

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43

-----  
/  
/  
/  
/  
/  
/  
/ THIS PROGRAM SOURCE FILE IS SUPPLIED IN CONFIDENCE TO THE  
/ CUSTOMER; THE CONTENTS OR DETAILS OF ITS OPERATION MAY ONLY  
/ BE DISCLOSED TO PERSONS EMPLOYED BY THE CUSTOMER WHO  
/ REQUIRE A KNOWLEDGE OF THE SOFTWARE CODING TO CARRY OUT  
/ THEIR JOB. DISCLOSURE TO ANY OTHER PERSON MUST HAVE PRIOR  
/ AUTHORIZATION FROM THE DIRECTORS OF REDAC SOFTWARE LIMITED  
/

/1 SUITE : P.C.B. LAYOUT  
/2 PROGRAM TITLE : REDAL23 MARK2  
/3 ROUTINE TITLE :

/4 AUTHOR :  
/5 DATE :

/6 PURPOSE :

/7 CALLING SEQUENCE AND DESCRIPTION OF ARGUMENTS :

/8 I/O DEVICES AND FUNCTIONS :

/9 REGISTERS USED :

/10 EXTERNAL COMMON AREAS :

/11 INTERNAL COMMON AREAS :

/12 EXTERNAL GLOBALS :

/13 INTERNAL GLOBALS :

/14 CONDITIONAL ASSEMBLY PARAMETERS :

/15 METHOD :

/16 AMENDMENTS :

| PAGE | 2     | DIRECT SRC    | DIRECT                                                            |
|------|-------|---------------|-------------------------------------------------------------------|
| 44   |       |               | .TITLE DIRECT                                                     |
| 45   |       |               | .GLOBL DIRECT,.DA                                                 |
| 46   |       |               | / EXAMINES DIRECTORY OF DEVICE IN SPECIFIEDMDAT SLOT              |
| 47   |       |               | / SETS O/P PARAM TO NUMBER OF FREE BLOCKS,OR-1 IF NDIRECTORY FULL |
| 48   | 00000 | R 740040 A    | DIRECT XX                                                         |
| 49   | 00001 | R 120101 E    | JMS* .DA                                                          |
| 50   | 00002 | R 600006 R    | JMP .+1+3                                                         |
| 51   | 00003 | R 000000 A    | DAT 0 / DAT SLOT NO OF DEVICE                                     |
| 52   | 00004 | R 000000 A    | SPACE 0 / NO OF FREE BLOCKS                                       |
| 53   | 00005 | R 000000 A    | BUFF 0 /ADDR OF 256 WORD BUFFER FOR .TRAN                         |
| 54   | 00006 | R 200100 R    | LAC AFLG                                                          |
| 55   | 00007 | R 740200 A    | SZA                                                               |
| 56   | 00010 | R 600024 R    | JMP INT                                                           |
| 57   | 00011 | R 440100 R    | ISZ AFLG                                                          |
| 58   | 00012 | R 200005 R    | LAC BUFF                                                          |
| 59   | 00013 | R 040033 R    | DAC TRN+3 / PLUG BUFF ADDR IN .TRAN                               |
| 60   | 00014 | R 220003 R    | LAC* DAT                                                          |
| 61   | 00015 | R 040035 R    | DAC WT / PLUG .WAIT                                               |
| 62   | 00016 | R 040037 R    | DAC CL / PLUG .CLOSE                                              |
| 63   | 00017 | R 240030 R    | XOR TRN                                                           |
| 64   | 00020 | R 040030 R    | DAC TRN / PLUG DAT SLOT IN .TRAN                                  |
| 65   | 00021 | R 220003 R    | LAC* DAT                                                          |
| 66   | 00022 | R 240024 R    | XOR INT                                                           |
| 67   | 00023 | R 040024 R    | DAC INT / PLUG .INIT                                              |
| 68   | 00024 | R             | INT .INIT 0,0,DIRECT                                              |
|      | 00024 | R 000000 A *G | CAL+0*1000 0&777                                                  |
|      | 00025 | R 000001 A *G | 1                                                                 |
|      | 00026 | R 000000 R *G | DIRECT+0                                                          |
|      | 00027 | R 000000 A *G | 0                                                                 |
| 69   | 00030 | R             | TRN .TRAN 0,0,100,0,256 / READ DIRECTORY BLOCK                    |
|      | 00030 | R 000000 A *G | CAL+0*1000 0&777                                                  |
|      | 00031 | R 000013 A *G | 13                                                                |
|      | 00032 | R 000100 A *G | 100                                                               |
|      | 00033 | R 000000 A *G | 0                                                                 |
|      |       | *G            | .DEC                                                              |
|      | 00034 | R 777400 A *G | -256                                                              |
| 70   | 00035 | R             | WT .WAIT 0                                                        |
|      | 00035 | R 000000 A *G | CAL 0&777                                                         |
|      | 00036 | R 000012 A *G | 12                                                                |
| 71   | 00037 | R             | CL .CLOSE 0                                                       |
|      | 00037 | R 000000 A *G | CAL 0&777                                                         |
|      | 00040 | R 000006 A *G | 6                                                                 |
| 72   |       |               | / NOW EXAMINE BIT MAP FOR FREE BLOCKS                             |
| 73   | 00041 | R 735000 A    | CLX                                                               |
| 74   | 00042 | R 200077 R    | LAC BSIZ / SET LIMIT REG TO NO OF WRDS IN BIT MAP                 |
| 75   | 00043 | R 722000 A    | PAL                                                               |
| 76   | 00044 | R 140074 R    | DZM FREE                                                          |
| 77   | 00045 | R 230005 R    | MAPSCN LAC* BUFF,X / BIT MAP WORD                                 |
| 78   | 00046 | R 740001 A    | CMA / CHANGE 0 BITS TO 1                                          |
| 79   | 00047 | R 741200 A    | BITLP SNA                                                         |
| 80   | 00050 | R 600056 R    | JMP FIN                                                           |
| 81   | 00051 | R 440074 R    | ISZ FREE / COUNT 1'S                                              |

| PAGE | 3 | DIRECT SRC       | DIRECT                                |
|------|---|------------------|---------------------------------------|
| 82   |   | 00052 R 040075 R | DAC TEMP                              |
| 83   |   | 00053 R 723777 A | AAC -1                                |
| 84   |   | 00054 R 500075 R | AND TEMP / KNOCKS OUT 1 BIT           |
| 85   |   | 00055 R 600047 R | JMP BITLP                             |
| 86   |   | 00056 R 725001 A | FIN AXS 1 /SKIP IF END OF BIT MAP     |
| 87   |   | 00057 R 600045 R | JMP MAPSCN                            |
| 88   |   |                  | / NOW SCAN DIRECTORY FOR A FREE ENTRY |
| 89   |   | 00060 R 200076 R | LAC DSIZ                              |
| 90   |   | 00061 R 722000 A | PAL / SET LIMIT TO END OF DIRECTORY   |
| 91   |   | 00062 R 230005 R | DIRSCN LAC* BUFF,X / 1ST WRD OF NAME  |
| 92   |   | 00063 R 741200 A | SNA                                   |
| 93   |   | 00064 R 600072 R | JMP FOUND / FREE ENTRY                |
| 94   |   | 00065 R 725004 A | AXS 4 / SKIP IF END OF DIRECTORY      |
| 95   |   | 00066 R 600062 R | JMP DIRSCN                            |
| 96   |   | 00067 R 777777 A | LAW -1                                |
| 97   |   | 00070 R 060004 R | DAC* SPACE / NO FREE ENTRY IN DIR.    |
| 98   |   | 00071 R 620000 R | JMP* DIRECT                           |
| 99   |   | 00072 R 200074 R | FOUND LAC FREE                        |
| 100  |   | 00073 R 600070 R | JMP .-3                               |
| 101  |   |                  | /                                     |
| 102  |   |                  | /SYMBOL TABLE                         |
| 103  |   | 00074 R 000000 A | FREE 0                                |
| 104  |   | 00075 R 000000 A | TEMP 0                                |
| 105  |   | 00076 R 000400 A | DSIZ 400                              |
| 106  |   | 00077 R 000040 A | BSIZ 40                               |
| 107  |   | 00100 R 000000 A | AFLG 0                                |
| 108  |   | 000000 A         | .END                                  |
|      |   | 00101 R 000101 E | *E                                    |
|      |   | SIZE=00102       | NO ERROR LINES                        |

PAGE 4 DIRECT CROSS REFERENCE

|        |       |     |      |      |      |    |
|--------|-------|-----|------|------|------|----|
| AFLG   | 00100 | 54  | 57   | 107* |      |    |
| BITLP  | 00047 | 79* | 85   |      |      |    |
| BSIZ   | 00077 | 74  | 106* |      |      |    |
| BUFF   | 00005 | 53* | 58   | 77   | 91   |    |
| CL     | 00037 | 62  | 71*  |      |      |    |
| DAT    | 00003 | 51* | 60   | 65   |      |    |
| DIRECT | 00000 | 44  | 45   | 48*  | 68   | 98 |
| DIRSCN | 00062 | 91* | 95   |      |      |    |
| DSIZ   | 00076 | 89  | 105* |      |      |    |
| FIN    | 00056 | 80  | 86*  |      |      |    |
| FOUND  | 00072 | 93  | 99*  |      |      |    |
| FREE   | 00074 | 76  | 81   | 99   | 103* |    |
| INT    | 00024 | 56  | 66   | 67   | 68*  |    |
| MAPSCN | 00045 | 77* | 87   |      |      |    |
| SPACE  | 00004 | 52* | 97   |      |      |    |
| TEMP   | 00075 | 82  | 84   | 104* |      |    |
| TRN    | 00030 | 59  | 63   | 64   | 69*  |    |
| WT     | 00035 | 61  | 70*  |      |      |    |
| .DA    | 00101 | 45  | 49   |      |      |    |