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1      .TITL BINIOP
2      .GLOBL BINIOP,.DA
3      / 9.3.72 JOE ATIYAH BINIOP(ST,N,DT,M)
4      / IF M=0 WRITES IN IOPS BINARY N WORDS FROM ST TO DEVICE
5      / ON SLOT DT IN BLOCKS OF 251 DATA WORDS,FORTRAN RECORD FORMAT
6      /IF M=1 READS N WORDS FROM DEVICE TO ST ONWARDS
7      00000 R 740040 A BINIOP XX
8      00001 R 120550 E JMS* .DA
9      00002 R 600007 R JMP .+1+4
10     00003 R 000000 A START 0
11     00004 R 000000 A N 0
12     00005 R 000000 A DAT 0
13     00006 R 000000 A MODE 0
14     00007 R 220003 R LAC* START
15     00010 R 723777 A AAC -1
16     00011 R 060551 R DAC* (11 / SET PTR TO START
17     00012 R 140544 R DZM LFLG / SET WHEN LAST BLOCK O/P
18     00013 R 220006 R LAC* MODE
19     00014 R 740200 A SZA / WRITE MODE
20     00015 R 600102 R JMP READ
21     00016 R 140547 R DZM BLCNT
22     00017 R 200552 R LAC (177000
23     00020 R 040144 R DAC BUFF / SET HEADER WORD
24     00021 R 220005 R LAC* DAT
25     00022 R 040064 R DAC WITE
26     00023 R 040070 R DAC WAIT1 / PLUG DAT SLOT
27     00024 R 220004 R LAC* N / TOTAL NO OF WORDS
28     00025 R 040545 R DAC CNT
29     00026 R 723404 A WRLUP AAC -374 / 252 DECIMAL
30     00027 R 740100 A SMA / LAST BLOCK
31     00030 R 600034 R JMP NOLAST
32     00031 R 200545 R LAC CNT
33     00032 R 440544 R ISZ LFLG
34     00033 R 741000 A SKP
35     00034 R 200553 R NOLAST LAC (373 / COPY 251 WORDS
36     00035 R 740031 A TCA
37     00036 R 040546 R DAC COPY / -NO OF WORDS IN THIS BLOCK
38     00037 R 200554 R LAC (BUFF+2
39     00040 R 060555 R DAC* (10 / SET PTR FOR COPYING TO BUFF
40     00041 R 220011 A WRCOP LAC* 11 / READ FROM DATA ARE
A
41     00042 R 060010 A DAC* 10 / COPY TO BUFF
42     00043 R 440546 R ISZ COPY / EXIT ON LAST WORD
43     00044 R 600041 R JMP WRCOP
44     00045 R 200544 R LAC LFLG
45     00046 R 741200 A SNA / LAST BLOCK
46     00047 R 600062 R JMP SETBLK
47     00050 R 200547 R LAC BLCNT
48     00051 R 240556 R XOR (400000 / SET TOP BIT
49     00052 R 040547 R DAC BLCNT
50     00053 R 200545 R LAC CNT / NO DATA WORDS IN LAST BLOCK
51     00054 R 723003 A AAC 3 / TOTAL NO WRDS INC. HEADER
52     00055 R 740031 A TCA

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53	00056	R	500557	R	AND (-2
54	00057	R	740031	A	TCA / ROUND UP TO EVEN NUMBER
55	00060	R	660710	A	ALSS 10 / W.P.C. IN TOP 9 BITS
56	00061	R	040144	R	DAC BUFF / SET HEADER
57	00062	R	200547	R	SETBLK LAC BLCNT
58	00063	R	040146	R	DAC BUFF+2 / SET RECORD BLOCK COUNT
59	00064	R			WITE .WRITE 0,0,BUFF,10 / IOPS BINARY,DAT SLOT PLUGGED
	00064	R	000000	A	*G CAL+0*1000 0&777
	00065	R	000011	A	*G 11
	00066	R	000144	R	*G BUFF
					*G .DEC
	00067	R	777766	A	*G -10
60	00070	R			WAIT1 .WAIT 0 / SLOT PLUGGED
	00070	R	000000	A	*G CAL 0&777
	00071	R	000012	A	*G 12
61	00072	R	200544	R	LAC LFLG
62	00073	R	740200	A	SZA
63	00074	R	620000	R	JMP* BINIOP / LAST BLOCK DONE
64	00075	R	440547	R	ISZ BLCNT / UPDATE BLOCK COUNT
65	00076	R	200545	R	LAC CNT
66	00077	R	723405	A	AAC -373
67	00100	R	040545	R	DAC CNT / UPDATE NO OF WORDS LEFT
68	00101	R	600026	R	JMP WRLUP
69	00102	R	140545	R	READ DZM CNT / NO OF WORDS READ
70	00103	R	220005	R	LAC* DAT
71	00104	R	040106	R	DAC REED
72	00105	R	040112	R	DAC WAIT2
73	00106	R			REED .READ 0,0,BUFF,254 / IOPS BINARY,DAT SLOT PLUGGED
	00106	R	000000	A	*G CAL+0*1000 0&777
	00107	R	000010	A	*G 10
	00110	R	000144	R	*G BUFF
					*G .DEC
	00111	R	777402	A	*G -254
74	00112	R			WAIT2 .WAIT 0 / SLOT PLUGGED
	00112	R	000000	A	*G CAL 0&777
	00113	R	000012	A	*G 12
75	00114	R	200144	R	LAC BUFF
76	00115	R	660510	A	LRSS 10 / EVEN WORD COUNT
77	00116	R	723775	A	AAC -3 / SUBTRACT HEADER WORDS
78	00117	R	740031	A	TCA
79	00120	R	040546	R	DAC COPY / -NO OF DATA WORDS (-1?)
80	00121	R	740031	A	TCA
81	00122	R	340545	R	TAD CNT
82	00123	R	040545	R	DAC CNT / UPDATE WORDS READ
83	00124	R	740031	A	TCA
84	00125	R	360004	R	TAD* N / COUNT EXCEEDS TOTAL NO OF WRDS?
85	00126	R	741100	A	SPA / NO . COPY CORRECT,SINCE ALL BUT LAST BLOCK
86					/ HAVE 254 WORDS(EVEN)
87	00127	R	440546	R	ISZ COPY / CORRECT LAST BLOCK WRD COUNT
88	00130	R	200554	R	LAC (BUFF+2
89	00131	R	060555	R	DAC* (10 / SET PTR FOR COPYING FROM BUFF
90	00132	R	220010	A	RDCOP LAC* 10 / READ FROM BUFF

PAGE	3	BINIOP SRC	BINIOP
91		00133 R 060011 A	DAC*11 / COPY TO DATA AREA
92		00134 R 440546 R	ISZ COPY
93		00135 R 600132 R	JMP RDCOP
94		00136 R 220004 R	LAC* N
95		00137 R 740031 A	TCA
96		00140 R 340545 R	TAD CNT
97		00141 R 740100 A	SMA / MORE WORDS LEFT
98		00142 R 620000 R	JMP* BINIOP
99		00143 R 600106 R	JMP REED
100			/ SYMBOL TABLE
101		00144 R	000000 A
102		00544 R 000000 A	000000 A
103		00545 R 000000 A	000000 A
104		00546 R 000000 A	000000 A
105		00547 R 000000 A	000000 A
106		000000 A	000000 A
		00550 R 000550 E	*E
		00551 R 000011 A	*L
		00552 R 177000 A	*L
		00553 R 000373 A	*L
		00554 R 000146 R	*L
		00555 R 000010 A	*L
		00556 R 400000 A	*L
		00557 R 777776 A	*L
		SIZE=00561	NO ERROR LINES

BINIOP	00000	1	2	7*	53	98			
BLCNT	00547	21	47	49	57	64	105*		
BUFF	00144	23	38	56	58	59	73	75	88
		101*							
CNT	00545	28	32	50	65	67	69	81	82
		96	103*						
COPY	00546	37	42	79	87	92	104*		
DAT	00005	12*	24	70					
LFLG	00544	17	33	44	61	102*			
MODE	00006	13*	18						
N	00004	11*	27	84	94				
NOLAST	00034	31	35*						
RDCOP	00132	90*	93						
READ	00102	20	69*						
REED	00106	71	73*	99					
SETBLK	00062	46	57*						
START	00003	10*	14						
WAIT1	00070	26	60*						
WAIT2	00112	72	74*						
WITE	00064	25	59*						
WRCOP	00041	40*	43						
WRLUP	00026	29*	68						
.DA	00550	2	8						