

10-30 Titles and Copyright statement.

```
10 CLS:PRINT@462,CHR$(23);"SAILPLANE DERBY"  
20 PRINT@650,"BY DAVID J.T. MUNN.":FORM=1T02700:NEXT  
30 CLS:PRINT@393,"(D.J.T.MUNN. - LONDON,ENGLAND. COPYRIGHT 1979)  
":PRINT@594,"( VERSION 3.4 / 1.77 MHZ ),":FORM=1T02700:NEXT
```

40 Dimension arrays; define integer variables.

```
40 CLEAR160:DIMTH(30,4),XY(3),MH(3),WV(3),X(3),Y(3),H(3),S(3),R(3),  
W(3),D(3),K(3),B$(3),L(5):DEFINTD,N,Q,M,O,F,S,H,U,B,C,P:L(4)=  
1:L(5)=1  
42 RANDOM
```

44-60 Define user selected weather conditions.

```
44 CLS:PRINT"DO YOU WISH TO DEFINE YOUR OWN WEATHER CONDITIONS O  
R ACCEPT A RANDOMISED WEATHER PATTERN  
1 = OWN  
2 = RANDOM"  
46 PRINT"(1 OR 2)"  
48 W$=INKEY$:IFW$=""THEN#8  
50 IFW$="2"THEN#70  
51 IFW$="1"THEN#2ELSE#6  
52 CLS:PRINT"ENTER THERMAL STRENGTHS  
1 = WEAK  
2 = MEDIUM  
3 = STRONG"  
53 INPUT"(1,2 OR 3 THEN ENTER)";A1:IFA1<10RA1>3THEN#53  
54 CLS:PRINT"ENTER WIND SPEED  
1 = 3-5 MPH.  
2 = 7-13 MPH.  
3 = 19-25 MPH."  
55 INPUT"(1,2 OR 3 THEN ENTER)";A3:IFA3<10RA3>3THEN#55  
57 IF A3=3 THEN A3=5  
60 A4=(9-A1)/10:A5=.6:A2=RND(6):GOTO100
```

70-80 Define randomised weather conditions.

```
70 CLS:PRINT"ONE MOMENT...":A1=RND(3):A4=(9-A1)/10:A5=.6  
80 A2=RND(6):A3=RND(6)  
90 '
```

100-130 Randomiser selects values for thermals (X & Y coordinates, strengths).

```
100 FORM=1T030:TH(N,1)=RND(425)+130:NEXT  
110 FORM=1T030:TH(N,2)=RND(475)+175:NEXT  
120 FORM=1T030:TH(N,3)=(RND(5)*A1)+7:NEXT  
130 Q5=0:F2=0
```

140-160 Turns one thermal in every five into sinking air on a random basis.

```
140 FORM=1T030:T1=RND(5)  
150 IFT1=1THENH(N,3)=INT(TH(N,3)*.6)  
160 NEXTN
```

170 Ensures there is at least one thermal within gliding range of the start by loading a thermal into front of array, using a very limited set of conditions for the randomiser.

```
170 TH(1,1)=RND(120)+140:TH(1,2)=RND(120)+140:TH(1,3)=(RND(5)*A1  
)#7
```

180-200 Sets the vertical centroid of the thermal above ground level into the last line of the thermal matrix.

```
180 FORM=1T030:IFTH(N,3)<0THEN#200  
190 TH(N,4)=RND(A1*600)+(A1*500)  
200 NEXTN  
210 IFF9=1THEN#30  
220 F9=1
```

230-270 Enter player's names and set player counter.

```
230 CLS:INPUT"NUMBER OF PLAYERS ";P1  
240 IFP1<10R1>3THEN#230  
250 INPUT"TYPE NAMES OF PLAYER(S)-AFTER EACH PRESS ENTER ";B$(1)  
260 IFP1=1THEN#280ELSEINPUTB$(2)  
270 IFP1=2THEN#280ELSEINPUTB$(3)
```

280-450 Print meteorological report.

```
280 CLS:PRINT"METEOROLOGICAL DATA"  
290 PRINT"THERMAL STRENGTH: ";  
300 IFA1=1PRINT"WEAK"  
310 IFA1=2PRINT"MODERATE"  
320 IFA1=3PRINT"STRONG"  
330 PRINT"CLOUD DEVELOPMENT EXPECTED : ";  
340 PRINT" ISOLATED SUMMER CUMULUS."  
350 PRINT"WIND VELOCITY (FROM THE WEST)";  
360 IFA3=<2PRINT": 3-5 MPH."  
370 IFA3<5AND#3>2PRINT": 7-13 MPH."  
380 IFA3>4PRINT": 19-25 MPH."  
390 IFA1=1THENPRINT"FOUR HOURS OF CONVECTION EXPECTED"  
400 IFA1=2THENPRINT"FIVE HOURS OF CONVECTION EXPECTED"  
410 IFA1=3THENPRINT"SIX HOURS OF CONVECTION EXPECTED"  
420 T1=15-((1-A4)*10)  
430 PRINT"THERMALS EXPECTED TO START AT ";T1;"00 HOURS."  
440 PRINT"VISIBILITY IS EXPECTED TO BE 20 MILES."  
450 PRINT@788,"PRESS ANY KEY TO CONTINUE"  
460 IFA3>4THEN#2=RND(399)+100:T3=RND(500)+150:T4=RND(3)*A1+6:FOR  
N=27T030:TH(N,1)=T2:T2=T2+40:NEXT:FORM=27T030:TH(N,2)=T3:NEXT:FO  
RN=27T030:TH(N,3)=TH(27,3):NEXT  
470 A$=INKEY$:IFA$=""THEN#70ELSECLS
```

480-510 Is launch deferment required if so increment A4 and A5.

```
480 PRINT"YOU WILL BE LAUNCHED HALF AN HOUR AFTER  
CONDITIONS HAVE BECOME SOARABLE, AT ";T1;"30 HOURS.":A4=A4+.05  
490 INPUT"COMPETITORS MAY REQUIRE A LATER LAUNCH. THEREFORE IF A  
LAUNCH POSTPONMENT IS REQUIRED ENTER NUMBER OF HOURS OF POSTP  
ONMENT (1 OR 2), IF NONE REQUIRED ENTER 0";T2  
500 IFT2<0ORT2>2THENPRINT"ENTER 0,1 OR 2":GOTO490  
510 T2=T2/10:A4=A4+T2:A5=A5+T2  
520 '
```

530 Initialise variables for launch of first sailplane.

```
530 H(1)=3000:H(2)=3000:H(3)=3000:S(1)=60:S(2)=60:S(3)=60:W(1)=6  
0:W(2)=60:W(3)=60:D(1)=45:D(2)=45:D(3)=45:K(1)=3000:K(2)=3000:K(3)=  
3000:X(1)=200:X(2)=200:X(3)=200:Y(1)=200:Y(2)=200:Y(3)=200:R(1)=  
0:R(2)=0:R(3)=0  
540 B=1:T1=0:T2=0:T3=0:T4=0
```

550-600 Request positions of turnpoints and load into memory.

```
550 PRINT"ENTER TURNPOINTS (TURN ONE MUST BE NORTH OF TURN TWO)"  
560 INPUT"TASKSETTER TO TYPE X CO-ORDINATE OF FIRST TURNPOINT(10  
-70)";U1  
570 INPUT"Y CO-ORDINATE";U2  
580 INPUT"TASKSETTER TO TYPE X CO-ORDINATE OF SECOND TURNPOINT(1  
0-70)";U3  
590 INPUT"Y CO-ORDINATE";U4  
600 IF(U1<10ORU1>70)OR(U2<10ORU2>70)OR(U3<10ORU3>70)OR(U4<10ORU4  
>70)THENPRINT"ENTER COORDINATES BETWEEN 10 & 70":GOTO560
```

602 Call up map S/R to indicate positions of turnpoints.

```
602 CLS:PRINT"TURNPOINTS ARE DISPLAYED AS CROSSES ON THE FOLLOWI  
NG MAP.":FORM=1T04200:NEXT:CLS:GOSUB3060:FORM=1T010000:NEXT:CLS  
610 IFP1=1THENL(2)=1:L(3)=1  
620 IFP1=2THENL(3)=1
```

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