,"R
ECORD:":ms:LOCATE#1,2,2:PRINT#1,"SC
ORE :":sc:LOCATE#1,2,3:PRINT#1,"BAL
LES:":ba
250 IF vic=0 THEN LOCATE 20+(20-LEN>DH<
(N$))/2,15:PRINT n$:LOCATE 21,17:PR
INT "Detient le record !"
260 WINDOW#2,22,40,5,10>TJ<
270 PRINT#2,"Appuyer sur ";:fire ou>MK<
":CHR$(240)
280 IF INKEY(76)=0 OR fe=1 THEN 28>NL<
5
281 IF INKEY(0)<0 THEN 280>NM<
285 EI>DR<
287 REM ----->VU<

```



```

290 ac=0:al=-1:CLS#2:IF t=-1 THEN D >MM<
I:LOCATE 18,12:PRINT CHR$(213):f(18
,12)=213:EI:AFTER 100,0 GOSUB 1410
300 IF t=0 THEN AFTER 200,0 GOSUB 3 >HD<
20:DI:LOCATE 18,12:PRINT " *EI
310 GOTO 330 >PE<
320 ON INT(RND*4)+1 GOSUB 1410,1450 >XF<
,1480,1520:RETURN
330 ac1=ac:al1=al:c1=c:l1=l >KB<
340 f=(c+ac,1+al):DN ac+2 GOTO 850 >UH<
,860,870
350 c=c+ac1:l1=l+al1 >UJ<
360 CALL &BD19 >CK<
370 DI:LOCATE c1,11:PRINT " *EI >HL<
380 c=c+ac1:l1=l+al1 >QM<
390 DI:LOCATE c,1:PRINT "o":EI >PN<
400 IF c=18 AND 1=23 THEN ba=ba+2: >XE<
ENT 2,100,25,10:SOUND 2,300,40,15,0
,2:pr=1:BORDER 6,2:GOSUB 1670:BORD
ER 0:GOTO 1570
405 IF c=13 AND (1=7 AND 11(>6) THE >DK<
N al=-1
410 IF f(<164 THEN 450 >QF<
420 ac=-1:INT(RND*3):al=-1:INT(RND* >MG<
3):IF ac=0 AND al=0 THEN 420
430 pr=5:GOSUB 1660 >TH<
435 IF c=18 AND 1=11 THEN 1=10 >XN<
440 DI:LOCATE c,1:PRINT CHR$(164):c >WJ<
=c+ac:l1=l+al:EI
450 IF so=1 THEN 480 >RK<
460 IF so=1 THEN 480 >NL<
470 so=1:DI:LOCATE 18,12:PRINT CHR$ >MM<
(214):f(18,12)=214:EI
480 IF c=3 AND 1=12 AND 1(<7 THEN E >CN<
NT 3,100,-25,10:SOUND 2,500,30,15,0
,3:AFTER 450,1 GOSUB 1730:mu=2:INK
3,24,6:ac=0:pr=30:GOSUB 1670:IF al=
0 THEN al=1:GOTO 550 ELSE 550
490 IF c=3 AND 1=21 AND al(<-1) THEN >XP<
ac=0:al=1:GOTO 550
500 IF c=18 AND 1(<10 AND so=1 THEN >EF<
INK 1,24,6:ENT 3,200,-25,5:SOUND 2,
700,20,15,0,3:pr=50:GOSUB 1670
510 IF 1=24 THEN 1560 >EG<
520 IF c=6 AND 1=12 AND al(<0) THEN >ZH<
ENT 3,100,-25,10:SOUND 2,400,40,15,
0,3:pr=20:GOSUB 1670:IF al=-1 THEN
ac=0:al=1:GOTO 550
530 IF c=16 AND 1=18 AND al=1 THEN >EJ<
ac=0:GOTO 550
535 IF (c=4 AND 1=8) AND f(4,9)=215 >RF<
THEN al=-1
536 LOCATE 4,9:PRINT CHR$(215):IF c >BQ<
=4 AND 1=9 THEN SOUND 1,100,10,15,2
,9:sc=sc+5:GOSUB 1670
540 IF al=1 AND (c=10 AND 1=8) OR >NK<
(c=14 AND 1=12) THEN DI:LOCATE c,1
:PRINT " *":l1=l+1:LOCATE c,1:PRINT "
o":EI
545 REM ----- >RQ<
550 IF (INKEY(9)=0 OR JOY(0)=4) THE >WL<
N IF g=0 THEN GOSUB 670 ELSE 560 EL
SE IF g=1 THEN GOSUB 790:
560 IF (INKEY(6)=0 OR JOY(0)=8) THE >VM<
N IF d=0 THEN GOSUB 730 ELSE 570 EL
SE IF d=1 THEN GOSUB 820
564 LOCATE 12,12:PRINT CHR$(155):f(< >VR<
12,12)=155
565 REM ----- >UT<
570 IF c=10 AND (1=22 OR ac=0) THEN >FN<
al=1:ac=0:GOTO 650
580 IF 1(<20 OR c(<5 OR c(>14) THEN >ZF<
650
590 IF 1=20 THEN 630 >DQ<
600 IF c(>10) THEN 630 >KG<
610 IF g=0 AND 1=22 THEN al=0:GOTO >AH<
650
620 IF g=1 THEN IF (1=21 AND c(>5) >QJ<
R (1=22 AND c(<7) THEN ac=-1:INT(RND
*2):al=-1:GOTO 650 ELSE IF 1=20 THE
N ac=0:al=1:GOTO 650
630 IF d=0 AND 1=22 THEN al=0:GOTO >ZK<
650
640 IF d=1 THEN IF (1=21 AND c(>12) >ZL<
OR (1=20 AND (c(>11 AND c(<15)) THEN
ac=INT(RND*2):al=-1
650 REM >RM<
660 GOTO 330 >YN<
670 IF c(<10 AND c(>5 AND 1=22 THEN >XP<
80 ELSE 700
680 DI:LOCATE c,1:PRINT " *EI:IF a >QQ<
c=0 THEN ac=-1:INT(RND*2)
690 al=-1:c=c+ac:l1=l+al >ER<
700 DI:PLOT 68,45,0:DRAW 68,35:DRAW >MH<
140,35:DRAW 140,45:DRAW 68,45:PLOT
65,43,1:DRAW 72,35:DRAW 135,64:DRA
W 127,72:DRAW 65,43:EI
710 g=1 >MJ<
720 RETURN >NK<
730 IF c(>10 AND c(<15 AND (1=22 OR >VL<
=21) THEN 740 ELSE 760
740 DI:LOCATE c,1:PRINT " *EI:IF a >BM<
c=0 AND c(>14 THEN ac=INT(RND*2) EL
SE IF c=14 THEN ac=0
750 al=-1:c=c+ac:l1=l+al >BN<
760 DI:PLOT 235,35,0:DRAW 235,45:DR >BP<
AW 163,45:DRAW 163,35:DRAW 235,35:P
LOT 234,35,1:DRAW 238,43:DRAW 180,7
2:DRAW 172,64:DRAW 233,33:EI
770 d=1 >QQ<
780 RETURN >VR<
790 DI:PLOT 65,43,0:DRAW 72,35:DRAW >XT<
135,64:DRAW 127,72:DRAW 65,43:PLOT
68,45,1:DRAW 68,35:DRAW 140,35:DRA
W 140,45:DRAW 68,45:EI
800 g=0 >LJ<
810 RETURN >NK<
820 DI:PLOT 234,35,0:DRAW 238,43:DR >YL<
AW 180,72:DRAW 172,64:DRAW 233,33:P
LOT 235,35,1:DRAW 235,45:DRAW 163,4
5:DRAW 163,35:DRAW 235,35:EI
830 d=0 >LM<
840 RETURN >RN<
850 ON al+2 GOTO 880,950,1020 >FP<
860 ON al+2 GOTO 1080,1080,1130 >JQ<
870 ON al+2 GOTO 1190,1260,1320 >NR<
880 IF f=207 THEN IF c=3 THEN ac=-( >ET<
1=19 OR 1=6):al=-1:GOTO 370 ELSE ac
=(1=5):al=1:GOTO 370
885 REM ----- >ZY<
890 IF f=214 OR f=215 THEN ac=INT(R >FU<
ND*2):al=-1:GOTO 370
900 IF f=212 THEN ac=1:al=1:GOTO 35 >YK<
0
910 IF f=155 THEN ac=-1:INT(RND*2): >LL<
al=1:pr=5:GOSUB 1660:GOTO 370
920 IF f=158 THEN ac=-1:INT(RND*2): >EM<
al=-1:INT(RND*2):IF ac=0 AND al=0 T
HEN al=-1:GOTO 350 ELSE 350
930 IF f=215 THEN ac=0:al=-1:GOTO 3 >EN<
70
935 IF c=4 AND 1=10 AND f(4,9)=215 >DU<
THEN al=1
940 GOTO 370 >DF<
950 IF f=207 OR f=214 THEN ac=1:al= >6Q<
INT(RND*2):IF 1=13 OR 1=9 OR c=6 TH
EN al=-1:ac=0:GOTO 370 ELSE 370
960 IF f=215 THEN ac=0:al=-1:GOTO 3 >FR<
50
970 IF f=212 THEN ac=0:al=1:GOTO 35 >ET<
0
980 IF f=155 THEN ac=-1:INT(RND*2): >RU<
al=1:pr=5:GOSUB 1660:GOTO 350
990 IF f=158 THEN ac=-1:INT(RND*3): >UV<
al=-1:pr=10:GOSUB 1660:GOTO 350
1000 IF c(>10 AND 1=22 AND 1=1) THEN >VB<
GOSUB 1550:ac=1:al=0:GOTO 370
1001 BORDER xzs >EC<
1010 GOTO 370 >UC<
1020 IF f=207 OR f=212 THEN ac=0:al >DD<
=1:GOTO 370
1030 IF f=215 THEN ac=1:al=-1:GOTO >XE<
350
1040 IF f=214 THEN ac=-1+2*(INT(RND >YF<
*2)):al=0:IF c=16 THEN ac=0:GOTO 37
0 ELSE 350
1050 IF f=158 THEN ac=-1:INT(RND*3) >RG<
:al=-1:INT(RND*2):pr=10:GOSUB 1660:
IF ac=0 AND al=0 THEN al=-1:GOTO 35
0 ELSE 350
1060 IF f=213 THEN ac=1:al=1:GOTO 3 >ZH<
50
1070 GOTO 370 >AJ<
1075 xzs=INT(RND*3):xzs=INT(RND(RND >YP<
*6)):BORDER xzs,xzs
1080 IF f=207 THEN IF 1=5 AND c(>4 >CK<
ND c(<14 THEN ac=-1:INT(RND*3):IF ac

```



```

=> THEN al=1:GOTO 370 ELSE al=0:GOT
0 370 ELSE ac=1+2*(c=14 AND f(13,5)
=>):al=0:GOTO 370
1090 IF f=212 THEN ac=1:al=0:GOTO 3 >AL<
50
1100 IF f=213 THEN ac=-1:al=0:GOTO >RC<
350
1110 IF f=155 THEN ac=-1+INT(RND*3) >DD<
:pr=5:GOSUB 1660:IF ac=0 THEN al=1:
GOTO 350 ELSE al=INT(RND*2):GOTO 35
0
1120 GOTO 370 >WE<
1130 IF f=214 THEN ac=-1:al=0:GOTO >WF<
350
1140 IF f=215 THEN ac=1:al=0:GOTO 3 >ZG<
50
1150 IF f=212 THEN ac=-1+INT(RND*3) >KH<
:al=-1:GOTO 350
1160 IF f=158 THEN pr=10:GOSUB 1660 >MJ<
:IF c=13 THEN ac=-1+INT(RND*3):IF a
c=0 THEN al=-1:GOTO 350 ELSE al=0:6
OTO 350 ELSE ENT 3,100,-50,10:SOUND
2,100,40,15,0,3:ac=0:al=-1:pr=13:6
OSUB 1670:GOTO 350
1170 IF f=144 THEN ac=INT(RND*2):al >RK<
=-1:GOTO 350
1180 GOTO 370 >CL<
1190 IF f=207 THEN IF c=4 THEN ac=0 >NM<
:al=1:GOTO 370 ELSE IF c=16 AND 1<1
1 THEN ac=0:al=-1:GOTO 370 ELSE ac=
-1:al=-1:GOTO 370
1200 IF f=213 THEN ac=-1:al=1:GOTO >UD<
350
1210 IF f=214 THEN ac=-1+INT(RND*2) >HE<
:al=-1:GOTO 350
1220 IF f=215 THEN al=(c=3 OR c=13) >MF<
:IF al=-1 THEN ac=0:GOTO 370 ELSE a
c=-1:GOTO 350
1230 IF f=212 THEN ac=INT(RND*2):IF >ZG<
ac=0 THEN al=1:GOTO 370 ELSE al=0:
GOTO 370
1240 IF f=155 THEN pr=5:GOSUB 1660: >YH<
ac=INT(RND*2):IF ac=0 THEN al=1:GOT
0 370 ELSE al=0:GOTO 370
1250 GOTO 370 >AJ<
1260 IF f=207 THEN IF c=18 THEN al= >WK<
1:ac=0:GOTO 370 ELSE IF 1<13 AND 1
<19 THEN ac=-1+INT(RND*2):al=1:GOT
0 370 ELSE ac=-1:al=INT(RND*2):GOTO
370
1270 IF f=212 THEN ac=-1:al=0:GOTO >ZL<
350
1280 IF f=214 OR f=158 THEN ac=0:al >RM<
=-1:GOTO 350
1290 IF f=213 THEN ac=0:al=1:GOTO 3 >DN<
50
1300 IF f=155 THEN ac=INT(RND*2):al >FE<
=1:pr=5:GOSUB 1660:GOTO 350
1310 GOTO 370 >XF<
1320 IF f=207 THEN ac=-1+INT(RND*2) >XG<
:al=1:IF c=12 THEN al=0:ac=-1:GOTO
370 ELSE 370
1330 IF f=214 THEN ac=-1:al=-1:GOTO >YH<
350
1340 IF f=215 THEN ac=INT(RND*2):IF >AJ<
ac=0 THEN al=1:GOTO 350 ELSE al=0:
GOTO 350
1350 IF f=212 THEN ac=INT(RND*2):IF >XK<
ac=0 THEN al=-1:GOTO 350 ELSE al=0:
:GOTO 350
1360 IF f=155 THEN ac=-1+INT(RND*2) >NL<
:al=1:pr=5:GOSUB 1660:GOTO 370
1370 IF f=213 THEN ac=-1+INT(RND*2) >QM<
:al=1:GOTO 350
1380 IF f=158 THEN ac=-1+INT(RND*3) >ZN<
:pr=10:GOSUB 1660:IF ac=0 THEN al=-
1:GOTO 350 ELSE al=0:GOTO 350
1390 IF f=144 THEN ac=1:al=0:GOTO 3 >XP<
70
1400 GOTO 370 >XF<
1410 REM ----- >LG<
1420 GOSUB 1510:AFter 300,0 GOSUB 1 >MH<
450
1430 DI:LOCATE 16,23:PRINT CHR$(215 >KJ<
)+f(16,23)=215:LOCATE 17,22:PRINT C
HR$(209):f(17,22)=0:LOCATE 9,10:PRI
NT CHR$(164):f(9,10)=164:EI:RETURN
1440 DI:LOCATE 16,23:PRINT " " >YK<
)+f(16,23)=215:LOCATE 17,22:PRINT C
HR$(209):f(17,22)=0:LOCATE 9,10:PRI
NT CHR$(164):f(9,10)=164:EI:RETURN
1450 AFTER 300,0 GOSUB 1520:GOSUB 1 >QL<
440
1460 DI:LOCATE 7,5:PRINT CHR$(212): >CM<
+f(7,5)=212:EI:RETURN
1470 DI:LOCATE 7,5:PRINT " " >NN<
)+f(7,5)=212:EI:RETURN
1480 REM 2 >AP<
1490 AFTER 300,0 GOSUB 1410:GOSUB 1 >VQ<
550
1500 DI:LOCATE 16,20:PRINT CHR$(214 >ZG<
)+f(16,20)=214:LOCATE 16,21:PRINT C
HR$(207):f(16,21)=214:LOCATE 16,22:
PRINT CHR$(213):f(16,22)=213:LOCATE
13,5:PRINT CHR$(212):f(13,5)=212:E
I:RETURN
1510 DI:FOR x=20 TO 22:LOCATE 16,x >AH<
:PRINT " " >f(16,x)=0:NEXT:LOCATE 13,
5:PRINT " " >f(13,5)=0:EI:RETURN
1520 REM 3 >MJ<
1530 AFTER 300,0 GOSUB 1480:GOSUB 1 >XK<
470:GOSUB 1440
1540 DI:LOCATE 10,5:PRINT CHR$(212) >EL<
)+f(10,5)=212:LOCATE 16,22:PRINT CHR
$(214):f(16,22)=214:EI:RETURN
1550 DI:LOCATE 10,5:PRINT " " >f(10, >NM<
)+f(10,5)=212:LOCATE 16,22:PRINT " " >f(16,22
)=0:EI:RETURN
1560 SOUND 4,400,10,15:SOUND 4,500, >RW<
10,15:SOUND 4,600,30,15
1570 DI:LOCATE c,1:PRINT " " >GOSUB >PP<
1440:GOSUB 1470:GOSUB 1510:GOSUB 15
50:DI:LOCATE 16,5:PRINT " " >LOCATE
17,12:PRINT " " >f(16,5)=0: >f(17,12)=
0:EI:t=(t=0):GOTO 80
1580 ENT 2,100,-20,5:SOUND 2,200,-5 >LQ<
0,7,0,2
1590 DI:PEN 0:LOCATE 22,20:PRINT RE >PR<
MAIN(0):PEN 1:EI:CLS
1595 REM ----- >BX<
1600 LOCATE 5,5:PRINT "SCORE "+sc >EH<
1610 CLEAR INPUT:IF sc>ms THEN LOCA >LJ<
TE 1,10:PRINT "Vous avez battu le p
recedent record qui etait de "+ms;"p
oints." >PRINT:PRINT "Entrez votre n
om S.V.P.":PRINT:INPUT n$:n$=UPPER$(
LEFT$(n$,20))
1620 ms=MAX(ms,sc) >BK<
1630 LOCATE 1,25:PRINT "Appuyez sur >NL<
R pour rejouer"
1640 IF UPPER$(INKEY$)<"R" THEN 16 >LM<
40
1650 RUN >NN<
1660 ENT 2,100,40,2:SOUND 2,200:INT >ZP<
(RND*300),10,15,,2
1670 sc=sc+pr*mu >LQ<
1680 DI:LOCATE#1,9,2:PRINT#1,sc:CLS >NR<
2:EI
1690 IF sc>se THEN ENT 1,200,20,3, >KT<
200,20,3:SOUND 2,100,31,7,0,1:ba=ba
+1:LOCATE#1,10,3:PRINT#1,ba:se=2*se
1700 IF vic=1 THEN 1720 >MJ<
1710 IF sc>ms THEN LOCATE 20,15:PRI >PK<
NT " VOUS detenez " >LOCATE 20
,17:PRINT " le record ! " >v
ic=1
1720 INK 1,24:RETURN >ML<
1730 mu=1:INK 3,6:RETURN >XM<
1740 LOCATE 13,2:PRINT"jeu de FLIPP >PN<
E":LOCATE 4,5:PRINT"Ce flipper se
jour au clavier ou au":LOCATE 1,6:P
RINT"joystick en inclinant celui-ci
a droite":LOCATE 1,7:PRINT" pour s
oulever le taquet de droite"
1745 LOCATE 1,8:PRINT"ou en l'incli >AU<
nant a gauche pour le":LOCATE 1,9:P
RINT"taquet de gauche"
1750 LOCATE 2,10:PRINT"Four le clav >HP<
ier,enter pour le taquet":LOCATE 1,
11:PRINT"de droite,et control pour
le taquet de":LOCATE 1,12:PRINT"gau
che"
1760 LOCATE 25,25:PRINT">TOUCHE":a >LQ<
$=INKEY$:IF a$="" THEN 1760 ELSE 17
70
1770 RETURN >XR<

```



Chaque réponse juste  
remplit un wagon.

Chaque réponse fautive  
en fait disparaître un.

SAURAS-TU RAMENER LE CONVOI INTACT ?

Pour continuer  
il faut toujours appuyer sur une touche.



# ALCUL MENTAL

Henri CHAUVET



*Vous aimez les trains et le calcul de tête ? Alors Calcul Mental est fait pour vous. Le but du jeu : ramener un convoi intact à la gare. Chaque mauvaise réponse détruit un wagon. Attention ce programme fonctionne uniquement sur 664 et 6128.*

```

10 REM---pour changer le temps d'af >JB< continuer":LOCATE 4,16:PRINT"il faut
fichage des operations, jouer sur 1 toujours appuyer sur une touche."
a valeur de "at" a la ligne 390
20 ENV 1,15,1,1,15,-1,1:ENT -1,2,1, >HC< 240 CALL @B06:CLS#1 >TB<
1,2,-1,1
30 ENV 2,15,-1,10:ENT -2,60,-2,2 >GD< 250 PEN 3:LOCATE 1,10:PRINT"Quelle >BH<
40 CLS:GOSUB 1970 >ME< op"+CHR$(212)+"ration chois-tu ?"
50 GOSUB 2170 >XF< 260 PEN 1:PRINT:PRINT"1 ":"PEN 2:PR >KJ<
60 DEF FN deek(x)=PEEK(x)+256*PEEK >MG< INT"addition":PEN 1:PRINT"2 ":"PEN
x+1):REM---redefinition des caracte 2:PRINT"soustraction":PEN 1:PRINT"3
res ":PEN 2:PRINT"multiplication":PEN
70 REM----- >MH< 1:PRINT"4 ":"PEN 2:PRINT"division"
80 REM---initialisations--- >UJ< :PEN 1
90 REM----- >PK< 270 CLEAR INPUT >RK<
100 RANDOMIZE TIME/1000 >NB< 280 OP=INKEY$ >CL<
110 INK 0,1:INK 1,25:INK 2,20:INK 3 >ZC< 290 IF op="" OR INSTR("1234",op)= >TK<
120 m=0:xt=3:yt=22:xtf=36:x=21:y=3: >AD< 0 THEN 280
130 j=0:i=0 300 CLS#1 >XD<
140 WINDOW #1,1,40,1,18:WINDOW #2,1 >KE< 310 LOCATE 5,5:PRINT"L"op"+CHR$(212 >XE<
140 PEN 3:LOCATE xt,yt:PRINT tr$ >TF< )+"ration ne reste affich"+CHR$(212
150 MASK 100,1:PLOT 1,28,2:DRAW 63 >NG< )+"e":LOCATE 9,6:PRINT"que quelques
160 IF partie>0 THEN 250 >AH< instants."
170 REM----- >MJ< 320 LOCATE 8,8:PRINT"Tu ne dois pas >XF<
180 REM---choix de l'epreuve--- >FK< r"+CHR$(212)+"pondre":LOCATE 7,9:P
190 REM----- >PL< RINT"avant qu'elle ne s'efface."
200 PEN 1:LOCATE 10,2:PRINT"Chaque >PC< 330 PEN 3:LOCATE 1,13:PRINT"Quel ni >WG<
r"+CHR$(212)+"ponse juste":LOCATE 1 veau chois-tu ?"
1,3:PRINT"remplit un wagon."
210 LOCATE 10,5:PRINT"Chaque r"+CHR >XD< 340 PEN 1:PRINT:PRINT"1 ":"PEN 2:PR >FH<
$(212)+"ponse fautive":LOCATE 9,6:PR INT"champion":PEN 1:PRINT"2 ":"PEN
INT"en fait dispara"+CHR$(215)+"tre 2:PRINT"entra"+CHR$(215)+"n"+CHR$(12
un." 12):PEN 1:PRINT"3 ":"PEN 2:PRINT"d"
220 PEN 2:LOCATE 3,9:PRINT"SAURAS-T >JE< +CHR$(212)+"butant"
U RAMENER LE CONVOI INTACT ?" >AN< 350 CLEAR INPUT >QJ<
230 PEN 1:LOCATE 13,15:PRINT"Pour c >TF< 360 ni$=INKEY$ >TK<
370 IF ni$="" OR INSTR("123",ni$)=0 >RL<
THEN 360
380 at=2000*VAL(ni$) >RM<
390 ON VAL(op$) GOSUB 420,590,770,9 >AN<
400 GOSUB 1750 >BE<
410 REM----- >VF<
420 REM---addition--- >UG<
430 REM----- >XH<
440 FOR nq=1 TO 10 >RJ<
450 CLS#1:PEN 1 >RK<
460 a=INT(RND*(98)+2:IF aa=a THEN 46 >KL<
0 ELSE aa=a
470 a$=MID$(STR$(a),2) >EM<
480 b=INT(RND*(98)+2:IF bb=b THEN 48 >XN<
0 ELSE bb=b
490 b$=MID$(STR$(b),2) >JP<
500 xx=x-LEN(a$):yy=y+x$a$:GOSUB 2 >CF<
480
510 xx=x-LEN(b$):yy=y+x$b$:GOSUB >HG<
2400
520 xx=x-LEN(b$)-2:yy=y+x$b$+"":60 >XH<
SUB 2400
530 LOCATE xx,yy+2:FOR trait=1 TO L >CJ<
EN(b$)+2):PRINT CHR$(154):NEXT trai
t
540 so=a+b:so$=MID$(STR$(so),2) >HK<
550 GOSUB 1130 >ZL<
560 NEXT nq >NM<
570 RETURN >RN<
580 REM----- >YP<
590 REM---soustraction--- >MQ<
600 REM----- >QG<
610 FOR nq=1 TO 10 >QH<
620 CLS#1:PEN 1 >QJ<
630 a=INT(RND*(89))+10:IF aa=a THEN >XK<
630 ELSE aa=a
640 a$=MID$(STR$(a),2) >DL<
650 b=INT(RND*(98)+2:IF bb=b THEN 65 >VM<
0 ELSE bb=b
660 IF b>a THEN 650 >HN<
670 b$=MID$(STR$(b),2) >JP<
680 xx=x-LEN(a$):yy=y+x$a$:GOSUB 2 >MQ<
480

```



```

690 xx=x-LEN(b$):yy=y+3;x$=b$:GOSUB >TR<
2480
700 xx=x-LEN(b$)-2:yy=y+3;x$="":60 >ZH<
SUB 2480
710 LOCATE xx,yy+2:FOR trait=1 TO L >CJ<
EN(b$)+2:PRINT CHR$(154):NEXT trai
?
720 so=a-b:so$=MID$(STR$(so),2):IF >ZK<
so<10 THEN so$="0"+so$
730 GOSUB 1130 >ZL<
740 NEXT nq >NM<
750 RETURN >RN<
760 REM----- >XP<
770 REM---multiplication--- >BQ<
780 REM----- >ZR<
790 FOR nq=1 TO 10 >AT<
800 CLS#1:PEN 1 >QJ<
810 a=INT(RND*89)+10:IF aa=a THEN 8 >JK<
10 ELSE aaa=
820 a$=MID$(STR$(a),2) >DL<
830 b=INT(RND*8)+2:IF bb=b THEN 830 >HM<
ELSE bb=b
840 b$=MID$(STR$(b),2) >HN<
850 xx=x-LEN(a$):yy=y;x$=a$:GOSUB 2 >LP<
480
860 xx=x-LEN(b$):yy=y+3;x$=b$:GOSUB >RQ<
2480
870 xx=x-LEN(b$)-2:yy=y+3;x$="":60 >ER<
SUB 2480
880 LOCATE xx,yy+2:FOR trait=1 TO L >LT<
EN(b$)+2:PRINT CHR$(154):NEXT trai
t
890 so=a-b:so$=MID$(STR$(so),2) >QU<
900 GOSUB 1130 >YK<
910 NEXT nq >ML<
920 RETURN >QM<
930 REM----- >CN<
940 REM---division--- >DP<
950 REM----- >EQ<
960 FOR nq=1 TO 10 >ZT<
970 CLS#1:PEN 1 >TR<
980 a=INT(RND*89)+10:IF aa=a THEN 8 >JL<
10 ELSE aaa=
990 a$=MID$(STR$(a),2) >MV<
1000 b=INT(RND*8)+2:IF bb=b THEN 10 >QB<
00 ELSE bb=b
1010 b$=MID$(STR$(b),2) >ZC<
1020 xx=x-LEN(a$)-2:yy=y;x$=a$:GOSUB >FD<
B 2480
1030 xx=x+1:yy=y;x$=b$:GOSUB 2480 >QE<
1040 FOR trait=1 TO 7:LOCATE xx-2,y >XF<
+trait-1:PRINT CHR$(149):NEXT trait
:LOCATE xx-2,y+2:PRINT CHR$(151)+CH
R$(154)+CHR$(154)+CHR$(152)
1050 so=a-b:so$=MID$(STR$(so),2) >KB<
1060 GOSUB 1390 >BH<
1070 NEXT nq >MJ<
1080 RETURN >QK<
1090 REM----- >PL<
1100 REM-correction de +, - et * - >MC<
1110 REM----- >GD<
1120 REM >LE<
1130 FOR w=1 TO at:NEXT w:INK 1,1:P >AF<
EN 2
1140 LOCATE 1,15:PRINT"Quelle est t >VG<
a r"CHR$(212)+"ponse ? ":PEN 3
1150 CLEAR INPUT:INPUT"",re$ >PH<
1160 FOR ct=1 TO LEN(re$) >NJ<
1170 IF ASC(MID$(re$,ct,1))<47 OR A >MK<
SC(MID$(re$,ct,1))>57 THEN 1180 ELS
E 1190
1180 PRINT CHR$(7):LOCATE 25,15:PRI >YL<
NT CHR$(18):LOCATE 25,15:GOTO 1150
1190 NEXT >TM<
1200 re=VAL(re$) >FD<
1210 PEN 2 >PE<
1220 FOR w=1 TO 400:NEXT w:LOCATE 1 >BF<
,15:PRINT CHR$(18)
1230 INK 1,25 >ZG<
1240 xx=x-LEN(so$):yy=y+7;x$=so$:GO >CH<
SUB 2480:LOCATE 1,15
1250 IF re=so THEN 1260 ELSE 1300 >NJ<
1260 PRINT:PRINT:PRINT"JUSTE." >TK<
1270 j=j+1:xt=xt+3 >CL<
1280 CLEAR INPUT:FOR k=1 TO 5000:IF >LM<
INKEY$<>"" THEN 1290 ELSE NEXT k
1290 SOUND 1,100,0,15,2:LOCATE xt,y >HN<
t:PRINT wp$:RETURN
1300 PRINT:PRINT"Faux." >YE<
1310 IF re=0 THEN PRINT:PRINT"Tu n' >QF<
avais rien r"+CHR$(212)+"poudu !":6
0 TO 1330
1320 PRINT:PRINT"Tu avais r"+CHR$(2 >NG<
12)+ "poudu":PEN 1:PRINT re:PEN 2
1330 f=f+1:xtf=xtf-3 >VH<
1340 CLEAR INPUT:FOR k=1 TO 5000:IF >EJ<
INKEY$<>"" THEN 1350 ELSE NEXT k
1350 SOUND 1,100,50,15,2:FOR cl=1 >AK<
TO 30:LOCATE xtf,yt+1:PEN -3*(cl M
OD 2=0):PRINT wv$:NEXT:LOCATE xtf,y
t:PRINT ef$:RETURN
1360 REM----- >PL<
1370 REM-correction de la division >NM<
1380 REM----- >RN<
1390 FOR w=1 TO at:NEXT w:INK 1,1:P >JP<
EN 2
1400 LOCATE 1,16:PRINT"Quelle est t >VF<
a r"CHR$(212)+"ponse ? ":PEN 3
1410 CLEAR INPUT:INPUT"",re$ >NG<
1420 FOR ct=1 TO LEN(re$) >MH<
1430 IF ASC(MID$(re$,ct,1))<47 OR A >JJ<
SC(MID$(re$,ct,1))>57 THEN 1440 ELS
E 1450
1440 PRINT CHR$(7):LOCATE 25,16:PRI >YK<
NT CHR$(18):LOCATE 25,16:GOTO 1410
1450 NEXT >RL<
1460 re=VAL(re$) >PM<
1470 PEN 2 >YN<
1480 FOR w=1 TO 400:NEXT w:LOCATE 1 >LP<
,16:PRINT CHR$(18)
1490 INK 1,25 >HQ<
1500 xx=x+1:yy=y+3;x$=so$:GOSUB 248 >ZG<
0
1510 d1=(so\10)*10 >FH<
1520 d2=a-d1*b >BJ<
1530 IF d2<10 THEN d2$="0"+MID$(STR >AK<
$(d2),2) ELSE d2$=MID$(STR$(d2),2)
1540 r=a-so*b:r$=MID$(STR$(r),2) >ZL<
1550 PEN 3 >YM<
1560 IF a>10*b THEN 1570 ELSE 1590 >NM<
1570 xx=x-LEN(d2$)-2:yy=y+3;x$=d2$: >JP<
GOSUB 2480
1580 xx=x-LEN(r$)-2:yy=y+5;x$=r$:GO >DQ<
SUB 2480:GOTO 1600
1590 xx=x-LEN(r$)-2:yy=y+3;x$=r$:GO >HR<
SUB 2480
1600 PEN 2 >TH<
1610 IF re=so THEN 1620 ELSE 1660 >YJ<
1620 LOCATE 1,18:PRINT"JUSTE." >KK<
1630 j=j+1:xt=xt+3 >CL<
1640 CLEAR INPUT:FOR k=1 TO 5000:IF >LM<
INKEY$<>"" THEN 1650 ELSE NEXT k
1650 SOUND 1,100,0,0,2:LOCATE xt,yt >ZM<
:PRINT wp$:RETURN
1660 LOCATE 1,16:PRINT"Faux." >TP<
1670 IF re=0 THEN PRINT:PRINT"Tu n' >KQ<
avais rien r"+CHR$(212)+"poudu !":6
0 TO 1690
1680 PRINT:PRINT"Tu avais r"+CHR$(2 >YK<
12)+ "poudu":PEN 1:PRINT re:PEN 2
1690 f=f+1:xtf=xtf-3 >ET<
1700 CLEAR INPUT:FOR k=1 TO 5000:IF >EJ<
INKEY$<>"" THEN 1710 ELSE NEXT k
1710 SOUND 1,100,50,15,2:FOR cl=1 >AK<
TO 30:LOCATE xtf,yt+1:PEN -3*(cl M
OD 2=0):PRINT wv$:NEXT:LOCATE xtf,y
t:PRINT ef$:RETURN
1720 REM----- >TL<
1730 REM---fin de l'exercice--- >LM<
1740 REM----- >VN<
1750 CLS >UP<
1760 xx=14:yy=10;x$="bon voyage !": >NQ<
GOSUB 2480
1770 GOSUB 2720 >PR<
1780 CLS#1:LOCATE 1,15 >RT<
1790 IF f=0 THEN 1800 ELSE 1840 >MU<
1800 IF ni$="3" OR (ni$="2" AND (op >TK<
$="1" OR op$="2")) OR (ni$="1" AND
op$="1") THEN PRINT" Bravo, le conv
oi est arriv"+CHR$(212)+" intact !"
:GOTO 1880
1810 PEN 2:x$="FELICITATIONS !":xx= >ML<
13:yy=5:GOSUB 2480:LOCATE 15,9:PRIN
T"L ":
1820 PEN 2:LOCATE 11,11:PRINT"(!":P >MM<
EN 1:PRINT$":PEN 2:PRINT"oci"+CHR
$(212)+"t"+CHR$(212):PEN 1:PRINT"

```



```

N";PEN 2:PRINT"ationale":LOCATE 18
,12:PRINT"des":PEN 1:LOCATE 7,13:PR
INT"C";PEN 2:PRINT"alculateurs "":
PEN 1:PRINT"F";PEN 2:PRINT"antasti
ques)"
1830 LOCATE 5,15:PRINT"t'embauchera >EN<
d"+CHR$(213)+"s que tu voudras." :6
OSUB 1930:GOTO 1890
1840 IF f=1 THEN 1850 ELSE IF f=10 >GP<
THEN 1860 ELSE 1870
1850 PEN 2:LOCATE 15,6:PRINT"Pas ma >DQ<
1 1":PRINT:PRINT" Il manque tout de
m"+CHR$(214)+"me un petit wagon." :
LOCATE 7,10:PRINT"Tu es certainement
t capable":LOCATE 7,11:PRINT"de ram
ener tout le convoi." :6OSUB 1930:GO
TO 1890
1860 PRINT" Mes pauvres petits w >ER<
agons !!!!!":GOTO 1880
1870 PRINT" D"+CHR$(212)+"sol" >UT<
+CHR$(212)+" , il manque";f;"wagons.
"
1880 FOR w=1 TO 3000:NEXT w >LU<
1890 CLEAR INPUT:LOCATE 8,10:PRINT" >WV<
Vieux tu rejouer (0/N)? " :
1900 IF INKEY(34)=0 THEN PRINT"0":F >ZL<
OR w=1 TO 200:NEXT w:CLS:CLEAR INPU
T:partie+partie+1:GOTO 120
1910 IF INKEY(46)=0 THEN PRINT"N":G >LM<
OTO 1920 ELSE 1890
1920 FOR w=1 TO 1000:NEXT w:CLS:CAL >YN<
L &B02:END
1930 PEN 1:LOCATE 1,19:PRINT" Appui >JP<
e sur une touche pour continuer. "
PEN 2
1940 CALL &B06 >DQ<
1950 CLS:RETURN >FR<
1960 REM----- >WT<
1970 REM---page de presentation--- >GU<
1980 REM----- >VW<
1990 MODE 0:ti$="CALCUL MENTAL" >AW<
2000 INK 1,17:INK 2,15:INK 3,19:INK >PC<
4,11
2010 FOR ti=1 TO 14 >QD<
2020 Iti$=MID$(ti$,ti,1) >QE<
2030 IF Iti$=" " THEN 2110 >VF<
2040 FOR chu= 1 TO 15 >TB<
2050 PEN ti MOD 4+1 >JK<
2060 LOCATE 3+ti,chu:PRINT Iti$ >XJ<
2070 no=400-12*ti-12*chu:SOUND 1,no >VK<
,8,10:SOUND 2,no*0,5,8
2080 LOCATE 3+ti,chu:PRINT" " >FL<
2090 NEXT chu >LM<
2100 LOCATE 3+ti,chu:PRINT Iti$ >RD<
2110 NEXT ti >FE<
2120 FOR w=1 TO 300:NEXT >BF<
2130 SPEED INK 3,3:BORDER 7,11:ENV >DB<
2,15,-1,15:SOUND 1,0,400,15,2,0,30:
OUT 255,8:OUT 256,1:FOR w=1 TO 2000
: NEXT W:OUT 256,0
2140 BORDER 6:MODE 1:FOR w=1 TO 100 >VH<
0: NEXT
2150 RETURN >PJ<
2160 REM----- >NK<
2170 REM redefinition caracteres >ML<
2180 REM----- >QM<
2190 SYMBOL AFTER 0 >MN<
2200 SYMBOL 200,6,6,6,6,6,31,63,127 >ZE<
2210 SYMBOL 201,0,0,0,0,0,255,254,2 >KF<
54
2220 SYMBOL 202,0,127,127,112,112,2 >NG<
40,112,112
2230 SYMBOL 203,255,255,255,127,63, >TH<
15,15,6
2240 SYMBOL 204,255,255,255,255,0,0 >LJ<
,20
2250 SYMBOL 205,127,255,255,255,255 >JK<
,120,120,48
2260 lo$=CHR$(200)+CHR$(201)+CHR$(2 >VL<
02)+CHR$(10)+CHR$(8)+CHR$(8)+CHR$(8
)+CHR$(203)+CHR$(204)+CHR$(205)
2270 SYMBOL 206,63,63,255,255,63,15 >RM<
,15,6
2280 SYMBOL 207,255,255,255,255,255 >LN<
0,0,0
2290 SYMBOL 208,255,255,255,255,255 >PP<
,60,60,24
2300 wv$=CHR$(206)+CHR$(207)+CHR$(2 >CF<
08)
2310 SYMBOL 209,0,0,0,0,3,14,51,63 >BB<
2320 SYMBOL 210,0,28,51,255,204,127 >FH<
,204,255
2330 SYMBOL 211,0,0,0,192,240,156,2 >RJ<
43,255
2340 wp$=CHR$(209)+CHR$(210)+CHR$(2 >QK<
11)
2350 ef$=CHR$(10)+" " >VL<
2360 FOR i=1 TO 10:w$=w$+wv$:NEXT i >NM<
2370 tr$=lo$+w$ >MN<
2380 REM---accents--- >XP<
2390 SYMBOL 212,12,24,60,102,126,96 >UD<
,60
2400 SYMBOL 213,48,24,60,102,126,96 >WG<
,60
2410 SYMBOL 214,24,36,60,102,126,96 >VH<
,60
2420 SYMBOL 215,24,36,56,24,24,6 >NJ<
0
2430 REM---fumees--- >MK<
2440 SYMBOL 216,0,0,0,3,3 >DL<
2450 SYMBOL 217,0,0,24,60,60,24 >JM<
2460 SYMBOL 218,0,24,60,126,126,60, >PN<
24
2470 RETURN >VF<
2480 REM----- >AQ<
2490 REM---double hauteur--- >MR<
2500 REM----- >TH<
2510 RESTORE 2610 >BJ<
2520 d$=STRING$(81,32):d$="" >AK<
2530 FOR i=0 TO 80 >JL<
2540 READ j:d$=d$+CHR$(j) >MK<
2550 NEXT i >YN<
2560 d=Fndeeek(8d$+1) >AP<
2570 LOCATE xx,yy >KQ<
2580 FOR i=1 TO LEN(x$) >TR<
2590 POKE d+1,ASC(MID$(x$,i,1)) >BT<
2600 CALL d:NEXT i >PJ<
2610 DATA &3e,&6e,&cd,&a5,&bb,&16,& >MK<
fe,&3e,&19
2620 DATA &cd,&5a,&bb,&7a,&cd,&5a,& >HL<
bb,&0e,&04,&7e
2630 DATA &cd,&5a,&bb,&cd,&5a,&bb,& >JM<
23,&0d,&20,&f5
2640 DATA &14,&20,&e7,&3e,&fe,&cd,& >BN<
5a,&bb,&3e,&0a
2650 DATA &cd,&5a,&bb,&3e,&0b,&cd,& >LP<
5a,&bb,&3e,&ff
2660 DATA &cd,&5a,&bb,&3e,&0b,&cd,& >DQ<
5a,&bb,&3e,&5a
2670 DATA &bb,&3e,&0a,&cd,&5a,&bb,& >JR<
3e,&0b,&cd,&5a
2680 DATA &bb,&3e,&ff,&cd,&5a,&bb,& >AT<
3e,&0b,&cd,&5a
2690 DATA &bb,&3e >TU<
2700 RETURN >QK<
2710 REM----- >VL<
2720 REM---depart du train--- >FM<
2730 REM----- >XN<
2740 tr$="" :w$="" :FOR i=1 TO j >GP<
2750 w$=w$+CHR$(15)+"C"+wv$+CHR$(11 >AQ<
)+CHR$(8)+CHR$(8)+CHR$(8)+CHR$(15)+
"B"+wv$+CHR$(10)
2760 NEXT >XR<
2770 llo$=CHR$(15)+"C"+lo$ >JT<
2780 PEN 1:tr$=llo$+w$+CHR$(32)+CH >GU<
R$(11)+CHR$(8)+CHR$(32)
2790 CLS2:xt=35-j >AV<
2800 FOR i=36-j*3 TO 1 STEP -1 >ML<
2810 LOCATE i,yt:PRINT tr$ >VM<
2820 PEN 1 >XN<
2830 LOCATE i,21:PRINT CHR$(216);:6 >WP<
OSUB 2860:LOCATE i+1,20:PRINT CHR$(
217);:6OSUB 2860:LOCATE i+2,19:PRIN
T CHR$(218);:6OSUB 2860
2840 NEXT >WQ<
2850 RETURN >XR<
2860 IF i=1 THEN 2910 >GT<
2870 SOUND 1,4000,0,0,1,15 >EU<
2880 IF m=100 THEN m=50 ELSE m=100 >LV<
2890 IF z>10 THEN z=0 >BW<
2900 z=z+1:MASK m,0:PLOT 1,28:DRAWR >RM<
639,0:PLOT -5+z*(z=10),-2:DRAWR -
633,0
2910 PRINT CHR$(8)+CHR$(32) >FN<
2920 RETURN >VP<

```

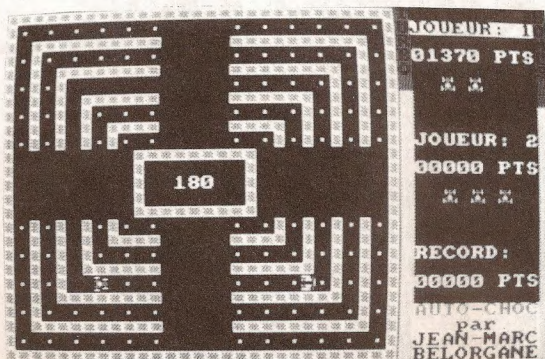


# AUTO-CHOC

Jean-Marc BELORGANE



*Le but du jeu est assez similaire à celui du PAC-MAN. C'est-à-dire qu'il faut ramasser le plus grand nombre de pièces d'or éparpillées tout au long d'un circuit, afin d'obtenir le maximum de points.*



L'originalité de cette version réside dans le fait que les PAC-MEN sont remplacés par deux formules 1 :

- l'une est conduite par le joueur,
- l'autre par l'AMSTRAD (ou plutôt par JR).

Le rôle de la voiture conduite par l'AMSTRAD est de provoquer une collision avec la voiture du joueur, en se plaçant intentionnellement sur sa route.

## MODE DE JEU

Il est possible de jouer :

- à un joueur,
- à deux joueurs,
- avec le clavier,
- avec un joystick (le même pour les deux joueurs).

La règle du jeu ainsi que les modes de jeu sont expliqués de manière plus étendue dans le programme.

Le logiciel "AUTO-CHOC" est composé

de 2 modules :

- AUTOCHOC.BAS qui constitue la présentation du jeu,
- AUTOCHOC.DAT qui constitue le programme en lui-même.

Le module AUTOCHOC.DAT est "mergé" en fin du module AUTOCHOC.BAS à la ligne 3390. De ce fait, ce module AUTOCHOC.DAT doit être sauvegardé par : SAVE "AUTOCHOC.DAT", A pour les utilisateurs d'un 464 accouplé à un lecteur DDI, dans le cas contraire, SAVE "AUTOCHOC.DAT" suffira.

La routine binaire incluse dans le second programme permet d'intégrer au basic Locomotive V1.0 de l'AMSTRAD, 5 nouvelles commandes : -

- | COPYCHR, X, Y, @ Caractère%
- | GPEN, Couleur
- | CURSEUR
- | AUTOJOUEUR, X, Y, ix, jy
- | AUTOAMSTRAD, X, Y, ox, oy

| COPYCHR, X, Y, @ Caractère%

Cette commande place dans la variable entière Caractère% le cpde ASCII du caractère situé aux coordonnées X et Y du curseur texte.

| GPEN, Couleur

Cette commande initialise la couleur du PEN GRAPHIC avec la couleur 'Couleur'. La variable 'Couleur' peut être un nombre compris entre 0 et 15.

| CURSEUR

Cette commande permet d'afficher ou d'effacer le bloc curseur texte à la position actuelle du curseur texte.

| AUTOJOUEUR, X, Y, ix, jy

Cette commande affiche la formule 1 du joueur aux coordonnées X et Y du curseur texte suivant les valeurs de ix et de jy.

- Si ix = -1 la commande affiche l'auto dirigée vers la gauche (jy = 0 dans ce cas).

- Si ix = 1 la commande affiche l'auto dirigée vers la droite (jy = 0 dans ce cas).

- Si jy = -1 la commande affiche l'auto dirigée vers le haut (ix = 0 dans ce cas).

- Si jy = 1 la commande affiche l'auto dirigée vers le bas (ix = 0 dans ce cas).

| AUTOAMSTRAD, X, Y, ox, oy

Cette commande affiche la formule 1 de l'AMSTRAD aux coordonnées X et Y du curseur texte suivant les valeurs de ox et de py.

- Si ox = -1 la commande affiche l'auto dirigée vers la gauche (py = 0 dans ce cas).

- Si ox = 1 la commande affiche l'auto dirigée vers la droite (py = 0 dans ce cas).



- Si py = -1 la commande affiche l'auto dirigée vers le haut (ox = 0 dans ce cas).  
- Si py = 1 la commande affiche l'auto dirigée vers le bas (ox = 0 dans ce cas ).



```

10 REM ***** >VB<
20 REM * >WC<
30 REM * A U T O - C H O C * >WD<
40 REM * >YE<
50 REM * par * >WF<
60 REM * >AG<
70 REM * Jean-Marc BELORGANE * >PH<
80 REM * alias Jumbosoft * >LJ<
90 REM * >DK<
100 REM * sur * >UB<
110 REM * >YC<
120 REM * AMSTRAD CPC-464 + DD1 * >VD<
130 REM * >AE<
140 REM ***** >BF<
150 REM ***** PRESENTATION ***** >TG<
160 REM ***** >BH<
170 ' >HJ<
180 ' V2.0 ---- MAI 1987 >ZK<
190 IF HIMEM=37119 THEN 1670 >BL<
200 ' >BC<
210 ' REDEFINITION DES CARACTERES >MD<
220 SYMBOL AFTER 127 >RE<
230 REM ---> LA FORMULE 1 >QF<
240 SYMBOL 165,0,0,0,252,252,252,252 >PG<
,252
250 SYMBOL 166,0,0,0,0,0,0,7 >DH<
260 SYMBOL 167,0,0,0,0,0,127,255 >FJ<
270 SYMBOL 168,0,0,0,0,64,240,248,24 >NK<
8
280 SYMBOL 169,0,0,0,0,0,0,32 >KL<
290 SYMBOL 170,60,63,56,48,16,16,8,7 >FM<

300 SYMBOL 171,127,255,255,127,127,1 >AD<
27,255,0
310 SYMBOL 172,255,255,255,255,255,2 >LE<
55,255,0
320 SYMBOL 173,240,255,254,252,254,2 >YF<
52,255,0
330 SYMBOL 174,240,255,248,240,240,1 >ZG<
12,248,7
340 SYMBOL 175,0,0,192,112,124,127,2 >RH<
55,0
350 REM ---> LES PNEUS DE LA F1 >LJ<
360 SYMBOL 176,0,7,8,16,16,16,8,7 >LK<

```

```

370 SYMBOL 177,0,0,128,64,64,64,128, >YL<
0
380 REM ---> LE COTE DE LA F1 >VM<
390 SYMBOL 178,0,0,31,31,31,31,0 >MN<
400 SYMBOL 179,0,0,255,255,255,255,2 >JE<
55,0
410 SYMBOL 180,0,0,224,240,240,240,2 >WF<
40,0
420 REM ---> LE PILOTE >JB<
430 SYMBOL 181,0,0,0,0,0,48,56,56 >LH<
440 SYMBOL 182,48,0,0,0,0,0,0 >KJ<
450 SYMBOL 183,192,0,0,0,0,0,0 >PK<
460 REM ---> ENJOLIVEURS DE LA F1 >PL<
470 SYMBOL 184,0,0,0,5,2,5,0,0 >NM<
480 SYMBOL 185,0,0,2,2,13,2,2,0 >TN<
490 SYMBOL 186,0,0,0,0,128,0,0,0 >WP<
500 REM ---> INVERSE DE CHR$(207) >UF<
510 SYMBOL 128,85,170,85,170,85,170, >KB<
85,170
520 REM ---> LE CIRCUIT >LH<
530 SYMBOL 129,0,127,107,85,107,85,1 >XJ<
07,126
540 SYMBOL 130,0,255,171,213,171,213 >YK<
,255,0
550 SYMBOL 131,0,254,170,214,170,214 >KL<
,234,126
560 SYMBOL 132,126,86,106,86,106,86, >JM<
106,126
570 SYMBOL 133,126,214,170,214,170,2 >MN<
14,254,0
580 SYMBOL 134,126,87,107,85,107,85, >DP<
127,0
590 REM ---> AUTO DE L'AMSTRAD >TQ<
600 SYMBOL 135,90,126,90,24,24,219,2 >BG<
55,195
610 SYMBOL 136,195,255,219,24,24,90, >DH<
126,90
620 SYMBOL 137,224,231,66,127,127,66 >DJ<
,231,224
630 SYMBOL 138,7,231,66,254,254,66,2 >XK<
31,7
640 REM ---> AUTO DES 2 JOUEURS >UL<
650 SYMBOL 139,165,255,189,60,24,90, >PM<
126,90
660 SYMBOL 140,90,126,90,24,60,189,2 >GN<
55,165
670 SYMBOL 141,224,71,242,127,127,24 >ZP<
2,71,224
680 SYMBOL 142,7,226,79,254,254,79,2 >PQ<
26,7
690 REM ---> PNEUS DE L'AMSTRAD >HR<
700 SYMBOL 145,66,66,66,0,0,195,195, >AH<
195
710 SYMBOL 146,195,195,195,0,0,66,66 >CJ<
,66
720 SYMBOL 147,224,231,0,0,0,0,231,2 >VK<
24
730 SYMBOL 148,7,231,0,0,0,0,231,7 >LL<
740 REM ---> PNEUS DES 2 JOUEURS >JM<

```

```

750 SYMBOL 149,129,129,153,24,0,66,6 >FN<
6,66
760 SYMBOL 150,66,66,66,0,24,153,129 >YP<
,129
770 SYMBOL 151,224,7,0,48,48,0,7,224 >UQ<
780 SYMBOL 152,7,224,0,24,24,0,224,7 >HR<

790 >RT<
800 IF HIMEM=37119 THEN 1670 >ZJ<
810 OPENOUT "d":MEMORY HIMEM-1:CLOSE >KK<
OUT
820 MEMORY 37119:tot=0:som=0:dta=0:a >HL<
d=&9100:erreur=0:lig=1090:RESTORE 11
00
830 WHILE som<>&22A AND erreur=0 >ZM<
840 som=0:tam=0:lig=lig+10 >KN<
850 FOR n=1 TO 7 >NP<
860 READ dta$ >FQ<
870 dta=VAL("&" + dta$):tam=tam+dt >AR<
a
880 POKE ad,dta:ad=ad+1 >AT<
890 NEXT >XU<
900 READ som >KK<
910 IF som<>tam THEN erreur=1 ELSE >NL<
tot=tot+tam
920 WEND >XM<
930 WHILE som<>&15B AND erreur=0 >DN<
940 som=0:tam=0:lig=lig+10 >LP<
950 FOR n=1 TO 3 >KQ<
960 READ dta$ >GR<
970 dta=VAL("&" + dta$):tam=tam+dt >BT<
a
980 POKE ad,dta:ad=ad+1 >BU<
990 NEXT >YV<
1000 READ som >DB<
1010 IF som<>tam THEN erreur=1 ELSE >GC<
tot=tot+tam
1020 WEND >QD<
1030 ' >FE<
1040 IF tot=36025 THEN CALL 37120:GO >YF<
TO 1670
1050 PRINT CHR$(7);:MODE 1:PEN 1 >LG<
1060 PRINT:PRINT "ERREUR de DATAS"; >LH<
1070 IF erreur THEN PRINT " a la lig >TJ<
ne ";lig:PRINT:PRINT "tam =&";HEX$(t
am);" au lieu de &";HEX$(som);" !!!
";CHR$(7);
1080 PRINT:PRINT:PRINT "tot =&";tot;" >ZK<
au lieu de 36025 !!!";CHR$(7):PRINT
:STOP
1090 REM >TL<
1100 DATA 01,0E,91,21,0A,91,CD,&229 >EC<
1110 DATA D1,BC,C9,00,00,00,00,&256 >PD<
1120 DATA 1F,91,C3,AF,91,C3,CD,&443 >ZE<
1130 DATA 91,C3,D6,91,C3,D9,91,&4E8 >KF<
1140 DATA C3,3A,92,43,4F,50,59,&2CA >QB<
1150 DATA 43,48,D2,47,50,45,CE,&307 >MH<
1160 DATA 43,55,52,53,45,55,D2,&2A9 >XJ<

```



|                                                         |      |                                                                                                 |      |                                 |      |
|---------------------------------------------------------|------|-------------------------------------------------------------------------------------------------|------|---------------------------------|------|
| 1170 DATA 41,55,54,4F,4A,4F,55,&227                     | >RK< | 1730 LOCATE #1,1,2:PRINT #1," ";CHR\$(164);" JUMBOSDFT 1987"                                    | >HM< | 2140 MOVE 179,78:DRAW 461,78    | >BH< |
| 1180 DATA 45,55,D2,41,55,54,4F,&2A5                     | >PL< | 1740                                                                                            | >PN< | 2150 MOVE 218,57:DRAW 422,57    | >LJ< |
| 1190 DATA 41,4D,53,54,52,41,C4,&28C                     | >KM< | 1750 REM ---> DESSIN DE LA F1                                                                   | >KP< | 2160 MOVE 257,34:DRAW 383,34    | >LK< |
| 1200 DATA 00,20,16,01,0F,03,8C,&0D5                     | >BD< | 1760 x=8:y1=10:y2=11                                                                            | >UQ< | 2170 MOVE 297,13:DRAW 337,13    | >JL< |
| 1210 DATA 08,0F,01,96,16,00,20,&0E4                     | >VE< | 1770 LOCATE x,y1:PRINT CHR\$(22)+CHR\$(1);                                                      | >ZR< | 2180                            | >NM< |
| 1220 DATA 16,01,0F,03,8B,08,0F,&0CB                     | >WF< | 1780 PEN 4:LOCATE x,y1:PRINT CHR\$(165);CHR\$(166);CHR\$(167);CHR\$(168);CHR\$(169);            | >AT< | 2190 REM ---> DESSIN DU COIN-1. | >UN< |
| 1230 DATA 01,95,16,00,20,16,01,&0E3                     | >WG< | 1790 PEN 4:LOCATE x,y2:PRINT CHR\$(170);CHR\$(171);CHR\$(172);CHR\$(173);CHR\$(174);CHR\$(175); | >HU< | 2200 cy=350                     | >PE< |
| 1240 DATA 0F,03,8D,0B,0F,01,97,&14E                     | >YH< | 1800 PEN 5:LOCATE x,y2:PRINT CHR\$(176);CHR\$(177);                                             | >GK< | 2210 MOVE 0,cy:DRAW 17,185,8    | >EF< |
| 1250 DATA 16,00,20,16,01,0F,03,&05F                     | >MJ< | 1810 PEN 6:LOCATE x,y2:PRINT " ";CHR\$(178);CHR\$(179);CHR\$(180);                              | >DL< | 2220 MOVE 0,cy:DRAW 38,194,9    | >KG< |
| 1260 DATA 8E,08,0F,01,98,16,00,&154                     | >QK< | 1820 PEN 7:LOCATE x,y1:PRINT " ";CHR\$(181);                                                    | >UM< | 2230 MOVE 0,cy:DRAW 53,204,10   | >TH< |
| 1270 DATA 20,16,01,0F,01,87,08,&0D6                     | >DL< | 1830 PEN 7:LOCATE x,y2:PRINT " ";CHR\$(182);CHR\$(183);                                         | >YN< | 2240 MOVE 0,cy:DRAW 75,215,11   | >BJ< |
| 1280 DATA 0F,03,91,0F,01,16,00,&0C9                     | >RM< | 1840 PEN 3:LOCATE x,y2:PRINT CHR\$(184);" ";CHR\$(185);CHR\$(186);                              | >DP< | 2250 MOVE 0,cy:DRAW 89,224,12   | >JK< |
| 1290 DATA 20,16,01,0F,01,88,08,&0D7                     | >HN< | 1850 PEN 2:LOCATE x,y2:PRINT CHR\$(187);CHR\$(188);                                             | >DQ< | 2260 MOVE 0,cy:DRAW 109,234,13  | >GL< |
| 1300 DATA 0F,03,92,0F,01,16,00,&0CA                     | >UE< | 1860 LOCATE 1,1:PRINT CHR\$(22)+CHR\$(0);:PEN 1                                                 | >XR< | 2270 MOVE 0,cy:DRAW 127,244,14  | >KM< |
| 1310 DATA 20,16,01,0F,01,89,08,&0D8                     | >CF< | 1870                                                                                            | >UT< | 2280 MOVE 0,cy:DRAW 146,254,15  | >PN< |
| 1320 DATA 0F,03,93,0F,01,16,00,&0CB                     | >YG< | 1880 REM ---> DESSIN DES CADRES ET L'ORANGE                                                     | >BU< | 2290 MOVE 0,cy:DRAW 161,265,8   | >PP< |
| 1330 DATA 20,16,01,0F,01,8A,08,&0D9                     | >PH< | 1890 ORIGIN 0,49:IGPEN,1:DRAW 0,350:DRAW 639,0:DRAW 0,-350:DRAW -639,0                          | >DV< | 2300 MOVE 0,cy:DRAW 178,272,9   | >NF< |
| 1340 DATA 0F,03,94,0F,01,16,00,&0CC                     | >CJ< | 1900 MOVE 319,0:DRAW 0,175:DRAW 319,175:DRAW 319,-175:DRAW -320,-175                            | >ML< | 2310 MOVE 0,cy:DRAW 193,283,10  | >GG< |
| 1350 DATA FE,03,C0,CD,7B,BB,E5,&4A6                     | >PK< | 1910                                                                                            | >NM< | 2320 MOVE 0,cy:DRAW 215,293,11  | >EH< |
| 1360 DATA DD,66,04,DD,6E,02,CD,&361                     | >DL< | 1920 REM ---> DESSIN DU SOL EN 3D                                                               | >RN< | 2330 MOVE 0,cy:DRAW 231,303,12  | >WJ< |
| 1370 DATA 75,BB,CD,60,BB,DD,56,&44B                     | >PM< | 1930 cy=175                                                                                     | >EP< | 2340 MOVE 0,cy:DRAW 251,312,13  | >AK< |
| 1380 DATA 01,DD,5E,00,12,E1,C3,&2F2                     | >UN< | 1940 MOVE 53,cy:DRAW 16,166,3                                                                   | >TQ< | 2350 MOVE 0,cy:DRAW 267,323,14  | >ML< |
| 1390 DATA 75,BB,FE,01,C0,DD,7E,&44A                     | >PP< | 1950 MOVE 89,cy:DRAW 57,144,2                                                                   | >DR< | 2360 MOVE 0,cy:DRAW 285,333,15  | >QM< |
| 1400 DATA 00,C3,DE,BB,C3,8A,BB,&464                     | >XF< | 1960 MOVE 126,cy:DRAW 97,120,3                                                                  | >XT< | 2370 MOVE 0,cy:DRAW 300,343,8   | >EN< |
| 1410 DATA FE,04,C0,DD,7E,02,3C,&35B                     | >KG< | 1970 MOVE 160,cy:DRAW 136,101,2                                                                 | >PU< | 2380                            | >QP< |
| 1420 DATA FE,00,20,03,C3,FE,91,&373                     | >JH< | 1980 MOVE 192,cy:DRAW 176,78,3                                                                  | >NV< | 2390 REM ---> DESSIN DU COIN-2  | >XQ< |
| 1430 DATA DD,7E,02,3C,FE,02,20,&2B9                     | >VJ< | 1990 MOVE 228,cy:DRAW 216,57,2                                                                  | >EW< | 2400 cx=639                     | >BG< |
| 1440 DATA 03,C3,07,92,DD,7E,00,&2BA                     | >ZK< | 2000 MOVE 265,cy:DRAW 257,35,3                                                                  | >PC< | 2410 MOVE cx,cy:DRAW 334,343,9  | >ZH< |
| 1450 DATA 3C,FE,00,CA,10,92,C3,&369                     | >FL< | 2010 MOVE 302,cy:DRAW 298,12,2                                                                  | >FD< | 2420 MOVE cx,cy:DRAW 353,331,10 | >RJ< |
| 1460 DATA 19,92,06,0C,11,6B,91,&1CA                     | >VM< | 2020 MOVE 335,cy:DRAW 339,14,3                                                                  | >ME< | 2430 MOVE cx,cy:DRAW 378,318,11 | >GK< |
| 1470 DATA CD,22,92,C9,06,0C,11,&26D                     | >QN< | 2030 MOVE 379,cy:DRAW 384,38,2                                                                  | >CF< | 2440 MOVE cx,cy:DRAW 392,309,12 | >EL< |
| 1480 DATA 5F,91,CD,22,92,C9,06,&340                     | >LP< | 2040 MOVE 417,cy:DRAW 434,65,3                                                                  | >TB< | 2450 MOVE cx,cy:DRAW 417,297,13 | >LM< |
| 1490 DATA 0C,11,47,91,CD,22,92,&276                     | >PQ< | 2050 MOVE 458,cy:DRAW 477,88,2                                                                  | >LH< | 2460 MOVE cx,cy:DRAW 437,285,14 | >MN< |
| 1500 DATA C9,06,0C,11,53,91,CD,&29D                     | >QB< | 2060 MOVE 497,cy:DRAW 526,115,3                                                                 | >DJ< | 2470 MOVE cx,cy:DRAW 458,274,15 | >QP< |
| 1510 DATA 22,92,C9,CD,19,BD,DD,&3FD                     | >VH< | 2070 MOVE 538,cy:DRAW 569,138,2                                                                 | >MK< | 2480 MOVE cx,cy:DRAW 476,262,8  | >NQ< |
| 1520 DATA 66,06,DD,6E,04,E5,E1,&381                     | >ZJ< | 2080 MOVE 578,cy:DRAW 618,164,3                                                                 | >ML< | 2490 MOVE cx,cy:DRAW 496,252,9  | >RR< |
| 1530 DATA E5,CD,75,BB,1A,13,CD,&3DC                     | >YK< | 2090 IGPEN,1                                                                                    | >FM< | 2500 MOVE cx,cy:DRAW 516,241,10 | >RH< |
| 1540 DATA 5A,BB,10,F4,E1,C9,FE,&4C1                     | >JL< | 2100 MOVE 1,175:DRAW 639,175                                                                    | >HD< | 2510 MOVE cx,cy:DRAW 536,231,11 | >VJ< |
| 1550 DATA 04,C0,DD,7E,02,3C,FE,&35B                     | >QM< | 2110 MOVE 58,144:DRAW 581,144                                                                   | >LE< | 2520 MOVE cx,cy:DRAW 558,218,12 | >GK< |
| 1560 DATA 00,20,03,C3,5F,92,DD,&2B4                     | >GN< | 2120 MOVE 96,122:DRAW 542,122                                                                   | >CF< | 2530 MOVE cx,cy:DRAW 577,209,13 | >KL< |
| 1570 DATA 7E,02,3C,FE,02,20,03,&1DF                     | >AP< | 2130 MOVE 138,100:DRAW 501,100                                                                  | >NG< | 2540 MOVE cx,cy:DRAW 598,197,14 | >XM< |
| 1580 DATA C3,71,92,DD,7E,00,3C,&35D                     | >RQ< |                                                                                                 |      | 2550 MOVE cx,cy:DRAW 617,187,15 | >PN< |
| 1590 DATA FE,00,CA,68,92,C3,7A,&3FF                     | >JR< |                                                                                                 |      | 2560                            | >QP< |
| 1600 DATA 92,06,0E,11,A1,91,CD,&2B6                     | >FH< |                                                                                                 |      | 2570 REM ---> DESSIN DU COIN-3  | >YQ< |
| 1610 DATA 22,92,C9,06,0E,11,77,&219                     | >UJ< |                                                                                                 |      | 2580 MOVE cx,0:DRAW 618,163,8   | >VR< |
| 1620 DATA 91,CD,22,92,C9,06,0E,&2EF                     | >RK< |                                                                                                 |      | 2590 MOVE cx,0:DRAW 592,150,9   | >UT< |
| 1630 DATA 11,93,91,CD,22,92,C9,&37F                     | >PL< |                                                                                                 |      | 2600 MOVE cx,0:DRAW 569,136,10  | >MJ< |
| 1640 DATA 06,0E,11,85,91,CD,22,&22A                     | >RM< |                                                                                                 |      | 2610 MOVE cx,0:DRAW 547,124,11  | >GK< |
| 1650 DATA 92,C9,00,&15B                                 | >BN< |                                                                                                 |      | 2620 MOVE cx,0:DRAW 526,112,12  | >CL< |
| 1660                                                    | >QP< |                                                                                                 |      | 2630 MOVE cx,0:DRAW 502,101,13  | >WM< |
| 1670 REM ---> PRESENTATION                              | >QQ< |                                                                                                 |      | 2640 MOVE cx,0:DRAW 479,86,14   | >YN< |
| 1680 MODE 0:BORDER 0                                    | >WR< |                                                                                                 |      | 2650 MOVE cx,0:DRAW 457,76,15   | >VP< |
| 1690 FOR i=0 TO 15:INK i,0:NEXT i                       | >QT< |                                                                                                 |      | 2660 MOVE cx,0:DRAW 435,62,8    | >LQ< |
| 1700 WINDOW #0,1,20,1,22:WINDOW #1,1,20,23,25           | >ZJ< |                                                                                                 |      | 2670 MOVE cx,0:DRAW 411,50,9    | >DR< |
| 1710 PAPER 0:CLS:PEN 1:PAPER #1,1:CLS #1:PEN #1,0       | >RK< |                                                                                                 |      | 2680 MOVE cx,0:DRAW 385,37,10   | >PT< |
| 1720 TAG:MOVE 176,304:IGPEN,1:PRINT "AUTO-CHOC";:TAGOFF | >NL< |                                                                                                 |      | 2690 MOVE cx,0:DRAW 359,23,11   | >MU< |
|                                                         |      |                                                                                                 |      | 2700 MOVE cx,0:DRAW 338,11,12   | >YK< |
|                                                         |      |                                                                                                 |      | 2710                            | >ML< |
|                                                         |      |                                                                                                 |      | 2720 REM ---> DESSIN DU COIN-4  | >WM< |



```

2730 MOVE 0,0: DRAW 299,11,13 >TN<
2740 MOVE 0,0: DRAW 278,22,14 >UP<
2750 MOVE 0,0: DRAW 259,33,15 >XQ<
2760 MOVE 0,0: DRAW 239,45,8 >ZR<
2770 MOVE 0,0: DRAW 219,54,9 >ZT<
2780 MOVE 0,0: DRAW 201,64,10 >KU<
2790 MOVE 0,0: DRAW 177,76,11 >DV<
2800 MOVE 0,0: DRAW 163,87,12 >TL<
2810 MOVE 0,0: DRAW 138,101,13 >KM<
2820 MOVE 0,0: DRAW 116,110,14 >HN<
2830 MOVE 0,0: DRAW 97,123,15 >WP<
2840 MOVE 0,0: DRAW 76,133,8 >VQ<
2850 MOVE 0,0: DRAW 57,142,10 >PR<
2860 MOVE 0,0: DRAW 37,154,12 >UT<
2870 MOVE 0,0: DRAW 18,165,14 >YU<
2880 >WV<
2890 REM ---> REDESSIN DES CADRE ET >CW<
LOSANGE
2900 ORIGIN 0,49: IGPEN,1: DRAW 0,350: >WM<
DRAW 639,0: DRAW 0,-350: DRAW -639,
0
2910 MOVE 319,0: DRAW 0,175: DRAW 319 >PN<
,175: DRAW -319,-175: DRAW -320,-175
2920 >QP<
2930 REM ---> ANIMATION >RQ<
2940 DIM couleur(15): RESTORE 2980 >PR<
2950 FOR i=0 TO 15 >NT<
2960 READ couleur(i): INK i,couleur(i) >MU<
)
2970 NEXT i: PRINT CHR$(7); >QV<
2980 DATA 0,26,26,0,6,11,9,25, 2,3,6 >YW<
,8,15,18,24,23
2990 INK 2,0,26: INK 3,26,0 >RX<
3000 k=0: a=0: b=0: c=0: ad=2.2 >ED<
3010 FOR i=1 TO 20: z#=INKEY$: NEXT >EE<
3020 RESTORE 3250 >EF<
3030 WHILE z#="" AND k<200 >MG<
3040 FOR j=0 TO 7 >DH<
3050 FOR i=8 TO 15 >NJ<
3060 l=(j+i) MOD 16: IF l<8 THEN l=l+ >NK<
8
3070 INK i,couleur(l) >DL<
3080 NEXT i: IF k>50 THEN a=a+1: IF a< >WM<
61 THEN GOSUB 3180
3090 k=k+1 >BN<
3100 NEXT j >QE<
3110 z#=INKEY$ >ZF<
3120 WEND: SOUND 135,0,1,0 >BG<
3130 IF FRE("")<20000 THEN 3390 ELSE >DH<
CHAIN MERGE "!AUTOCHOC.DAT",3390,DE
LETE 3390-
3140 STOP >XJ<
3150 >LK<
3160 REM *MUSIQUE DE PRESENTATION* >NL<
3170 REM ***** >UM<
3180 READ b,c >YN<
3190 IF b=100 THEN per=0: GOTO 3210 >RP<
3200 per=ROUND(125000/(440*(2^((b-10 >YF<
)/12))))

```

```

3210 SOUND 2,per,c*ad,13 >NG<
3220 SOUND 2,0,1,0 >ZH<
3230 IF ad=2.2 AND a=33 THEN SOUND 2 >PJ<
,1,22,1
3240 RETURN >QK<
3250 DATA 1,5,3,5,5,10,8,10,8,10 >BL<
3260 DATA 10,10,8,10,5,10,1,10,1,5 >TM<
3270 DATA 3,5,5,10,5,10,3,10,1,10 >TN<
3280 DATA 3,20,3,10,1,5,3,5,5,10,8 >DP<
3290 DATA 10,8,10,10,10,8,10,5,10 >AQ<
3300 DATA 1,10,1,5,3,5,5,10,5,10,3 >PG<
3310 DATA 10,3,10,1,20,1,10,6,20,6 >MH<
3320 DATA 20,10,10,10,20,10,10,8 >KJ<
3330 DATA 10,8,10,5,10,1,10,3,20,3 >RK<
3340 DATA 10,1,10,5,10,8,10,8,10 >UL<
3350 DATA 10,10,8,10,5,10,1,10,1,5 >TM<
3360 DATA 3,5,5,10,5,10,3,10,3,10 >VN<
3370 DATA 1,40,100,30 >AP<
3380 >RQ<
3390 REM ---< LIGNE DE CHAINAGE de A >QR<
UTOCHOC.DAT >---

```

## Listing 2

```

3390 REM ***** >QR<
3400 REM * >FH<
3410 REM * PROGRAMME PRINCIPAL * >FJ<
3420 REM * >HK<
3430 REM ***** >KL<
3440 REM >UM<
3450 REM ** INITIALISATION ** >BN<
3460 REM ***** >BP<
3470 ON BREAK GOSUB 8820 >DQ<
3480 ENT -1,8,-1,1,16,1,1,8,-1,1 >KR<
3490 CLEAR: DEFINIT b-z: DIM no$(3),ta >KT<
ble$(25)
3500 no$(1)="!!!qbs!!!": no$(2)="KFB >UJ<
0.NBSD": no$(3)="CFMPSHBOF"
3510 in$=CHR$(24): so$=CHR$(7): image >YK<
=0: objet=144: record=0
3520 car$=CHR$(22)+CHR$(1)+CHR$(15) >JL<
+CHR$(3)+CHR$(207)+CHR$(8)+CHR$(15)
+CHR$(1)+CHR$(128)+CHR$(22)+CHR$(0)
+CHR$(15)+CHR$(2)
3530 RESTORE 6970 >ZM<
3540 FOR i=1 TO 25 >LN<
3550 READ d$ >VP<
3560 FOR j=1 TO LEN(d$) >WQ<
3570 k=ASC(MID$(d$,j,1)) >BR<
3580 IF k=32 THEN table$(i)=table >LT<
$(i)+" " ELSE table$(i)=table$(i)+C
HR$(k+30)
3590 NEXT >ZU<

```

```

3600 NEXT >QK<
3610 >ML<
3620 REM **** REGLES DU JEU **** >MM<
3630 REM ***** >EN<
3640 MODE 1: CALL &BC02: INK 2,8: INK >GP<
3,18
3650 LOCATE 12,1: PRINT "A U T O - C >TQ<
H O C";
3660 LOCATE 10,3: PRINT CHR$(164);" >UR<
Jean-Marc BELORGANE"
3670 LOCATE 14,7: PRINT "REGLES DU J >UT<
EU"
3680 LOCATE 1,10: PRINT " Assis au v >CU<
olant d'une superbe FERRARI.";
3690 LOCATE 1,11: PRINT "vous devez >HV<
essayer de rester le plus lon";
3700 LOCATE 1,12: PRINT "-gtemps pos >NL<
sible sur la piste, en ramas-";
3710 LOCATE 1,13: PRINT "sant au pas >QM<
sage les pieces d'or eparpil-";
3720 LOCATE 1,14: PRINT "lees sur vo >XN<
tre chemin.";
3730 REM >WF<
3740 LOCATE 1,17: PRINT " J'ai bien >KQ<
dit essayer car comme vous";
3750 LOCATE 1,18: PRINT "vous en dou >VR<
tez, l'ignoble JR a bors de ";
3760 LOCATE 1,19: PRINT "sa LUCIFER >AT<
2000 est la pour faire echou-";
3770 LOCATE 1,20: PRINT "er votre mi >WU<
ssion en se placant volontai-";
3780 LOCATE 1,21: PRINT "rement sur >MV<
votre route...";
3790 GOSUB 8590 ' ATTENTE D'UNE TOU >QW<
CHE
3800 CLS >RM<
3810 LOCATE 12,1: PRINT "A U T O - C >QN<
H O C";
3820 LOCATE 10,3: PRINT CHR$(164);" >RP<
Jean-Marc BELORGANE"
3830 LOCATE 14,6: PRINT "REGLES DU J >QQ<
EU"
3840 LOCATE 1, 8: PRINT "-Les touche >YR<
s de commandes de votre FER-";
3850 LOCATE 1, 9: PRINT "RARI sont 1 >JT<
es suivantes :";
3860 LOCATE 6,11: PEN 2: PRINT "A";: P >BU<
EN 1: PRINT " pour ";: PEN 3: PRINT "v
ous diriger en HAUT";
3870 LOCATE 6,13: PEN 2: PRINT "Z";: P >BV<
EN 1: PRINT " pour ";: PEN 3: PRINT "v
ous diriger en BAS";
3880 LOCATE 6,15: PEN 2: PRINT "/";: P >HW<
EN 1: PRINT " pour ";: PEN 3: PRINT "v
ous diriger a GAUCHE";
3890 LOCATE 6,17: PEN 2: PRINT "\";: P >NX<
EN 1: PRINT " pour ";: PEN 3: PRINT "v
ous diriger a DROITE";
3900 LOCATE 1,19: PEN 2: PRINT "ESPAC >DN<

```



```

E";:PEN 1:PRINT " pour ";:PEN 3:PRI
NT "actionner le TURBO";
3910 LOCATE 1,21:PRINT "-Bien >NP<
entendu il est egalement possible"
;
3920 LOCATE 1,22:PRINT "de jouer av >AQ<
ec le JOYSTICK..."
3930 GOSUB 8590 >AR<
3940 ' >UT<
3950 MODE 1:BORDER 3 >CU<
3960 INK 0,0:INK 1,26:INK 2,9:INK 3 >VV<
,15
3970 WINDOW #0, 1,40, 1,25:PEN #0,1 >PW<
:PAPER #0,0
3980 WINDOW #1,31,39, 1,21:PEN #1,1 >DX<
:PAPER #1,0
3990 WINDOW #2,31,39,22,25:PEN #2,0 >TY<
:PAPER #2,1
4000 WINDOW #3,30,30, 1,25:PEN #3,0 >ME<
:PAPER #3,2
4010 WINDOW #4,40,40, 1,25:PEN #4,0 >UF<
:PAPER #4,2
4020 CLS#0:CLS#1:CLS#4:CLS#2:CLS#3 >HG<
4030 ' >JH<
4040 REM ** AFFICHAGE GENERAL ** >DJ<
4050 REM ***** >JK<
4060 GOSUB 6910 ' Affichage du circ >AL<
uit
4070 GOSUB 7250 ' Affichage du joue >QM<
ur 1
4080 GOSUB 7370 ' Affichage du joue >WN<
ur 2
4090 GOSUB 7490 ' Affichage du reco >RP<
rd
4100 GOSUB 7740 ' Affichage du titr >WF<
e
4110 GOSUB 7890 ' Affichage de TURB >QG<
0
4120 GOSUB 8020 ' Affichage de BONU >WH<
S
4130 GOSUB 8390 ' Musique No2 >JJ<
4140 ' >LK<
4150 REM ***** INTRODUCTION ***** >KL<
4160 REM ***** >HM<
4170 WINDOW SWAP 0,2:CLS >QN<
4180 LOCATE 1,1:PRINT "COMBIEN"; >RP<
4190 LOCATE 1,2:PRINT " DE"; >PQ<
4200 LOCATE 1,3:PRINT "JOUEURS"; >NG<
4210 LOCATE 1,4:PRINT "1 ou 2 ?"; >PH<
4220 j=0:EVERY 15,3 GOSUB 8550 >UJ<
4230 GOSUB 8720: ' VIDAGE DU BUFFER >YK<
CLAVIER
4240 jo$=INKEY$:IF jo$="" THEN 4240 >LL<
4250 IF jo$<>"1" AND jo$<>"2" THEN >AM<
PRINT so$;GOTO 4240
4260 sto3=REMAIN(3):!CURSEUR:PRINT >LN<
jo$;:jo=VAL(jo$)
4270 GOSUB 8770: ' TEMPORISATION >XP<

```

```

4280 CLS:WINDOW SWAP 2,0:GOSUB 7740 >BQ<
4290 ' >TR<
4300 REM ***** PARTIE ***** >MH<
4310 REM ***** >FJ<
4320 parcours1=0:parcours2=0:jeueur >EK<
=0:pistea=0:pistej=0:sortie=0
4330 partiel=1:partie2=1:apts1=0:ap >XL<
ts2=0:mei=0:route=0:bonus=0:coef1=1
:coef2=1
4340 REM >UM<
4350 WHILE partiel<4 AND partie2<4 >XN<
4360 GOSUB 4640 ' Partie du joueu >JP<
r 1
4370 partiel=partiel+1:IF partiel >QQ<
>3 THEN GOSUB 4830
4380 IF jo=2 THEN GOSUB 4950 ' Pa >NR<
rtie du joueur 2
4390 IF jo=2 THEN partie2=partie2 >MT<
+1:IF partie2>3 THEN GOSUB 5140
4400 WEND >WJ<
4410 ' >LK<
4420 REM ***** FIN DU JEU ***** >VL<
4430 REM ***** >RM<
4440 IF apts1>=apts2 THEN mei=apts1 >UN<
ELSE mei=apts2
4450 IF mei>record THEN GOSUB 7550 >UP<
4460 REM >XQ<
4470 WINDOW SWAP 0,2:CLS >UR<
4480 LOCATE 1,2:PRINT "ON REJOU"; >LT<
4490 LOCATE 1,3:PRINT "UNE AUTRE"; >QU<
4500 LOCATE 1,4:PRINT "PARTIE ?"; >YK<
4510 J=0:EVERY 15,3 GOSUB 8550 >WL<
4520 GOSUB 8720 >QM<
4530 rep$=LOWER$(INKEY$):IF rep$="" >PN<
THEN 4530
4540 IF rep$<>"o" AND rep$<>"n" THE >MP<
N PRINT so$;GOTO 4530
4550 sto3=REMAIN(3):!CURSEUR:PRINT >MQ<
rep$;
4560 GOSUB 8770 >AR<
4570 WINDOW SWAP 2,0 >LT<
4580 IF rep$="o" THEN i=FRE(""):GOT >RU<
0 4070 ' Retour a L'AFFICHAGE GENE
RAL
4590 CLEAR:RUN >YV<
4600 ' >ML<
4610 ' >NM<
4620 REM ** PARTIE DU JOUEUR-1 ** >DN<
4630 REM ***** >JP<
4640 GOSUB 7890:GOSUB 8020:jeueur=1 >PQ<
:LOCATE #1,9-2*partiel,6:PRINT #1,"
";
4650 turbo=0:drap=1:yturbo=6 >TR<
4660 LOCATE #1,1,2:PRINT #1,in$;"JO >MT<
UEUR: 1";in$;
4670 route=parcours1 MOD 5:coef1=1+ >JU<
INT(parcours1/5)
4680 GOSUB 5260 ' GESTION DU JOUEUR >BV<

```

```

4690 IF point MOD 121=0 THEN point= >HW<
0:parcours1=parcours1+1:GOTO 4670
4700 LOCATE #1,1,2:PRINT #1,"JOUEUR >XM<
: 1";
4710 RETURN >UN<
4720 ' >QF<
4730 REM * AFFICHAGE SCORE-1 * >EQ<
4740 REM ***** >QR<
4750 apts1=apts1+coef1:apts1=apts1 >TT<
MOD 10000:point=point+1
4760 LOCATE #1,1,4 >CU<
4770 PRINT #1,RIGHT$("0000"+MID$(ST >GV<
R$(apts1),2),4)
4780 FOR i=40 TO 1 STEP -10:SOUND 4 >KW<
,i,0.5,12:NEXT
4790 RETURN >CX<
4800 ' >PN<
4810 REM * GAME OVER JOUEUR-1 * >EP<
4820 REM ***** >KQ<
4830 GOSUB 8320 >QR<
4840 FOR n=1 TO 5 >RT<
4850 LOCATE #1,1,2:PRINT #1,"GAME >XU<
OVER";
4860 GOSUB 8770:LOCATE #1,1,2 >FV<
4870 PEN #1,3:PRINT #1,"JOUEUR: 1 >ZW<
";
4880 PEN #1,1:GOSUB 8770 >HX<
4890 NEXT n:SOUND 135,0,1,0 >WY<
4900 LOCATE #1,1,6:PEN #1,3:PRINT # >DP<
1,"GAME OVER";:PEN #1,1
4910 RETURN >WQ<
4920 ' >TR<
4930 REM ** PARTIE DU JOUEUR-2 ** >JT<
4940 REM ***** >NU<
4950 GOSUB 7890:GOSUB 8020:jeueur=2 >XV<
:LOCATE #1,9-2*partie2,14:PRINT #1,
" ";
4960 turbo=0:drap=1:yturbo=6 >XW<
4970 LOCATE #1,1,10:PRINT #1,in$;"J >UX<
OUEUR: 2";in$;
4980 route=parcours2 MOD 5:coef2=1+ >RY<
INT(parcours2/5)
4990 GOSUB 5260 ' GESTION DU JOUEUR >FZ<
5000 IF point MOD 121=0 THEN point= >ZF<
0:parcours2=parcours2+1:GOTO 4980
5010 LOCATE #1,1,10:PRINT #1,"JOUEU >UG<
R: 2";
5020 RETURN >NH<
5030 ' >KJ<
5040 REM * AFFICHAGE SCORE-2 * >AK<
5050 REM ***** >KL<
5060 apts2=apts2+coef2:apts2=apts2 >TM<
MOD 10000:point=point+1
5070 LOCATE #1,1,12 >YN<
5080 PRINT #1,RIGHT$("0000"+MID$(ST >CP<
R$(apts2),2),4)
5090 FOR i=40 TO 1 STEP -10:SOUND 4 >EQ<
,i,0.5,12:NEXT

```



|                                     |      |                                     |      |                                      |      |
|-------------------------------------|------|-------------------------------------|------|--------------------------------------|------|
| 5100 RETURN                         | >MG< | 5480                                | >VUK | 5950 IF ix=-1 AND x=13 THEN RETURN   | >EW< |
| 5110                                | >JH< | 5490 REM *AFF1. AUTO JOUEUR 1&2*    | >ZV< | 5960 jy=2:GOSUB 5510:y=y+2:jy=0      | >MX< |
| 5120 REM * GAME OVER JOUEUR-2 *     | >AJ< | 5500 REM *****                      | >BL< | 5970 IF ix=1 THEN pistej=pistej+1 E  | >GY< |
| 5130 REM *****                      | >EK< | 5510 SOUND 1,4000,23,12,,,15        | >EM< | LSE pistej=pistej-1                  |      |
| 5140 GOSUB 8320                     | >KL< | 5520 LOCATE x,y:PRINT " ";          | >YN< | 5980 RETURN                          | >EZ< |
| 5150 FOR n=1 TO 5                   | >LM< | 5530 !AUTOJOUEUR,x+ix,y+jy,ix,jy:RE | >EP< | 5990 REM * EN HAUT                   | >VA< |
| 5160 LOCATE #1,1,10:PRINT #1,"GAM   | >TN< | TURN                                |      | 6000 IF y=16 OR y=2 THEN RETURN      | >PG< |
| E OVER";                            |      | 5540 STOP                           | >DQ< | 6010 IF ix=1 AND x=17 THEN RETURN    | >XH< |
| 5170 GOSUB 8770:LOCATE #1,1,10      | >KP< | 5550                                | >TR< | 6020 IF ix=-1 AND x=13 THEN RETURN   | >TJ< |
| 5180 PEN #1,3:PRINT #1,"JOUEUR: 2   | >VQ< | 5560 REM *CHANGEMENT DE DIRECTION*  | >PT< | 6030 jy=-2:GOSUB 5510:y=y-2:jy=0     | >BK< |
| ";                                  |      | 5570 REM *****                      | >AU< | 6040 IF ix=1 THEN pistej=pistej-1 E  | >VL< |
| 5190 PEN #1,1:GOSUB 8770            | >CR< | 5580 REM *POUR LE JOUEUR            | >ZV< | LSE pistej=pistej+1                  |      |
| 5200 NEXT n:SOUND 135,0,1,0         | >FH< | 5590 IF image=132 THEN 5630         | >DW< | 6050 RETURN                          | >TM< |
| 5210 LOCATE #1,1,14:PEN #1,3:PRINT  | >ZJ< | 5600 IF jy=-1 THEN jy=0:ix=-1:GOSUB | >PM< | 6060                                 | >PN< |
| #1,"GAME OVER";:PEN #1,1            |      | 5510:RETURN                         |      | 6070 REM *GESTION DES COLLISIONS*    | >UP< |
| 5220 RETURN                         | >QK< | 5610 IF jy=1 THEN jy=0:ix=1:GOSUB   | >TN< | 6080 REM *****                       | >BQ< |
| 5230                                | >ML< | 5510:RETURN                         |      | 6090 IF image>134 AND image<139 THE  | >RR< |
| 5240 REM * GESTION DES JOUEURS *    | >NM< | 5620 REM                            | >WP< | N GOSUB 5520:GOTO 6130               |      |
| 5250 REM *****                      | >DN< | 5630 IF ix=-1 THEN ix=0:jy=1:GOSUB  | >RQ< | 6100 IF objet>148 AND objet<153 THE  | >DH< |
| 5260 last=0:point=1:bonus=190:ybonu | >TP< | 5510:RETURN                         |      | N 6130                               |      |
| s=6:dbonus=1:sortie=0               |      | 5640 IF ix=1 THEN ix=0:jy=-1:GOSUB  | >TR< | 6110 IF x=x3 AND y=y3 THEN 6130      | >EJ< |
| 5270 x3=17:y3=2+2*route:ox=1:py=0:o | >BQ< | 5510:RETURN                         |      | 6120 RETURN                          | >QK< |
| bjet=32:pistea=5-route              |      | 5650 STOP                           | >FT< | 6130 LOCATE x3,y3:PRINT " ";         | >GL< |
| 5280 x=16:y=6:ix=-1:jy=0:image=32:p | >UR< | 5660                                | >VU< | 6140 PEN 1:!COPYCHR,x+ix,y+jy,@i:IF  | >JM< |
| istej=3:GOSUB 6910                  |      | 5670 REM *MOUVEMENT LATERAL JOUEUR* | >KV< | i>148 AND i<153 THEN LOCATE x+ix,y   |      |
| 5290 SOUND 1,4000,33,12,,,15:GOSUB  | >WT< |                                     |      | +jy:PRINT " ";                       |      |
| 5530:LOCATE 13,13:PRINT " 190 ";    |      | 5680 REM *****                      | >YW< | 6150 SOUND 135,0,1,0:SOUND 4,50,210  | >JN< |
| 5300 REM                            | >QJ< | 5690 IF INKEY(22)=0 OR (JOY(0) AND  | >JX< | ,13,,1                               |      |
| 5310 WHILE sortie=0 AND point MOD 1 | >EK< | 8)=8 THEN GOSUB 5730:RETURN         |      | 6160 FOR k=1 TO 4                    | >JP< |
| 21<>0                               |      | 5700 IF INKEY(30)=0 OR (JOY(0) AND  | >NN< | 6170 LOCATE 10+2*k,12:PEN 3:PRINT    | >MQ< |
| 5320 !COPYCHR,x+ix,y+jy,@image      | >ZL< | 4)=4 THEN GOSUB 5800:RETURN         |      | MID\$("AUTO",k,1);:PEN 1             |      |
| 5330 GOSUB 6090:IF sortie THEN 54   | >TM< | 5710 RETURN                         | >VP< | 6180 !AUTOJOUEUR,x,y,0,-1:GOSUB 6    | >DR< |
| 30 ' GESTION DES COLLISIONS         |      | 5720 REM * A DROITE                 | >HQ< | 310                                  |      |
| 5340 IF image=32 THEN GOSUB 5510:   | >KN< | 5730 IF x=28 OR x=10 THEN RETURN    | >BR< | 6190 !AUTOJOUEUR,x,y,-1,0:GOSUB 6    | >ET< |
| GOTO 5370                           |      | 5740 IF jy=1 AND y=15 THEN RETURN   | >HT< | 310                                  |      |
| 5350 IF image=144 THEN GOSUB 5510   | >BP< | 5750 IF jy=-1 AND y=11 THEN RETURN  | >DU< | 6200 !AUTOJOUEUR,x,y,0,1:GOSUB 6     | >XJ< |
| :IF joueur=1 THEN GOSUB 4750 ELSE G |      | 5760 ix=2:GOSUB 5510:x=x+2:ix=0     | >DV< | 310                                  |      |
| OSUB 5060                           |      | 5770 IF jy=1 THEN pistej=pistej-1 E | >GW< | 6210 !AUTOJOUEUR,x,y,1,0:GOSUB 6     | >YK< |
| 5360 IF image=132 OR image=130 TH   | >JQ< | LSE pistej=pistej+1                 |      | 310                                  |      |
| EN GOSUB 5590                       |      | 5780 RETURN                         | >CX< | 6220 NEXT                            | >RL< |
| 5370 x=x+ix:y=y+jy                  | >BR< | 5790 REM * A GAUCHE                 | >MY< | 6230 LOCATE x,y:PEN 3:PRINT CHR\$(23 | >PM< |
| 5380 GOSUB 6360 ' GESTION AUTO AM   | >ET< | 5800 IF x=20 OR x=2 THEN RETURN     | >PP< | 8);:PEN 1                            |      |
| STRAD                               |      | 5810 IF jy=1 AND y=15 THEN RETURN   | >FQ< | 6240 LOCATE 12,14:PEN 3:PRINT "C H   | >LN< |
| 5390 IF y<=15 AND y>=11 THEN GOSU   | >QU< | 5820 IF jy=-1 AND y=11 THEN RETURN  | >BR< | 0 C";:PEN 1                          |      |
| B 5690                              |      | 5830 ix=-2:GOSUB 5510:x=x-2:ix=0    | >CT< | 6250 FOR i=15 TO 8 STEP-1:SOUND 4,4  | >RP< |
| 5400 IF x<=17 AND x>=13 THEN GOSU   | >LK< | 5840 IF jy=1 THEN pistej=pistej+1 E | >EU< | 00,23,i,,,31:NEXT                    |      |
| B 5890                              |      | LSE pistej=pistej-1                 |      | 6260 LOCATE x,y:PRINT " ";           | >AQ< |
| 5410 IF yturbo<=24 THEN GOSUB 797   | >YL< | 5850 RETURN                         | >AV< | 6270 LOCATE 12,12:PRINT " "          | >ZR< |
| 0:IF turbo THEN 5430 ' GESTION DU T |      | 5860                                | >XW< | 6280 LOCATE 12,14:PRINT " "          | >CT< |
| URBO                                |      | 5870 REM MOUVEMENT VERTICAL JOUEUR  | >NX< | 6290 sortie=1                        | >HU< |
| 5420 IF dbonus THEN GOSUB 8100      | >HM< | 5880 REM *****                      | >WY< | 6300 RETURN                          | >QK< |
| GESTION DU BONUS                    |      | 5890 IF INKEY(71)=0 OR (JOY(0) AND  | >EZ< | 6310 FOR i=1 TO 150:NEXT             | >VL< |
| 5430 WEND                           | >AN< | 2)=2 THEN GOSUB 5930:RETURN         |      | 6320 RETURN                          | >TM< |
| 5440 LOCATE x,y:PRINT " ";;LOCATE x | >ZP< | 5900 IF INKEY(69)=0 OR (JOY(0) AND  | >PQ< | 6330                                 | >PN< |
| 3,y3:PRINT " ";                     |      | 1)=1 THEN GOSUB 6000:RETURN         |      | 6340 REM * GESTION AUTO AMSTRAD *    | >FP< |
| 5450 IF point MOD 121=0 THEN GOSUB  | >EQ< | 5910 RETURN                         | >XR< | 6350 REM *****                       | >BQ< |
| 8200 ' CALCUL DU BONUS              |      | 5920 REM * EN BAS                   | >MT< | 6360 IF turbo THEN turbo=0:RETURN E  | >MR< |
| 5460 SOUND 135,0,1,0                | >VR< | 5930 IF y=24 OR y=10 THEN RETURN    | >BU< | LSE drap=1                           |      |
| 5470 RETURN                         | >YT< | 5940 IF ix=1 AND x=17 THEN RETURN   | >JV< | 6370 IF x3>=13 AND x3<=17 THEN IF p  | >QT< |



|                                          |                                           |                                             |
|------------------------------------------|-------------------------------------------|---------------------------------------------|
| istea<>pistej THEN GOSUB 6480:GOTO       | 6740 LOCATE x3,y3:PRINT CHR\$(objet2 >RU< | f                                           |
| 6430                                     | );                                        | 7120 DATA frfrfrfrfr r r rfrfrf >GL<        |
| 6380 IF y3>=11 AND y3<=15 THEN IF p >NU< | 6750 !AUTOAMSTRAD,x3+ox,y3+py,ox,py >BV<  | rfrf                                        |
| istea<>pistej THEN GOSUB 6560:GOTO       | :RETURN                                   | 7130 DATA f f f f hddd dddg f f >KM<        |
| 6430                                     | 6760 STOP >JW<                            | f f                                         |
| 6390 objet2=objet:ICOPYCHR,x3+ox,y3 >TV< | 6770 ' >YX<                               | 7140 DATA frfrfrfr r r r rfrf >GN<          |
| +py,@objet                               | 6780 REM *CHANGEMENT DE DIRECTION* >VY<   | rfrf                                        |
| 6400 GOSUB 6090:IF sortie THEN 6450 >VL< | 6790 REM ***** >FZ<                       | 7150 DATA f f f hdddd ddddg f >FP<          |
| ' GESTION DES COLLISIONS                 | 6800 REM *POUR L'AMSTRAD >RQ<             | f f                                         |
| 6410 IF objet=32 OR objet=144 THEN >TM<  | 6810 IF objet=132 THEN 6850 >YR<          | 7160 DATA frfrfr r r r r rfrf >GQ<          |
| GOSUB 6740                               | 6820 IF py=-1 THEN py=0:ox=1:GOSUB >XT<   | rfrf                                        |
| 6420 IF objet=132 OR objet=130 THEN >HN< | 6740:RETURN                               | 7170 DATA f f hdddddd ddddddg >BR<          |
| GOSUB 6810:objet=32                      | 6830 IF py=1 THEN py=0:ox=-1:GOSUB >YU<   | f f                                         |
| 6430 IF last=1 THEN last=0:LOCATE x >AP< | 6740:RETURN                               | 7180 DATA frfr r r r r r r r r >GT<         |
| 3,y3:PRINT " ";ICOPYCHR,x3+ox,y3+p       | 6840 REM >BV<                             | rfrf                                        |
| y,@objet                                 | 6850 IF ox=-1 THEN ox=0:py=-1:GOSUB >XW<  | 7190 DATA f hddddddddd dddddd >XU<          |
| 6440 x3=x3+ox:y3=y3+py >KQ<              | 6740:RETURN                               | dg f                                        |
| 6450 RETURN >XR<                         | 6860 IF ox=1 THEN ox=0:py=1:GOSUB >AX<    | 7200 DATA fr r r r r r r r r >XK<           |
| 6460 REM >ZT<                            | 6740:RETURN                               | r r f                                       |
| 6470 REM ** DIRECTION DROITE ** >JU<     | 6870 STOP >LY<                            | 7210 DATA hdddddddddddddddddddddd >CL<      |
| 6480 IF ox<>1 THEN 6520 >DV<             | 6880 >AZ<                                 | dddg                                        |
| 6490 IF x3<17 THEN t=2:GOSUB 6640 E >PW< | 6890 REM * AFFICHAGE DU CIRCUIT * >TA<    | 7220 ' >NM<                                 |
| LSE last=1                               | 6900 REM ***** >CR<                       | 7230 REM * AFFICHAGE JOUEUR-1 * >EN<        |
| 6500 RETURN >TM<                         | 6910 FOR i=1 TO 25 >QT<                   | 7240 REM ***** >JP<                         |
| 6510 REM ** DIRECTION GAUCHE ** >AN<     | 6920 LOCATE 1,i:PRINT table\$(i); >TU<    | 7250 WINDOW SWAP 1,0 >HQ<                   |
| 6520 IF ox<>-1 THEN 6560 >BP<            | 6930 NEXT >AV<                            | 7260 LOCATE 1,2:PRINT "JOUEUR: 1"; >YR<     |
| 6530 IF x3>13 THEN t=-2:GOSUB 6640 >FQ<  | 6940 !GPEN,2:DRAW 0,399:DRAWR 463,0 >WW<  | 7270 LOCATE 1,4:PRINT "00000 PTS"; >ZT<     |
| ELSE last=1                              | :DRAWR 0,-399:DRAWR -463,0                | 7280 LOCATE 1,6:PRINT " " >YU<              |
| 6540 RETURN >XR<                         | 6950 RETURN >CX<                          | 7290 FOR xc=3 TO 7 STEP 2 >EV<              |
| 6550 REM ** DIRECTION EN BAS ** >FT<     | 6960 REM >EY<                             | 7300 !AUTOJOUEUR,xc,6,0,-1 >HL<             |
| 6560 IF py<>1 THEN 6600 >DU<             | 6970 DATA cdddddddddddddddddd >HZ<        | 7310 NEXT >TM<                              |
| 6570 IF y3<15 THEN t=2:GOSUB 6680 E >RV< | ddde                                      | 7320 WINDOW SWAP 1,0 >FN<                   |
| LSE last=1                               | 6980 DATA fr r r r r r r r r >MA<         | 7330 RETURN >VF<                            |
| 6580 RETURN >BW<                         | r r f                                     | 7340 >RQ<                                   |
| 6590 REM ** DIRECTION EN HAUT ** >KX<    | 6990 DATA f cddddddddd dddddd >XB<        | 7350 REM * AFFICHAGE JOUEUR-2 * >JR<        |
| 6600 IF py<>-1 THEN RETURN >YN<          | de f                                      | 7360 REM ***** >MT<                         |
| 6610 IF y3>11 THEN t=-2:GOSUB 6680 >HP<  | 7000 DATA frfr r r r r r r r r >XH<       | 7370 WINDOW SWAP 1,0 >LU<                   |
| ELSE last=1                              | rfrf                                      | 7380 LOCATE 1,10:PRINT "JOUEUR: 2"; >DV<    |
| 6620 RETURN >WQ<                         | 7010 DATA f f cddddddd ddddddde >LJ<      |                                             |
| 6630 REM *MOUVEMENT VERTICAL AMSTRA >DR< | f f                                       | 7390 LOCATE 1,12:PRINT "00000 PTS"; >DW<    |
| D*                                       | 7020 DATA frfrfr r r r r r r r rfrf >BK<  |                                             |
| 6640 IF pistea<pistej THEN py=py-t: >TT< | rfrf                                      | 7400 LOCATE 1,14:PRINT " " >TM<             |
| objet2=32:GOSUB 6740:y3=y3-t:py=0:p      | 7030 DATA f f f cdddddd ddddde f >VL<     |                                             |
| istea=piste+1:RETURN                     | f f                                       | 7410 FOR xc=3 TO 7 STEP 2 >YN<              |
| 6650 IF pistea>pistej THEN py=py+t: >UU< | 7040 DATA frfrfrfr r r r rfrf >FM<        | 7420 !AUTOJOUEUR,xc,14,0,-1 >MP<            |
| objet2=32:GOSUB 6740:y3=y3+t:py=0:p      | rfrf                                      | 7430 NEXT >WQ<                              |
| istea=piste-1:RETURN                     | 7050 DATA f f f f cddd ddde f f >DN<      | 7440 WINDOW SWAP 1,0 >JR<                   |
| 6660 STOP >HV<                           | f f                                       | 7450 RETURN >YT<                            |
| 6670 REM MOUVEMENT LATERAL AMSTRAD >ZW<  | 7060 DATA frfrfrfrfr r r rfrfrf >KP<      | 7460 ' >VU<                                 |
| 6680 IF pistea<pistej THEN ox=ox+t: >JX< | rfrf                                      | 7470 REM *AFFI. DU RECORD PRES.* >NV<       |
| objet2=32:GOSUB 6740:x3=x3+t:ox=0:p      | 7070 DATA f cddddddde >YQ<                | 7480 REM ***** >LW<                         |
| istea=piste+1:RETURN                     | f                                         | 7490 LOCATE #1,1,18:PRINT #1,"RECOR >XX<    |
| 6690 IF pistea>pistej THEN ox=ox-t: >UY< | 7080 DATA f f f >LR<                      | D:";LOCATE #1,1,20                          |
| objet2=32:GOSUB 6740:x3=x3-t:ox=0:p      | f                                         | 7500 PRINT #1,RIGHT\$("0000")+MID\$(ST >JN< |
| istea=piste-1:RETURN                     | 7090 DATA f f \$1075 f >ZT<               | R\$(record),2),4);"0"                       |
| 6700 STOP >CP<                           | f                                         | 7510 LOCATE #1,7,20:PRINT #1,"PTS"; >VP<    |
| 6710 ' >RQ<                              | 7100 DATA f f f >DJ<                      |                                             |
| 6720 REM *AFFICHAGE AUTO AMSTRAD* >AR<   | f                                         | 7520 RETURN >WQ<                            |
| 6730 REM ***** >DT<                      | 7110 DATA f hdddddddg >AK<                | 7530 REM * AFFICHAGE DU RECORD * >TR<       |



```

7540 REM ***** >HT<
7550 i=FRE(""):SOUND 135,0,1,0 >HU<
7560 FOR n=1 TO 5 >UV<
7570 LOCATE #1,1,18:PRINT #1,"REC >UW<
ORD: "
7580 GOSUB 8770:LOCATE #1,1,18:PE >FX<
N #1,3
7590 PRINT #1,"JOUER:"+STR$(1-(m >BY<
ei>apts1));
7600 PEN #1,1:GOSUB 8770 >AP<
7610 NEXT n >FQ<
7620 LOCATE #1,1,20:PRINT #1,RIGHT$ >MR<
("0000"+MID$(STR$(mei),2),4)
7630 LOCATE #1,1,18:PEN #1,1:PRINT >GT<
#1,"RECORD: ";
7640 record=mei >TU<
7650 RELEASE 7 >WV<
7660 FOR i=1 TO 12 >PW<
7670 SOUND 2,(13-i)*44,12,13 >FX<
7680 FOR j=400 TO 0 STEP -30:SOUN >WY<
D 4,j,0.7,13:NEXT
7690 NEXT >EZ<
7700 RETURN >WQ<
7710 ' >TR<
7720 REM * AFFICHAGE DU TITRE * >JT<
7730 REM ***** >NU<
7740 WINDOW SWAP 0,2 >NV<
7750 LOCATE 1,1:PEN 3:PRINT "AUTO"; >AW<

7760 LOCATE 5,1:PEN 0:PRINT "-"; >LX<
7770 LOCATE 6,1:PEN 3:PRINT "CHOC"; >CY<

7780 PEN 0 >GZ<
7790 FOR i=1 TO 3 >RA<
7800 FOR j=1 TO LEN(no$(i)) >LR<
7810 LOCATE j,i+1:PRINT CHR$(AS >HT<
C(MID$(no$(i),j,1))-1);
7820 NEXT >ZU<
7830 NEXT >AV<
7840 WINDOW SWAP 2,0 >PW<
7850 RETURN >CX<
7860 ' >ZY<
7870 REM * AFFICHAGE DE TURBO * >CZ<
7880 REM ***** >VA<
7890 LOCATE #3,1,1:PEN #3,0:PRINT # >CB<
3,"TURBO"
7900 FOR ty=7 TO 24:LOCATE #3,1,ty: >HT<
PRINT #3,car$;:NEXT
7910 FOR i=1 TO LEN(car$):LOCATE #3 >BU<
,1,25:PRINT #3,MID$(car$,i,1);:NEXT

7920 LOCATE #3,1,7 >JV<
7930 RETURN >BW<
7940 ' >YX<
7950 REM * GESTION DU TURBO * >BY<
7960 REM ***** >CZ<
7970 IF drap AND (JOY(0)>15 OR INKE >LA<
Y(47)=0) THEN SOUND 130,0,1,0:SOUND
2,2000,48,13,0,1,15:yturbo=yturbo+
1:LOCATE #3,1,tyturbo:PRINT #3," ";:
turbo=1:drap=0
7980 RETURN >GB<
7990 ' >DC<
8000 REM * AFFICHAGE DE BONUS * >GJ<
8010 REM ***** >EK<
8020 LOCATE #4,1,1:PEN #4,0:PRINT # >KL<
4,"BONUS"
8030 FOR ty=7 TO 24:LOCATE #4,1,ty: >EM<
PRINT #4,car$;:NEXT
8040 FOR i=1 TO LEN(car$):LOCATE #4 >YN<
,1,25:PRINT #4,MID$(car$,i,1);:NEXT

8050 LOCATE #4,1,7 >EP<
8060 RETURN >WQ<
8070 ' >TR<
8080 REM * GESTION DU BONUS * >QT<
8090 REM ***** >XU<
8100 count=count+1:IF count<31 THEN >KK<
RETURN
8110 count=0:bonus=bonus-10:ybonus= >XL<
ybonus+1
8120 LOCATE #4,1,ybonus:PRINT #4," >PM<
";
8130 LOCATE 14,13:PRINT RIGHT$("000 >MN<
"+MID$(STR$(bonus),2),3);
8140 IF bonus=0 THEN dbonus=0 >UP<
8150 RETURN >WQ<
8160 ' >TR<
8170 REM ** PRISE EN COMPTE ** >HT<
8180 REM DU BONUS >RU<
8190 REM ***** >MV<
8200 i=FRE(""):SOUND 135,0,1,0:IF b >NL<
onus=0 THEN RETURN
8210 FOR i=bonus TO 0 STEP -10 >VM<
8220 LOCATE 14,13:PRINT RIGHT$("0 >RN<
00"+MID$(STR$(i),2),3);
8230 IF joueur=1 THEN LOCATE #1,1 >TP<
,4:PRINT #1,RIGHT$("0000"+MID$(STR$
(apts1+(bonus-i)/10),2),4); ELSE LO
CATE #1,1,12:PRINT #1,RIGHT$("0000"
+MID$(STR$(apts2+(bonus-i)/10),2),4
);
8240 FOR j=500 TO 1 STEP -20:SOUN >MQ<
D 4,j,0.5,13:NEXT
8250 NEXT >XR<
8260 IF joueur=1 THEN apts1=apts1+b >ET<
onus/10 ELSE apts2=apts2+bonus/10
8270 bonus=0:GOSUB 8030:SOUND 131,0 >AU<
,1,0
8280 RETURN >AV<
8290 ' >XW<
8300 REM ***** GAME OVER ***** >AM<
8310 REM ***** >XN<
8320 FOR i=1 TO 12 >HP<
8330 SOUND 2,i*44,12,13 >DQ<
8340 FOR j=400 TO 0 STEP -30:SOUN >NR<
D 4,j,0.6,13:NEXT
8350 NEXT >YT<

8360 RETURN >ZU<
8370 REM **** MUSIQUE No 2 **** >TV<
8380 REM ***** >RW<
8390 b=0:c=0:ad=1.4 >JX<
8400 RESTORE 8440 >UN<
8410 FOR i=1 TO 31:GOSUB 3180:NEXT >WP<
8420 FOR i=1 TO 1000:NEXT i:SOUND 1 >HQ<
35,0,1,0
8430 RETURN >XR<
8440 DATA 5,40,2,10,1,10,5,10,3 >UT<
8450 DATA 10,1,20,13,20,10,10,13 >UU<
8460 DATA 30,8,40,5,20,1,20,3,40 >HV<
8470 DATA 3,40,5,40,3,10,1,10,5 >BW<
8480 DATA 10,3,10,1,20,13,20,10 >UX<
8490 DATA 10,13,30,8,20,5,10,1 >DY<
8500 DATA 10,3,20,5,10,3,10,1,40 >QP<
8510 DATA 1,40 >QQ<
8520 ' >TR<
8530 REM * CLIGNOTEMENT CURSEUR * >AT<
8540 REM ***** >EU<
8550 !CURSEUR:RETURN >ZV<
8560 ' >XW<
8570 REM *ATTENTE D'UNE TOUCHE* >NX<
8580 REM ***** >TY<
8590 m$=STRING$(40,".")+"APPUYER.SU >RZ<
R. UNE. TOUCHE...S.V.P."+STRING$(40,"
.")
8600 GOSUB 8720:m=1:j=0:L=0:k$=INKE >TQ<
Y$
8610 WHILE k$="" >WR<
8620 LOCATE 1,25:PEN 1:PRINT MID$ >PT<
(m$,m,40);
8630 m=m+1:IF m>LEN(m$)-40 THEN m >NU<
=1:j=NOT j:PEN 2+ABS(j)
8640 L=NOT L:LOCATE 12,1:PEN ABS( >RV<
L):PRINT "A U T O - C H O C";
8650 FOR k=1 TO 30:NEXT:k$=INKEY$ >HW<

8660 WEND >JX<
8670 LOCATE 12,1:PEN 1:PRINT "A U T >NY<
O - C H O C";
8680 RETURN >EZ<
8690 ' >BA<
8700 REM ** VIDAGE DU BUFFER CLAVIE >KR<
R **
8710 REM ***** >LT<
**
8720 FOR i=1 TO 20:z$=INKEY$:NEXT >UU<
8730 RETURN >AV<
8740 ' >XW<
8750 REM *** TEMPORISATION *** >WX<
8760 REM ***** >PY<
8770 FOR i=1 TO 900:NEXT >LZ<
8780 RETURN >FA<
8790 ' >CB<
8800 REM **** CAS DU BREAK **** >CT<
8810 REM ***** >PU<
8820 MODE 2:PEN 1:PAPER 0:CLS:PRINT >NV<
SD$;:STOP

```



# JAUQUETTE

Bernard VABRE



FACE 1  
S  
PLAY IN THE SUNSHINE  
HOUSEDUAKE  
DOROTHY PARKER  
IT  
STARFISH AND COFFEE  
SLOW LOVE  
HOT THING  
FACE 2  
U GOT THE LOOK  
IF I WAS YOUR GIRLFRIEND  
STRANGE RELATIONSHIP  
NEVER TAKE THE PLACE OF YOUR MAN  
THE CROSS  
BEAUTIFUL NIGHT  
UNTIL THE END OF TIME

PRINCE

SIGN OF THE TIMES

VERY GOOD

*JAUQUETTE permettra à tous les amateurs d'enregistrements audio de réaliser des jaquettes pour leurs cassettes. Finies avec cet utilitaire, les présentations bâclées. Ce programme a été conçu pour le CPC 6128. Il tourne sans problèmes sur le 664. Pour le 464 quelques aménagements seront nécessaires. (Supprimer module traitements d'erreurs - Revoir sauvegarde - chargement).*

Voici les différentes options de ce programme :

- COULEUR : permet de modifier les couleurs de travail.
- SAISIE : pour saisir le titre de la cassette, le ou les auteurs, le titre des chansons (20 lignes) et d'éventuelles remarques.
- MODIFICATION : lorsque la ligne n'est pas à modifier, faire RETURN ;  
+ 1 appui sur ESPACE + RETURN : efface toute la ligne, bien que celle-ci reste affichée à l'écran.  
+ 1 appui prolongé sur ESPACE : efface toute la ligne à l'écran.  
Revenir au début pour correction.
- IMPRESSION : prévu pour fonctionner avec la DMP 2000. En cas d'utilisation avec une imprimante non compatible, modifiez les lignes 10060 et 10295.

CHARGEMENT-SAUVEGARDE : en cas d'erreur, le programme vous affichera le type d'erreur, et attendra l'appui sur une touche, avant de revenir au MENU. Refaites alors l'opération (6128 et 664).

VISION : visualise la jaquette avant sauvegarde ou impression, modification.

**ATTENTION** : le poke de la ligne 19 évite l'arrêt du programme et le "RESET" par CTRL+SHIFT+ESC. Ne supprimez le REM, que lorsque le programme a été sauvegardé et fonctionne correctement. Sinon, tout votre travail sera perdu. Lors de la saisie, ne mettez pas de virgule. En cas de "plantage" du programme, faire GOTO 1000.

```

5      JAUQUETTE                >PF<
10     VABRE Bernard            >CB<
11                                          >ZC<
15     _____              >RG<
16                                          >EH<
19 'POKE &BDEE,201:  'ANNULE CTRL+ >KL<
SHIFT+ESC
30 MODE 1:BORDER 6:INK 0,0:INK 1,26 >VD<

32 FOR x=1 TO 399 STEP 100:NEXT:FOR >CF<
  y1=0 TO 639 STEP 50:DRAW x,1,3:DRA
  W 1,y1,3:INK 3,8:NEXT
35 WINDOW #1,1,40,1,1:INK 2,1:PAPER >TJ<
  #1,2:CLS #1:LOCATE #1,12,1:PRINT#1
  ,"J A Q U E T T E"
40 LOCATE 6,6:PRINT"Ce":LOCATE 10,6 >HE<
:PRINT"programme , tres simple , vo
us"
45 LOCATE 1,8:PRINT"permettra":LOCA >AK<
TE 12,8:PRINT"de":LOCATE 16,8:PRINT
"realiser des JAUQUETTES"
  
```



```

46 LOCATE 1,10:PRINT"pour":LOCATE 6 >NL<
,10:PRINT"vos cassettes AUDIO."
47 LOCATE 5,12:PRINT" Toutes les":LO >PM<
CATE 16,12:PRINT"explications neces
saires"
48 LOCATE 1,14:PRINT"sont incluses" >LN<
:LOCATE 15,14:PRINT"dans les differ
ents modu-"
49 LOCATE 1,16:PRINT"les. Les":LOCA >RP<
TE 11,16:PRINT"codes":LOCATE 17,16:
PRINT"d'imprimantes utilises"
50 LOCATE 1,18:PRINT"sont ceux de l >JF<
'AMSTRAD DMP 2000."
60 LOCATE 6,20:PRINT"En cas":LOCATE >EG<
13,20:PRINT"de":LOCATE 16,20:PRINT
"plantage , du programme,"
65 LOCATE 1,22:PRINT"faire <GOTO":L >WM<
OCATE 13,22:PRINT"1000">
70 WINDOW #2,1,40,25,25:INK 2,1:PAP >BH<
ER #2,2:CLS#2
85 LOCATE #2,5,25:PRINT#2,"APPUYER >TP<
SUR UNE TOUCHE ";CHR$(24);"VAB
RE.B";CHR$(24):CALL &BB06
90 DIM D$(23):DEFINT A-Z >YK<
105 BORDER 7:MODE 2:PAPER 0:PEN 1 >FG<
1000 ' _____ MENU >LB<
1005 ' >HG<
1010 CLS:MODE 2: ON ERROR GOTO 5200 >NC<
0
1015 GOSUB 60160 >JH<
1020 LOCATE 28,4:PRINT"M E N U" >PD<
1025 LOCATE 28,5:PRINT"_____ " >HJ<
1030 LOCATE 15,8:PRINT"1 -----> C >RE<
OULEUR d'ecran."
1040 LOCATE 15,10:PRINT"2 -----> >BF<
SAISIE Jaquette.
1050 LOCATE 15,12:PRINT"3 -----> >VG<
MODIFICATION.
1060 LOCATE 15,14:PRINT"4 -----> >FH<
IMPRESSION.
1070 LOCATE 15,16:PRINT"5 -----> >TJ<
CHARGEMENT jaquettes.
1080 LOCATE 15,18:PRINT"6 -----> >GK<
SAUVEGARDE jaquettes.
1090 LOCATE 15,20:PRINT"7 -----> >EL<
VISION jaquette chargee.
1095 LOCATE 15,22:PRINT"8 -----> >AR<
FIN."
1100 b$=INKEY$:IF b$="" THEN 1100 >EC<
1105 IF b$="1" THEN 2000 >RH<
1106 IF b$="2" THEN 4000 >WJ<
1107 IF b$="3" THEN 15000 >CK<
1108 IF b$="4" THEN 10000 >ZL<
1109 IF b$="5" THEN 6000 >EM<
1110 IF b$="6" THEN 5000 >WD<
1111 IF b$="7" THEN 7000 >AE<
1112 IF b$="8" THEN 8000 >DF<
1115 IF b$<>"1" OR b$<>"2" OR b$<>" >AJ<
3" OR b$<>"4" OR b$<>"5" OR b$<>"6"

```

```

OR b$<>"7" OR b$<>"8" THEN SOUND 1
29,49:GOTO 1100
2000 ' _____ COULEUR DE TRAVAIL >TC<
2010 ' >ED<
2020 MODE 2:CLS:GOSUB 60160:LOCATE >ZE<
17,10:INPUT"quelle couleur pour le
papier: ",c
2030 LOCATE 17,12:INPUT"quelle coul >QF<
eur pour la bordure: ",c1
2040 LOCATE 17,14:INPUT"quelle coul >LG<
eur pour l'encre: ",c2
2050 IF c2=c THEN SOUND 129,39:LOCA >MH<
TE 10,24:PRINT"une couleur d'encre
differente du papier S.V.P";GOTO 2
040
2060 BORDER c1:INK 0,c:INK 1,c2:CLS >UJ<
:GOTO 1000
4000 ' _____ >YE<
SAISIE BANDE + AUTEUR+CHANSONS
4005 ' >LK<
4010 CLS:MODE 1:GOSUB 60160 >AF<
4015 A$=STRING$(60,CHR$(46))+CHR$(1 >EL<
51)
4020 LOCATE 2,2:PRINT CHR$(24):"SAI >WG<
SIE: AUTEUR TITRE CHANSONS
";CHR$(24)
4030 LOCATE 9,10:PRINT STRING$(18," >AH<
.");CHR$(151)
4040 LOCATE 2,10:LINE INPUT "AUTEUR >XJ<
: ",D$(0)
4050 IF LEN (D$(0))>18 THEN PRINT C >YK<
HR$(7):GOTO 4040
4070 LOCATE 8,13:PRINT STRING$(40," >BM<
.");CHR$(151)
4080 LOCATE 2,13:LINE INPUT "TITRE: >WN<
",D$(1)
4090 IF LEN (D$(1))>40 THEN PRINT >BP<
CHR$(7):GOTO 4070
4100 LOCATE 12,17:PRINT STRING$(40, >RF<
").";CHR$(151):LOCATE 2,17:LINE INF
UT "REMARQUES:",D$(3)
4110 IF LEN (D$(3))>40 THEN PRINT >PG<
CHR$(7):GOTO 4100
4120 CLS:MODE 2:LOCATE 3,2:PRINT CH >TH<
R$(24);" SAISIE TITRES DE
S CHANSONS PAR LIGNES (20 lignes)
";CHR$(24)
4121 GOSUB 60160 >KJ<
4130 LOCATE 10,3:PRINT USING "&";a$ >GJ<
:LOCATE 7,3:LINE INPUT "1: ",D$(4)
4140 IF LEN (D$(4))>60 THEN PRINT >ZK<
CHR$(7):GOTO 4130
4150 LOCATE 10,4:PRINT USING "&";a$ >NL<
:LOCATE 7,4:LINE INPUT "2: ",D$(5)
4160 IF LEN (D$(5))>60 THEN PRINT >EM<
CHR$(7):GOTO 4150
4170 LOCATE 10,5:PRINT USING "&";a$ >VN<
:LOCATE 7,5:LINE INPUT "3: ",D$(6)
4180 IF LEN (D$(6))>60 THEN PRINT >KP<

```

```

CHR$(7):GOTO 4170
4190 LOCATE 10,6:PRINT USING "&";a$ >BQ<
:LOCATE 7,6:LINE INPUT "4: ",D$(7)
4200 IF LEN (D$(7))>60 THEN PRINT >FG<
CHR$(7):GOTO 4190
4210 LOCATE 10,7:PRINT USING "&";a$ >YH<
:LOCATE 7,7:LINE INPUT "5: ",D$(8)
4220 IF LEN (D$(8))>60 THEN PRINT >BJ<
CHR$(7):GOTO 4210
4230 LOCATE 10,8:PRINT USING "&";a$ >EK<
:LOCATE 7,8:LINE INPUT "6: ",D$(9)
4240 IF LEN (D$(9))>60 THEN PRINT >GL<
CHR$(7):GOTO 4230
4250 LOCATE 10,9:PRINT USING "&";a$ >DM<
:LOCATE 7,9:LINE INPUT "7: ",D$(10)
4260 IF LEN (D$(10))>60 THEN PRINT >EN<
CHR$(7):GOTO 4250
4270 LOCATE 10,10:PRINT USING "&";a >VP<
$:LOCATE 7,10:LINE INPUT "8: ",D$(1
1)
4280 IF LEN (D$(11))>60 THEN PRINT >KQ<
CHR$(7):GOTO 4270
4290 LOCATE 10,11:PRINT USING "&";a >BR<
$:LOCATE 7,11:LINE INPUT "9: ",D$(1
2)
4300 IF LEN (D$(12))>60 THEN PRINT >FH<
CHR$(7):GOTO 4290
4310 LOCATE 10,12:PRINT USING "&";a >QJ<
$:LOCATE 7,12:LINE INPUT "10:",D$(1
3)
4320 IF LEN (D$(13))>60 THEN PRINT >BK<
CHR$(7):GOTO 4310
4330 LOCATE 10,13:PRINT USING "&";a >XL<
$:LOCATE 7,13:LINE INPUT "11:",D$(1
4)
4340 IF LEN (D$(14))>60 THEN PRINT >GM<
CHR$(7):GOTO 4330
4350 LOCATE 10,14:PRINT USING "&";a >DN<
$:LOCATE 7,14:LINE INPUT "12:",D$(1
5)
4360 IF LEN (D$(15))>60 THEN PRINT >MP<
CHR$(7):GOTO 4350
4370 LOCATE 10,15:PRINT USING "&";a >KQ<
$:LOCATE 7,15:LINE INPUT "13:",D$(1
6)
4380 IF LEN (D$(16))>60 THEN PRINT >TR<
CHR$(7):GOTO 4370
4390 LOCATE 10,16:PRINT USING "&";a >RT<
$:LOCATE 7,16:LINE INPUT "14:",D$(1
7)
4400 IF LEN (D$(17))>60 THEN PRINT >NJ<
CHR$(7):GOTO 4390
4410 LOCATE 10,17:PRINT USING "&";a >NK<
$:LOCATE 7,17:LINE INPUT "15:",D$(1
8)
4420 IF LEN (D$(18))>60 THEN PRINT >JL<
CHR$(7):GOTO 4410

```



```

4430 LOCATE 10,18:PRINT USING "&";a >VM<
$:LOCATE 7,18:LINE INPUT "16:",D$(1
9)
4440 IF LEN (D$(19))>60 THEN PRINT >PN<
CHR$(7):GOTO 4430
4450 LOCATE 10,19:PRINT USING "&";a >RP<
$:LOCATE 7,19:LINE INPUT "17:",D$(2
0)
4460 IF LEN (D$(20))>60 THEN PRINT >KQ<
CHR$(7):GOTO 4450
4470 LOCATE 10,20:PRINT USING "&";a >DR<
$:LOCATE 7,20:LINE INPUT "18:",D$(2
1)
4480 IF LEN (D$(21))>60 THEN PRINT >QT<
CHR$(7):GOTO 4470
4490 LOCATE 10,21:PRINT USING "&";a >KU<
$:LOCATE 7,21:LINE INPUT "19:",D$(2
2)
4500 IF LEN (D$(22))>60 THEN PRINT >LK<
CHR$(7):GOTO 4490
4510 LOCATE 10,22:PRINT USING "&";a >XL<
$:LOCATE 7,22:LINE INPUT "20:",D$(2
3)
4520 IF LEN (D$(23))>60 THEN PRINT >GM<
CHR$(7):GOTO 4510
4530 LOCATE 4,23:LINE INPUT "REDUCT >JN<
EUR DE BRUIT :DOLBY / NR ",D$(2)
4540 LOCATE 25,25:PRINT CHR$(24);" >CP<
APPUYEZ SUR UNE TOUCHE ";CHR$(24)
4550 CALL &BB06 >DQ<
4560 GOTO 1000 >AR<
4570 >UT<
5000 '___ SAUVEGARDE JAQUETTE >NF<
5002 ' >JH<
5005 CLS:MODE 2:GOSUB 60160:LOCATE >HL<
3,2:PRINT CHR$(24);"
SAUVEGARDE DU FICHER
";CHR$(24)
)
5010 CAT:LINE INPUT "NOM DU FICHER >WB<
: ",fich$
5015 OPENOUT FICH$:FOR I=0 TO 23 >TM<
5020 PRINT#9,D$(I):NEXT >LH<
5030 CLOSEOUT >UJ<
5090 GOTO 1000 >ZQ<
6000 '___ CHARGEMENT JAQUETTE >EG<
6002 ' >KJ<
6005 CLS:MODE 2:GOSUB 60160:LOCATE >BM<
3,2:PRINT CHR$(24);"
CHARGEMENT D'UN FICHER
";CHR$(24)
)
6010 CAT:LINE INPUT "NOM DU FICHER >XH<
: ",fich$
6015 OPENIN FICH$:FOR I=0 TO 23 >NN<
6020 INPUT #9,D$(I):NEXT >QJ<
6030 CLOSEIN >PK<
6090 GOTO 1000 >AR<
7000 'VISION DE LA JAQUETTE >NH<

```

```

7005 ' >PN<
7010 CLS:GOSUB 60160 >UJ<
7015 LOCATE 70,1:PRINT CHR$(24);" V >FP<
ISION ";CHR$(24)
7020 FOR I=4 TO 23:PRINT ;" " >WK<
$(I):NEXT
7030 LOCATE 5,22:PRINT"AUTEUR >XL<
: ";D$(0)
7040 LOCATE 5,23:PRINT"TITRE >QM<
: ";D$(1)
7050 LOCATE 5,24:PRINT"REDUCTEUR DE >RN<
BRUIT: ";D$(2)
7060 LOCATE 5,25:PRINT"REMARQUE >JP<
: ";D$(3)
7070 LOCATE 56,25:PRINT CHR$(24);" >HQ<
APPUYEZ SUR UNE TOUCHE ";CHR$(24)
7080 CALL &BB06:GOTO 1000 >TR<
8000 '_____ FIN >WJ<
8010 >LK<
8020 MODE 1:CLS:GOSUB 60160 >FL<
8030 LOCATE 4,8:PRINT "FIN DE TRAVA >MM<
IL.....":LOCATE 15,13:PRINT ".... D
'ACCORD ? O/N ":A$=INKEY$:IF A$=""
THEN 8030
8035 IF A$="O" OR A$="o" THEN GOTO >VT<
8040
8037 IF a$="N" OR a$="n" THEN GOTO >HV<
1000
8040 FOR t=1 TO 3500:NEXT:;BASIC >WN<
10000 '_____ MODULE IMPRESSION >JB<
10010 >FC<
10040 CLS:MODE 1:GOSUB 60160:LOCATE >VF<
5,5:PRINT"PREPAREZ L'IMPRIMANTE"
10050 LOCATE 10,10:PRINT"PUIS PRESS >EG<
EZ:":LOCATE 15,12:PRINT" -> I-mpres
sion.":LOCATE 15,14:PRINT" -> M-menu
."
10055 c$=INKEY$ >HM<
10056 IF c$="I" OR c$="i" THEN GOTO >FN<
10060
10057 IF c$="M" OR c$="m" THEN GOTO >GP<
1000
10058 IF c$<>"i" OR c$<>"I"OR c$<>" >JQ<
m" OR c$<>"M" THEN 10055
10060 CLS:LOCATE 10,10:PRINT"IMPRES >AH<
SION EN COURS":PRINT#8,CHR$(27)+CHR
$(64):PRINT#8,CHR$(27);"0";CHR$(15)
10070 GOSUB 10410 >EJ<
10080 PRINT#8,"!";TAB(5);D$(4);TAB( >NK<
69)"!"
10090 PRINT#8,"!";TAB(5);D$(5);TAB( >QL<
69)"!"
10100 PRINT#8,"!";TAB(5);D$(6);TAB( >HC<
69)"!"
10110 PRINT#8,"!";TAB(5);D$(7);TAB( >KD<
69)"!"
10120 PRINT#8,"!";TAB(5);D$(8);TAB( >ME<
69)"!"

```

```

10130 PRINT#8,"!";TAB(5);D$(9);TAB( >PF<
69)"!"
10140 PRINT#8,"!";TAB(5);D$(10);TAB >JG<
(69)"!"
10150 PRINT#8,"!";TAB(5);D$(11);TAB >LH<
(69)"!"
10160 PRINT#8,"!";TAB(5);D$(12);TAB >NJ<
(69)"!"
10170 PRINT#8,"!";TAB(5);D$(13);TAB >QK<
(69)"!"
10180 PRINT#8,"!";TAB(5);D$(14);TAB >TL<
(69)"!"
10190 PRINT#8,"!";TAB(5);D$(15);TAB >VM<
(69)"!"
10200 PRINT#8,"!";TAB(5);D$(16);TAB >MD<
(69)"!"
10210 PRINT#8,"!";TAB(5);D$(17);TAB >PE<
(69)"!"
10220 PRINT#8,"!";TAB(5);D$(18);TAB >RF<
(69)"!"
10230 PRINT#8,"!";TAB(5);D$(19);TAB >UG<
(69)"!"
10240 PRINT#8,"!";TAB(5);D$(20);TAB >LH<
(69)"!"
10250 PRINT#8,"!";TAB(5);D$(21);TAB >NJ<
(69)"!"
10260 PRINT#8,"!";TAB(5);D$(22);TAB >QK<
(69)"!"
10270 PRINT#8,"!";TAB(5);D$(23);TAB >TL<
(69)"!"
10280 GOSUB 10410 >HM<
10295 PRINT#8,"!";TAB (5);CHR$(27)+ >JU<
"E";CHR$(27)+"W"+CHR$(1);D$(0);CHR$
(27)+"W"+CHR$(0);CHR$(27)+"F";CHR$(
15)
10300 PRINT#8,"!";TAB(69)"!" >TE<
10310 PRINT#8,"!";TAB (5);D$(1);TAB >FF<
(69)"!"
10320 GOSUB 10410 >CB<
10330 PRINT#8,"!";TAB(69)"!" >WH<
10340 PRINT#8,"!";TAB(5);D$(2);TAB( >KJ<
69)"!"
10350 PRINT#8,"!";TAB(69)"!" >YK<
10360 PRINT#8,"!";TAB (5);D$(3);TAB >NL<
(69)"!"
10370 GOSUB 10410 >HM<
10400 GOTO 1000 >RF<
10410 PRINT#8,"!"; STRING$(67,"-"); >MG<
TAB(69)"!"
10420 RETURN >QH<
15000 '_____ MODIFICATION >TG<
15005 >QM<
15010 CLS:MODE 1:GOSUB 60160:LOCATE >UH<
2,2:PRINT CHR$(24);" MODI
FICATION ";CHR$(24)
15020 LOCATE 3,7:PRINT"LORSQUE LE P >BJ<
OSTE N'EST PAS"
15030 LOCATE 14,9:PRINT"A MODIFIER >VK<

```



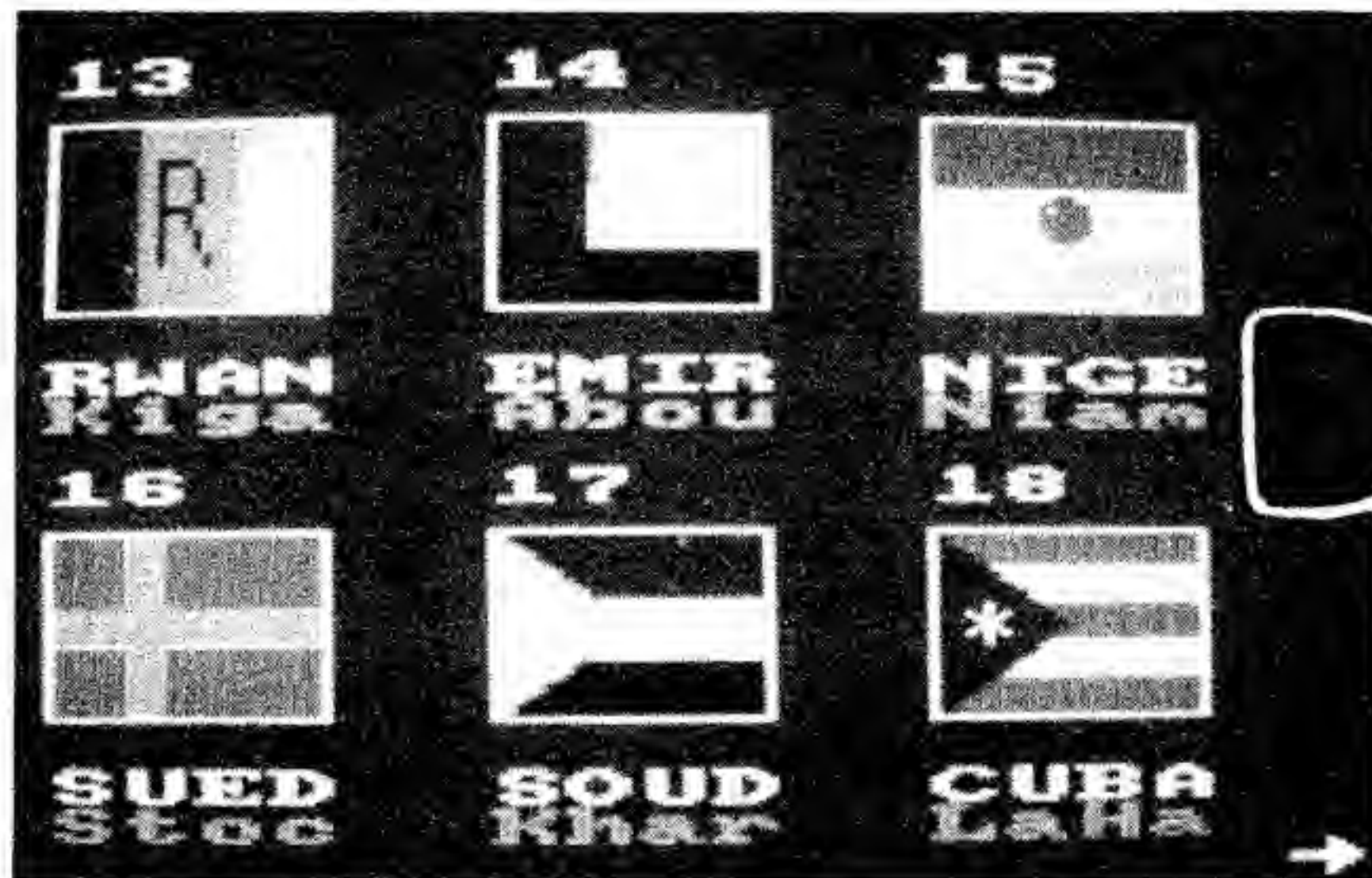
```

FAIRE <RETURN>."
15040 LOCATE 2,15:PRINT"AUTEUR: ";D$>YL<
$(0)
15050 LOCATE 10,15:GOSUB 16000 >PM<
15060 IF B$=" " THEN D$(0)=B$ >HN<
15065 IF LEN (d$(0))>20 THEN PRINT >FU<
CHR$(7):GOTO 15040
15070 LOCATE 2,18:PRINT"TITRE: ";D$( >WP<
1)
15080 LOCATE 8,18:GOSUB 16000 >BQ<
15090 IF B$=" " THEN D$(1)=B$ >MR<
15095 IF LEN (d$(1))>40 THEN PRINT >DX<
CHR$(7):GOTO 15070
15100 LOCATE 2,21:PRINT"REMARQUES: " >MH<
;D$(3)
15110 LOCATE 12,21:GOSUB 16000 >KJ<
15120 IF B$=" " THEN D$(3)=B$ >HK<
15125 IF LEN (d$(3))>40 THEN PRINT >EQ<
CHR$(7):GOTO 15100
15130 CLS:MODE 2:GOSUB 60160:LOCATE >ZL<
7,2:PRINT CHR$(24);"
MODIFICATION
";CHR$(241);CHR$(24)
15135 LOCATE 7,3:PRINT"1: ";D$(4) >AR<
15140 LOCATE 10,3:GOSUB 16000 >JM<
15150 IF B$=" " THEN D$(4)=B$ >MN<
15155 IF LEN (d$(4))>60 THEN PRINT >VJ<
CHR$(7):GOTO 15135
15160 LOCATE 7,4:PRINT"2: ";D$(5) >BP<
15170 LOCATE 10,4:GOSUB 16000 >NQ<
15180 IF B$=" " THEN D$(5)=B$ >RR<
15185 IF LEN (d$(5))>60 THEN PRINT >XX<
CHR$(7):GOTO 15160
15190 LOCATE 7,5:PRINT"3: ";D$(6) >HT<
15200 LOCATE 10,5:GOSUB 16000 >HJ<
15210 IF B$=" " THEN D$(6)=B$ >LK<
15215 IF LEN (d$(6))>60 THEN PRINT >VQ<
CHR$(7):GOTO 15190
15220 LOCATE 7,6:PRINT"4: ";D$(7) >EL<
15230 LOCATE 10,6:GOSUB 16000 >MM<
15240 IF B$=" " THEN D$(7)=B$ >QN<
15245 IF LEN (d$(7))>60 THEN PRINT >TU<
CHR$(7):GOTO 15220
15250 LOCATE 7,7:PRINT"5: ";D$(8) >LP<
15260 LOCATE 10,7:GOSUB 16000 >RQ<
15270 IF B$=" " THEN D$(8)=B$ >VR<
15275 IF LEN (d$(8))>60 THEN PRINT >AX<
CHR$(7):GOTO 15250
15280 LOCATE 7,8:PRINT"6: ";D$(9) >TT<
15290 LOCATE 10,8:GOSUB 16000 >WU<
15300 IF B$=" " THEN D$(9)=B$ >PK<
15305 IF LEN (d$(9))>60 THEN PRINT >YQ<
CHR$(7):GOTO 15280
15310 LOCATE 7,9:PRINT"7: ";D$(10) >GL<
15320 LOCATE 10,9:GOSUB 16000 >QM<
15330 IF B$=" " THEN D$(10)=B$ >LN<
15335 IF LEN (d$(10))>60 THEN PRINT >NU<
CHR$(7):GOTO 15310
15340 LOCATE 7,10:PRINT"8: ";D$(11) >FP<
)
15350 LOCATE 10,10:GOSUB 16000 >MQ<
15360 IF B$=" " THEN D$(11)=B$ >QR<
15365 IF LEN (d$(11))>60 THEN PRINT >WX<
CHR$(7):GOTO 15340
15370 LOCATE 7,11:PRINT"9: ";D$(12) >MT<
)
15380 LOCATE 10,11:GOSUB 16000 >RU<
15390 IF B$=" " THEN D$(12)=B$ >VV<
15395 IF LEN (d$(12))>60 THEN PRINT >DA<
CHR$(7):GOTO 15370
15400 LOCATE 7,12:PRINT"10: ";D$(13) >BL<
)
15410 LOCATE 10,12:GOSUB 16000 >LM<
15420 IF B$=" " THEN D$(13)=B$ >PN<
15425 IF LEN (d$(13))>60 THEN PRINT >RU<
CHR$(7):GOTO 15400
15430 LOCATE 7,13:PRINT"11: ";D$(14) >HP<
)
15440 LOCATE 10,13:GOSUB 16000 >QQ<
15450 IF B$=" " THEN D$(14)=B$ >UR<
15455 IF LEN (d$(14))>60 THEN PRINT >ZX<
CHR$(7):GOTO 15430
15460 LOCATE 7,14:PRINT"12: ";D$(15) >PT<
)
15470 LOCATE 10,14:GOSUB 16000 >VJ<
15480 IF B$=" " THEN D$(15)=B$ >YV<
15485 IF LEN (d$(15))>60 THEN PRINT >GA<
CHR$(7):GOTO 15460
15490 LOCATE 7,15:PRINT"13: ";D$(16) >WW<
)
15500 LOCATE 10,15:GOSUB 16000 >PM<
15510 IF B$=" " THEN D$(16)=B$ >TN<
15515 IF LEN (d$(16))>60 THEN PRINT >EU<
CHR$(7):GOTO 15490
15520 LOCATE 7,16:PRINT"14: ";D$(17) >TP<
)
15530 LOCATE 10,16:GOSUB 16000 >UQ<
15540 IF B$=" " THEN D$(17)=B$ >XR<
15545 IF LEN (d$(17))>60 THEN PRINT >CX<
CHR$(7):GOTO 15520
15550 LOCATE 7,17:PRINT"15: ";D$(18) >ZT<
)
15560 LOCATE 10,17:GOSUB 16000 >YU<
15570 IF B$=" " THEN D$(18)=B$ >BV<
15575 IF LEN (d$(18))>60 THEN PRINT >KA<
CHR$(7):GOTO 15550
15580 LOCATE 7,18:PRINT"16: ";D$(19) >FW<
)
15590 LOCATE 10,18:GOSUB 16000 >CX<
15600 IF B$=" " THEN D$(19)=B$ >WN<
15605 IF LEN (d$(19))>60 THEN PRINT >HU<
CHR$(7):GOTO 15580
15610 LOCATE 7,19:PRINT"17: ";D$(20) >TP<
)
15620 LOCATE 10,19:GOSUB 16000 >XQ<
15630 IF B$=" " THEN D$(20)=B$ >QR<
15635 IF LEN (d$(20))>60 THEN PRINT >WX<
CHR$(7):GOTO 15610
15640 LOCATE 7,20:PRINT"18: ";D$(21) >PT<
)
15650 LOCATE 10,20:GOSUB 16000 >RU<
15660 IF B$=" " THEN D$(21)=B$ >VV<
15665 IF LEN (d$(21))>60 THEN PRINT >DA<
CHR$(7):GOTO 15640
15670 LOCATE 7,21:PRINT"19: ";D$(22) >WW<
)
15680 LOCATE 10,21:GOSUB 16000 >WX<
15690 IF B$=" " THEN D$(22)=B$ >ZY<
15695 IF LEN (d$(22))>60 THEN PRINT >LD<
CHR$(7):GOTO 15670
15700 LOCATE 7,22:PRINT"20: ";D$(23) >HP<
)
15710 LOCATE 10,22:GOSUB 16000 >QQ<
15720 IF B$=" " THEN D$(23)=B$ >UR<
15725 IF LEN (d$(23))>60 THEN PRINT >ZX<
CHR$(7):GOTO 15700
15730 LOCATE 4,23:PRINT"REDUCTEUR D >GT<
E BRUIT: DOLBY / NR ";D$(2)
15740 LOCATE 23,23:GOSUB 16000 >ZU<
15750 IF B$=" " THEN D$(2)=B$ >RV<
15760 LOCATE 25,25:PRINT CHR$(24);" >LW<
APPUYEZ SUR UNE TOUCHE ";CHR$(24)
15770 CALL &BB06 >MX<
15780 GOTO 1000 >JY<
16000 LINE INPUT"", B$:RETURN >TH<
52000 ' TRAITEMENT D'ERREURS >UH<
52005 ' >RN<
52010 CLS:MODE 1:GOSUB 60160 >FJ<
52020 IF DERR=144 THEN LOCATE 5,10: >LK<
PRINT"NOM DU FICHIER INCORRECT":LOC
ATE 5,14:PRINT"MINI: 1 Caractere.":
LOCATE 5,16:PRINT"MAXI: 8 Caractere
s."
52030 IF DERR=146 THEN LOCATE 5,10: >PL<
PRINT"CE FICHIER NE SE TROUVE PAS":
LOCATE 5,12:PRINT"SUR CETE DISQUETT
E."
52040 IF DERR=147 THEN LOCATE 5,10: >NM<
PRINT"CATALOGUE SATURE.PLUS DE 64 F
ICHIERS.":LOCATE 5,12:PRINT"CHANGER
DE DISQUETTE."
52050 IF DERR=148 THEN LOCATE 5,10: >XN<
PRINT"DISQUETTE PLEINE.":LOCATE 5,1
2:PRINT"CHANGER DE DISQUETTE."
52060 LOCATE 10,25:PRINT CHR$(24);" >DP<
APPUYEZ SUR UNE TOUCHE";CHR$(24):CA
LL &BB06:GOTO 1000
52070 RESUME 1000 >RQ<
60160 ' TRACE DES CADRES >QP<
60165 ' >YV<
60170 MOVE 5,5:DRAW 5,395,3. >CQ<
60180 DRAW 635,395 >AR<
60190 DRAW 635,5 >JT<
60200 DRAW 5,5 >LJ<
60210 MOVE 7,7:DRAW 7,393,3:DRAW 63 >VK<
3,393,3:DRAW 633,7,3:DRAW 7,7,3
60220 RETURN >UL<

```



# EDUCATIF



## DRAPEAUX ET CAPITALES

Jack CHAIGNEAU



*Ce programme dessine les drapeaux de 60 nations. Il s'agit de donner le nom du pays, ainsi que la capitale correspondant au dessin. On fixe le nombre de drapeaux pour une manche (de 3 à 60). Le programme ne prend en compte que les 4 premières lettres des noms, ce qui est généralement suffisant pour l'identification. Il comptabilise le nombre d'essais et de réponses exactes. Pour "donnez votre langue aushat" entrez la lettre "Z". Au début du jeu une option "révision" fera défiler tous les drapeaux en mémoire. Le programme est composé de deux fichiers : le premier est à sauvegarder sous le nom DRAPEAUX et le second sous le nom DRAPEAU 1.*

### LISTING 1

```

5' ##### DRAPEAUX #####
10 MODE 1:DEG:INK 0,1:INK 2,20
20 BORDER 1:PAPER 0:PEN 2
30 ORIGIN 320,200
40 FOR n=1 TO 100
50 x=RND*640-320:y=RND*400-200
60 IF (x^2+y^2)<12200 GOTO 80
70 PLOT x,y,2
80 NEXT
90 MOVE 109,0
100 FOR a=0 TO 360 STEP 5
110 DRAW 109*COS(a),109*SIN(a)
120 NEXT
130 ORIGIN 0,0
140 FOR p=1 TO 9
150 READ a,b,c:PLOT a,b
160 FOR n=1 TO c:READ x,y:DRAW x,y
170 NEXT:NEXT
180 PLOT 215,186:DRAW 220,194:DRAW
212,204
190 ORIGIN 315,200:TAG
200 FOR n=3 TO 25
210 READ a$
220 x=n*360/26
230 MOVE COS(x)*260,SIN(x)*140
240 PRINT a$;
250 NEXT:TAGOFF
260 FOR n=1 TO 3000:NEXT
270 LOCATE 27,24:PRINT "Chargement.
.."
280 RUN "!drapeau1
290 DATA 389,281,60,377,271,370,277
,375,283,358,293,339,269,339,259,34
5,264,351,256,358,276,361,263
300 DATA 371,263,359,251,350,251,34
5,258,342,249,330,243,329,240,334,2
37,334,233,331,230
310 DATA 324,234,321,222,329,218,33
8,229,346,233,350,221,354,221,352,2
33,368,216,374,231
320 DATA 383,231,388,221,373,219,37
1,214,383,213,376,200,360,203,349,2
10,348,215,326,212
330 DATA 312,201,306,185,319,171,33
8,164,343,144,336,136,339,107,350,1
06,376,126,380,142
340 DATA 400,162,387,167,376,194,39
2,170,413,177,398,196,401,198,407,1
88,410,190,426,185
350 DATA 336,246,4,333,262,330,262,
328,244,336,246,319,244,4,320,254,3
24,255,324,247,319,244,403,229,3,39
7,224,403,212,403,229
360 DATA 319,278,3,305,282,312,275,
319,278,304,308,4,302,288,289,284,2
79,270,268,292
370 DATA 251,284,8,250,270,258,274,
262,259,249,255,258,249,230,237,228

```



,227,218,236  
 380 DATA 215,220,9,221,205,225,199, >RM<  
 231,201,260,185,259,179,276,162,262  
 ,146,254,146,238,130  
 390 DATA 238,214,4,234,210,226,218, >YN<  
 228,220,238,214  
 400 DATA X,U,A,E,P,A,R,D,,,E,T,,C, >KE<  
 A,P,I,T,A,L,E,S

## LISTING 2

```

50 '***** DRAPEAUX ET ***** >ZF<
60 '***** CAPITALES ***** >QG<
70 INK 0,1:INK 1,2:INK 2,26:INK 3, >TH<
6:INK 4,0:INK 5,24:INK 6,19:INK 7,1
5
80 MODE 1:PAPER 0:PEN 2 >YJ<
90 B=340:GOSUB 6360 >XK<
100 LOCATE 9,7:PRINT"Bonjour !" >AB<
110 LOCATE 3,9:PRINT"Ce programme v >AC<
a tester vos connaissancesconcernan
t les drapeaux et les capitalesde q
uelques nations."
120 FOR n=1 TO 2500:NEXT:PRINT CHR$ >QD<
(7)
130 LOCATE 1,15:PRINT"Avant de comm >AE<
encer,peut-etre voulez-vousfaire un
e petite revision ?"
140 PRINT >UF<
150 FOR n=1 TO 1500:NEXT:PRINT CHR$ >TG<
(7)
160 PRINT >WH<
170 PRINT" - Tapez 0 pour o >PJ<
ui"
180 PRINT" - N pour n >QK<
on"
190 a$=UPPER$(INKEY$) >HL<
200 IF a$<>"0" AND a$<>"N" THEN 190 >UC<

210 IF a$="0" THEN GOTO 400 >GD<
220 CLS:choix=0:B=340:GOSUB 6350 >VE<
230 LOCATE 2,7:PRINT"-Lorsqu'une qu >LF<
estion apparait, entrez"
240 PRINT >VG<
250 PRINT" les 4 premieres lettres >BH<
de la reponse."
260 FOR n=1 TO 2000:NEXT:PRINT CHR$ >QJ<
(7)
270 LOCATE 2,12:PRINT"-Si vous ne t >ZK<
rouvez pas :"
280 PRINT >ZL<
290 PRINT" entrez Z pour avoir >DM<
la solution."
300 FOR n=1 TO 2000:NEXT:PRINT CHR$ >KD<
(7)

```

```

310 PRINT:PRINT >ME<
320 PRINT" -Pour changer de page : " >QF<

330 PRINT:PRINT" appuyez sur une >BG<
touche quelconque."
340 FOR n=1 TO 2000:NEXT:PRINT CHR$ >PH<
(7)
350 LOCATE 36,23:PRINT" " >JJ<
360 LOCATE 2,23:INPUT "-Combien de >TK<
drapeaux (de 3 a 60)";nbre
370 IF nbre<3 OR nbre>60 THEN GOTO >YL<
350
380 non1=0:non2=0:oui1=0:oui2=0 >YM<
390 GOTO 410 >XN<
400 choix=1:nbre=60 >DE<
410 MODE 0:PEN 2 >XF<
420 ' >FG<
430 '***** CHOIX DES DRAPEAUX **** >YH<
440 CLS:Pas=31+6*INT(RND*4) >RJ<
450 DR=INT(RND*60+1):Po=1:ND=1 >QK<
460 GOSUB 7480 >PL<
470 WINDOW #3,W31,W32,W33,W34 >LM<
480 PEN #3,2:PAPER #3,0 >CN<
490 PRINT #3,ND:PRINT CHR$(7) >ZP<
500 IF DR>60 THEN DR=DR-60 >QF<
510 IF DR>30 GOTO 540 >NG<
520 ON DR GOSUB 610,670,730,810,900 >ZH<
,980,1040,1100,1160,1280,1340,1400,
1490,1550,1610,1710,1810,1940,2000,
2070,2130,2190,2270,2350,2440,2510,
2580,2650,2760,2870
530 GOTO 560 >ZJ<
540 DR=DR-30 >QK<
550 ON DR GOSUB 2930,3000,3060,3120 >ZL<
,3310,3460,3520,3660,3750,3840,3970
,4030,4110,4180,4280,4370,4480,4560
,4660,4780,4850,4960,5020,5160,5290
,5560,5720,5840,5910,6040:DR=DR+30
560 Po=Po+1:ND=ND+1 >CM<
570 IF ND>nbre THEN GOTO 7800 >RN<
580 IF Po>6 THEN GOSUB 6580 >BP<
590 DR=DR+Pas:GOTO 460 >EQ<
600 ' >FG<
610 '*****FRANCE***** >FH<
620 g$="FRAN":cap1$="Pari" >VJ<
630 GOSUB 7470 >MK<
640 C1=1:C2=2:C3=3:GOSUB 6270 >TL<
650 GOSUB 6220:GOSUB 7130:RETURN >RM<
660 ' >MN<
670 '*****ETHIOPIE***** >DP<
680 g$="ETHI":cap1$="Addi" >BQ<
690 GOSUB 7470 >UR<
700 C1=3:C2=5:C3=6:GOSUB 6480 >BH<
710 GOSUB 6220:GOSUB 7130:RETURN >NJ<
720 ' >JK<
730 '*****SOUDAN***** >NL<
740 g$="SOUD":cap1$="Khar" >NM<
750 GOSUB 7470 >QN<
760 C1=4:C2=2:C3=3:GOSUB 6480 >CP<
770 FOR Y=B TO B+80 STEP 2 >PQ<

```

```

780 PLOT A+60,B+40,6:DRAW A,Y:NEXT >WR<
790 GOSUB 6220:GOSUB 7130:RETURN >XT<
800 ' >HJ<
810 '*****SOMALIE***** >BK<
820 g$="SOMA":cap1$="Moga" >YL<
830 GOSUB 7470 >PM<
840 c1=1:c2=1:c3=1:c4=2:GOSUB 6270 >EN<
850 GOSUB 6700:PLOT A+64,B+46,2 >MP<
860 PLOT A+64,B+48:PLOT A+52,B+46 >FQ<
870 PLOT A+44,B+46,1:PLOT A+60,B+56 >DR<

880 GOSUB 6220:GOSUB 7130:RETURN >XT<
890 ' >TU<
900 '*****GAMBIE***** >TK<
910 g$="GAMB":cap1$="Banj" >LL<
920 GOSUB 7470 >PM<
930 C1=6:C2=2:C3=3:GOSUB 6480 >DN<

940 FOR Y=B+31 TO B+48 STEP 2 >YP<
950 PLOT A,Y,1:DRAW A+120,Y:NEXT >HQ<
960 GOSUB 6220:GOSUB 7130:RETURN >WR<
970 ' >RT<
980 '*****BELGIQUE***** >PU<
990 g$="BELG":cap1$="Brux" >PV<
1000 GOSUB 7470 >FB<
1010 C1=4:C2=5:C3=3:GOSUB 6270 >TC<
1020 GOSUB 6220:GOSUB 7130:RETURN >KD<
1030 ' >FE<
1040 '*****AUTRICHE***** >LF<
1050 g$="AUTR":cap1$="Vien" >ZG<
1060 GOSUB 7470 >MH<
1070 c1=3:c2=2:c3=3:GOSUB 6480 >YJ<
1080 GOSUB 6220:GOSUB 7130:RETURN >RK<
1090 ' >ML<
1100 '*****ITALIE***** >DC<
1110 g$="ITAL":cap1$="Rome" >CD<
1120 GOSUB 7470 >JE<
1130 C1=6:C2=2:C3=3:GOSUB 6270 >VF<
1140 GOSUB 6220:GOSUB 7130:RETURN >NG<
1150 ' >JH<
1160 '*****SUISSE***** >ZJ<
1170 g$="SUIS":cap1$="Bern" >ZK<
1180 GOSUB 7470 >QL<
1190 C1=3:C2=3:C3=3:GOSUB 6270 >ZM<
1200 FOR X=54 TO 66 STEP 4 >JD<
1210 PLOT A+X,B+13,2:DRAW A+X,B+67 >PE<
1220 NEXT >LF<
1230 FOR Y=34 TO 46 STEP 2 >GG<
1240 PLOT A+31,Y+B,2:DRAW A+89,Y+B >ZH<
1250 NEXT >PJ<
1260 GOSUB 6220:GOSUB 7130:RETURN >RK<
1270 ' >ML<
1280 '*****NIGERIA***** >ZM<
1290 g$="NIGE":cap1$="Abuj" >LN<
1300 GOSUB 7470 >JE<
1310 C1=6:C2=2:C3=6:GOSUB 6270 >YF<
1320 GOSUB 6220:GOSUB 7130:RETURN >NG<
1330 ' >JH<
1340 '*****ALLEMAGNE***** >BJ<
1350 g$="ALLE":cap1$="Bonn" >PK<

```



|                                     |      |                                     |      |                                    |      |
|-------------------------------------|------|-------------------------------------|------|------------------------------------|------|
| 1360 GOSUB 7470                     | >QL< | 1910 q=A+24:r=B+60:c6=2:GOSUB 6850  | >BM< | 2470 c1=3:c2=3:c3=3:GOSUB 6480     | >EP< |
| 1370 C1=5:C2=3:C3=4:GOSUB 6480      | >FM< | 1920 GOSUB 6220:GOSUB 7130:RETURN   | >VN< | 2480 c5=2:GOSUB 6790               | >NQ< |
| 1380 GOSUB 6220:GOSUB 7130:RETURN   | >VN< | 1930                                | >QP< | 2490 GOSUB 6220:GOSUB 7130:RETURN  | >YR< |
| 1390                                | >QP< | 1940 *****POLOGNE*****              | >WQ< | 2500                               | >JH< |
| 1400 *****EMIRATS ARABES*****       | >PF< | 1950 g\$="POLO":cap1\$="Vars"       | >TR< | 2510 *****SUEDE*****               | >JJ< |
| 1410 UNIS                           | >EG< | 1960 GOSUB 7470                     | >XT< | 2520 g\$="SUED":cap1\$="Stoc"      | >YK< |
| 1420 g\$="EMIR":cap1\$="Abou"       | >XH< | 1970 C1=3:C2=2:C3=0:GOSUB 6480      | >EU< | 2530 GOSUB 7470                    | >QL< |
| 1430 GOSUB 7470                     | >NJ< | 1980 GOSUB 6220:GOSUB 7130:RETURN   | >BV< | 2540 c1=1:c2=1:c3=1:GOSUB 6480     | >WM< |
| 1440 C1=4:C2=2:C3=6:GOSUB 6480      | >DK< | 1990                                | >XW< | 2550 c5=5:GOSUB 6790               | >PN< |
| 1450 FOR X=A TO A+40 STEP 2         | >EL< | 2000 *****JAPON*****                | >EC< | 2560 GOSUB 6220:GOSUB 7130:RETURN  | >WP< |
| 1460 PLOT X,B,3:DRAW X,B+80:NEXT    | >MM< | 2010 g\$="JAP":cap1\$="Toky"        | >ZD< | 2570                               | >RQ< |
| 1470 GOSUB 6220:GOSUB 7130:RETURN   | >VN< | 2020 GOSUB 7470                     | >JE< | 2580 *****FINLANDE*****            | >AR< |
| 1480                                | >QP< | 2030 c1=2:c2=2:c3=2:GOSUB 6480      | >TF< | 2590 g\$="FINL":cap1\$="Hels"      | >HT< |
| 1490 *****GABON*****                | >DQ< | 2040 couleur=3:GOSUB 6990           | >TG< | 2600 GOSUB 7470                    | >NJ< |
| 1500 g\$="GABO":cap1\$="Libr"       | >BG< | 2050 GOSUB 6220:GOSUB 7130:RETURN   | >PH< | 2610 c1=2:c2=2:c3=2:GOSUB 6480     | >XK< |
| 1510 GOSUB 7470                     | >MH< | 2060                                | >KJ< | 2620 c5=1:GOSUB 6790               | >HL< |
| 1520 C1=1:C2=5:C3=6:GOSUB 6480      | >CJ< | 2070 *****HONGRIE*****              | >GK< | 2630 GOSUB 6220:GOSUB 7130:RETURN  | >UM< |
| 1530 GOSUB 6220:GOSUB 7130:RETURN   | >RK< | 2080 g\$="HONG":cap1\$="Buda"       | >ML< | 2640                               | >PN< |
| 1540                                | >ML< | 2090 GOSUB 7470                     | >RM< | 2650 *****NORVEGE*****             | >XP< |
| 1550 *****MALI*****                 | >TM< | 2100 c1=6:c2=2:c3=3:GOSUB 6480      | >WD< | 2660 g\$="NORV":cap1\$="Oslo"      | >EQ< |
| 1560 g\$="MALI":cap1\$="Bama"       | >TN< | 2110 GOSUB 6220:GOSUB 7130:RETURN   | >LE< | 2670 GOSUB 7470                    | >WR< |
| 1570 GOSUB 7470                     | >UP< | 2120                                | >GF< | 2680 c1=3:c2=3:c3=3:GOSUB 6480     | >HT< |
| 1580 C1=6:C2=5:C3=3:GOSUB 6270      | >HQ< | 2130 *****TCHAD*****                | >MG< | 2690 c5=2:GOSUB 6790               | >RU< |
| 1590 GOSUB 6220:GOSUB 7130:RETURN   | >YR< | 2140 g\$="TCHA":cap1\$="Ndja"       | >XH< | 2700 FOR y=B+36 TO B+43 STEP 2     | >WK< |
| 1600                                | >JH< | 2150 GOSUB 7470                     | >NJ< | 2710 PLOT A,y,1:DRAW A+120,y:NEXT  | >FL< |
| 1610 *****KOWEIT*****               | >PJ< | 2160 c1=1:c2=5:c3=3:GOSUB 6270      | >XK< | 2720 FOR x=A+41 TO A+47 STEP 2     | >VM< |
| 1620 g\$="KOWE":cap1\$="Kowe"       | >AK< | 2170 GOSUB 6220:GOSUB 7130:RETURN   | >TL< | 2730 PLOT x,B:DRAW x,B+80:NEXT     | >KN< |
| 1630 GOSUB 7470                     | >QL< | 2180                                | >NM< | 2740 GOSUB 6220:GOSUB 7130:RETURN  | >WP< |
| 1640 C1=3:C2=2:C3=6:GOSUB 6480      | >EM< | 2190 *****ESPAGNE*****              | >AN< | 2750                               | >RQ< |
| 1650 FOR Y=B TO B+80 STEP 2         | >PN< | 2200 g\$="ESPA":cap1\$="Madr"       | >LE< | 2760 *****ISLANDE*****             | >AR< |
| 1660 PLOT A+60,B+40,4: DRAW A,Y:NEX | >UP< | 2210 GOSUB 7470                     | >KF< | 2770 g\$="ISLA":cap1\$="Reyk"      | >ZT< |
| T                                   |      | 2220 c1=3:c2=3:c3=3:GOSUB 6480      | >XG< | 2780 GOSUB 7470                    | >YU< |
| 1670 FOR Y=B+27 TO B+54 STEP 2      | >DQ< | 2230 FOR y=20 TO 60 STEP 2          | >YH< | 2790 c1=1:c2=1:c3=1:GOSUB 6480     | >DV< |
| 1680 PLOT A+44,Y,2:DRAW A+120,Y:NEX | >XR< | 2240 PLOT A,y+B,5:DRAW A+120,y+B:NE | >VJ< | 2800 c5=2:GOSUB 6790               | >JL< |
| T                                   |      | XT                                  |      | 2810 FOR y=B+36 TO B+43 STEP 2     | >YM< |
| 1690 GOSUB 6220:GOSUB 7130:RETURN   | >ZT< | 2250 GOSUB 6220:GOSUB 7130:RETURN   | >RK< | 2820 PLOT A,y,3:DRAW A+120,y:NEXT  | >KN< |
| 1700                                | >KJ< | 2260                                | >ML< | 2830 FOR x=A+41 TO A+47 STEP 2     | >XP< |
| 1710 *****DJIBOUTI*****             | >AK< | 2270 *****TCHECOSLOVAQUIE*****      | >DM< | 2840 PLOT x,B:DRAW x,B+80:NEXT     | >MQ< |
| 1720 g\$="DJIB":cap1\$="Djib"       | >NL< | 2280 g\$="TCHE":cap1\$="Frag"       | >WN< | 2850 GOSUB 6220:GOSUB 7130:RETURN  | >YR< |
| 1730 GOSUB 7470                     | >RM< | 2290 GOSUB 7470                     | >UP< | 2860                               | >UT< |
| 1740 C1=6:C2=1:C3=0:GOSUB 6480      | >BN< | 2300 C1=3:C2=2:C3=0:GOSUB 6480      | >RF< | 2870 *****GUATEMALA*****           | >UU< |
| 1750 FOR Y=B TO B+80 STEP 2         | >QP< | 2310 FOR Y=B TO B+80 STEP 2         | >HG< | 2880 g\$="GUAT":cap1\$="Guat"      | >ZV< |
| 1760 PLOT A+60,B+40,2:DRAW A,Y:NEXT | >TQ< | 2320 PLOT A+60,B+40,1: DRAW A,Y:NEX | >JH< | 2890 GOSUB 7470                    | >AW< |
|                                     |      | T                                   |      | 2900 c1=1:c2=2:c3=1:GOSUB 6270     | >UM< |
| 1770 q=A+26:r=B+40:c6=3             | >XR< | 2330 GOSUB 6220:GOSUB 7130:RETURN   | >QJ< | 2910 GOSUB 6220:GOSUB 7130:RETURN  | >VN< |
| 1780 GOSUB 6850                     | >YT< | 2340                                | >LK< | 2920                               | >QP< |
| 1790 GOSUB 6220:GOSUB 7130:RETURN   | >AU< | 2350 *****VIET-NAM*****             | >QL< | 2930 *****GHANA*****               | >LQ< |
| 1800                                | >LK< | 2360 g\$="VIET":cap1\$="Hano"       | >MM< | 2940 g\$="GHAN":cap1\$="Accr"      | >ZR< |
| 1810 *****LIBERIA*****              | >LL< | 2370 GOSUB 7470                     | >TN< | 2950 GOSUB 7470                    | >XT< |
| 1820 g\$="LIBE":cap1\$="Monr"       | >FM< | 2380 c1=3:c2=3:c3=3:c4=5:GOSUB 6480 | >WP< | 2960 c1=6:c2=5:c3=3:GOSUB 6480     | >PU< |
| 1830 GOSUB 7470                     | >TN< |                                     |      | 2970 q=A+60:r=B+38:c6=4:GOSUB 6840 | >QV< |
| 1840 c1=2:c2=2:c3=2:GOSUB 6480      | >BP< | 2390 GOSUB 6700:PLOT A+64,B+46,5    | >UQ< | 2980 GOSUB 6220:GOSUB 7130:RETURN  | >CW< |
| 1850 FOR p=8 TO 72 STEP 16          | >LQ< | 2400 PLOT A+64,B+48:PLOT A+52,B+46  | >ZG< | 2990                               | >YX< |
| 1860 FOR y=p TO p+6 STEP 2          | >UR< | 2410 PLOT A+44,B+46,3               | >DH< | 3000 *****COTE D'IVOIRE*****       | >AD< |
| 1870 PLOT A,B+y,3:DRAW A+120,B+y    | >RT< | 2420 GOSUB 6220:GOSUB 7130:RETURN   | >QJ< | 3010 g\$="COTE":cap1\$="Yamo"      | >HE< |
| 1880 NEXT:NEXT                      | >JU< | 2430                                | >LK< | 3020 GOSUB 7470                    | >KF< |
| 1890 FOR y=40 TO 80                 | >RV< | 2440 *****DANEMARK*****             | >XL< | 3030 c1=7:c2=2:c3=6:GOSUB 6270     | >AG< |
| 1900 PLOT A,B+y,1:DRAW A+44,B+y:NEX | >WL< | 2450 g\$="DANE":cap1\$="Cope"       | >DM< | 3040 GOSUB 6220:GOSUB 7130:RETURN  | >PH< |
| T                                   |      | 2460 GOSUB 7470                     | >TN< | 3050                               | >KJ< |



|                                        |      |                                        |      |                                        |      |
|----------------------------------------|------|----------------------------------------|------|----------------------------------------|------|
| 3060 ' *****IRLANDE*****               | >TK< | 3560 FOR y=16 TO 64 STEP 2             | >QQ< | 4070 DEG:FOR m=15 TO 165 STEP 25       | >ZM< |
| 3070 g\$="IRLA":cap1\$="Dubl"          | >VL< | 3570 PLOT A,B+y,2:DRAW A+120,B+y:NE    | >ZR< | 4080 PLOT A+61+20*cos(m),B+27+20*SI    | >KN< |
| 3080 GOSUB 7470                        | >RM< | XT                                     |      | N(m),2:NEXT                            |      |
| 3090 c1=6:c2=2:c3=7:GOSUB 6270         | >GN< | 3580 FOR y=24 TO 56 STEP 2             | >TT< | 4090 GOSUB 6220:GOSUB 7130:RETURN      | >WP< |
| 3100 GOSUB 6220:GOSUB 7130:RETURN      | >LE< | 3590 PLOT A,B+y,3:DRAW A+120,B+y:NE    | >CU< | 4100 '                                 | >GF< |
| 3110 '                                 | >GF< | XT                                     |      | 4110 ' *****BENIN*****                 | >RG< |
| 3120 ' *****ETATS-UNIS*****            | >LG< | 3600 c4=5:B=B-2:GOSUB 6700             | >BK< | 4120 g\$="BENI":cap1\$="Port"          | >NH< |
| 3130 g\$="ETAT":h\$="AMER":i\$="USA"   | >QH< | 3610 PLOT A+64,B+46                    | >FL< | 4130 GOSUB 7470                        | >NJ< |
| 3140 cap1\$="Wash":GOSUB 7470          | >YJ< | 3620 PLOT A+64,B+48:PLOT A+52,B+46     | >EM< | 4140 c1=6:c2=6:c3=6:GOSUB 6480         | >KK< |
| 3150 FOR Y=B TO B+80 STEP 2            | >LK< | 3630 PLOT A+44,B+46,3:PLOT A+60,B+5    | >EN< | 4150 q=A+25:r=B+60:c6=3:GOSUB 6840     | >BL< |
| 3160 PLOT A,Y,3:DRAW A+120,Y:NEXT      | >HL< | 6                                      |      | 4160 GOSUB 6220:GOSUB 7130:RETURN      | >UM< |
| 3170 FOR P=1 TO 11 STEP 2              | >KM< | 3640 B=B+2:GOSUB 6220:GOSUB 7130:RE    | >VP< | 4170 '                                 | >PN< |
| 3180 FOR Y=B+2+6*P TO B+6*(P+1) STE    | >VN< | TURN                                   |      | 4180 ' *****THAILANDE*****             | >CP< |
| P 2                                    |      | 3650 '                                 | >RQ< | 4190 g\$="THAI":cap1\$="Bang"          | >FQ< |
| 3190 PLOT A,Y,2:DRAW A+120,Y:NEXT:N    | >VP< | 3660 ' *****CHILI*****                 | >GR< | 4200 GOSUB 7470                        | >LG< |
| EXT                                    |      | 3670 g\$="CHIL":cap1\$="Sant"          | >JT< | 4210 c1=2:c2=1:c3=2:GOSUB 6480         | >UH< |
| 3200 FOR Y=B+38 TO B+80 STEP 2         | >VF< | 3680 GOSUB 7470                        | >YU< | 4220 FOR y=0 TO 13 STEP 2              | >TJ< |
| 3210 PLOT A,Y,1:DRAW A+52,Y:NEXT       | >DG< | 3690 C1=3:C2=2:C3=0:GOSUB 6480         | >FV< | 4230 PLOT A,B+y,3:DRAW A+120,B+y:NE    | >UK< |
| 3220 FOR Y=0 TO 32 STEP 8              | >ZH< | 3700 FOR y=40 TO 80 STEP 2             | >FL< | XT                                     |      |
| 3230 FOR X=0 TO 40 STEP 8              | >YJ< | 3710 PLOT A,B+y,1:DRAW A+47,B+y:NEX    | >AM< | 4240 FOR y=67 TO 80 STEP 2             | >QL< |
| 3240 PLOT A+10+X,B+42+Y,2:NEXT:NEXT    | >YK< | T                                      |      | 4250 PLOT A,B+y,3:DRAW A+120,B+y:NE    | >WM< |
|                                        |      | 3720 q=A+26:r=B+60:c6=2:GOSUB 6910     | >BN< | XT                                     |      |
| 3250 FOR Y=0 TO 24 STEP 8              | >DL< | 3730 GOSUB 6220:GOSUB 7130:RETURN      | >WF< | 4260 GOSUB 6220:GOSUB 7130:RETURN      | >VN< |
| 3260 FOR X=0 TO 32 STEP 8              | >CM< | 3740 '                                 | >RQ< | 4270 '                                 | >QP< |
| 3270 PLOT A+14+X,B+46+Y,2:NEXT:NEXT    | >KN< | 3750 ' *****MADAGASCAR*****            | >FR< | 4280 ' *****LAOS*****                  | >EQ< |
|                                        |      | 3760 g\$="MADA":cap1\$="Anta"          | >AT< | 4290 g\$="LAOS":cap1\$="Vien"          | >VR< |
| 3280 GOSUB 6220:GOSUB 7130             | >LP< | 3770 GOSUB 7470                        | >YU< | 4300 GOSUB 7470                        | >MH< |
| 3290 h\$="****":i\$="****":RETURN      | >DQ< | 3780 C1=6:C2=3:C3=0:GOSUB 6480         | >KV< | 4310 c1=3:c2=3:c3=3:GOSUB 6270         | >WJ< |
| 3300 '                                 | >HG< | 3790 FOR x=0 TO 40 STEP 3              | >EW< | 4320 FOR y=23 TO 58 STEP 2             | >LK< |
| 3310 ' *****RWANDA*****                | >PH< | 3800 PLOT A+x,B,2:DRAW A+x,B+80:NEX    | >WM< | 4330 PLOT A,B+y,1:DRAW A+120,B+y:NE    | >TL< |
| 3320 g\$="RWAN":h\$="RUAN":cap1\$="Kig | >FJ< | T                                      |      | XT                                     |      |
| a"                                     |      | 3810 GOSUB 6220:GOSUB 7130:RETURN      | >VN< | 4340 B=B-2:couleur=2:GOSUB 6990:B=B    | >XM< |
| 3330 GOSUB 7470                        | >PK< | 3820 '                                 | >QP< | +2                                     |      |
| 3340 c1=3:c2=5:c3=6:GOSUB 6270         | >DL< | 3830 ' *****CUBA*****                  | >WQ< | 4350 GOSUB 6220:GOSUB 7130:RETURN      | >VN< |
| 3350 PLOT A+50,B+20,4:DRAW A+50,B+6    | >TM< | 3840 g\$="CUBA":cap1\$="LaHa":cap2\$=" | >BR< | 4360 '                                 | >QP< |
| 0                                      |      | La h"                                  |      | 4370 ' *****HONDURAS*****              | >ZQ< |
| 3360 PLOT A+50,B+62:DRAW A+63,B+62     | >CN< | 3850 GOSUB 7470                        | >XT< | 4380 g\$="HOND":cap1\$="Tegu"          | >RR< |
| 3370 PLOT A+50,B+64:DRAW A+63,B+64     | >HP< | 3860 c1=1:c2=1:c3=1:GOSUB 6480         | >CU< | 4390 GOSUB 7470                        | >XT< |
| 3380 PLOT A+64,B+60:DRAW A+64,B+46     | >LQ< | 3870 FOR p=18 TO 50 STEP 32            | >MV< | 4400 c1=1:c2=2:c3=1:c6=1:GOSUB 6480    | >HJ< |
| 3390 PLOT A+50,B+44:DRAW A+63,B+44     | >FR< | 3880 FOR y=p TO p+14 STEP 2            | >ZW< |                                        |      |
| 3400 PLOT A+50,B+42:DRAW A+63,B+42     | >TH< | 3890 PLOT A,B+y,2:DRAW A+120,B+y       | >VX< | 4410 q=A+60:r=B+38:GOSUB 6920          | >MK< |
| 3410 PLOT A+60,B+42:DRAW A+64,B+30     | >TJ< | 3900 NEXT:NEXT                         | >DN< | 4420 q=A+44:r=B+44:GOSUB 6920          | >ML< |
|                                        |      | 3910 FOR Y=B TO B+80 STEP 2            | >QP< | 4430 q=A+44:r=B+32:GOSUB 6920          | >KM< |
| 3420 PLOT A+64,B+30:DRAW A+68,B+20     | >YK< | 3920 PLOT A+60,B+40,3:DRAW A,Y:NEXT    | >UQ< | 4440 q=A+76:r=B+44:GOSUB 6920          | >VN< |
| 3430 GOSUB 6220:GOSUB 7130:h\$="****   | >LL< |                                        |      | 4450 q=A+76:r=B+32:GOSUB 6920          | >TP< |
| "                                      |      | 3930 r=B+40:q=A+26:c6=2                | >WR< | 4460 GOSUB 6220:GOSUB 7130:RETURN      | >XQ< |
| 3440 RETURN                            | >TM< | 3940 GOSUB 6850                        | >YT< | 4470 '                                 | >TR< |
| 3450 '                                 | >PN< | 3950 GOSUB 6220:GOSUB 7130:RETURN      | >AU< | 4480 ' *****SYRIE*****                 | >MT< |
| 3460 ' *****LIBYE*****                 | >TP< | 3960 '                                 | >WV< | 4490 g\$="SYRI":cap1\$="Dama"          | >PU< |
| 3470 g\$="LIBY":cap1\$="Trip"          | >JQ< | 3970 ' *****SIERRA-LEONE*****          | >ZW< | 4500 GOSUB 7470                        | >PK< |
| 3480 GOSUB 7470                        | >WR< | 3980 g\$="SIER":cap1\$="Free"          | >MX< | 4510 c1=4:c2=2:c3=3:GOSUB 6480         | >BL< |
| 3490 c1=6:c2=6:c3=6:GOSUB 6480         | >TT< | 3990 GOSUB 7470                        | >CY< | 4520 q=A+40:r=B+38:c6=6:GOSUB 6910     | >FM< |
|                                        |      | 4000 c1=1:c2=2:c3=6:GOSUB 6480         | >VE< | 4530 q=A+80:r=B+38:GOSUB 6910          | >RN< |
| 3500 GOSUB 6220:GOSUB 7130:RETURN      | >QJ< | 4010 GOSUB 6220:GOSUB 7130:RETURN      | >MF< | 4540 GOSUB 6220:GOSUB 7130:RETURN      | >WP< |
| 3510 '                                 | >LK< | 4020 '                                 | >HG< | 4550 '                                 | >RQ< |
| 3520 ' *****SURINAM*****               | >HL< | 4030 ' *****VENEZUELA*****             | >ZH< | 4560 ' *****IRAQ*****                  | >DR< |
| 3530 g\$="SURI":cap1\$="Para"          | >XM< | 4040 g\$="VENE":cap1\$="Cara"          | >GJ< | 4570 g\$="IRAQ":h\$="IRAK":cap1\$="Bag | >WT< |
| 3540 GOSUB 7470                        | >TN< | 4050 GOSUB 7470                        | >PK< | d"                                     |      |
| 3550 c1=6:c2=6:c3=6:GOSUB 6480         | >PP< | 4060 c1=3:c2=1:c3=5:GOSUB 6480         | >BL< |                                        |      |



|                                     |      |                                        |      |                                       |      |
|-------------------------------------|------|----------------------------------------|------|---------------------------------------|------|
| 4580 GOSUB 7470                     | >YU< | NEXT                                   |      | 5560 *****CENTRAFRIQUE*****           | >WT< |
| 4590 c1=4:c2=2:c3=3:GOSUB 6480      | >KV< | 5100 FOR x=A+15 TO A+105 STEP 2        | >MG< | 5570 g\$="CENT":cap1\$="Bang"         | >NU< |
| 4600 q=A+28:r=B+38:c6=6:GOSUB 6910  | >LL< | 5110 PLOT A+60,B+47,6:DRAW x,B+80:N    | >GH< | 5580 GOSUB 7470                       | >ZV< |
| 4610 q=A+60:r=B+38: GOSUB 6910      | >NM< | EXT                                    |      | 5590 FOR p=0 TO 60 STEP 20            | >ZW< |
| 4620 q=A+93:r=B+38: GOSUB 6910      | >WN< | 5120 FOR x=A+15 TO A+111 STEP 2        | >LJ< | 5600 IF p=0 THEN col=5                | >BM< |
| 4630 GOSUB 6220:GOSUB 7130          | >LP< | 5130 PLOT A+60,B+33,6:DRAW x,B:NEXT    | >UK< | 5610 IF p=20 THEN col=6               | >HN< |
| 4640 h\$="****":RETURN              | >ZQ< |                                        |      | 5620 IF p=40 THEN col=2               | >GF< |
| 4650                                | >TR< | 5140 GOSUB 6220:GOSUB 7130:RETURN      | >TL< | 5630 IF p=60 THEN col=1               | >JQ< |
| 4660 *****NIGER*****                | >MT< | 5150                                   | >NM< | 5640 FOR y=0 TO 20 STEP 2             | >YR< |
| 4670 g\$="NIGE":cap1\$="Niam"       | >VU< | 5160 *****TOGO*****                    | >XN< | 5650 PLOT A,B+p+y,col:DRAW A+120,B+   | >VT< |
| 4680 GOSUB 7470                     | >ZV< | 5170 g\$="TOGO":cap1\$="Lome"          | >YP< | p+y                                   |      |
| 4690 c1=6:c2=2:c3=7:GOSUB 6480      | >TW< | 5180 GOSUB 7470                        | >VQ< | 5660 NEXT:NEXT                        | >JU< |
| 4700 DEG:FOR u=0 TO 360 STEP 8      | >VM< | 5190 c1=6:c2=6:c3=6:GOSUB 6270         | >NR< | 5670 FOR x=54 TO 70 STEP 4            | >VV< |
| 4710 PLOT A+64,B+38,7               | >RN< | 5200 FOR p=18 TO 50 STEP 32            | >AH< | 5680 PLOT A+x,B,3:DRAW A+x,B+80:NEX   | >FW< |
| 4720 DRAW A+64+10*COS(u),B+38+10*SI | >BP< | 5210 FOR y=p TO p+14 STEP 2            | >MJ< | T                                     |      |
| N(u)                                |      | 5220 PLOT A,B+y,5:DRAW A+120,B+y       | >LK< | 5690 q=A+16:r=B+70:c6=5:GOSUB 6920    | >PX< |
| 4730 NEXT                           | >WQ< | 5230 NEXT:NEXT                         | >BL< | 5700 GOSUB 6220:GOSUB 7130:RETURN     | >VN< |
| 4740 PLOT A+52,B+44 :PLOT A+52,B+3  | >WR< | 5240 FOR y=34 TO 80 STEP 2             | >KM< | 5710                                  | >QP< |
| 2                                   |      | 5250 PLOT A,B+y,3:DRAW A+54,B+y:NEX    | >BN< | 5720 *****PANAMA*****                 | >XQ< |
| 4750 PLOT A+56,B+28,2:PLOT A+68,B+2 | >UT< | T                                      |      | 5730 g\$="PANA":cap1\$="Pana"         | >JR< |
| 8                                   |      | 5260 q=A+29:r=B+57:c6=2:GOSUB 6840     | >FP< | 5740 GOSUB 7470                       | >XT< |
| 4760 GOSUB 6220:GOSUB 7130:RETURN   | >AU< | 5270 GOSUB 6220:GOSUB 7130:RETURN      | >XQ< | 5750 c1=2:c2=2:c3=2:GOSUB 6480        | >FU< |
| 4770                                | >WV< | 5280                                   | >TR< | 5760 FOR y=0 TO 38 STEP 2             | >LV< |
| 4780 *****BURKINA-FASSO*****        | >BW< | 5290 *****GRANDE-BRETAGNE*****         | >ET< | 5770 PLOT A,B+y,1:DRAW A+60,B+y:NEX   | >DW< |
| 4790 g\$="BURK":cap1\$="Ouag"       | >ZX< | 5300 g\$="GRAN":h\$="ANGL":cap1\$="Lon | >KJ< | T                                     |      |
| 4800 GOSUB 7470                     | >TN< | d"                                     |      | 5780 FOR y=40 TO 80 STEP 2            | >RX< |
| 4810 C1=6:C2=3:C3=0:GOSUB 6480      | >EP< | 5310 GOSUB 7470                        | >PK< | 5790 PLOT A+64,B+y,3:DRAW A+120,B+y   | >UY< |
| 4820 q=A+60:r=B+40:c6=5:GOSUB 6840  | >EQ< | 5320 c1=3:c2=3:c3=3:GOSUB 6270         | >YL< | :NEXT                                 |      |
| 4830 GOSUB 6220:GOSUB 7130:RETURN   | >YR< | 5330 FOR y=B+5 TO B+79 STEP 2          | >BM< | 5800 q=A+30:r=B+60:c6=1:GOSUB 6840    | >YF< |
| 4840                                | >UT< | 5340 PLOT A+55,B+41,1:DRAW A,y:NEXT    | >VN< | 5810 q=A+94:r=B+20:c6=3:GOSUB 6840    | >HQ< |
| 4850 *****COLOMBIE*****             | >MU< |                                        |      | 5820 GOSUB 6220:GOSUB 7130:RETURN     | >YR< |
| 4860 g\$="COLD":cap1\$="Bogo"       | >JV< | 5350 FOR y=B+5 TO B+79 STEP 2          | >DP< | 5830                                  | >UT< |
| 4870 GOSUB 7470                     | >AW< | 5360 PLOT A+69,B+41:DRAW A+120,y:NE    | >HQ< | 5840 *****BANGLADESH*****             | >AU< |
| 4880 FOR y=0 TO 40 STEP 2           | >FX< | XT                                     |      | 5850 g\$="BANG":cap1\$="Dacc"         | >FV< |
| 4890 PLOT A,B+y,1:DRAW A+120,B+y:NE | >EY< | 5370 FOR x=A+15 TO A+109 STEP 2        | >BR< | 5860 GOSUB 7470                       | >AW< |
| XT                                  |      | 5380 PLOT A+60,B+47:DRAW x,B+80:NEX    | >KT< | 5870 c1=6:c2=6:c3=6:GOSUB 6480        | >XX< |
| 4900 FOR y=42 TO 80 STEP 2          | >LP< | T                                      |      | 5880 couleur=7:GOSUB 6990             | >NY< |
| 4910 PLOT A,B+y,5:DRAW A+120,B+y:NE | >BQ< | 5390 FOR x=A+15 TO A+111 STEP 2        | >WU< | 5890 GOSUB 6220:GOSUB 7130:RETURN     | >FZ< |
| XT                                  |      | 5400 PLOT A+60,B+35:DRAW x,B:NEXT      | >PK< | 5900                                  | >RQ< |
| 4920 FOR y=0 TO 22 STEP 2           | >AR< | 5410 PLOT A+11,B,2:DRAW A+120,B+79     | >UL< | 5910 *****URSS*****                   | >JR< |
| 4930 PLOT A,B+y,3:DRAW A+120,B+y:NE | >BT< | 5420 PLOT A,B+2:DRAW A+115,B+80        | >LM< | 5920 g\$="URSS":h\$="UNIO":i\$="RUSS" | >RT< |
| XT                                  |      | 5430 PLOT A,B+78:DRAW A+115,B          | >UN< | 5930 cap1\$="Mosc":GOSUB 7470         | >GU< |
| 4940 GOSUB 6220:GOSUB 7130:RETURN   | >AU< | 5440 PLOT A+11,B+80:DRAW A+120,B+2     | >MP< | 5940 c1=3:c2=3:c3=3:GOSUB 6480        | >KV< |
| 4950                                | >WV< | 5450 FOR x=54 TO 68 STEP 14            | >BQ< | 5950 PLOT A+16,B+64,5:DRAW A+36,B+5   | >WW< |
| 4960 *****GUINEE*****               | >CW< | 5460 PLOT A+x,B,2:DRAW A+x,B+80:NEX    | >AR< | 4                                     |      |
| 4970 g\$="GUIN":cap1\$="Cona"       | >LX< | T                                      |      | 5960 PLOT A+12,B+62:PLOT A+20,B+66    | >ZX< |
| 4980 GOSUB 7470                     | >CY< | 5470 FOR y=36 TO 44 STEP 2             | >TT< | 5970 PLOT A+32,B+60:DRAW A+32,B+66    | >KY< |
| 4990 c1=3:c2=5:c3=6:GOSUB 6270      | >RZ< | 5480 PLOT A,B+y,3:DRAW A+120,B+y:NE    | >CU< | 5980 PLOT A+32,B+68:DRAW A+24,B+72    | >TZ< |
| 5000 GOSUB 6220:GOSUB 7130:RETURN   | >MF< | XT                                     |      | 5990 PLOT A+24,B+56:PLOT A+20,B+54    | >FA< |
| 5010                                | >HG< | 5490 FOR y=34 TO 46 STEP 12            | >YV< | 6000 PLOT A+16,B+56:DRAW A+8,B+52     | >XG< |
| 5020 *****JAMAIQUE*****             | >EH< | 5500 PLOT A,B+y,2:DRAW A+120,B+y:NE    | >UL< | 6010 GOSUB 6220:GOSUB 7130            | >EH< |
| 5030 g\$="JAMA":cap1\$="King"       | >DJ< | XT                                     |      | 6020 h\$="****":i\$="****":RETURN     | >XJ< |
| 5040 GOSUB 7470                     | >PK< | 5510 FOR x=56 TO 64 STEP 4             | >TM< | 6030                                  | >LK< |
| 5050 c1=5:c2=5:c3=5:GOSUB 6270      | >EL< | 5520 PLOT A+x,B,3:DRAW A+x,B+80:NEX    | >YN< | 6040 *****GRECE*****                  | >BL< |
| 5060 FOR y=B+5 TO B+79 STEP 2       | >BM< | T                                      |      | 6050 g\$="GREC":cap1\$="Athe"         | >HM< |
| 5070 PLOT A+51,B+39,4:DRAW A,y:NEXT | >BN< | 5530 GOSUB 6220:GOSUB 7130:h\$="****   | >PP< | 6060 GOSUB 7470                       | >TN< |
|                                     |      | "                                      |      | 6070 c1=1:c2=1:c3=1:GOSUB 6480        | >YP< |
| 5080 FOR y=B+5 TO B+79 STEP 2       | >DP< | 5540 RETURN                            | >WQ< | 6080 FOR p=12 TO 60 STEP 16           | >EQ< |
| 5090 PLOT A+73,B+41,4:DRAW A+120,y: | >BQ< | 5550                                   | >TR< | 6090 FOR y=p+2 TO p+8 STEP 2          | >XR< |



|                                        |      |                                        |      |                                           |      |
|----------------------------------------|------|----------------------------------------|------|-------------------------------------------|------|
| 6100 PLOT A,B+y,2: DRAW A+120,B+y: NE  | >AH< | 6600 LOCATE 20,24: PRINT CHR\$(243)    | >UN< | 7120 '*****QUESTION-REPOSE*****           | >ML< |
| XT: NEXT                               |      | 6610 A\$=INKEY\$                       | >FP< | 7130 quest=1: qu\$=" Pays"                | >VM< |
| 6110 FOR y=38 TO 80 STEP 2             | >LJ< | 6620 IF A\$<>" " THEN 6670             | >EQ< | 7140 rep1\$=g\$: rep2\$=h\$: rep3\$=i\$   | >HN< |
| 6120 PLOT A,B+y,1: DRAW A+52,B+y: NEX  | >UK< | 6630 FOR n=1 TO 3                      | >NR< | 7150 WINDOW #1,W11,W12,W13,W14            | >EP< |
| T                                      |      | 6640 READ f: SOUND 1,f,25: SOUND 2,f/  | >XT< | 7160 PEN#1,2: PAPER#1,0                   | >CQ< |
| 6130 FOR y=54 TO 60 STEP 2             | >JL< | 2,25                                   |      | 7170 IF CHOIX=1 THEN GOTO 7370            | >JR< |
| 6140 PLOT A,B+y,2: DRAW A+52,B+y: NEX  | >XM< | 6650 DATA 478,319,379                  | >EU< | 7180 CLS #quest: PRINT #quest,qu\$        | >JT< |
| T                                      |      | 6660 NEXT: RESTORE: GOTO 6610          | >KV< | 7190 INPUT #quest,rep\$                   | >AU< |
| 6150 FOR x=24 TO 32 STEP 4             | >HN< | 6670 Po=1                              | >XW< | 7200 rep\$=UPPER\$(rep\$): rep\$=LEFT\$(r | >PK< |
| 6160 PLOT A+x,B+36,2: DRAW A+x,B+80:   | >JP< | 6680 CLS: RETURN                       | >LX< | ep\$,4)                                   |      |
| NEXT                                   |      | 6690                                   | >ZY< | 7210 IF rep\$="" THEN GOTO 7180           | >BL< |
| 6170 GOSUB 6220: GOSUB 7130: RETURN    | >XQ< | 6700 ' *****ETOILE*****                | >BF< | 7220 IF rep\$="Z" THEN PRINT CHR\$(7)     | >YM< |
| 6180                                   | >TR< | 6710 DEG: FOR p=90 TO 450 STEP 72      | >HQ< | : GOTO 7370                               |      |
| 6190 '-----                            | >NT< | 6720 FOR r=4 TO 0 STEP -2              | >PR< | 7230 IF rep\$=rep1\$ OR rep\$=rep2\$ OR   | >FN< |
| 6200 '-----                            | >EJ< | 6730 PLOT A+60+14*COS(p),B+42+14*SI    | >NT< | rep\$=rep3\$ THEN 7310                    |      |
| 6210                                   | >LK< | N(p),c4                                |      | 7240 CLS #quest: PRINT #quest," NON       | >BP< |
| 6220 ' *****TRACE DU CADRE*****        | >QL< | 6740 DRAW A+60+r*COS(p-36),B+42+r*S    | >DU< | !"                                        |      |
| 6230 PLOT A,B,2: DRAW A+120,B          | >YM< | IN(p-36)                               |      | 7250 IF quest=1 THEN non1=non1+1          | >ZQ< |
| 6240 DRAW A+120,B+80: DRAW A,B+80      | >YN< | 6750 PLOT A+60+14*COS(p),B+42+14*SI    | >NV< | 7260 IF quest=2 THEN non2=non2+1          | >DR< |
| 6250 DRAW A,B: RETURN                  | >BP< | N(p)                                   |      | 7270 ENT -9,20,5,1,1,-100,1               | >FT< |
| 6260                                   | >RQ< | 6760 DRAW A+60+r*COS(p+36),B+42+r*S    | >BW< | 7280 ENV 9,15,1,6,15,-1,20                | >XU< |
| 6270 '*****3 BANDES VERTICALES*****    | >VR< | IN(p+36)                               |      | 7290 SOUND 129,20,330,15,9,9              | >UV< |
| 6280 FOR P=1 TO 81 STEP 40: X=A+P-1    | >JT< | 6770 NEXT r: NEXT p: RETURN            | >YX< | 7300 FOR n=1 TO 1500: NEXT: GOTO 7180     | >GL< |
| 6290 IF P=1 THEN Col=C1                | >CU< | 6780                                   | >ZY< |                                           |      |
| 6300 IF P=41 THEN Col=C2               | >BK< | 6790 ' *****CRDIX*****                 | >QZ< | 7310 CLS #quest: PRINT #quest," OUI       | >BM< |
| 6310 IF P=81 THEN Col=C3               | >HL< | 6800 FOR y=B+33 TO B+47 STEP 2         | >CQ< | !"                                        |      |
| 6320 FOR X=A+P-1 TO A+P+39 STEP 4      | >LM< | 6810 PLOT A,y,c5: DRAW A+120,y: NEXT   | >NR< | 7320 IF quest=1 THEN ouil=ouil+1          | >BN< |
| 6330 PLOT X,B,Col: DRAW X,B+80         | >PN< | 6820 FOR x=A+39 TO A+49 STEP 2         | >KT< | 7330 IF quest=2 THEN oul2=ouil2+1         | >FP< |
| 6340 NEXT: NEXT: RETURN                | >PP< | 6830 PLOT x,B: DRAW x,B+80: NEXT: RETU | >AU< | 7340 ENT 2,=250,1,20,-10,1,20,10,1        | >AQ< |
| 6350                                   | >RQ< | RN                                     |      | 7350 SOUND 2,0,40,15,0,2                  | >ZR< |
| 6360 '*****PETITS DRAPEAUX*****        | >ER< | 6840                                   | >WV< | 7360 FOR n=1 TO 2300: NEXT                | >HT< |
| 6370 ENT -7,1,-5,4                     | >WT< | 6850 '*****PETITE ETOILE*****          | >VW< | 7370 CLS #quest: PRINT #quest," ";re      | >XU< |
| 6380 SOUND 129,500,340,10,0,7          | >GU< | 6860 FOR y=r-8 TO r+8 STEP 2           | >QX< | p1\$                                      |      |
| 6390 FOR A=45 TO 565 STEP 40           | >JV< | 6870 PLOT q,y,c6: NEXT                 | >AY< | 7380 quest=quest+1: qu\$="Capit."         | >TV< |
| 6400 FOR P=1 TO 17 STEP 8: X=A+P-1     | >DL< | 6880 PLOT q-8,r+4: DRAW q+8,r-4        | >XZ< | 7390 rep1\$=cap1\$                        | >MW< |
| 6410 IF P=1 THEN Co=1                  | >QM< | 6890 PLOT q+8,r+4: DRAW q-8,r-4        | >YA< | 7400 rep2\$=UPPER\$(cap2\$)               | >NM< |
| 6420 IF P=9 THEN Co=2                  | >BN< | 6900 RETURN                            | >XR< | 7410 rep3\$=UPPER\$(cap1\$)               | >PN< |
| 6430 IF P=17 THEN Co=3                 | >EP< | 6910                                   | >UT< | 7420 WINDOW #2,W21,W22,W23,W24            | >KP< |
| 6440 FOR X=A+P-1 TO A+P+7 STEP 2       | >EQ< | 6920 '*****TRES PETITE ETOILE*****     | >KU< | 7430 PEN #2,5: PAPER #2,0                 | >HQ< |
| 6450 PLOT X,B,Co: DRAW X,B+16: NEXT: N | >DR< | 6930 FOR y=r-4 TO r+4 STEP 2           | >EV< | 7440 IF choix=1 AND quest<3 THEN 73       | >FR< |
| EXT                                    |      | 6940 PLOT q,y,c6: NEXT                 | >YW< | 70                                        |      |
| 6460 PLOT A-2,B,2: DRAW A+24,B: DRAW   | >DT< | 6950 PLOT q-4,r+2: DRAW q+4,r-2        | >GX< | 7450 IF quest<3 THEN GOTO 7170            | >JT< |
| A+24,B+16: DRAW A-2,B+16: DRAW A-2,B:  |      | 6960 PLOT q+4,r+2: DRAW q-4,r-2        | >HY< | 7460 RETURN                               | >ZU< |
| NEXT: RETURN                           |      | 6970 RETURN                            | >EZ< | 7470                                      | >WV< |
| 6470                                   | >VU< | 6980                                   | >BA< | 7480 '*****POSITIONNEMENT*****            | >PW< |
| 6480 ' ***2 ou 3 BANDES HORIZONTALE    | >KV< | 6990 '*****CERCLE*****                 | >ZB< | 7490 ON Po GOTO 7500,7550,7600,7650       | >GX< |
| S***                                   |      | 7000 DEG: FOR u=0 TO 360 STEP 5        | >MH< | ,7700,7750                                |      |
| 6490 IF C3=0 THEN stp=40 ELSE stp=2    | >AW< | 7010 PLOT A+62,B+42,Couleur            | >KJ< | 7500 A=64 : B=260                         | >QN< |
| 6                                      |      | 7020 DRAW A+62+17*COS(u),B+42+17*SI    | >EK< | 7510 W11=2 : W12=8 : W13=11: W14=12       | >TP< |
| 6500 FOR p=0 TO 52 STEP stp            | >DM< | N(u)                                   |      | 7520 W21=2 : W22=8 : W23=12: W24=13       | >AQ< |
| 6510 IF p=0 THEN col=C1                | >WN< | 7030 NEXT                              | >RL< | 7530 W31=2 : W32=7 : W33=3 : W34=3 : RE   | >JR< |
| 6520 IF p=stp THEN col=C2              | >PP< | 7040 FOR y=32 TO 50 STEP 2             | >EM< | TURN                                      |      |
| 6530 IF p=stp*2 THEN col=C3            | >RQ< | 7050 PLOT A+80,B+y: NEXT               | >XN< | 7540                                      | >UT< |
| 6540 FOR y=B+p TO B+p+stp              | >TR< | 7060 PLOT A+48,B+34: PLOT A+76,B+54    | >JP< | 7550 A=256: B=260                         | >BU< |
| 6550 PLOT A,y,col: DRAW A+120,y        | >QT< | 7070 PLOT A+76,B+30: PLOT A+76,B+28    | >HQ< | 7560 W11=8 : W12=14: W13=11: W14=12       | >DV< |
| 6560 NEXT: NEXT: RETURN                | >UU< | 7080 PLOT A+72,B+26: PLOT A+68,B+24    | >BR< | 7570 W21=8 : W22=14: W23=12: W24=13       | >LW< |
| 6570                                   | >WV< | 7090 PLOT A+44,B+32                    | >ET< | 7580 W31=8 : W32=12: W33=3 : W34=3 : RE   | >UX< |
| 6580 '*****CHANGEMENT DE*****          | >DW< | 7100 RETURN                            | >PJ< | TURN                                      |      |
| 6590 '*****PAGE*****                   | >FX< | 7110                                   | >LK< | 7590                                      | >ZY< |



```

7600 A=448:B=260 >AP< 7830 IF CHOIX=1 GOTO 130 >RV< 8000 PRINT:PRINT " ";oui2;" reponse >DJ<
7610 W11=14:W12=20:W13=11:W14=12 >VQ< 7840 B=380:GOSUB 6360 >RW< exacte pour ";oui2+non2;" essai.":
7620 W21=14:W22=20:W23=12:W24=13 >CR< 7850 LOCATE 2,5 >UX< GOTO 8030
7630 W31=14:W32=18:W33=3 :W34=3 :RE >VT< 7860 PRINT" Voici vos resultats pou >TY< 8010 PRINT:PRINT " ";oui2;" reponse >VK<
TURN >VU< 7870 FOR n=1 TO 2000:NEXT >LZ< exacte pour ";oui2+non2;" essais."
7640 >ZV< 7880 LOCATE 10,9:PRINT"-Pays:" >CA< :GOTO 8030
7650 A=64 :B=84 >DW< 7890 IF oui1+non1<2 THEN 7920 >JB< 8020 PRINT:PRINT " ";oui2;" reponse >CL<
7660 W11=2 :W12=8 :W13=22:W14=23 >LX< 7900 IF oui1<2 AND oui1+non1>=2 THE >ET< s exactes pour ";oui2+non2;" essais
7670 W21=2 :W22=8 :W23=23:W24=24 >YY< N 7930 >RU< .
7680 W31=2 :W32=6 :W33=14:W34=14:RE >AZ< 7910 IF oui1>=2 THEN 7940 >XV< 8030 PRINT:PRINT:PRINT " Voule >JM<
TURN >AQ< 7920 PRINT:PRINT " ";oui1;" reponse >CA< z-vous recommencer ?"
7690 >ER< exacte pour ";oui1+non1;" essai.": >QN< 8040 PRINT:PRINT " - Tapez >
7700 A=256:B=84 >MT< GOTO 7950 >UF< 0 pour oui"
7710 W11=8 :W12=14:W13=22:W14=23 >ZU< 7930 PRINT:PRINT " ";oui1;" reponse >PQ< 8050 PRINT " - Tapez N pour >
7720 W21=8 :W22=14:W23=23:W24=24 >WV< exacte pour ";oui1+non1;" essais." :GOTO 7950 >XT< non"
7730 W31=8 :W32=12:W33=14:W34=14:RE >JW< 7940 PRINT:PRINT " ";oui1;" reponse >EU< 8060 a%=UPPER$(INKEY$) >
TURN >FX< s exactes pour ";oui1+non1;" essais >HK< 8070 IF a%<>"O" AND a%<>"N" THEN 80 >RR<
7740 >NY< .":GOTO 7950 >UL< 60
7750 A=448:B=84 >KZ< 7950 FOR n=1 TO 2500:NEXT >CM< 8080 CLS >
7760 W11=14:W12=20:W13=22:W14=23 >BA< 7960 LOCATE 10,15:PRINT"-Capitales: >DN< 8090 IF a%="O" THEN GOTO 360 >
7770 W21=14:W22=20:W23=23:W24=24 >RR< " >NW< 8100 LOCATE 5,10 >
7780 W31=14:W32=18:W33=14:W34=14:RE >YT< 7970 IF oui2+non2<2 THEN 8000 >
7790 >MU< 7980 IF oui2<2 AND oui2+non2>=2 THE >
7800 *****RESULTATS***** >
7810 GOSUB 6580 >
7820 MODE 1:PEN 2:PAPER 0 >

```

EDUCATIF

'NUCLEAR'

Valable pour  
☒ CPC 464  
☒ CPC 664  
☒ CPC 6128

Gérard TANNIERE

*En ordonnant les symboles des éléments chimiques par ordre de masse atomique croissante dans un tableau à double entrée, le chimiste russe Dimitri MENDELEIEV (1834-1907) s'est aperçu en 1869, que l'on trouvait dans une même colonne des éléments ayant des propriétés communes et le même nombre d'électrons dans la couche périphériques de leur structure électronique. Chaque élément occupe une case de ce tableau, le numéro d'ordre de la case étant identique au numéro atomique de l'élément (nombre de protons du noyau).*





"NUCLEAR" (de nucléon : ensemble des protons et neutrons d'un noyau) est un programme destiné aux classes de 2<sup>nde</sup> de chimie, traitant de l'utilisation de ce tableau de MENDELEIEV, appelé aussi tableau de la classification périodique des éléments.

Le programme comporte deux parties :

### 1 - Etude :

En déplaçant le carré clignotant sur le tableau à l'aide des flèches, vous obtenez, après appui sur [COPY], la carte d'identité complète de l'élément sélectionné :

- Symbole
- Nom
- Numéro atomique
- Nombre d'électrons sur les différentes couches.
- La couleur de fond de la fiche indique la famille de l'élément.
- La couleur d'écriture indique l'état de l'élément dans les conditions normales :
  - Noir = solide
  - Bleu = gazeux
  - Rouge = liquide à 30°C
  - Blanc = obtenu artificiellement.

### 2 - Jeu

Après choix du niveau, l'ordinateur tire au sort et affiche le symbole d'un élément.

- Niveau 1 : vous entrez le nom de l'élément.
- Niveau 2 : vous ajoutez le numéro atomique.
- Niveau 3 : (réservé aux très doués ! ) vous devez entrer en plus la masse atomique.

A l'issue des 20 questions, vous prenez connaissance de votre note.

```

10 ***** >PB<
20 *   N U C L E A R   * >HC<
30 *       par       * >ND<
40 *   Gerard Tanniere * >TE<
50 ***** >UF<
60 BORDER 13:INK 0,13:INK 1,0:INK 2 >QB<
,20:INK 3,6:MODE 1:PAPER 0:PEN 1:CL
S:DEG:ORIGIN 200,200
70 PEN 3:LOCATE 26,4:PRINT "N U C L >BH<
E A R":PEN 1:LOCATE 31,12:PRINT"pa
r":PEN 2:LOCATE 28,20:PRINT"G.Tanni
ere":PEN 1
80 PRINT CHR$(23)+CHR$(1)::TAG:PLOT >AJ<
6,-250,2:MOVE 6,6:PRINT CHR$(231);
:PLOT 0,-250,3:MOVE 0,0:PRINT CHR$(
231)::PLOT 0,-250,1:FOR a=1 TO 1800
STEP 10:xg1=200*COS(a):yg1=100*SIN
(a):xg2=100*COS(a+120):yg2=180*SIN(
a+120):
90 MOVE xg1,yg1:PRINT CHR$(144)::MO >TK<
VE xg2,yg2:PRINT CHR$(144);
100 NEXT:TAGOFF:PRINT CHR$(23)+CHR$ >XB<
(0);
110 RESTORE 660:DIM tn(13,110),t$(2 >DC<
,110):FOR x1=1 TO 105:SOUND 7,x1,15
,7:FOR x2=1 TO 13:READ n:tn(x2,x1)=
n:NEXT x2:FOR x3=1 TO 2:READ n#:t$(
x3,x1)=n#:NEXT x3:NEXT x1
120 *** Mode d'emploi *** >ED<
130 CLS:RESTORE 1720:FOR nbl=1 TO 3 >QE<
9:READ x1,y1,cray,phr$:PEN cray:LOC
ATE x1,y1:PRINT phr$:NEXT:CALL &BB
18:PEN 1:PRINT CHR$(7);
140 *** Utilisation du tableau *** >BF<

150 ORIGIN 0,0:CLG:MOVE 127,270:DRA >LB<
W 417,270:DRAW 417,384:DRAW 127,384
:DRAW 127,272:WINDOW#1,9,26,2,8:WIN
DOW#2,28,36,2,4:LOCATE 2,1:PRINT CH
R$(24);"CLASSIFICATION PERIODIQUE D
ES ELEMENTS":CHR$(24);
160 RESTORE 1780:FOR x=1 TO 28:READ >AH<
xd,xa,ya:MOVE xd,ya:DRAW xa,ya:NEX
T:FOR y=1 TO 60:READ ya,yd,xa:MOVE
xa,ya:DRAW xa,yd:NEXT:PRINT CHR$(22
)+CHR$(1)::LOCATE 1,2:PRINT "period
e":LOCATE 2,3:PRINT CHR$(241):LOCAT
E 18,17:PRINT CHR$(241);" lanthanid
es"
170 LOCATE 1,21:PRINT "groupe ":LOC >EJ<
ATE 5,22:PRINT CHR$(241):LOCATE 18,
22:PRINT CHR$(240);" actinides":LOC
ATE 7,20:PRINT CHR$(243)::LOCATE 9,
17:PRINT CHR$(241)::PRINT CHR$(23)+
CHR$(1)::TAG:FOR y=0 TO 6:MOVE 8,34
2-(y*32):PRINT y+1:NEXT

```

```

180 FOR g=1 TO 7:MOVE g*32,38:PRINT >EK<
g::MOVE g*32+30,38:PRINT "a":NEXT
:MOVE 300,38:PRINT "8";"a":FOR g=1
TO 7:MOVE g*32+320,38:PRINT g:MOV
E g*32+350,38:PRINT "b":NEXT:MOVE
600,38:PRINT "0";
190 FOR x=1 TO 105:MOVE tn(1,x)-6*( >AL<
LEN(t$(1,x))<2),tn(2,x)-8:PRINT t$(
1,x)::NEXT:TAGOFF:PRINT CHR$(23)+CH
R$(0):PRINT CHR$(22)+CHR$(0);
200 PEN#1,1:PAPER#1,0:CLS#1:PEN#2,1 >NC<
:PAPER#2,0:LOCATE#1,7,2:PRINT#1,CHR
$(24);"MENU":CHR$(24):LOCATE#1,5,4:
PRINT#1,"1--> etude":LOCATE#1,5,6:P
RINT#1,"2--> jeu":WHILE rub$<>"":ru
b$=INKEY$:WEND:WHILE rub$<>"2" AND
rub$<>"1":rub$=INKEY$:WEND
210 PRINT CHR$(7)::ON VAL(rub$) GOT >CD<
D 220,300
220 *** partie etude *** >CE<
230 GOSUB 420 >TF<
240 xc=49:yc=350 >FG<
250 xc=xc+(32*(INKEY(8))-1)-(32*(I >MH<
NKEY(1))-1):IF xc>593 THEN xc=xc-3
2 ELSE IF xc<49 THEN xc=xc+32 ELSE
GOSUB 450
260 yc=yc+(32*(INKEY(2))-1)-(32*(I >DJ<
NKEY(0))-1):IF yc>350 THEN yc=yc-3
2 ELSE IF yc<93 THEN yc=yc+32 ELSE
GOSUB 450
270 IF INKEY(9)>-1 THEN CLS#1:PRINT >KK<
CHR$(7)::GOSUB 470
280 IF INKEY(38)>-1 THEN PRINT CHR$ >DL<
(7)::GOTO 200
290 GOTO 250 >YM<
300 *** partie jeu *** >RD<
310 CLS#2:CLS#1:PRINT#1:PRINT#1,SPC >BE<
(7);"JEU":PRINT#1:PRINT#1,SPC(2);CH
R$(24);"1":CHR$(24)"-> debutant",SP
C(2);CHR$(24);"2":CHR$(24)"-> moyen
",SPC(2);CHR$(24);"3":CHR$(24);"->
chimiste":
320 WHILE niv$<>"":niv$=INKEY$:WEND >WF<
:WHILE niv$<>"3" AND niv$<>"2" AND
niv$<>"1":niv$=INKEY$:WEND:niv=VAL(
niv$)
330 sco=0:FOR quest=1 TO 20 >KG<
340 RANDOMIZE TIME:x=INT(RND*105)+1 >ZH<
:INK 2,tn(3,x):PAPER#1,2:CLS#1:INK
3,tn(4,x)
350 PEN#1,3:PAPER#2,2:PEN#2,3:c1$=C >LJ<
HR$(15)+CHR$(1)+CHR$(24):c2$=CHR$(1
5)+CHR$(3):c3$=CHR$(24):CLS#2:PRINT
#2,c1$;"niv ";c3$;c2$;niv,c1$;"ques
";c3$;c2$;quest,c1$;"sco ";c3$;sco;
360 IF niv>0 THEN LOCATE#1,9,2:PRIN >DK<
T#1,c2$;t$(1,x):PRINT#1,SPC(INT(15-
LEN(t$(2,x))))/2)::quest$=UPPER$(t$(

```



```

2,x)):q=1:GOSUB 550
370 IF niv>1 THEN PRINT#1,c1$;"nb a >ZL<
to:";c3$;c2$;:quest$=UPPER$(STR$(tn
(5,x)):quest$=RIGHT$(quest$,LEN(qu
est$)-1):q=2:GOSUB 550
380 IF niv>2 THEN PRINT#1,c1$;"m. a >FM<
to:";c3$;c2$;:quest$=UPPER$(STR$(tn
(6,x)):quest$=RIGHT$(quest$,LEN(qu
est$)-1):q=3:GOSUB 550
390 NEXT quest >DN<
400 CLS#2::PRINT#2," niv ";niv," no >HE<
te":PRINT#2,USING "##.##";sco/niv:
:PRINT#2,"/20";
410 GOTO 200 >LF<
420 '*** sp-1:affichage menu etude >RG<
***
430 CLS#2:CLS#1:LOCATE#1,2,2:PRINT# >MH<
1,CHR$(240);CHR$(241);CHR$(242);CHR
$(243);" deplacement";" curse
ur":PRINT#1,SPC(10);" [COPY] fiche"
;" [M] retour menu"
440 RETURN >MJ<
450 '*** sp-2:impression croix *** >UK<
460 PRINT CHR$(23)+CHR$(1);:TAG:MOV >CL<
E xc+8,yc-8:PRINT CHR$(233);:FOR t=
1 TO 25:NEXT:MOVE xc+8,yc-8:PRINT C
HR$(233);:TAGOFF:PRINT CHR$(23)+CHR
$(0);:RETURN
470 '*** sp-3:test limites *** >JM<
480 FOR x=1 TO 105:IF xc=tn(1,x) AN >RN<
D yc=tn(2,x) THEN GOSUB 500 ELSE NE
XT x
490 RETURN >TP<
500 '*** sp-4:affichage fenetre *** >RF<
510 INK 2,tn(3,x):PAPER#1,2:CLS#1:I >DG<
NK 3,tn(4,x):PEN#1,3:c1$=CHR$(15)+C
HR$(1)+CHR$(24):c2$=CHR$(15)+CHR$(3
):c3$=CHR$(24)
520 PRINT#1,SPC(8);t$(1,x),SPC(INT( >KH<
17-LEN(t$(2,x)))/2);t$(2,x),c1$;"nb
ato:";c3$;c2$;tn(5,x),c1$;"m. ato:
";c3$;c2$;tn(6,x)
530 PRINT#1,c1$;"couches elect:","c3 >EJ<
";c2$;tn(7,x);",";tn(8,x);",";tn(9,
x);",";tn(10,x);",";tn(11,x);",";tn
(12,x);",";tn(13,x);
540 RETURN >NK<
550 '*** sp-5:entree reponse et con >RL<
trole ***
560 INPUT#1," ",rep$:IF rep$="" THE >AM<
N GOTO 560 ELSE IF UPPER$(rep$)=que
st$ THEN FOR s=105 TO 1 STEP-1:SOUN
D 7,s,1,7:NEXT:sco=sco+1:GOSUB 580
ELSE GOSUB 610
570 RETURN >RN<
580 '*** sp-6:Affichage fenetre 2 * >GP<
**
590 PEN#2,3:LOCATE#2,5,2:PRINT#2,qu >GQ<

```

```

est;:LOCATE#2,5,3:PRINT#2,sco;
600 RETURN >KG<
610 '*** sp-7:solution reponse faus >DH<
se ***
620 IF q=1 THEN LOCATE#1,1,3:PRINT# >HJ<
1,SPACE$(17):LOCATE#1,1,3:PRINT#1,S
PC(INT(17-LEN(t$(2,x)))/2);quest$
630 IF q=2 THEN LOCATE#1,9,4:PRINT# >UK<
1,SPACE$(9):LOCATE#1,9,4:PRINT#1,qu
est$
640 IF q=3 THEN LOCATE#1,9,5:PRINT# >YL<
1,SPACE$(9):LOCATE#1,9,5:PRINT#1,qu
est$
650 q=0:FOR s=1 TO 105:SOUND 7,s,1, >CM<
7:NEXT:FOR t=1 TO 1000:NEXT:RETURN
660 '*** DATA elements chimique *** >ZN<
670 DATA 49,350,13,1,1,1.008,1,0,0, >VP<
0,0,0,0,H,Hydrogene
680 DATA 593,350,26,1,2,4.00,2,0,0, >GQ<
0,0,0,0,He,Helium
690 DATA 49,318,24,0,3,6.94,1,2,0,0 >AR<
,0,0,0,Li,Lithium
700 DATA 81,318,25,0,4,9.013,2,2,0, >MH<
0,0,0,0,Be,Beryllium
710 DATA 433,318,14,0,5,10.82,3,2,0 >HJ<
,0,0,0,0,B,Bore
720 DATA 465,318,5,0,6,12.01,4,2,0, >LK<
0,0,0,0,C,Carbone
730 DATA 497,318,16,1,7,14.00,5,2,0 >JL<
,0,0,0,0,N,Azote
740 DATA 529,318,7,1,8,16,6,2,0,0,0 >ZM<
,0,0,0,O,Oxygene
750 DATA 561,318,13,1,9,19.00,7,2,0 >FN<
,0,0,0,0,F,Fluor
760 DATA 593,318,26,1,10,20.18,8,2, >AP<
0,0,0,0,Ne,Neon
770 DATA 49,286,24,0,11,22.99,1,2,0 >XQ<
,0,0,0,0,Na,Sodium
780 DATA 81,286,25,0,12,24.32,2,2,0 >XR<
,0,0,0,0,Mg,Magnesium
790 DATA 433,286,14,0,13,26.98,3,8, >ET<
2,0,0,0,0,Al,Aluminium
800 DATA 465,286,5,0,14,28.09,4,8,2 >XJ<
,0,0,0,0,Si,Silicium
810 DATA 497,286,16,0,15,30.97,5,8, >ZK<
2,0,0,0,0,P,Phosphore
820 DATA 529,286,7,0,16,32.06,6,8,2 >TL<
,0,0,0,0,S,Soufre
830 DATA 561,286,13,1,17,35.45,7,8, >NM<
2,0,0,0,0,Cl,Chlore
840 DATA 593,286,26,1,18,39.94,8,8, >NN<
2,0,0,0,0,Ar,Argon
850 DATA 49,254,24,0,19,39.1,1,8,8, >WF<
2,0,0,0,0,K,Potassium
860 DATA 81,254,25,0,20,40.08,2,8,8 >HQ<
,2,0,0,0,Ca,Calcium
870 DATA 113,254,15,0,21,44.96,2,9, >HR<
8,2,0,0,0,Sc,Scandium

```

```

880 DATA 145,254,15,0,22,47.90,2,10 >HT<
,8,2,0,0,0,Ti,Titane
890 DATA 177,254,15,0,23,50.95,2,11 >VU<
,8,2,0,0,0,V,Vanadium
900 DATA 209,254,15,0,24,52.01,1,13 >BK<
,8,2,0,0,0,Cr,Chrome
910 DATA 241,254,15,0,25,54.94,2,13 >ZL<
,8,2,0,0,0,Mn,Manganese
920 DATA 273,254,19,0,26,55.85,2,14 >ZM<
,8,2,0,0,0,Fe,Fer
930 DATA 305,254,19,0,27,58.94,2,15 >UN<
,8,2,0,0,0,Co,Cobalt
940 DATA 337,254,19,0,28,58.71,2,16 >DP<
,8,2,0,0,0,Ni,Nickel
950 DATA 369,254,9,0,29,63.54,1,18, >HQ<
8,2,0,0,0,Cu,Cuivre
960 DATA 401,254,9,0,30,65.38,2,18, >RR<
8,2,0,0,0,Zn,Zinc
970 DATA 433,254,14,6,31,69.72,3,18 >FT<
,8,2,0,0,0,Ga,Gallium
980 DATA 465,254,5,0,32,72.60,4,18, >TU<
8,2,0,0,0,Ge,Germanium
990 DATA 497,254,16,0,33,74.91,5,18 >XV<
,8,2,0,0,0,As,Arsenic
1000 DATA 529,254,7,0,34,78.96,6,18 >RB<
,8,2,0,0,0,Se,Selenium
1010 DATA 561,254,13,6,35,79.91,7,1 >EC<
8,8,2,0,0,0,Br,Brome
1020 DATA 593,254,26,1,36,83.80,8,1 >AD<
8,8,2,0,0,0,Kr,Krypton
1030 DATA 49,222,24,0,37,85.48,1,8, >FE<
18,8,2,0,0,0,Rb,Rubidium
1040 DATA 81,222,25,0,38,87.63,2,8, >ZF<
18,8,2,0,0,0,Sr,Strontium
1050 DATA 113,222,15,0,39,88.92,2,9 >FG<
,18,8,2,0,0,0,Y,Yttrium
1060 DATA 145,222,15,0,40,91.22,2,1 >PH<
0,18,8,2,0,0,0,Zr,Zirconium
1070 DATA 177,222,15,0,41,92.91,1,1 >MJ<
2,18,8,2,0,0,0,Nb,Niobium
1080 DATA 209,222,15,0,42,95.95,1,1 >JK<
3,18,8,2,0,0,0,Mo,Molybdene
1090 DATA 241,222,15,26,43,99,1,14, >TL<
18,8,2,0,0,0,Tc,Technetium
1100 DATA 273,222,19,0,44,101.1,1,1 >HE<
5,18,8,2,0,0,0,Ru,Ruthenium
1110 DATA 305,222,19,0,45,102.91,1, >XD<
16,18,8,2,0,0,0,Rh,Rhodium
1120 DATA 337,222,19,0,46,106.4,0,1 >KE<
8,18,8,2,0,0,0,Pd,Palladium
1130 DATA 369,222,9,0,47,107.88,1,1 >JF<
8,18,8,2,0,0,0,Ag,Argent
1140 DATA 401,222,9,0,48,112.41,2,1 >ZG<
8,18,8,2,0,0,0,Cd,Cadmium
1150 DATA 433,222,14,0,49,114.82,3, >TH<
18,18,8,2,0,0,0,In,Indium
1160 DATA 465,222,5,0,50,118.70,4,1 >JJ<
8,18,8,2,0,0,0,Sn,Etain
1170 DATA 497,222,16,0,51,121.76,5, >TK<

```



18,18,8,2,0,0,Sb,Antimoine  
 1180 DATA 529,222,7,0,52,127.61,6,1 >XL<  
 8,18,8,2,0,0,Te,Tellure  
 1190 DATA 561,222,13,0,53,126.91,7, >LM<  
 18,18,8,2,0,0,I,Iode  
 1200 DATA 593,222,26,1,54,131.30,8, >GD<  
 18,18,8,2,0,0,Xe,Xenon  
 1210 DATA 49,190,24,6,55,132.91,1,8 >AE<  
 ,18,18,8,2,0,Cs,Caesium  
 1220 DATA 81,190,25,0,56,137.36,2,8 >TF<  
 ,18,18,8,2,0,Ba,Baryum  
 1230 DATA 113,126,17,0,57,138.92,2, >RG<  
 9,18,18,8,2,0,La,Lanthane  
 1240 DATA 145,126,17,0,58,140.13,2, >JH<  
 9,19,18,8,2,0,Ce,Cerium  
 1250 DATA 177,126,17,0,59,140.92,2, >DJ<  
 9,20,18,8,2,0,Pr,Praseodyme  
 1260 DATA 209,126,17,0,60,144.27,2, >AK<  
 8,22,18,8,2,0,Nd,Neodyme  
 1270 DATA 241,126,17,26,61,145,2,8, >AL<  
 23,18,8,2,0,Pm,Prometheum  
 1280 DATA 273,126,17,0,62,150.35,2, >DM<  
 8,24,18,8,2,0,Sm,Samarium  
 1290 DATA 305,126,17,0,63,152.0,2,8 >MN<  
 ,25,18,8,2,0,Eu,Europium  
 1300 DATA 337,126,17,0,64,157.2,2,9 >CE<  
 ,25,18,8,2,0,Gd,Gadolinium  
 1310 DATA 369,126,17,0,65,158.93,2, >KF<  
 9,26,18,8,2,0,Tb,Terbium  
 1320 DATA 401,126,17,0,66,162.51,2, >FB<  
 9,27,18,8,2,0,Dy,Dysprosium  
 1330 DATA 433,126,17,0,67,164.94,2, >KH<  
 9,28,18,8,2,0,Ho,Holmium  
 1340 DATA 465,126,17,0,68,167.27,2, >YJ<  
 9,29,18,8,2,0,Er,Erbium  
 1350 DATA 497,126,17,0,69,168.94,2, >XK<  
 8,31,18,8,2,0,Tm,Thulium  
 1360 DATA 529,126,17,0,70,173.04,2, >LL<  
 8,32,18,8,2,0,Yb,Ytterbium  
 1370 DATA 561,126,17,0,71,174.99,2, >GM<  
 9,32,18,8,2,0,Lu,Lutecium  
 1380 DATA 145,190,15,0,72,178.6,2,1 >NN<  
 0,32,18,8,2,0,Hf,Hafnium  
 1390 DATA 177,190,15,0,73,180.95,2, >JP<  
 11,32,18,8,2,0,Ta,Tantale  
 1400 DATA 209,190,15,0,74,183.86,2, >EF<  
 12,32,18,8,2,0,W,Tungstene  
 1410 DATA 241,190,15,0,75,186.22,2, >LG<  
 13,32,18,8,2,0,Re,Rhenium  
 1420 DATA 273,190,19,0,76,190.22,2, >NH<  
 14,32,18,8,2,0,Os,Osmium  
 1430 DATA 305,190,19,0,77,192.2,0,1 >PJ<  
 7,32,18,8,2,0,Ir,Iridium  
 1440 DATA 337,190,19,0,78,195.09,1, >PK<  
 17,32,18,8,2,0,Pt,Platine  
 1450 DATA 369,190,9,0,79,197.0,1,18 >ZL<  
 ,32,18,8,2,0,Au,Or  
 1460 DATA 401,190,9,6,80,200.61,2,1 >YM<  
 8,32,18,8,2,0,Hg,Mercure

1470 DATA 433,190,14,0,81,204.39,3, >KN<  
 18,32,18,8,2,0,Tl,Thallium  
 1480 DATA 465,190,5,0,82,207.21,4,1 >VP<  
 8,32,18,8,2,0,Pb,Plomb  
 1490 DATA 497,190,16,0,83,209.00,5, >AQ<  
 18,32,18,8,2,0,Bi,Bismuth  
 1500 DATA 529,190,7,0,84,210.6,18,3 >QG<  
 2,18,8,2,0,Po,Polonium  
 1510 DATA 561,190,13,0,85,210.7,18, >KH<  
 32,18,8,2,0,At,Astate  
 1520 DATA 593,190,26,1,86,222,8,18, >EJ<  
 32,18,8,2,0,Rn,Radon  
 1530 DATA 49,158,24,6,87,223,1,8,18 >WK<  
 ,32,18,8,2,Fr,Francium  
 1540 DATA 81,158,24,0,88,226.05,2,8 >LL<  
 ,18,32,18,8,2,Ra,Radium  
 1550 DATA 113,94,10,0,89,227,2,9,18 >UM<  
 ,32,18,8,2,Ac,Actinium  
 1560 DATA 145,94,10,0,90,232.05,2,9 >VN<  
 ,19,32,18,8,2,Th,Thorium  
 1570 DATA 177,94,10,0,91,231,2,9,20 >DP<  
 ,32,18,8,2,Pa,Protactinium  
 1580 DATA 209,94,10,0,92,238.07,2,9 >RQ<  
 ,21,32,18,8,2,U,Uranium  
 1590 DATA 241,94,10,26,93,237,2,9,2 >WR<  
 2,32,18,8,2,Np,Neptunium  
 1600 DATA 273,94,10,26,94,242,2,9,2 >GH<  
 3,32,18,8,2,Pu,Plutonium  
 1610 DATA 305,94,10,26,95,243,2,9,2 >DJ<  
 4,32,18,8,2,Am,Americium  
 1620 DATA 337,94,10,26,96,245,2,9,2 >AK<  
 5,32,18,8,2,Cm,Curium  
 1630 DATA 369,94,10,26,97,249,2,9,2 >FL<  
 6,32,18,8,2,Bk,Berkelium  
 1640 DATA 401,94,10,26,98,249,2,9,2 >GM<  
 7,32,18,8,2,Cf,Californium  
 1650 DATA 433,94,10,26,99,255,2,9,2 >XN<  
 8,32,18,8,2,Es,Einsteinium  
 1660 DATA 465,94,10,26,100,255,2,9, >XP<  
 29,32,18,8,2,Fm,Fermium  
 1670 DATA 497,94,10,26,101,256,2,9, >PQ<  
 30,32,18,8,2,Md,Mendelevium  
 1680 DATA 529,94,10,26,102,253,2,9, >ER<  
 31,32,18,8,2,No,Nobelium  
 1690 DATA 561,94,10,26,103,253,2,9, >ET<  
 32,32,18,8,2,Lw,Lawrencium  
 1700 DATA 145,158,15,26,104,260,2,1 >NJ<  
 0,32,32,18,8,2,Ku,Kourchatovium  
 1710 DATA 177,158,15,26,105,260,2,1 >TK<  
 1,32,32,18,8,2,Ha,Hahnium  
 1720 DATA 10,1,3, N.U.C.L.E.A.R,6,2 >BL<  
 ,1,Donne la ,15,2,2,classification  
 periodique,1,3,2,des,5,3,1,"105",9,  
 3,2,elements chimiques,28,3,1,connu  
 s.,2,4,1,"Le programme comporte 2 p  
 arties:",3,5,2,1-->,8,5,3,ETUDE  
 1730 DATA 1,6,1,"Vous deplacez le c >ZM<  
 urseur clignotant a l'aide des tou  
 ches du curseur puis ,enappuyant

sur [COPY] la fiche complete del'e  
 lement apparait."  
 1740 DATA 1,10,1,Chaque element a >FN<  
 un symbole de couleur differente s  
 elon qu'il est solide dans les cond  
 itions normales (couleur,34,12,2,no  
 ire,39,12,1,"),",1,13,1,gazeux (cou  
 leur,17,13,2,bleue,22,13,1,"),",24,  
 13,1,liquide a 30 deg  
 1750 DATA 1,14,1,(,2,14,2,rouge,7,1 >MP<  
 4,1,)ou obtenu artificiellement(,35  
 ,14,2,blanc,40,14,1,),1,15,1,La cou  
 leur de fond de la fiche represen  
 ,1,16,1,-te les differentes famille  
 s de produits,1,17,1,Le trait gras  
 a droite du tableau separe  
 1760 DATA 1,18,1,les,5,18,2,metaux, >JQ<  
 12,18,3,(a gauche),23,18,1,et les,3  
 1,18,2,non-metaux,1,19,3,(a droite)  
 .,2,20,1,Retour au menu en appuyant  
 sur [M],3,21,2,2-->,8,21,3,JEU,1,2  
 2,1,A chaque niveau vous devez entr  
 er 1 2 ou 3 reponses.  
 1770 DATA 12,23,1, Une note vous e >BR<  
 st attribuee,1,24,1,apres 20 questi  
 ons.,4,25,2,---> APPUYER SUR UNE TO  
 UCHE <---  
 1780 \*\*\* DATA tableau \*\*\* >DT<  
 1790 DATA 17,79,352,591,623,352,15, >DU<  
 111,320,431,623,320,15,111,288,431,  
 623,288,15,623,256,15,623,224,15,62  
 3,192,15,111,160,143,623,160,15,111  
 ,128,111,591,128,111,591,96,111,591  
 ,64,47,623,48,47,623,16,112,132,184  
 ,95,111,86,19,43,350  
 1800 DATA 19,43,130,47,623,18,47,62 >XK<  
 3,46,431,591,318,431,463,286,463,49  
 5,254,495,527,222,527,559,190  
 1810 DATA 128,352,15,16,48,47,128,3 >EL<  
 52,47,16,48,79,128,352,79,86,128,95  
 ,16,48,111,64,320,111,16,48,143,64,  
 256,143,16,48,175,64,256,175,16,48,  
 207,64,256,207,16,48,239,64,256,239  
 ,16,48,271,64,128,271  
 1820 DATA 160,256,271,64,128,303,16 >EM<  
 0,256,303,64,128,335,160,256,335,16  
 ,48,367,64,128,367,160,256,367,16,4  
 8,399,64,128,399,160,256,399,16,48,  
 431,64,128,431,160,320,431,16,48,46  
 3,64,128,463,160,320,463,16,48,495,  
 64,128,495,160,320,495,16,48,527  
 1830 DATA 64,128,527,160,320,527,16 >EN<  
 ,48,559,64,128,559,160,320,559,16,4  
 8,591,64,128,591,160,352,591,16,48,  
 623,160,352,623,130,184,135,130,350  
 ,17,130,350,45,18,46,49,18,46,621,2  
 88,320,433,256,288,465,224,256,497,  
 192,224,529,160,192,561,320,352,593



# BIORYTHMES



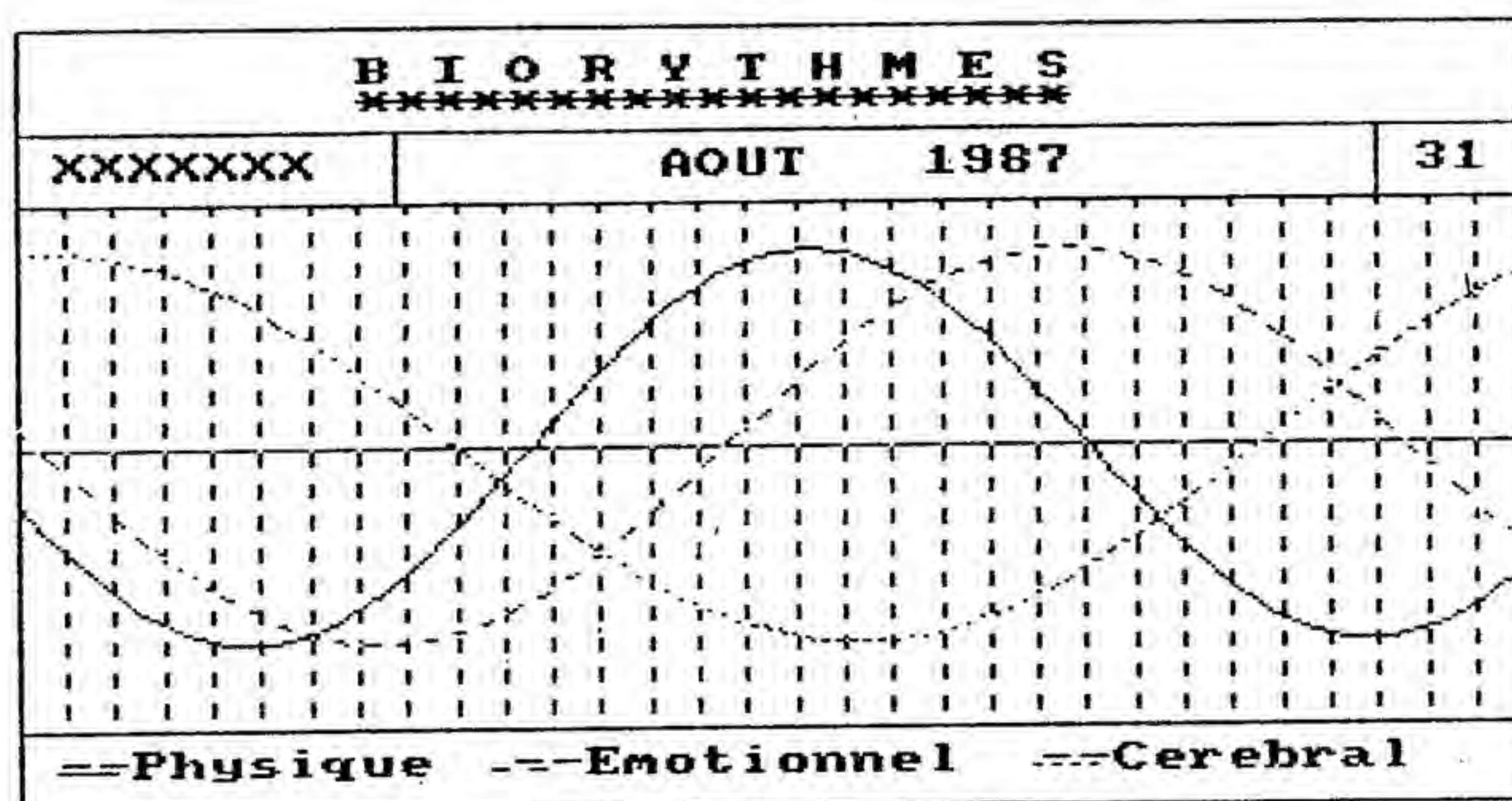
Stéphane MARCHAND-MAILLET

*"Biorythmes" est un programme permettant de tracer des courbes biorythmiques à partir de la date de naissance de l'utilisateur. Il peut aussi vous donner un horoscope journalier en se basant sur les courbes sans être obligé de les tracer.*

*Les courbes peuvent être sauvées sur disque ou papier.*

*Attention ce programme ne fonctionne pas sur 464.*

*NB : Le programme d'impression a été testé sur une CITIZEN 120D compatible EPSON.*



```

10 ' *****
20 ' **
30 ' ** BIORYTHMES **
40 ' **
50 ' ** CPC 6128 & **
60 ' ** DMP-2000 **
70 ' *****
80 '
90 ' ***** CALCULS *****
100 '
110 INK 1,9:INK 0,0:BORDER 0:GOSUB 1620
120 LOCATE 1,22:INPUT " Entrez vo >PD<
tre date de naissance sous la forme
<05.06.68> : ",d$
130 LOCATE 4,24:INPUT "Entrez le mo >DE<

```

```

>QB< is et l'annee desiree sous la forme
>BC< <04.87> : ",da$
>ZD< 140 j$=LEFT$(d$,2):m$=MID$(d$,4,2): >MF<
>JE< a$=RIGHT$(d$,2):mo$=LEFT$(da$,2):an
>LF< $=RIGHT$(da$,2):mo=VAL(mo$):an=VAL(
>QG< an$):a=VAL(a$):m=VAL(m$):j=VAL(j$)
>XH< 150 RESTORE 190:FOR x=1 TO m:READ d >LG<
>FJ< uree:NEXT:duree=(duree-j)+1
>CK<
>AB< 160 RESTORE 190:FOR x=1 TO m:READ 1 >LH<
>CC< :NEXT:FOR x=m+1 TO 12:READ 1:lo=lo+
1:NEXT
>PD< 170 RESTORE 190:FOR x=1 TO mo-1:REA >HJ<
D du:dur=dur+du:NEXT
>WK< 180 age=((an-a-1)*365)+lo+duree+dur >WK<
190 DATA 31,28,31,30,31,30,31,31,30 >BL<

```

```

,31,30,31
200 FOR x=(a+1900+1) TO (an+1900-1) >LD<

210 IF x MOD 4=0 THEN bi=bi+1 >CD<
220 NEXT >HE<
230 age=age+bi-0.5 >FF<
240 IF a=an THEN 270 >GG<
250 IF m<3 AND a MOD 4=0 THEN age=a >JH<
ge+1
260 IF mo>1 AND an MOD 4=0 THEN age >FJ<
=age+1
270 RESTORE 280:FOR x=1 TO mo:READ >WK<
mo$:NEXT
280 DATA "JANVIER","FEVRIER","MARS >QL<
","AVRIL","MAI","JUIN","JUILLET","A
OUT","SEPTEMBRE","OCTOBRE","NOVEMBR
E","DECEMBRE"
290 RESTORE 190:FOR x=1 TO mo:READ >FM<
1m:NEXT
300 IF 1m=28 AND a MOD 4=0 THEN 1m= >KD<
1m+1
310 ' >DE<
320 ' * TRACE DES COURBES * >LF<
330 ' >FG<
340 MODE 1:CLS:INK 0,0:INK 1,9:INK >VH<
2,6:INK 3,24:BORDER 0
350 ORIGIN 0,0 >NJ<
360 MOVE 0,184:DRAW 640,184,3 >FK<
370 FOR x=0 TO 639 STEP 639/1m >YL<
380 MASK 15:MOVE x,41:DRAW x,307,3: >AM<
NEXT
390 LOCATE 10,2:PEN 2:PRINT"B I O R >EN<
Y T H M E S"

```



```

400 LOCATE 10,3:PEN 2:PRINT"***** >YE<
*****"
410 PEN 3:LOCATE 18,5:PRINT mo$;" >NF<
";1900+an:LOCATE 2,5:PRINT UPPER$(t
i$):LOCATE 37,5:PRINT lm

420 PEN 1:LOCATE 2,24:PRINT"--Physi >QG<
que ";:PEN 2:PRINT "--Emotionnel
";:PEN 3:PRINT"--Cerebral"
430 MASK 255:MOVE 0,0:DRAW 0,399,3: >NH<
DRAW 639,399,3:DRAW 639,0,3:DRAW 0,
0,3:MOVE 0,40:DRAW 639,40,3:MOVE 0,
308:DRAW 639,308,3 :MOVE 0,344:DRAW
636,344,3:MOVE 161,308:DRAW 161,34
4,3:MOVE 576,308:DRAW 576,344,3
440 MASK 255:MOVE 16,20:DRAW 40,20, >CJ<
1:MASK 15:MOVE 192,20:DRAW 231,20,2
:MASK 204:MOVE 430,20:DRAW 456,20,3
:MASK 255:MOVE 576,308:DRAW 576,344
,3
450 MASK 255:z=-6.4:MOVE -5,184:FOR >AK<
x=age TO age+lm STEP lm/100:z=z+6.
4:y=SIN((x*2*PI)/23)*100
460 IF x<0 THEN MOVE z,y+184 ELSE D >AL<
RAW z,y+184,1
470 NEXT >QM<
480 MASK 15:z=-6.4:MOVE -5,184:FOR >AN<
x=age TO age+lm STEP lm/100:z=z+6.4
:y=SIN((x*2*PI)/28)*100
490 IF x<0 THEN MOVE z,y+184 ELSE D >EP<
RAW z,y+184,2
500 NEXT >JF<
510 MASK 204:z=-6.4:MOVE -5,184:FOR >RG<
x=age TO age+lm STEP lm/100:z=z+6.
4:y=SIN((x*2*PI)/33)*100
520 IF x<0 THEN MOVE z,y+184 ELSE D >ZH<
RAW z,y+184,3
530 NEXT:date=1 >FJ<
540 MASK 255:MOVE 0,0:DRAW 0,399,3: >YK<
DRAW 639,399,3:DRAW 639,0,3:DRAW 0,
0,3:MOVE 0,40:DRAW 639,40,3:MOVE 0,
308:DRAW 639,308,3
550 IF imp$="0" THEN CALL &A000:PR >AL<
INT#8:PRINT#8:PRINT#8
560 ^ >NM<
570 'APPEL DE COPIE D'ECRAN >XN<
580 ' >NP<
590 IF INKEY(8)=0 THEN xx=xx-(639/1 >BQ<
m):date=date-1:dx=1
600 IF INKEY(1)=0 THEN xx=xx+(639/1 >EG<
m):date=date+1:dx=-1
610 IF ch$="T" AND INKEY(54)=0 THEN >LH<
690
620 IF ch$="T" AND INKEY(69)=0 THEN >LJ<
:duree=0:l=0:lo=0:du=0:dur=0:age=0
:lm=0:x=0:y=0:z=0:bi=0:age=0:MODE 2
:GOTO 720
630 IF INKEY(62)=0 THEN nom$=ti$+" >RK<
BID":SAVE nom$,b,&C000,&4000

640 IF INKEY(61)=0 THEN CLEAR INPUT >WL<
:MODE 2:END
650 IF xx<0 THEN xx=0:date=1 >QM<
660 IF xx>(639-((639/lm)-2)) THEN x >VN<
x=639-(639/lm):date=lm
670 PEN 3:LOCATE 14,5:PRINT USING " >AP<
##";date:FOR x=xx TO xx+(639/lm):PL
OT x,184,2:NEXT:FOR x=xx+((639/lm)*
dx) TO xx+(639/lm)+(((639/lm)+1)*dx
):PLOT x,184,3:NEXT
680 FOR x=0 TO 100:NEXT:GOTO 590 >GQ<
690 duree=0:l=0:lo=0:du=0:dur=0:age >GR<
=0:lm=0:x=0:y=0:z=0:bi=0:mo=mo+1:xx
=0
700 IF mo>12 THEN mo=1:an=an+1:GOTO >QH<
150 ELSE GOTO 150
710 ' >HJ<
720 '*** HOROSCOPE *** >HK<
730 ' >KL<
740 MODE 2:LOCATE 30,1:PRINT"B I D >VM<
R Y T H M E S":LOCATE 34,3:PRINT"(C
) S M M"
750 DIM a$(27):CLEAR INPUT:LOCATE 5 >GN<
,5:PRINT"Date de naissance : ";d$:L
OCATE 5,7:INPUT "
Entrez le jour de
sire sous la forme <28.04.87> : ",d
a$
760 j$=LEFT$(d$,2):m$=MID$(d$,4,2): >FP<
a$=RIGHT$(d$,2):mo$=MID$(da$,4,2):a
n$=RIGHT$(da$,2):mo=VAL(mo$):an=VAL
(an$):a=VAL(a$):m=VAL(m$):j=VAL(j$)
:jo=VAL(LEFT$(da$,2))
770 IF d$=da$ THEN RESTORE 280:FOR >UQ<
x=1 TO mo:READ mo$:NEXT: GOTO 900
780 RESTORE 190:FOR x=1 TO m:READ d >WR<
uree:NEXT:duree=(duree-j)+1
790 RESTORE 190:FOR x=1 TO m:READ l >WT<
:NEXT:FOR x=m+1 TO 12:READ l:lo=lo+
l:NEXT
800 RESTORE 190:FOR x=1 TO mo-1:REA >HJ<
D du:dur=dur+du:NEXT
810 age=((an-a-1)*365)+lo+duree+dur >WK<
820 FOR x=(a+1900+1) TO (an+1900-1) >VL<
830 IF x MOD 4=0 THEN bi=bi+1 >LM<
840 NEXT >RN<
850 age=age+bi >FP<
860 IF m<3 AND x MOD 4=0 THEN age=a >RQ<
ge+1
870 IF mo>2 AND x MOD 4=0 THEN age= >ER<
age+1
880 RESTORE 280:FOR x=1 TO mo:READ >DT<
mo$:NEXT
890 age=age+jo >AU<
900 phy=SIN((age*2*PI)/23):emo=SIN( >VK<
(age*2*PI)/28):cer=SIN((age*2*PI)/3
3)
910 IF ABS(phy)<0.1 THEN ph=0 ELSE >WL<
ph=SGN(phy)
920 IF ABS(emo)<0.1 THEN em=0 ELSE >ZM<
em=SGN(emo)
930 IF ABS(cer)<0.1 THEN ce=0 ELSE >NN<
ce=SGN(cer)
940 IF ph>0 AND em>0 AND ce>0 THEN >CP<
q=1
950 IF ph>0 AND em>0 AND ce<0 THEN >CQ<
q=2
960 IF ph>0 AND em<0 AND ce>0 THEN >ER<
q=3
970 IF ph<0 AND em>0 AND ce>0 THEN >GT<
q=4
980 IF ph>0 AND em<0 AND ce<0 THEN >GU<
q=5
990 IF ph<0 AND em>0 AND ce<0 THEN >JV<
q=6
1000 IF ph<0 AND em<0 AND ce>0 THEN >UB<
q=7
1010 IF ph<0 AND em<0 AND ce<0 THEN >UC<
q=8
1020 IF ph>0 AND em>0 AND ce=0 THEN >BD<
q=9
1030 IF ph>0 AND em=0 AND ce>0 THEN >WE<
q=10
1040 IF ph=0 AND em>0 AND ce>0 THEN >YF<
q=11
1050 IF ph>0 AND em<0 AND ce=0 THEN >YG<
q=12
1060 IF ph<0 AND em>0 AND ce=0 THEN >AH<
q=13
1070 IF ph<0 AND em=0 AND ce>0 THEN >CJ<
q=14
1080 IF ph=0 AND em<0 AND ce>0 THEN >EK<
q=15
1090 IF ph=0 AND em>0 AND ce<0 THEN >GL<
q=16
1100 IF ph>0 AND em=0 AND ce<0 THEN >ZC<
q=17
1110 IF ph<0 AND em<0 AND ce=0 THEN >ZD<
q=18
1120 IF ph<0 AND em=0 AND ce<0 THEN >BE<
q=19
1130 IF ph=0 AND em<0 AND ce<0 THEN >UF<
q=20
1140 IF ph>0 AND em=0 AND ce=0 THEN >ZG<
q=21
1150 IF ph=0 AND em>0 AND ce=0 THEN >BH<
q=22
1160 IF ph=0 AND em=0 AND ce>0 THEN >DJ<
q=23
1170 IF ph<0 AND em=0 AND ce=0 THEN >DK<
q=24
1180 IF ph=0 AND em<0 AND ce=0 THEN >FL<
q=25
1190 IF ph=0 AND em=0 AND ce<0 THEN >HM<
q=26
1200 IF ph=0 AND em=0 AND ce=0 THEN >BD<

```



```

q=27
1210 ' >FE<
1220 ' ** PREVISIONS ** >UF<
1230 ' >HG<
1240 a$(1)= "Debordant d'energie, v >LH<
ous vous sentez en pleine forme: vo
tre moral est au plus "+CHR$(9)+"h
aut, votre esprit est alerte, bref,
la vie est vraiment belle !"
1250 a$(2)= "Vous voyez la vie en r >QJ<
ose et comme la forme suit, vous vo
us montrerez sous "+CHR$(9)+"vo
tre meilleur jour! N'hesitez pas a
entreprendre !"
1260 a$(3)= "Vous ne manquerez ni d >LK<
e vivacite d'esprit, ni de vitalite
et vous vous sentirez "+CHR$(9)+"d
e taille a surmonter les difficulte
s : profitez-en pour vous organiser
."
1270 a$(4)= "Aide par votre flair e >UL<
t votre perspicacite, vous portez u
n regard d'artiste sur "+CHR$(9)+"l
e monde. Votre sensibilite et votre
esprit favorisent la creation."
1280 a$(5)= "Aujourd'hui, vous risq >JM<
uez de ne pas vous sentir tres conc
erne par ce que vous "+CHR$(9)+"f
aites ! Alors contentez-vous de men
us travaux !"
1290 a$(6)= "L'humeur est bonne et >ZN<
favorable aux rencontres, mais vous
n'avez pas les pieds "+CHR$(9)+"s
ur terre ! Programmez ce jour-la so
rties, expos, cinemas !"
1300 a$(7)= "Vous posez sur les gen >CE<
s (y compris sur vous-meme) un rega
rd juste et lucide. "+CHR$(9)+"O
ptez pour des activites demandant d
e la reflexion."
1310 a$(8)= "Vos trois cycles en pe >UF<
riode de recuperation vous donnent
un certain recul par "+CHR$(9)+"r
apport a tout ce qui vous entoure.
Choisissez des activites reposantes
."
1320 a$(9)= "Vos relations avec les >YG<
autres sont assez chaleureuses. La
issez-vous aller a vo- "+CHR$(9)+"t
re bonne humeur et evitez de prendr
e des decisions importantes."
1330 a$(10)= "Anime par l'envie d'a >AH<
gir et la volonte d'arriver a vos f
ins, vous avez quelques "+CHR$(9)+"
difficultes a supporter les contrar
ietes ou les contre temps."
1340 a$(11)= "Vous avez l'esprit cl >NJ<
air et une facon de reagir positive
, mais n'en faites pas "+CHR$(9)+"

```

```

trop : physiquement, vous risquerie
z bien de ne pas suivre."
1350 a$(12)= "Vous avez un peu de ma >MK<
l a rassembler vos idees et a vous
faire comprendre. Gare "+CHR$(9)+"a
ux etourderies. Surtout, reflechiss
ez avant d'agir !"
1360 a$(13)= "Laissez-vous guider pa >DL<
r votre humeur qui vous rend optimi
ste ! Votre jugement "+CHR$(9)+"r
isque de ne pas etre tres sur : ent
ourez-vous de bons conseils."
1370 a$(14)= "Vous aurez tendance a >RM<
fuir le le brouhaha pour vous retir
er dans votre tour d'i- "+CHR$(9)+"v
oire et y reflechir a loisir ! Prof
itez-en pour faire des projets."
1380 a$(15)= "Vous risquez de vous l >MN<
ever du pied gauche et d'etre mal e
n point. Mais votre "+CHR$(9)+"s
ens du devoir prendra le dessus et
vous fera oublier ce jour gris !"
1390 a$(16)= "Heureusement que vos a >BP<
mis sont la pour vous entourer d'af
fection et vous prodi- "+CHR$(9)+"g
uer leurs conseils : vous avez tres
envie d'etre dorlote !"
1400 a$(17)= "Vous avez du mal a le >GF<
cacher : un rien vous agace ! Evite
z de vous mettre trop "+CHR$(9)+"e
n colere, cela risquerait bien de s
e retourner contre vous."
1410 a$(18)= "Il n'y aurait que vous >CG<
, vous seriez bien reste au chaud d
ans votre lit douillet "+CHR$(9)+"t
oute la journee ! Alors, surtout n'
essayez pas d'innover !"
1420 a$(19)= "Vous ne vous sentez pa >RH<
s dans votre assiette. Evitez de pre
ndre une decision qui "+CHR$(9)+"e
ngagerait votre avenir... vous pour
riez vous en mordre les doigts."
1430 a$(20)= "Aujourd'hui, il vaut m >EJ<
ieux ne pas compter sur vous pour r
emuer ciel et terre. "+CHR$(9)+"L
ire un bon bouquin au coin du feu :
c'est tout ce qui vous tente !"
1440 a$(21)= "La forme est bonne, ma >ZK<
is le moral et les idees sont en ro
ue libre ! Contentez- "+CHR$(9)+"v
ous de taches routinieres. Vraiment
cela vaut beaucoup mieux !"
1450 a$(22)= "Votre entourage va ben >JL<
eficier de votre indulgence et de v
os largesses ! Prenez "+CHR$(9)+"g
arde a ne pas vous laisser rouler !
Et, ne soyez pas trop poire !"
1460 a$(23)= "Votre humeur noire et >UM<
vos observations aigres-douces (mem

```

```

e justifiees) peuvent "+CHR$(9)+"n
e pas plaire a tout le monde : mett
ez de l'eau dans votre vin !"
1470 a$(24)= "Vous avez tendance a v >NN<
ous poser des tas de questions inut
iles et a ne pas leur "+CHR$(9)+"t
rouver de reponse, ce qui risque de
retenir sur votre humeur !"
1480 a$(25)= "Vous vous demandez si >XP<
la vie vaut bien la peine d'etre ve
cue ? Ne cherchez "+CHR$(9)+"s
urtout pas la reponse ! Livrez-vous
plutot a vos passe-temps preferes
!"
1490 a$(26)= "La moindre petite cont >HQ<
rariete peut prendre a vos yeux des
allures de catastro- "+CHR$(9)+"p
he. Recherchez le calme et la solit
ude par dessus tout !"
1500 a$(27)= "Cette combinaison ne s >WG<
e produit que 8 fois en 54 ans ! Vo
us avez donc le temps "+CHR$(9)+"d
e vous y preparer... et de vous en
remettre ! Alors dorlotez-vous !"
1510 MODE 2:PRINT "Le ";jo;" ";mo$; >TH<
" ";1900+an:PRINT:PRINT:PRINT "Phy
sique : ";ph
1520 PRINT:PRINT "Emotionnel : ";em >GJ<
1530 PRINT:PRINT "Cerebral : ";ce >VK<
1540 PRINT:PRINT:PRINT:PRINT a$(q) >WL<

1550 PRINT:PRINT CHR$(24);" A -> >WM<
Autre jour B -> Autre biorythme
C -> Fin ";CHR$(24)
1560 x$=UPPER$(INKEY$) >MN<
1570 IF x$="A" THEN CLS:duree=0;l=0 >F<
:l=0:du=0:du=0:age=0:lm=0:x=0:y=0
:z=0:bi=0:age=0:ERASE a$:GOTO 750
1580 IF x$="C" THEN CLS:END >ZQ<
1590 IF x$="B" THEN CLEAR:GOTO 120 >KR<
1600 GOTO 1560 >DH<
1610 ' >KJ<
1620 ' ** PRESENTATION ** >YK<
1630 ' >ML<
1640 MODE 2:LOCATE 30,1:PRINT "B I O >ZM<
R Y T H M E S":LOCATE 30,2:PRINT S
TRING$(19,"-")
1650 LOCATE 34,3:PRINT "(C) S.M.M." >CN<

1660 IF ch$="" THEN LOCATE 4,5:PRIN >FP<
T"Trace, Horoscope ou Chargement (T
/H/C) : " ELSE GOTO 1790
1670 ch$=UPPER$(INKEY$) >VQ<
1680 IF ch$="T" THEN 1640 >CR<
1690 IF ch$="H" THEN LOCATE 4,7:INP >YT<
UT "Entrez votre date de naissance
sous la forme <05.06.68> : ",d$:GO
TO 720
1700 IF ch$="C" THEN 1720 >AJ<

```



```

1710 GOTO 1670 >HK<
1720 LOCATE 5,18:IDIR,"*.bio" >ML<

1730 LOCATE 4,9:PRINT"Une fois la c >JM<
ourbe chargee : "
1740 LOCATE 5,11:PRINT CHR$(242);" >MN<
-> Curseur vers la gauche"
1750 LOCATE 5,13:PRINT CHR$(243);" >VP<
-> Curseur vers la droite"
1760 LOCATE 5,15:PRINT "D -> Fin" >TQ<

1770 LOCATE 4,7:INPUT "Titre : ",ti >ZR<
$:nom$=ti$+".BIO":MODE 1:LOAD nom$,
&C000
1780 LOCATE 38,5:lm1$=COPYCHR$(#0): >XT<
LOCATE 39,5:lm2$=COPYCHR$(#0):lm$=1
m1$+lm2$:lm=VAL(lm$):date=1:GOTO 59
0
1790 LOCATE 4,5:INPUT"Titre (8 lett >UU<
res maxi) : ",ti$:ti$=LEFT$(ti$,8)
1800 LOCATE 4,20:PRINT"Desirez vous >MK<
imprimer (O/N) : "+CHR$(143)
1810 LOCATE 4,7:PRINT"Une fois les >RL<
courbes tracees:"
1820 LOCATE 6,9:PRINT"A -> Horoscop >YM<
e"
1830 LOCATE 6,11:PRINT"B -> Mois su >LN<
ivant"
1840 LOCATE 6,13:PRINT"C -> Sauvega >JP<
rde de la courbe sur disc"
1850 LOCATE 33,9:PRINT"D -> Fin" >XQ<
1860 LOCATE 6,15:PRINT CHR$(242);" >WR<
-> Curseur vers la gauche"
1870 LOCATE 6,17:PRINT CHR$(243);" >DT<
-> Curseur vers la droite"
1880 imp$=UPPER$(INKEY$):LOCATE 34, >NU<
20:PRINT imp$
1890 IF imp$="N" THEN RETURN >ZV<

1900 IF imp$="D" THEN GOTO 1920 >GL<

1910 GOTO 1880 >NM<
1920 >PN<
1930 ' ROUTINE DE COPIE D'ECRAN APP >EP<
ELEE PAR <CALL &A000>
1940 >RQ<
1950 DATA cd,ba,bb,cd,e7,bb,32,b8,a >BR<
0,cd,bc,a0,21,8f,01,22
1960 DATA b9,a0,11,00,00,3e,07,32,b >MT<
b,a0,cd,77,a0,0e,00,3a
1970 DATA bb,a0,47,e5,d5,c5,cd,f0,b >NU<
b,c1,d1,21,b8,a0,be,e1
1980 DATA 37,20,01,a7,cb,11,2b,2b,1 >JV<
0,e9,cd,aa,a0,79,cd,a1

1990 DATA a0,13,e5,21,7f,02,37,ed,5 >UW<
2,e1,38,05,2a,b9,a0,18
2000 DATA cc,23,7c,b5,c8,2b,11,00,0 >MC<
0,22,b9,a0,3e,07,bd,20
2010 DATA b9,7c,b4,20,b5,3e,04,32,b >TD<
b,a0,18,ae,3e,1b,cd,a1
2020 DATA a0,3e,31,cd,a1,a0,c9,e5,3 >VE<
e,42,cd,1e,bb,e1,28,02
2030 DATA e1,c9,3e,0d,cd,a1,a0,3e,0 >ZF<
a,cd,a1,a0,3e,1b,cd,a1
2040 DATA a0,3e,4c,cd,a1,a0,3e,7f,c >FG<
d,a1,a0,3e,02,cd,a1,a0
2050 DATA c9,cd,2e,bd,38,fb,cd,2b,b >DH<
d,c9,3a,bb,a0,fe,07,c8
2060 DATA af,cb,11,cb,11,cb,11,c9,0 >CJ<
0,00,00,00
2070 MEMORY &9FFF:RESTORE 1950 >YK<
2080 s=0:LOCATE 4,22:PRINT CHR$(24) >HL<
;"PATIENTEZ UN INSTANT...";CHR$(24)

2090 FOR i=&A000 TO &A0BB >WM<
2100 READ b$:b=VAL("&"+b$):POKE i,b >KD<
:s=s+b
2110 NEXT >KE<
2120 IF s<>&5A0B THEN PRINT"ERREUR >UF<
EN DATA":END
2130 RETURN >MG<

```

UN  
NUMERO  
HORS  
SERIE  
GRATUIT  
TOUS  
LES  
DEUX  
MOIS

#### 4 REVUES POUR LES PASSIONNES

**CPC - REVUE DES UTILISATEURS D'AMSTRAD** : en vous abonnant, vous recevrez chez vous votre revue. Vous bénéficierez de réductions sur certains produits et vous recevrez *gratuitement* 1 n° hors-série tous les deux mois.

**AMSTAR** : en avant première, toutes les nouveautés sur AMSTRAD - des programmes, des articles ! A la demande de nos lecteurs, nous prenons désormais les abonnements.

**PCompatibles MAGAZINE** : la référence en matière d'initiation et de perfectionnement sur les "compatibles PC".

*Attention, tous nos abonnés reçoivent avant parution des souscriptions sur les nouveaux livres !*

ATTENTION ! Il n'y a pas d'abonnement rétroactif.

- |                                                |            |       |
|------------------------------------------------|------------|-------|
| <input type="checkbox"/> CPC AMSTRAD           | 11 numéros | 180 F |
| <input type="checkbox"/>                       | 6 numéros  | 105 F |
| <input type="checkbox"/> Abonnement essai      | 3 numéros  | 55 F  |
| <input type="checkbox"/> AMSTAR                | 11 numéros | 100 F |
| <input type="checkbox"/> PCompatibles Magazine | 11 numéros | 200 F |
| <input type="checkbox"/> Arcades               | 11 numéros | 200 F |

NOM \_\_\_\_\_ Prénom \_\_\_\_\_

Adresse \_\_\_\_\_

Code postal \_\_\_\_\_ Ville \_\_\_\_\_

Date \_\_\_\_\_ Signature \_\_\_\_\_

Je m'abonne à :

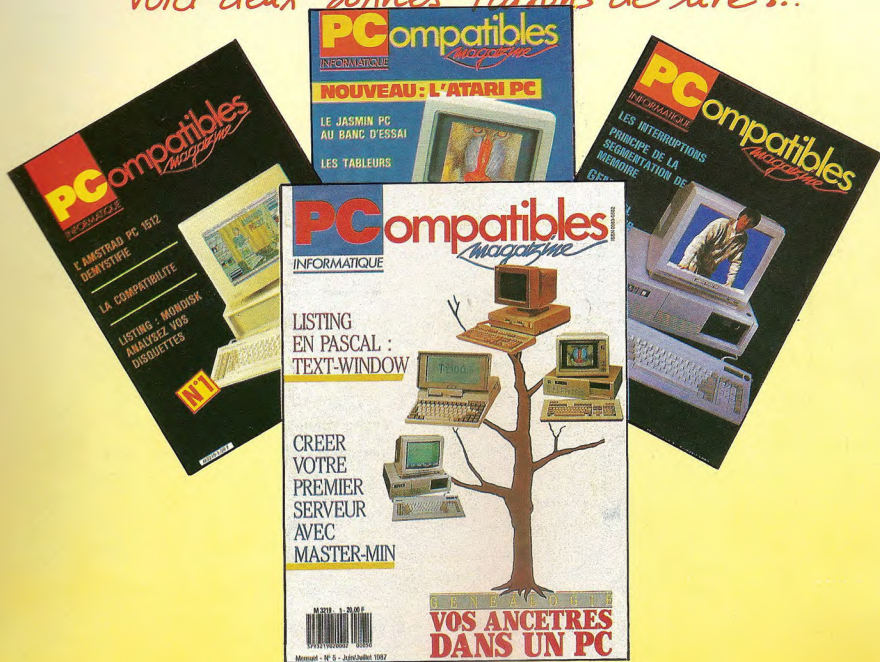
Merci d'écrire en majuscules. Ci-joint un chèque libellé à l'ordre de : Editions SORACOM.  
Service Abonnement - BP 11 - 35170 BRUZ - Retournez le(s) bulletin(s) ou une photocopie.

CPC

ABONNEZ-VOUS



*Vous avez un PC 1512 ?  
Vous envisagez l'achat d'un compatible PC,  
quelle que soit sa marque ?  
Débutants et amateurs avertis,  
voici deux bonnes raisons de lire ...*



**20 F.**  
**CHAQUE MOIS**  
**DANS LES KIOSQUES**  
**OU SUR ABONNEMENT**

**PC**  
INFORMATIQUE

**compatibles**  
*magazine*

est un produit

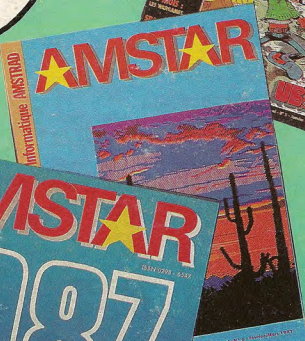
**SORACOM**  
éditions



# AMSTAR

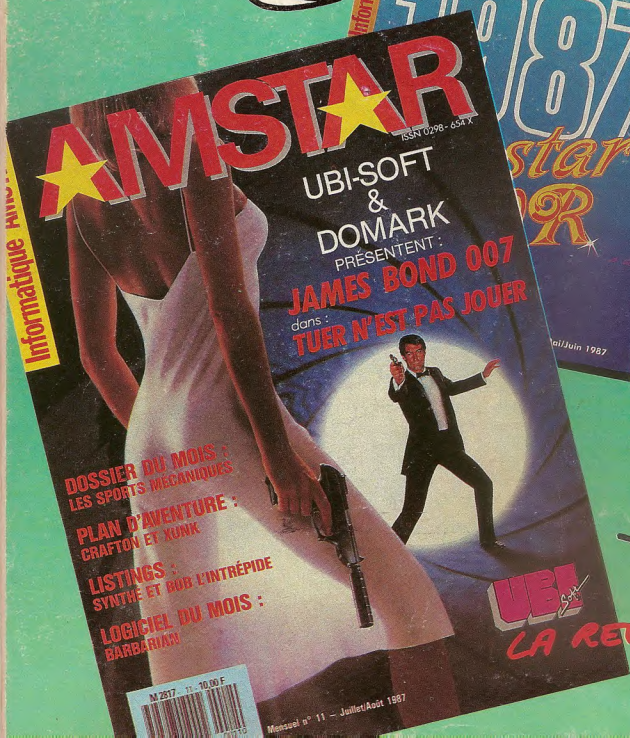
100% COULEUR  
10F SEULEMENT  
CHAQUE MOIS  
EN KIOSQUE

EN  
AVANT-PREMIÈRE  
TOUTES LES  
NOUVEAUTÉS  
SUR AMSTRAD



DES  
PROGRAMMES  
ET DES  
ARTICLES  
D'INITIATION

ET PLEIN DE  
BANCS D'ESSAI  
SUPER AVEC DES  
PHOTOS D'ÉCRAN  
ET DES CONSEILS  
POUR JOUER!



LA REVUE DES JEUNES!