M.J. Lindsell.

Dateline 5000

A game to space out your evenings

This program is based partly on John Waddington's board game, '4000 AD', and partly on the popular television programme, 'Star Trek', although most of it is original. It is not so simple and corny as to be too boring, and yet at the same time, is easy to play. The object of the game is to build up as large a fleet of starships as possible, before being annihilated by the enemy. For this reason each game is different, and the length of games is enormously variable; one can try to beat one's previous record etc. The information given should adequately describe the program, but it is recommended, that, if possible the program is actually tried out.

The game is designed to run on a Texas Instruments TI-59 calculator with the PC-100C Print/Security cradle. The PC-100A or B Print cradles may be used instead.

The program is best recorded on two magnetic cards; one for the program itself, and the other to record the memories (as for printing reasons these must be entered at the start). If a different game is required each time, a random number seed between 0 and 199017 (inc) should be entered into register 9, also at the start of the game. The program should be run with the Master Library module in place (supplied with calculator), and with the partition set to 479.59 (power up partition).

The program is controlled by means of the five user-defined keys alone, using only their first functions, (A–E).

The program itself, and memory contents, are supplied as a printer listing. The game may be altered slightly by changing the names of the 12 stars. Registers 36 and 37, contain the print codes for the first star, and 58 and 59 contain those for the twelfth and last star.

Program Scenario

The game is set in the future, at a time when the United Nations have sent out a fleet of starships to colonise the worlds. Matter transportation has been perfected, and any resources found, can be immediately 'beamed' back to the home colonies, in order to build more starships. For each 'planetful', of raw materials, and each one of life-forms, providing the necessary manpower, one new starship is manufactured, during each interstellar journey, and being in possession of light-warp drive, each of these new ships, joins the main fleet before the end of the journey. The objective is therefore to colonise as many planets containing these vital resources, as possible, thereby obtaining the largest fleet possible.

However, some of these planets have already been colonised by Earth's old enemies, the Romulans and the Klingons. The U N fleet, on encountering one of these colonies, may elect to withdraw and resume the search, or to attack the settlement. If the attack is made, the battle will continue until one fleet is totally annihilated; this will be the fleet with the fewest ships (the colony will of course reply to the attack by dispatching a fleet of battle-cruisers). If both fleets are the same size, then because U N starships are slightly larger and better equipped than alien battle-cruisers, the U N fleet will win through.

The situation is further complicated by the occasional approach of the U N fleet towards the neutral zones, and statutory space of the aliens. When this happens, most of the time, the approach is uneventful; however, sometimes, the aliens, being of treacherous nature, actually cross their boundaries, and commence a spontaneous unprovoked attack on the allied fleet. In this event, the same rules of battle as previously described, apply. Although, the enemy fleets are proportioned according to the allied fleet, the greater the size of the allied fleet, the smaller the chances of its destruction (the U N fleet starts off with two ships, and all enemy fleets have *at least* two).

The greatest fleet size hitherto obtained before annihiliation, was 3,130 starships (defeated by a fleet of 3,144 battle-cruisers). The least was of course, 2 starships.

Planet Identification

Planets are denoted by their Sun's name, followed by their numerical order from the Sun; ie., Earth is SOL 3.

The twelve stars used are divided into two categories, alpha-stars, and beta-stars; please see flow chart for the differences between them. The alpha stars used here, are as follows:–

ALBIREO, ACRUX, MENKAR, SOL, GEMMA & PAVO.

The beta-stars are:–

ALGOL, PROCYON, CASTOR, POLLUX, ENIF & SPICA.

Of these Procyon, Castor, Albireo, Menkar and Pavo have planets housing alien colonies at the start of the game, although these colonies readily change around during the game.

The same planet will always contain the same resources, however, throughout the game.

User Instructions

1. To start the game, first ensure the master library module is in position. Next, ensure the calculator is connected to a print cradle of the PC-100' series, and check that the partition is set to 479.59. Now, enter the program and data memories, either directly, or from each side of two magnetic cards.
   Press A. (First user-defined key)

2. If destroyed in an interstellar battle with Romulan or Klingon battle-cruisers, start again. Otherwise, the printer will have written "On course for" and then a destination, eg " CASTOR 8".
   If it is desired to investigate this planet, Press B. and proceed to step 3.
   If it is desired to withdraw and resume search, return to stage 2 and Press C.

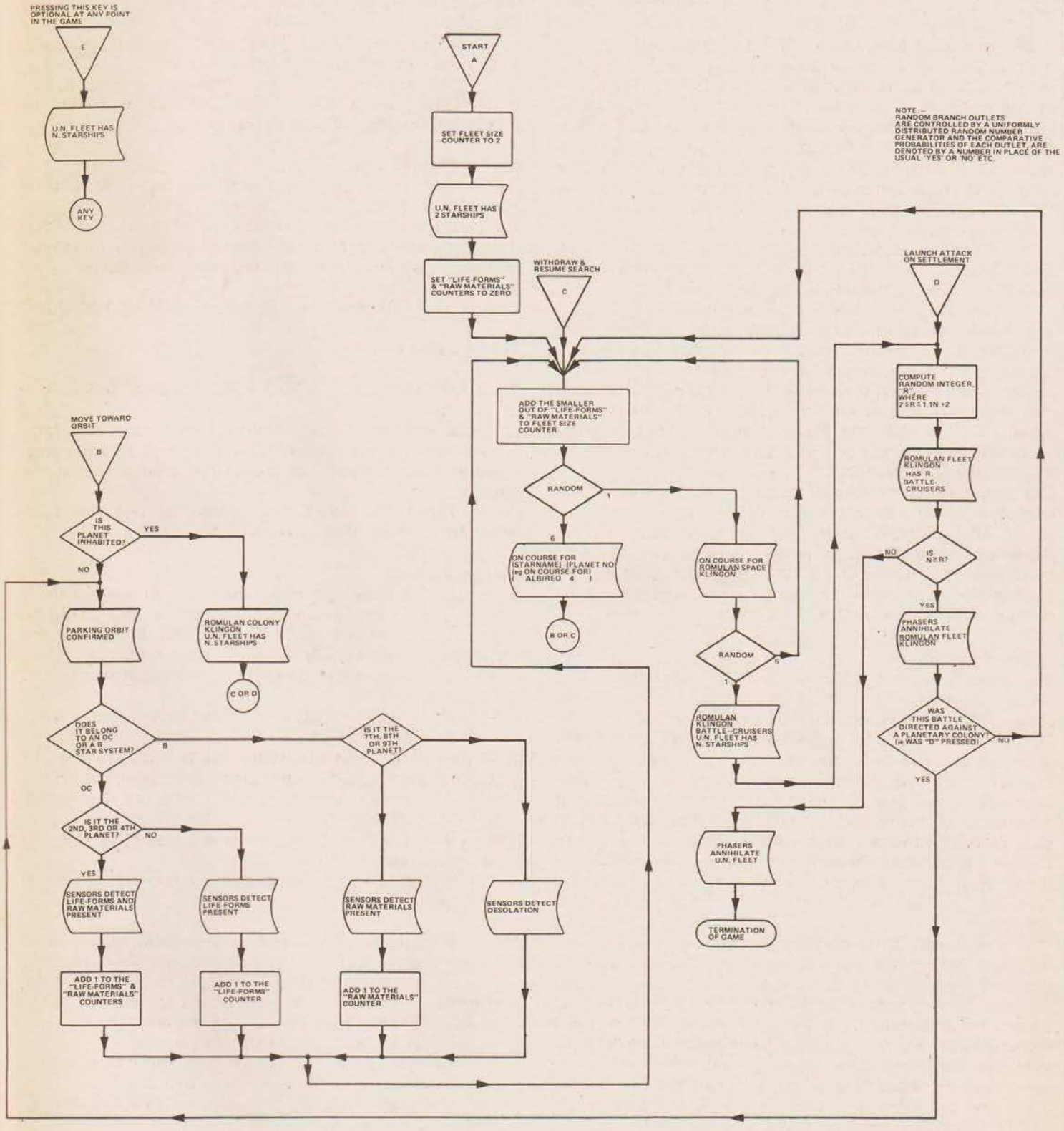
3. If the planet is uninhabited, parking orbit will be established, and the surface scanned by sensors. Any resources present, will automatically be utilised, and the fleet will continue on course for another planet (or alien space); go to step 2. If there is an alien colony present, then;
   If it is desired to attack the colony,
   Press D. and if successful, procedure will continue as if colony had not been there, ie., go to step 2.
   If attack is unsuccessful, game will terminate, – if desired, Press A to start again.
   If (as is the safest strategy early in the game) it is

desired to withdraw from danger of enemy colony, Press C. and go to step 2.

4. At any point in the game, E may be pressed, to print the size of the United Nations' Fleet.

1. Simplified Flowchart for the game.

The Flow Chart should clear up any points still not understood so far. However, please note that the chart does not show all of the subroutines and branches in the actual program, but is vastly oversimplified to show just the behaviour of the program, in a reasonably comprehensible fashion.



2. Program listing for Dateline 5000.

```
000  76 LBL
001  10 E'
002  36 PGM
003  15  15
004  71 SBR
005  88 DMS
006  92 RTN
007  76 LBL
008  16 A'
009  69 OP
010  00  00
011  76 LBL
012  18 C'
013  42 STO
014  07  07
015  73 RC*
016  07  07
017  69 OP
018  01  01
019  69 OP
020  27  27
021  76 LBL
022  17 B'
023  73 RC*
024  07  07
025  69 OP
026  02  02
027  69 OP
028  27  27
029  73 RC*
030  07  07
031  76 LBL
032  19 D'
033  69 OP
034  03  03
035  69 OP
036  05  05
037  25 CLR
038  92 RTN
039  76 LBL
040  11  A
041  02  2
042  42 STO
043  01  01
044  15  E
045  42 STO
046  03  03
047  42 STO
048  04  04
049  76 LBL
050  13  C
051  68 NOP
052  01  1
053  77  GE
054  00  00
055  69  69
056  68 NOP
057  43 RCL
058  23  23
059  48 EXC
060  33  33
061  42 STO
062  23  23
063  43 RCL
064  24  24
065  48 EXC
066  34  34
067  42 STO
068  24  24
069  25 CLR
070  42 STO
071  36  36
072  43 RCL
073  03  03
074  85  +
075  43 RCL
076  04  04
077  95  =
078  55  ÷
079  02  2
080  95  =
081  75  -
082  53  (
083  24 CE
084  75  -
085  43 RCL
086  03  03
087  54  )
088  50 I×I
089  95  =
090  44 SUM
091  01  01
092  10 E'
093  65  ×
094  01  1
095  04  4
096  95  =
097  59 INT
098  65  ×
099  02  2
100  85  +
101  03  3
102  06  6
103  95  =
104  42 STO
105  02  02
106  32 X:T
107  03  3
108  02  2
109  03  3
110  01  1
111  00  0
112  00  0
113  69 OP
114  00  00
115  69 OP
116  01  01
117  01  1
118  03  3
119  42 STO
120  07  07
121  98 ADV
122  17 B'
123  05  5
124  09  9
125  22 INV
126  77  GE
127  79  x̄
128  73 RC*
129  02  02
130  69 OP
131  01  01
132  69 OP
133  22  22
134  73 RC*
135  02  02
136  69 OP
137  02  02
138  10 E'
139  65  ×
140  01  1
141  01  1
142  85  +
143  02  2
144  95  =
145  59 INT
146  42 STO
147  36  36
148  19 D'
149  98 ADV
150  25 CLR
151  91 R/S
152  76 LBL
153  79  x̄
154  43 RCL
155  33  33
156  69 OP
157  01  01
158  43 RCL
159  34  34
160  69 OP
161  02  02
162  03  3
163  06  6
164  03  3
165  03  3
166  01  1
167  03  3
168  01  1
169  05  5
170  01  1
171  07  7
172  19 D'
173  98 ADV
174  10 E'
175  65  ×
176  05  5
177  95  =
178  32 X:T
179  01  1
180  22 INV
181  77  GE
182  13  C
183  69 OP
184  00  00
185  03  3
186  03  3
187  42 STO
188  07  07
189  17 B'
190  02  2
191  08  8
192  16 A'
193  15  E
194  14  D
195  13  C
196  76 LBL
197  14  D
198  43 RCL
199  33  33
200  69 OP
201  01  01
202  43 RCL
203  34  34
204  69 OP
205  02  02
```

```
206  43 RCL
207  21  21
208  69 DP
209  03  03
210  43 RCL
211  22  22
212  69 DP
213  04  04
214  69 DP
215  05  05
216  10 E'
217  65  ×
218  43 RCL
219  01  01
220  65  ×
221  01  1
222  93  .
223  01  1
224  85  +
225  02  2
226  95  =
227  59 INT
228  99 PRT
229  32 X:T
230  02  2
231  08  8
232  16 A'
233  98 ADV
234  01  1
235  03  3
236  03  3
237  07  7
238  01  1
239  07  7
240  00  0
241  00  0
242  00  0
243  00  0
244  69 DP
245  04  04
246  02  2
247  05  5
248  18 C'
249  69 DP
250  00  00
251  43 RCL
252  21  21
253  69 DP
254  04  04
255  43 RCL
256  01  01
257  77  GE
258  60 DEG
259  43 RCL
260  20  20
261  19 D'
262  98 ADV
263  98 ADV
264  98 ADV
265  98 ADV
266  91 R/S
267  76 LBL
268  60 DEG
269  06  6
270  44 SUM
271  07  07
272  17 B'
273  06  6
274  00  0
275  32 X:T
276  43 RCL
277  02  02
278  22 INV
279  77  GE
280  25 CLR
281  92 RTN
282  76 LBL
283  15  E
284  98 ADV
285  02  2
286  00  0
287  16 A'
288  43 RCL
289  01  01
290  99 PRT
291  69 DP
292  00  00
293  03  3
294  06  6
295  03  3
296  07  7
297  01  1
298  03  3
299  03  3
300  05  5
301  69 DP
302  02  02
303  03  3
304  06  6
305  02  2
306  03  3
307  02  2
308  04  4
309  03  3
310  03  3
311  03  3
312  06  6
313  19 D'
314  98 ADV
315  92 RTN
316  76 LBL
317  22 INV
318  69 DP
319  32  32
320  69 DP
321  10  10
322  64 PD*
323  02  02
324  04  4
325  05  5
326  52 EE
327  08  8
328  22 INV
329  52 EE
330  69 DP
331  04  04
332  43 RCL
333  33  33
334  69 DP
335  01  01
336  43 RCL
337  34  34
338  69 DP
339  02  02
340  43 RCL
341  00  00
342  19 D'
343  15  E
344  91 R/S
345  76 LBL
346  12  B
347  73 RC*
348  02  02
349  69 DP
350  32  32
351  29 CP
352  22 INV
353  77  GE
354  22 INV
355  76 LBL
356  25 CLR
357  98 ADV
358  01  1
359  05  5
360  16 A'
361  69 DP
362  00  00
363  69 DP
364  27  27
365  17 B'
366  98 ADV
367  03  3
368  06  6
369  01  1
370  07  7
371  03  3
372  01  1
373  03  3
374  06  6
375  69 DP
376  01  01
377  05  5
378  42 STO
379  07  07
380  17 B'
381  69 DP
382  00  00
383  04  4
384  08  8
385  32 X:T
386  43 RCL
387  02  02
388  50 I×I
389  77  GE
390  04  04
391  06  06
392  08  8
393  32 X:T
394  43 RCL
395  36  36
396  77  GE
397  04  04
398  73  73
399  03  3
400  01  1
401  42 STO
402  07  07
403  17 B'
404  98 ADV
405  13  C
406  43 RCL
407  08  08
408  69 DP
409  01  01
410  43 RCL
411  35  35
412  69 DP
413  02  02
```

```
414  43 RCL
415  36  36
416  32 X:T
417  03  3
418  67  EQ
419  39 COS
420  04  4
421  67  EQ
422  39 COS
423  05  5
424  67  EQ
425  39 COS
426  68 NOP
427  69 OP
428  05  05
429  69 OP
430  23  23
431  61 GTO
432  69 OP
433  76 LBL
434  39 COS
435  01  1
436  03  3
437  03  3
438  01  1
439  01  1
440  06  6
441  19 D'
442  69 OP
443  23  23
444  69 OP
445  24  24
446  01  1
447  00  0
448  16 A'
449  76 LBL
450  69 OP
451  69 OP
452  00  00
453  03  3
454  03  3
455  03  3
456  05  5
457  69 OP
458  02  02
459  01  1
460  07  7
461  03  3
462  06  6
463  01  1
464  07  7
465  03  3
466  01  1
467  03  3
468  07  7
469  19 D'
470  98 ADV
471  61 GTO
472  13  C
473  01  1
474  00  0
475  16 A'
476  69 OP
477  24  24
478  61 GTO
479  69 OP
```

DATA MEMORIES, ALSO TO BE ENTERED AT THE START OF THE GAME.

```
 1532273231.   00
          0.   01
          0.   02
          0.   03
          0.   04
3235360016.   05
1737171537.   06
          0.   07
2724211720.   08
193342.7196   09
   351343.    10
 30133717.    11
3524132736.   12
1532413536.   13
1700213235.   14
 33133526.    15
2431220032.
3514243700.
1532312124.
3530171600.
4140314000.
2127171737.
  23133600.
    353230.
4127133100.
3323133617.
3536001331.
3124232427.
1413373727.
1720153541.
2436173536.
1617363227.
1337243231.
   262724.
3122323100.
2132353036.
          0.
1327223227.
     3335.
-3215453231.
       15.
16 -1336373235.
17          33.
18  3227274144.
19           0.
20    17312421.
21           0.
22  3633241513.
23        1327.
   -1424351732.
24           0.
25  1315354144.
26          30.
27 -1731261335.
28           0.
29      363227.
30           0.
31  2217303013.
32           0.
   -33134232.
33
34
35
36
37
38
39 PARTITION - 479.59
40 MODULE - MASTER 1
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
```

3. Sample run of the program. Letters indicate key depressed, lines show stages of execution.

```
(A)
U.N. FLEET HAS
        2.
    STARSHIPS


 ON COURSE FOR
    GEMMA    8
(B)
 PARKING ORBIT
    CONFIRMED

 SENSORS DETECT
LIFE-FORMS
       PRESENT


  ON COURSE FOR
  ROMULAN SPACE


  ON COURSE FOR
   POLLUX    5
(B)
 PARKING ORBIT
    CONFIRMED

 SENSORS DETECT
    DESOLATION


  ON COURSE FOR
    ALGOL    7
(B)
 PARKING ORBIT
    CONFIRMED

 SENSORS DETECT
  RAW MATERIALS
       PRESENT


  ON COURSE FOR
   MENKAR    1
```

```
(C)
  ON COURSE FOR
  ROMULAN SPACE

  ON COURSE FOR
     PAVO    2
(C)
  ON COURSE FOR
  ROMULAN SPACE

  ON COURSE FOR
  KLINGON SPACE

       KLINGON
BATTLE-CRUISERS

U.N. FLEET HAS
        7.
    STARSHIPS

  KLINGON FLEET HAS
        4.
BATTLE-CRUISERS

PHASERS ANNIHILATE
      KLINGON FLEET

  ON COURSE FOR
     ACRUX    7

(C)
  ON COURSE FOR
   ALBIREO    7

(C)
  ON COURSE FOR
     ENIF    4

(B)
 PARKING ORBIT
    CONFIRMED

 SENSORS DETECT
    DESOLATION

  ON COURSE FOR
   MENKAR    4
```

```
(B)
   KLINGON COLONY

U.N. FLEET HAS
       11.
    STARSHIPS
(D)
  KLINGON FLEET HAS
        5.
BATTLE-CRUISERS

PHASERS ANNIHILATE
      KLINGON FLEET

 PARKING ORBIT
    CONFIRMED

 SENSORS DETECT
LIFE-FORMS  AND
 RAW MATERIALS
       PRESENT


  ON COURSE FOR
    ALGOL    8
(C)
  ON COURSE FOR
  KLINGON SPACE


  ON COURSE FOR
   ALBIREO    9
(B)
  ROMULAN COLONY

U.N. FLEET HAS
       17.
    STARSHIPS
(D)
  ROMULAN FLEET HAS
       18.
BATTLE-CRUISERS

PHASERS ANNIHILATE
       U.N. FLEET
```