

CMM2 TTY SCANNER AND PANIC HANDLER  
STORAGE ALLOCATION.

COMPASS - VER 2.

08/09/71 16.42.54.

PAGE

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ADDRESS LENGTH      BINARY CONTROL CARDS.

ADDRESS	LENGTH	IDENT	CMM2
0	0	END	

		IDENT	CMMD2
ASSORTED CONSTANTS			
200000 620	SNDBGSPC SNDBGMT	EQU EQU	200000B 400 SPACE FOR CREATION OF PROCESSES MOT SLOTS FOR CREATION OF PROCESSES
24	MXPROC	EQU	20 MAXIMUM NUMBER OF SIMULTANEOUS PROCESSES
20000 50	USERECS USERMOT	EQU EQU	20000B 40 ECS SPACE FOR USER PROCESS MOT SLOTS FOR USER PROCESS
40000 144	JPROCECS JPROCMT	EQU EQU	40000B 100 ECS SPACE FOR JPROC MOT SLOTS FOR JPROC
40000	TSTSPC	EQU	20000B SPACE TO BE SANDBAGGED UNDER TEST CASE
ECS CAPABILITY TYPES			
1377 1577	CLTYPE FLTYPE	EQU EQU	1377B 1577B

		LIST	X				
0	C.SELF	EQU	0	CAPABILITY FOR THIS C LIST		OPNAMES	1
1	C.ALLOC	EQU	1	ALLOCATION BLOCK C LIST INDEX		OPNAMES	1
2	C.INTFIL	EQU	2			OPNAMES	1
3	C.RFILE	EQU	2+1	READ ON FILE		OPNAMES	1
4	C.WFILE	EQU	3+1	WRITE ON FILE		OPNAMES	1
5	C.SENDE	EQU	4+1	SEND EVENT		OPNAMES	1
6	C.GETE	EQU	5+1	GET EVENT OR HANG		OPNAMES	1
7	C.CCLIST	EQU	6+1	CREATE C LIST OPERATION		OPNAMES	1
10	C.CFILE	EQU	7+1	CREATE FILE		OPNAMES	1
11	C.CBLK	EQU	8+1	CREATE FILE BLOCK		OPNAMES	1
12	C.CPROC	EQU	9+1	CREATE PROCESS		OPNAMES	1
13	C.CEVCH	EQU	10+1	CREATE EVENT CHANNEL		OPNAMES	1
14	C.CSPROC	EQU	11+1	CREATE SUB PROCESS		OPNAMES	1
15	C.CCC	EQU	12+1	CREATE CLASS CODE		OPNAMES	1
16	C.SAVE	EQU	13+1	SAVE REGISTERS		OPNAMES	1
17	C.RESTOR	EQU	14+1	RESTORE REGISTERS		OPNAMES	1
20	C.DSCAP	EQU	15	.. DISPLAY A CAPABILITY		OPNAMES	1
20	C.DSPCAP	EQU	C.DSCAP	.. OLD NAME FOR C.DSCAP		OPNAMES	1
21	C.FSON	EQU	16+1			OPNAMES	1
22	C.MOVEC	EQU	18	.. MOVE A CAPABILITY WITHIN FULL CLIST		OPNAMES	1
22	C.MVECAP	EQU	C.MOVEC	.. OLD NAME FOR C.MOVEC		OPNAMES	1
23	C.CAPIN	EQU	18+1			OPNAMES	1
24	C.CAPOU	EQU	20	.. COPY A CAPABILITY OUT OF FULL CLIST		OPNAMES	1
24	C.CAPOUT	EQU	C.CAPOU	.. OLD NAME FOR C.CAPOU		OPNAMES	1
25	C.ESMGEN	EQU	21	SET ANY ESM IN PROCESS		OPNAMES	1
26	C.ESMLOC	EQU	22	SET LOCAL ESM		OPNAMES	1
27	C.MKOPR	EQU	23	CREATE OPERATION(SUBP CALL)		OPNAMES	1
30	C.RETURN	EQU	24	SUBPROCESS RETURN		OPNAMES	1
31	C.FRETUR	EQU	25	F-BRETURN		OPNAMES	1
32	C.FIXC	EQU	26	FIX CAPABILITY PS		OPNAMES	1
33	C.FIXD	EQU	27	FIX DATUM PS		OPNAMES	1
34	C.UDAT	EQU	28	CHANGE ANY PS TO USER DATUM		OPNAMES	1
35	C.UCAP	EQU	29	CHANGE ANY PS TO USER CAPABILITY		OPNAMES	1
36	C.ACAP	EQU	30	CHANGE ANY PS TO ANY CAPABILITY		OPNAMES	1
37	C.ADDOPT	EQU	31	ADD OPTION BITS TO PS		OPNAMES	1
40	C.COPYOP	EQU	32	• MAKE A COPY OF AN OPERATION		OPNAMES	1
41	C.CHKBLK	EQU	33	• CHECK FOR MISSING FILE BLOCKS		OPNAMES	1
42	C.DELBLK	EQU	34	• DELETE A FILE BLOCK		OPNAMES	1
43	C.DELFTL	EQU	35	• DELETE A FILE		OPNAMES	1
44	C.REDSHP	EQU	36	• GET SHAPE NUMBERS OF A FILE		OPNAMES	1
45	C.MAPZRO	EQU	37	• ZERO A MAP ENTRY		OPNAMES	1
46	C.MPCHRO	EQU	38	• CHANGE A ZERO MAP ENTRY TO READ ONLY		OPNAMES	1
47	C.MFCRHW	EQU	39	• CHANGE A ZERO MAP ENTRY TO RW		OPNAMES	1
50	C.MOVBLK	EQU	40	• MOVE A FILE BLOCK		OPNAMES	1
51	C.DISMAP	EQU	41			OPNAMES	1
52	C.JUMP	EQU	42			OPNAMES	1
53	C.NEWUN	EQU	43	• CHANGE UNIQUE NAME		OPNAMES	1
54	C.DISPSLT	EQU	44	• DISPLAY ENTIRE STACK		OPNAMES	1
55	C.DISSEN	EQU	45	• DISPLAY STACK ENTRY		OPNAMES	1

56	C.DSFMAP	EQU	46	DISPLAY FULL MAP ENTRY	OPNAMES	1
57	C.DELCL	EQU	47	DELETE C-LIST	OPNAMES	1
60	C.PINT	EQU	48	SEND PROCESS INTERRUPT	OPNAMES	1
61	C.ADDORD	EQU	49	• ADD AN ORDER TO AN OPERATION	OPNAMES	1
62	C.CCCLOA	EQU	50	CREATE COMPLETE CAPABILITY	OPNAMES	1
63	C.DONATE	EQU	51	TRANSFER BETWEEN ALLOC BKS	OPNAMES	1
64	C.CRALBK	EQU	52	• CREATE ALLOC BLOCK	OPNAMES	1
65	C.MODPC	EQU	53	• MODIFY P-COUNTER	OPNAMES	1
66	C.DLPROC	EQU	54	• DESTROY A PROCESS	OPNAMES	1
67	C.DPROD	EQU	55	.. DISPLAY A PROCESS	OPNAMES	1
67	C.CHNGWD	EQU	C.DPROD	***NOW DEFUNCT OPERATION. SYMBOL DEFINITION	OPNAMES	1
				KEPT AROUND TO AVOID ASSEMBLY PROBLEMS	OPNAMES	1
				SHOULD EVENTUALLY BE DELETED.	OPNAMES	1
70	C.CLRDAE	EQU	56	• CLEAR THE DIRECT ACCESS ECS ENTRY	OPNAMES	1
71	C.SETDAE	EQU	57	• SET THE DIRECT ACCESS ECS ENTRY	OPNAMES	1
72	C.DELSUB	EQU	58	DELETE SUP PROC	OPNAMES	1
73	C.SETITB	EQU	59+4	• SET INTERRUPT INHIBIT BIT	OPNAMES	1
74	C.CLRIIB	EQU	56+4	• CLEAR INTERRUPT-INHIBIT BIT	OPNAMES	1
75	C.GETEVF	EQU	57+4	• GET EVENT OR RETURN	OPNAMES	1
76	C.DELAB	EQU	62	• DESTROY ALLOCATION BLOCK	OPNAMES	1
77	C.MGETW	EQU	63	GET EVENT FROM MULTIPLE CHANNELS OR	OPNAMES	1
				GET EVENT FROM MULTIPLE CHANNELS OR	OPNAMES	1
100	C.MGETF	EQU	64	GET EVENT FROM MULTIPLE CHANNELS OR	OPNAMES	1
				DESTROY EVENT CHANNEL	OPNAMES	1
101	C.DSECH	EQU	65	DISPLAYCLOCKS IN USER CORE	OPNAMES	1
102	C.DSPCOLX	EQU	66		OPNAMES	1
3	C.READ	EQU	C.RFILE		OPNAMES	1
4	C.WRITE	EQU	C.WFILE		OPNAMES	1
6	C.HANG	EQU	C.GETE		OPNAMES	1
41	C.PROBE	EQU	C.CHKBLK		OPNAMES	1
103	C.NWTMB	EQU	67	SET TEMPORARY PART OF CLASS CODE	OPNAMES	1
104	C.DSPAB	EQU	68	DISPLAY ALLOCATION BLOCK	OPNAMES	1
105	C.BDAT	EQU	69	• CHANGE ANY TO BLOCK DATA PARAMETER	OPNAMES	1
106	C.BLKCAP	EQU	70	• CHANGE ANY TO BLOCK CAPABILITY PARAM	OPNAMES	1
107	C.DISPOP	EQU	71	• DISPLAY OPERATION	OPNAMES	1
110	C.USREQ	EQU	72	• USER INITIATED ERROR	OPNAMES	1
111	C.RETPAR	EQU	73	• RETURN WITH PARAMETERS	OPNAMES	1
112	C.TIMDT	EQU	74	• RETURN DATE AND TIME	OPNAMES	1
113	C.CAGEN	EQU	75	• MAKE CAPABILITY CREATING AUTHORIZATION	OPNAMES	1
114	C.CGEN	EQU	76	• MAKE CAPABILITY OF AUTHORIZED TYPE	OPNAMES	1
115	C.DSPSP	EQU	77	• DISPLAY SUBPROCESS DESCRIPTOR	OPNAMES	1
116	C.TRDB	EQU	78	• TEST AND RESET DIRTY BIT	OPNAMES	1
117	C.INCHR	EQU	79	• INCREMENT AB CHARGE RATE	OPNAMES	1
120	C.DSPOB	EQU	80	• DISPLAY OBJECT	OPNAMES	1
121	C.DSPALC	EQU	81	• DISPLAY ALLOCATOR CONSTANTS	OPNAMES	1
122	C.CHMPRW	EQU	82	• CHANGE A READ-WRITE MAP ENTRY	OPNAMES	1
123	C.CHMPRO	EQU	83	• CHANGE A READ ONLY MAP ENTRY	OPNAMES	1
47	C.MKMPRW	EQU	C.MPCHRW	• MORE REASONABLE NAME FOR C.MPCHRW	OPNAMES	1
46	C.MKMPRO	EQU	C.MPCHRO	• MORE REASONABLE NAME FOR C.MPCHRO	OPNAMES	1
124	C.DSCLX	EQU	84	• DISPLAY SYSTEM CLOCKS IN USER CORE	OPNAMES	1
125	C.SPRET	EQU	85	.. SPECIAL RETURN (DECREMENT P-COUNTER)	OPNAMES	1
126	C.CPZRO	EQU	86	.. ZERO A CAPABILITY	OPNAMES	1

127	C.MOVCP	EQU	87	• TRANSFER CP TIME BETWEEN ABS	OPNAMES	1
130	C.MOVMT	EQU	88	• TRANSFER MOT SLOTS BETWEEN ABS	OPNAMES	1
131	C.INMTR	EQU	89	• INCREMENT AB CHARGE METER	OPNAMES	1
132	C.DLOPR	EQU	90	• DESTROY AN OPERATION	OPNAMES	1
133	C.GRAB	EQU	91	• STEAL ECS SPACE	OPNAMES	1
134	C.CPUIN	EQU	92	.. MOVE TIME INTO PROCESS TIMER	OPNAMES	1
135	C.CPOUT	EQU	93	.. MOVE TIME OUT OF PROCESS TIMER	OPNAMES	1
136	C.STMSG	EQU	94	.. SET MSG MECHANISM IN A PROCESS	OPNAMES	1
137	C.CLRMG	EQU	95	.. CLEAR MSG MECHANISM IN A PROCESS	OPNAMES	1
140	C.ARMIT	EQU	96	.. ARM INTERRUPTS FOR A PROCESS	OPNAMES	1
141	C.DISIT	EQU	97	.. DISARM INTERRUPTS FOR A PROCESS	OPNAMES	1

CMM2  
MACROS

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\*  
\*  
\* XJ MACRO LOC  
\* VFD 12/0130B,18/LOC,30/1  
\* SB7 \*+1  
\* JP FRR  
\* ENDM  
  
\*  
\* XJR MACRO LOC,RTNAUTH  
\* VFD 12/0130B,18/LOC,12/1,18/2  
\* VFD 60/RTNAUTH  
\* SB7 \*+1  
\* JP FRR  
\* ENDM  
  
\*  
\* XJF MACRO LOC,FGO  
\* VFD 12/0130B,18/LOC,30/1  
\* JP FGO  
\* ENDM  
  
\*  
\* CALL MACRO LOC  
\* SB7 \*+1  
\* JP LOC  
\* ENDM  
  
\*  
\* MCAP MACRO NAME  
\* BSS 0  
\* M.NAME EQU \*  
\* VFD 1/1,29/C,NAME,30/CX,MAST  
\* ENDM  
  
\*  
\* MXCAP MACRO NAME  
\* VFD 1/1,29/C,NAME,30/CX,MAST  
\* ENDM  
  
\*  
\* ITEMS MACRO A,B,C,D,E,F,G,H  
\* VFD 60/A  
\* IFC NE,\$\$BS\$  
\* VFD 60/B  
\* IFC NE,\$\$CS\$  
\* VFD 60/C  
\* IFC NE,\$\$DS\$  
\* VFD 60/D  
\* IFC NE,\$\$ES\$  
\* VFD 60/E  
\* IFC NE,\$\$FS\$

VFD	60/F
IFZ	NE,\$\$GS
VFD	60/G
IFC	NE,\$\$HS
VFD	40/H
ENDIF	
ENDM	

\*  
\*  
\*  
MAP MACRO NAME,X,FLAD,CMAD,LASTPI,RO  
+ VFD 60/0L,NAME  
VFD 30/X,30/FLAD  
VFD 1/R0,29/CMAD,30/LASTPI  
ENDM

\*  
\*  
\*  
\* MACRO FOR CLIST INDEX OF OBJECT TO RETURN TO CALLER

RTNCAP	MACRO	NAME
	DATA	6
	RMT	
	DATA	ALNAME
	RMT	
	ENDM	

\*  
\*  
\*  
\* MACRO FOR CLIST INDEX OF OBJECT TO BE OBTAINED  
\* AT TIME OF THIS SUBPROCESS CONSTRUCTION

PARCAP	MACRO	NAME
	DATA	ALNAME
	ENRM	

\*\*\*  
\*\*\*  
\*\*\* BASIC MACRO  
\*\*\*  

XSETXJ	MACRO	A,B,C,D,E
LOCALPXJ	SET	NE,SSAS
	IFC	
	SX1	
LOCALPXJ	SET	NE,SSRS
	IFC	
	SX2	
LOCALPXJ	SET	NE,SSCS
	IFC	
	SX3	
LOCALPXJ	SET	NE,SSDS
	IFC	
	SX4	
LOCALPXJ	SET	NE,SSES
	IFC	
	SX5	
LOCALPXJ	SET	NE
	ENDM	

\*\*\*  
\*\*\*  
\*\*\*  
\*\*\*

\*\*\*  
\*\*\*  
\*\*\* FULL IO PARAM VERSION  
\*\*\*  

YSETXJ	MACRO	A,B,C,D,E,F,G,H,I,J
XSETXJ	SET	A,B,C,D,E
SB2	CALL	
XSETXJ	SET	F,G,H,I,J
ENHIF	ENDF	
SB2	CALL	LOCALPXJ
CALL	SET	
ENDM		

\*\*\*  
\*\*\*  
\*\*\*

\*\*\*  
\*\*\*  
\*\*\* STANDARD XJ CALL  
\*\*\*  

DOXJ	MACRO	A,B,C,D,E,F,G,H,I,J
	SB1	XJLOC
	YSETXJ	A,B,C,D,E,F,G,H,I,J
	XJ	XJLOC
	ENDM	

\*\*\*  
\*\*\*  
\*\*\*

\*\*\*  
\*\*\*  
\*\*\* MULTI LINE VERSIONS  
\*\*\*  
\*\*\*  
\*\*\* INITIAL SET UP LINE  
\*\*\*  

SETXJ	MACRO	A,B,C,D,E,F,G,H,I,J
	SB1	XJLOC
	YSETXJ	A,B,C,D,E,F,G,H,I,J

\*\*\*  
\*\*\*  
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MACROS FOR XJ CALLS

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ENDM

\*  
\* FINAL CALL ( USE YSETXJ IN BETWEEN)  
\*

XDOXJ MACRO  
YSETXJ  
XJ  
ENDM  
A,B,C,D,E,F,G,H,I,J  
A,B,C,D,E,F,G,H,I,J  
XJLOC

\*  
\*  
\* SAVE7 MACRO  
SX6  
SA6  
ENDM  
I  
R7  
L

\*  
\* GET7 MACRO  
SA1  
SB7  
ENDM  
I  
V1  
L

SUBPROCESS DESCRIPTOR				
		ORG		
0	00000000000000000000000000000000	DATA	1	
1	00000000000000000000000000000000	DATA	0	
2	03035703151504350000	DATA	BLCC.CMMD2	
3	221717240000000000000000	DATA	BLROOT	
4	03175703151504350000	DATA	BLCO.CMMD2	
5	03145703151504350000	DATA	BLCL.CMMD2	
6	23065703151504350000	DATA	BLSF.CMMD2	
7	00000000000000000000000000000005	DATA	5	
10	00000000000000000000000024	DATA	20	
11	0000000000000000003260	ITEMS	FL	
12	0000000000000000002232	ITEMS	MAIN	
13	0000000000000000001027	ITEMS	CLSTSZ	
14	0000000000000000002171	ITEMS	SCRSZ	
15	23065703151504350000	MAP	SF.CMMD2,0,0,0,SCRSZ,0	
20	03065703151504350000	MAP	CF.CMMD2,1,SCRSZ,SCRSZ,FL,1	
23	77777777777777777777	DATA	20	
L	0	LOC	0	
0	05035712202205260310	CX.JEVČ	PARCAP	JPROC-DONE SIGNAL EVENT CHANNEL
1	0314570315150423200300	CX.SPCO	PARCAP	SPACE CONTROL EVEN CHANS
2	03145703151504232406	CX.CMSTF	PARCAP	
3	03145703151504350000	CX.LCLCL	PARCAP	
4	11571501232405220000	CX.MAST	PARCAP	T-MASTER
5	03065703151504350000	CX.CODE	PARCAP	CF.CMMD2
6	0205010400000000000000	CX.BEAD	PARCAP	BEAD
7	05035703151504350000	CX.SPCHN	PARCAP	EC.CMMD2
10	05035703352310240526	CX.SHTEV	PARCAP	EC.C2SHTEV
11	05035703351311031326	CX.KICKV	PARCAP	EC.C2KICKV
12		CX.PROC	BSSZ	
13	02571627202203252322	CX.NWPR	PARCAP	R.NWPPCUSR
14	03035702050104070000	CX.BDCC	PARCAP	CC.BEADG
15	03035706011305070000	CX.FGHST	PARCAP	CC.FAKEG
16	11570114141703000000	CX.ALLOC	PARCAP	T-ALLOC
17		CX.TREQ	BSSZ	
20	0000000000000000000000	CX.SRESP	DATA	1
21	01025706113005040000	CX.SNDBG	PARCAP	AB.FIXED
22		CX.TEMP	BSSZ	1
23		CX.TTYP5	BSSZ	256
423		CX.ALBS	BSSZ	256
1023	0000000000000000000000	CX.USAB	RTNCAP	UCLALLOC
1024	0000000000000000000000	CX.UST1	RTNCAP	TTYFILE
1025	0000000000000000000000	CX.UST2	RTNCAP	TTYREQ
1026	0000000000000000000000	CX.UST3	RTNCAP	TTYRESP

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LOW CORE

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L 1027	CLSTSZ	BSS	6
L 1027 77777777777777777777	*	DATA	20
1054	*	LOC	40

\*\*\*\*\* NAMES FOR CALL TO MAKE NEW PROC \*\*\*\*\*

1054	NAMES	BSS	6
1060 00000000000000000000	HERE	DATA	6

			*
			*
			*
			XJ S DONE HERE
1061	XJLOC	BSSZ	15
			*
			MISC POINTERS ETC
1100	TTYSPOX	BSSZ	1
1101	TTYLMT	BSSZ	1
1102	TTYBASE	BSSZ	1
1103	TTYPNT	BSSZ	1
1104	MXTTY	BSSZ	1
1105	TTYNUM	BSSZ	1
1106	TYPEVENT	BSSZ	1
1107	NEWTTYNM	BSSZ	1
1108	NEWTTYB7	BSSZ	1
1109	PRCDESC	BSSZ	1
1110	MAST.TTY	DATA	1
1111	PCOUNT	VFD	10/MXPROC
1112	00000000000000000000000000000000		ALLOWED NUMBER OF TTYS ( CURRENT )
1113	00000000000000000000000000000024		B7 SAVE FG FOR PUTTWD
1114	PUTTWD7	BSSZ	
			*
			*
			BREAK COUNTS FOR RUNNING PROCESSES
1115	TTABLE	BSSZ	556
			*
			*
			STATES OF RUNNING PROCESSES AND TTYS
			*
			*
			0 NOT TURNED ON
			1 TURNED ON, NO PROCESS
			2 HAS A PROCESS
			*
1515	PTABLE	BSSZ	556
2115	PTABLSIZ	BSS	0
400	PTABLSIZ	EQU	#=PTABLE
			*
			*
			REGISTER SAVE AREA
2115	REGAREA	BSSZ	208
			*
			*
			MISC DATA
			*
2135	ALBSONX	BSSZ	1
			INDEX CURRENT SON OF AN ALLOC BLOCK
			*
			*

		ERROR CALL AREA		
2136	EREGS	BSSZ	20B	REGISTERS
2156	STKBUF	BSSZ	?	TOP OF STACK
		TTY BUFFER AREA		
2161	TBFPPNTS	BSSZ	?	
		TTY POINTER INDEXES		
0	OUTFST	EQU	0	
1	OUTOUT	EQU	1	
2	OUTLAST	EQU	2	
5	OUTIN	EQU	5	
		KIND OF BAD NEWS		
2170	TBADNWS	BSSZ	?	

CMMDS TTY SCANNER AND PANIC HANDLER  
END OF SCRATCH

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\* END OF SCRATCH AREA

2171

SCRSZ BSS

0

2171 40000000300000000004  
2172 00000000000000000005

READSELF MXCAP  
ITEMS

READ  
CX, CODE, 0, 0, SCRSZ

\* MISC MASTER CLIST REFERENCES

2176

MCAP

CAPIN

2177

MCAP

CAPOUT

2200

MCAP

BLPROC

2201

MCAP

GEDE

2202

MCAP

INTFIL

2203

MCAP

MVECAP

2204

MCAP

DSPAB

2205

MCAP

PINT

2206

MCAP

READ

2207

MCAP

SENDE

2210

MCAP

MGETH

2211

MCAP

DSPCAP

2212

MCAP

CRALBK

2213

MCAP

DONATE

2214

MCAP

MOVMT

2215

MCAP

CEVCH

2216

MCAP

DSPOB

2217

MCAP

WRITE

2220

MCAP

DELCL

2221

MCAP

DELBK

2222

MCAP

DELFILE

2223

MCAP

CCCLOA

2224  
2231 0200002331  
2232 01300021710000000001  
2234 01300023470000000001  
2236 6110001061

MAIN

BSSZ  
JP  
XJ  
XJ  
DOXJ

ALTERNATE ENTRY POINTS  
ERRC ERROR CALL ENTRY  
READSELF  
SETEMASK SET ERROR SELECTION MASK  
M.CAPOUT,CX.CMSTF,14B,CX.LCLCL PLACE THIS CLIST IN CMMSTF

2244 6110001061  
2255 6110001061  
2266 5110001100  
7267000003  
2267 5160001102  
5160001103  
2270 7231000002  
6716001061  
2277 76600  
5160001104

DOXJ  
DOXJ  
SA1  
SX6  
SA6  
SA6  
SX3  
DOXJ  
SX6  
SA6

M.READ,M.INTFIL,B0,TTYSPCX,1  
M.READ,M.INTFIL,1,TTYLMT,1  
TTYSPCX  
XL+3  
TTYBASE  
TYPNT  
XL+2  
M.CAPIN,CX.MAST,XA,CX.SRESP  
S0  
MXTTY

2300 01300032450000000001  
2302 0306002305  
7166000015  
2303 5160001112  
2304 6170002305

XJ  
ZR  
SX6  
SA6  
CALL

NSPBEND  
X6,MAIN0 LIVE CASE  
15B  
MAST.TTY MAKE TTY NO. 15B NOMINAL MASTER  
DEBUG ALLOW RESETTING MASTER

2305 7160200000  
5160001064  
2306 01300032450000000001  
2310 0306002312  
71660040000  
2311 5160001064  
2312 6110001061

MAIN0  
MAIN0A

SX6  
SA6  
XJ  
ZR  
SX6  
SA6  
DOXJ  
DOXJ

SNDBGSPC  
XJLOC+3  
NSPBEND  
X6,MAIN0A  
TSTSPPC  
XJLOC+3  
M.DONATE,CX.ALLOC,CX,SNDBG,-XJLOC-3  
M.MOVMT,CX.ALLOC,CX,SNDBG,SNDBGMT

174000B

LIVE CASE

2320 5110001112  
106611  
2321 5160001105  
2322 6170002323

MAIN1

SA1  
BX6  
SA6  
CALL

MAST.TTY  
X1  
TTYNUM  
NEWTTY

TURN ON CONTROLLING TTY AND START ITS PROCESS

CMM2 TTY SCANNER AND PANIC HANDLER  
MAIN CODE

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2323	0301002325	ZR	X1,TLOOP0 NO SUCH TTY	
	6116002326	SBI	NF,JPROC	
2324	0200002537	JP	CREATE	
2325	0200002325	TLOOP0	JP TLOOP0 NO SUCH TTY	
	*	*	*	
	*	*	*	
2326	16065712202217030000	NF,JPROC	DATA	ALNF,JPROC
2327	000000000000000040000	VFD		40/JPROCECS
2330	0000000000000000144	VFD		40/JPROCMT

**ERROR CALL AREA**

2331	01300023430000000001	ERRC	XJ	ESAVE	SAVE REGISTERS
2333	01300023470000000001		XJ	SETEMASK	RE SET ERROR SELECTION MASK
2335	01300023520000000001		XJ	RDSTK	READ TOP OF STACK ( IN CASE UNWANTED ERROR)
2337	01300023450000000001		XJ	ERESTOR	RESTORE REGISTERS
2341	01300023550000000001		XJ	FRTN	NOW CONVERT ERROR TO F RETURN
	*				
	*				
2343	40000000160000000004	ESAVE	MXCAP	SAVE	
2344	00000000000000002136		ITEMS	FREGS	
	*				
	*				
2345	40000000170000000004	ERESTOR	MXCAP	RESTOR	
2346	00000000000000002136		ITEMS	FREGS	
	*				
	*				
2347	40000000260000000004	SETEMASK	MXCAP	FSMLOC	
2350	00000000000000002351		ITEMS	*+1	
2351	77777777777777777777		DATA	-0	
	*				
	*				
2352	40000000550000000004	RDSTK	MXCAP	DISSEN	
2353	00000000000000002156		ITEMS	GTKBUF	
2354	00000000000000000001		DATA	1	
	*				
	*				
2355	40000000310000000004	FRTN	MXCAP	FREEBUF	

## WATCH FOR COMPLETION OF JPROC AND TTY BREAKS AND PANICS

2356	6110001061	TLOOP2	DOXJ	M.MGETH,CHNLST,CHNCNT
2364	6170002365		CALL	DEBUG
2365	26676		UX6	B7,X6
	0270002366		JP	TLOOP2A+B7
2366	00000000000000000000	TLOOP2A	DATA	CANT COME HERE
2367	0200002406		JP	SPCEVNT GOT A JPROC COMPLETION EVENT
2370	0200002377		JP	TTYEVNT GOT TTY MILD PANIC OR MAJOR PANIC
2371	0200002760		JP	DEADPRC DIEING PROCESS
2372	0200002436		JP	KICKPRC SEND PROCESS INTERRUPT TO FAKE GHOST
2373	00000000000000000007	CHNLST	VFD	40/CX.SPCHN
2374	00000000000000000020		VFD	60/CX.SRESP
2375	00000000000000000010		VFD	60/CX.SHTEV
2376	00000000000000000011		VFD	60/CX.KICKV
2377			BSS	
		4 CHNCNT	EQU	4=CHNLST

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JUST GOT A TTY EVENT

2377	43064	TTYEVNT	MX0	40-8	
	15270		BX2	-X0*X7	CHANNEL NUMBER
	10622		BX6	X2	
2400	5160001105		SA6	TTYNUM	
	2774		AX7	12	
	15770		BX7	-X0*X7	TYPE EVENT
2401	5170001106		SA7	TYPEVENT	
	*				
	5110001105		SA1	TTYNUM	
2402	5211001515		SA1	STABLE+X1	
	0301002356		ZR	X1,TL00P2	TTY NOT TURNED ON
	*				
2403	5110001105		SA1	TTYNUM	
	63110		SB1	v1	
2404	5140001106		SA4	TYPEVENT	
	7544777776		SX4	X4-1	
2405	0314002524		NZ	X4,BREAK	BREAK RECEIVED
	0206002421		JP	PANIC	PANIC RECEIVED

2406 76600  
5160001105SPCEVN<sup>T</sup> SX6  
SA6BO  
TTYNUM

\* NOTIFY JANITOR IN JPROC THAT JPROC IS COMPLETE

2407 6110001061

DOXJ M.SENDE,CX.JEV<sup>C</sup>,0

\* WAIT FOR JANITOR TO RESPOND (SWAPPED ECS POOL ADJUSTED)

\* DOXJ M.GETE,CX.JEV<sup>C</sup> SHOULD WAIT BUT TIMING PROB O.K.

\* TURN ON ALL OTHER TTYS

2415 5110001105

7261000001

SPCEVN<sup>T</sup> SA1  
SX6  
SA6  
CALL  
NZ  
JPTTYNUM  
X1\*I  
A1  
NEWTTY  
X1,SPCEVN<sup>T</sup>  
TLOOP2

2416 54610

2417 6170002420

2420 0311002415

0200002356

## PROCESS MINOR PANIC

B1 HOLDS TTYNUM

2421	5111001515	PANIC	S1	PTABLE+B1 PICK UP STATE FLAG
	721177776		SX1	X1-1
2422	0301002432		ZR	X1,PANIC1 TURNED ON, NO PROCESS
	7121000023		SX2	X1+CX,TYTYP
2423	6110001061		SE <del>E</del> XJ	M,PINT,X2,CX,BDCC,B0
2427	01300010610000000001		XJF	XJLOC,TLOOP2
2431	0200002356		JP	TLOOP2
2432	6110002433	PANIC1	S1	NF,USER TURNED ON, NO PROCESS
	0200002537		JP	CREATE SO CREATE ONE
2433	16065725230525000000	NF,USER	DATA	ALNF,USER
2434	000000000000000020000		VFD	A0/USERECS
2435	000000000000000000050		VFD	A0/USERMOT

\* KICK (SEND INTERRUPT TO FAKE GHOST)  
\* THE PROCESS NUMBER WAS CONTAINED IN THE EVENT

2436	5170001105	KICKPRC	SAT	TTYNUM
	16277		BX2	X7 .. PROCESS NUMBER
2437	7212777377		SXT	X2-PTABLSIZ
	0321002356		PL	X1,TLOOP2 .. PROCESS NUMBER TOO BIG
2440	0332002356		NG	X2,TLOOP2 .. PROCESS NUMBER LESS THAN ZERO
	5212001515		SA1	PTABLE+X2
2441	0301002356		ZR	X1,TLOOP2 .. IGNORE IT. TTY NOT TURNED ON
	7211777776		SX1	X1-1
2442	0301002356		ZR	X1,TLOOP2 .. IGNORE IT. NO PROCESS HAS BEEN CREATED
	6242000023		SB4	X2+CX,TTYPES
2443	6110001061		DOXJ	M,PINT,B4,CX,FGHST,B4
2451	0200002356		JP	TLOOP2

CHECK TO SEE IF A TTY WAS CONSTRUCTED  
IF NOT, RETURN WITH X = 0.  
IF SO, TURN IT ON, START OUTPUT, CREATE AN  
ALLOC BLOCK FOR IT AND RETURN WITH X1 = 1  
( IF ALREADY DONE, JUST RETURN WITH X1 = 1 )

## TTÝNUM IN XI

2452	76670	NEWTTY	SAVE7	NEWTTYB7
	10611		BX6	X1
2453	5160001107		SA6	NEWTTONM SAVE NUMBER
	10211		BX2	X1
2454	36112		LX2	
	5120001102		IX1	X1+X2 3 * TTN NUMBER
	36112		SA2	TTYBASE
2455	5120001101		IX1	X1+X2
	37272		SA2	TTYLMT
2456	0322002522		IX2	X1+X2 SEE IF CONSTRUCTED
			PL	X2, NEWTTYX NO
2457	7251000001		SX3	X1+1 INDEX OF TREQ CHAN
	5120001107		SA2	NEWTTONM
2465	6116001061		DOXJ	M,DSPCAP,CX,ALBS+X2 SEE IF ALLOC BLOCK EXISTS
	0316002520		NZ	X6, NEWTTY1 ALREADY EXISTS
2474	6116001061		DOXJ	M,CAPIN,CX,MAST,X2,CX,TREQ
2502	6116001061		DOXJ	M,SENDE,CX,TREQ,20000B (TURN IT ON)
			DOXJ	M,SENDE,CX,TREQ,10000B (START OUTPUT)
2510	5130001107		SA3	NEWTTONM (NOW MAKE ALLOC BLOCK)
	6116001061		DOXJ	M,CRALEK,CX,ALLOC,CX,ALBS+X3
2516	5116001107		SA1	NEWTTONM
	7150000001		SX6	
2517	5261001518		SA6	PTABLE+X1 INDICATE TTY TURNED ON
2520	5116001110	NEWTTY1	GET7	NEWTTYB7 OK EXIT
2521	7110000001		SX1	
	6270000000		JP	X7
2522	5110001110	NEWTTYX	GET7	NEWTTYB7 FAIL EXIT
	76100		SX1	X0
2523	0270000000		JP	X7

## HANDLE A BREAK

	24	BREAKCNT	EOU	50
2524	5111001115	BREAK	S1	TTABLE+BI
	7261777776		SX6	\$1-1
2525	5161001115		S46	TTABLE+BI DECREMENT COUNT
	0311002356		NZ	X1,TLOOP2 DO NOT PANIC YET
2526	7160000024		SX6	BREAKCNT
	5161001115		S46	TTABLE+BI
2527	7121000023		SX2	R1+CX,TTYPS
	6110001061		SETXJ	M,PINT,X2,CX,BDCC,I
2534	01300010610000000001		XJF	XJLOC,TLOOP2
2536	0200002356		JP	\$LOOP2

## CREATE A PROCESS

IN B1 ADDRESS OF 3 WORD VECTOR  
 WD0 NAME OF FILE DESCRIBING PROCESS  
 WD1 PCS SPACE  
 WD2 NOT SLOTS

2537 77601  
5160001111

CREATE SX6  
SA6

B1  
PRCDESC

## FIRST CHECK TO SEE IF A PROCESS ALREADY EXISTS

2540 5110001105  
5211001515

SA1  
SA1  
SX1  
NZ

TTYNUM  
STABLE+X1  
X1+1  
X1,TLOOP2

NOT( TURNED ON AND NO PROCESS)

## OK, NO PROCESS IN EXISTENCE NOW

2542 5110001105  
63110

CREATEI SA1  
SB1

TTYNUM  
X1

2543 7121000423  
6110001061

SX2  
DOXJ

B1+CX\_ALBS  
M.MVECAP,X2,CX.USAB,-XMZERO

2552 5110001105  
16211  
20201

SA1  
BX2  
LX2

TTYNUM  
X1

2553 36212  
5110001102  
36312

IX2  
SA1  
IX3

X1+X2, TTY NUM + 3  
TTYBASE  
X1+X2

2554 6110001061  
2562 6110001061  
2570 6110001061

DOKJ  
DOXJ  
DOXJ

M.CAPIN,CX.MAST,X3,CX,UST1  
M.CAPIN,CX.MAST,X3+1,CX,UST2  
M.CAPIN,CX.MAST,X3+1,CX,UST3

2576 5110001113  
0301002657

SA1  
ZR

PCOUNT  
X1,CREATEZ  
X1-1  
A1

NO MORE PROCESSES ALLOWED  
DECREMENT ALLOWED COUNT

2577 726177776  
54610

SX6  
SA6

A1

2600 5140001111  
6110001061

SA4  
SETXJ

PRCDESC  
M.DONATE,CX.SNDBG,CX.ALLOC,X4-1  
XJLOC,CREATEY

2605 01300010610000000001  
2607 5140001111  
6110001061

XJF  
SA4  
SETXJ

XJLOC,CREATEX  
PRCDESC  
M.MOVMT,CX.SNDBG,CX.ALLOC,X4-2

2614 5140001111  
6110001061

\*\*  
XJF  
SA4  
DOXJ

PRCDESC  
M.DONATE,CX.ALLOC,CX.USAB,X4-1  
PRCDESC  
M.MOVMT,CX.ALLOC,CX.USAB,X4-2

2623 5140001111

\*\*  
DOXJ

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	5120001111	SA2	PROCDESC
2624	6110001061	SETXJ	CX,NWPR,X2,-BLKNMS,-BLKCAPS
2630	7110001023	YSETXJ	CX,USAB,CX,SHTEV,-TTYNUM
2633	6170002634	CALL	DEBUG
2634	01300010610001000002	XJR	XJLOC,RTNAUTH
2637	5110001105	SA1	TTYNUM
	7231000023	SX3	X1+CX,TTYPE
2640	6110001061	DOXJ	M,MVECAP,CX,PROC,X3,-XMZERO
2646	5110001105	SA1	TTYNUM
	631110	SB1	X1
2647	7160000024	SX6	BREAKCNT
	5161001115	SA6	R1+TTABLE
2650	5110001105	SA1	TTYNUM
	7160000002	SX6	2
2651	5261001515	SA6	PTABLE+X1
	*		SIGNAL THAT A PROCESS EXISTS
	0200002356	JP	TLOOPZ
2652	77777777777777777777	XMZER0	DATA
2653	0000000050000001054	BLKNMS	VFD
2654	0000000040000001023	BLKCAPS	VFD
2655	00000000000000000000	RTNAUTH	DATA
2656	0000000010000000012		VFD
	*		30/1,30/CX,PROC
	*		*
	*		PROCESS CONSTRUCTION FAILED
	*		*
	*		TOO MANY PROCESSES
2657	5110002755	CREATEZ	SA1
	10611	BX6	F,CNT
2660	5160002170	SA6	X1
	0200002711	JP	TBADNWS
	*		CREATEZ1
	*		NOT ENOUGH ECS SPACE
2661	6110001061	CREATEY	DOXJ
	*		M,DONATE,CX,ALLOC,CX,SNDBG,X6 .. X6 CONTAINS AMT
	*		OF SPACE ACTUALLY MOVED BY ECS SYSTEM. SINCE WE GOT AN
	*		F=RETURN THAT MEANS THAT THERE WASN'T ENOUGH SPACE IN
	*		CX,SNDBG TO MOVE ALL THE REQUEST. SO WE GOTTA UNDO
	*		WHAT WAS ACTUALLY DONE.
	*		NOTE:::::::::: AT A FUTURE DATE, THIS QUANTITY WILL BE RE
	*		AS A PARAMETER RATHER THAN IN A REGISTER
2667	5110002757	SA1	F,ECS
	10611	BX6	X1
2670	5160002170	SA6	TBADNWS

	0200002707	JP	CREATEY1	
	*	*	NOT ENOUGH MOT SPACE	
2671	6110001061	CREATEX	DOXJ M.MOVMT,CX.ALLOC,CX.SNDBG,X6 .. X6 CONTAINS AMT MOT SLOTS ACTUALLY MOVED. SEE COMMENTS ABOVE!	
2677	5110002756	SAT	F.MOT	
2700	5160002170	BX6 SA6	X1 TBADNWS	
	*	*	PROCESS CONSTRUCTION FAILED, NOW CLEAN UP	
2701	6110001061	SA4 DOXJ	BRCDDESC M.DONATE,CX.ALLOC,CX.SNDBG,X4-1	
2707	5110001113	CREATEY1	PCOUNT INCREMENT ALLOWED COUNT	
2710	54610	SA1 SX6 SA6	X1+1 A1	
	*	*	NOW XMIT BAD NEWS	
2711	6110001061	CREATEZ1	DOXJ M.READ,CX.UST1,B0,TBFPNTS,7	
2722	6110002752	SBI	M1	
2723	6170002724	CALL	BUTTW0	
2724	0331002356	NG	X1.TLOOP2	
	6110002753	SBI	X2	
2725	6170002726	CALL	BUTTW0	
2726	0331002356	NG	X1.TLOOP2	
	6110002170	SBI	TBADNWS	
2727	6170002730	CALL	BUTTW0	
2730	0331002356	NG	X1.TLOOP2	
	6110002754	SBI	M4	
2731	6170002732	CALL	BUTTW0	
2732	0331002356	NG	X1.TLOOP2	
	6110001061	DOXJ	M.WRITE,CX.UST1,OUTIN,TBFPNTS+OUTIN,1	
2743	6110001061	DOXJ	M.SENDE,CX.UST2,10000B	
2751	0200002356	JP	TLOOP2	
	*	*	C1,C2,C3,C4,C5 12/C1>B,12/C2>B,12/C3>B,12/C4>B,12/C5>B	
2752	02150012011603170240	M1	215,12,116,317,240	CR L F N O
2753	03220317031703150240	M2	322,317,317,115,240	R O O M
2754	02150012400100000000	M4	215,12,4001,0,0	(FINISH UP)
2755	00500303011603240251	E.CNT	50,303,116,324,251	( C N T )
2756	00500115031703240251	E.MOT	50,115,317,324,251	( M O T )
2757	00500305030301230251	E.ECS	50,305,303,123,251	( E C S )

				A PROCESS IS DIEING
2760	5170001105	DEADPRC	SAT	TTYNUM SAVE TTY NUMBER
		*	*	
		*	*	WAIT FOR ACTUAL DEATH
2761	5120001105 6110001061	DEADPRC1	SA2 DOXJ DOXJ SA1 BXI AXI NG ZR	TTYNUM M.DSPOB,X2+CX,TTYPS,XJLOC+2,I M.DSPCAP,X2 XJLOC+2 X1-X7 COMPARE UNIQUE NAMES
2770	6110001061			21
2775	5110001063 13117 21125			X1,DEADPRC2 X1,DEADPRC1
2776	0331002777 0301002761			NOT YET DEAD
		*	*	
		*	*	NOW CLEAN ALLOC BLOCK
		*	*	ASSUME ONLY CLISTS AND FILES WI
2777	5120001105 6110001061	DEADPRC2	SA2 DOXJ SX6 SA6	TTYNUM M.MVECAP,X2+CX,ALBS,CX,USAB,-XM 1 ALBSONX
3006	7160000001 5160002135			
3007	6110001061	DDPRC2A	SETXJ	M.CCLDA,CX,USAB,CX,TEMP,-ALBSO
3013	01300010610000000001		XJF	XJLOC,DDPRC2D
3015	6110001061		DOXJ	M.DSPCAP,CX,TEMP
3022	7216776400 0301003026		SX1 ZR	X6-CLTYPE X1,DDPRC2B
3023	7216776200 0301003034		SX1 ZR	X6-FLTYPE X1,DDPRC2C
3024	5110002135 7261000001		SA1 SX6 SA6	ALBSONX X1+1 A1 DDPRC2A
3025	54610 0200003007		JP	
		*	*	DELETE CLIST
3026	6110001061	DDPRC2B	DOXJ	M.DELCL,CX,TEMP
3033	0200003007		JP	DDPRC2A
		*	*	
		*	*	DELETE FILE
3034	6110001061	DDPRC2C	DOXJ	M.DELBLK,CX,TEMP,RO
3042	6110001061		DOXJ	M.DELEFL,CX,TEMP
3047	0200003007		JP	DDPRC2A

NOW COMPUTE FREESPACE + MOT SLOTS TO

RETURN, AND INCREMENT ALLOWED PROCESS COUNT				
3050 6110001061	DDPRC2D	DOXJ	M.DSPAB,CX.USAB,XJLOC,8	
3056 5110001061	*	SA1	XJLOC	
	43036	MX0	30	
	11201	BX2	X0*X1	
3057 20236	LX2	40	RESEARVED SPACE	
	BX1	+X0*X1	SPACE IN USE	
	IX6	X2-X1	FREE SPACE	
3060 5160001064	SA6	XJLOC+3		
	6110001061	DOXJ	M.DONATE,CX.USAB,CX.ALLOC,-XJLOC-3	
3067 6110001061	DOXJ	M.DONATE,CX.ALLOC,CX.SNDBG,-XJLOC-3		
3075 5110001070	*	SA1	XJLOC+7	
	43036	MX0	30	
	11201	BX2	X0*X1	
3076 20236	LX2	40	RESEARVED MOT	
	BX1	+X0*X1	MOT IN USE	
	IX6	X2-X1	FREE MOT SLOTS	
3077 0336003114	NG	X6,DEADPRC3	DURING TEST VERSION OF MOT, IGNORE	
	5160001064	SA6	XJLOC+3	
3100 6110001061	DOXJ	M.MOVMT,CX.USAB,CX.ALLOC,-XJLOC-3		
3106 6110001061	DOXJ	M.MOVMT,CX.ALLOC,CX.SNDBG,-XJLOC-3		
3114 5110001113	DEADPRC3	SA1	PCOUNT	
	7261000001	SX6	X1+1	INCREMENT ALLOWED COUNT
3115 54610	*	SA6	A1	
	*			SEND WAKE UP EVENTS ON SPACE CONTROL CHANS
	*			INDICATING SOME SPACE MAY HAVE BECOME AVAILABLE
	*			*
3123 6110001061	DOXJ	M.SENDE,-WX.TD,1		
3131 6110001061	DOXJ	M.SENDE,-WX.MT,1		
3137 6110001061	DOXJ	M.SENDE,-WX.FE,1		
	*	DOXJ	M.SENDE,-WX.SE,1	RECORD FACT OF NO PROCESS
3145 5110001105	SA1	TTYNM		
	7160000001	SX6	I	
3146 5261001515	SA6	PTABLE+X1		
	*			*
3147 40000000010000000001	JP	TLOOP2		
3150 40000000070000000001	*			REFERENCES TO WAKE UP EVENT CHANS FOR SPC CONTROL
3151 40000000150000000001	*			*
3152 40000000230000000001	VFD	1/1,29/0+1,30/CX.SPCQ		
	VFD	1/1,29/6+1,30/CX.SPCQ		
	VFD	1/1,29/12+1,30/CX.SPCQ		
	VFD	1/1,29/18+1,30/CX.SPCQ		

PLACE ONE WORD (8B) INTO TTY OUTPUT BUFFER

RETURN WITH X1 NEGATIVE IF NO ROOM

3153	76670	PUTTWD	SX6	R7	
	5160001114		SA6	PUTTWD7	
3154	5110002166		SA1	TBFPNTS+OUTIN	
	7267000001		SX6	X1+1 NOMINAL NEW VALUE	
3155	5120002163		SA2	TBFPNTS+OUTLAST	
	37256		IX2	X2-X6	
3156	0312003160		NZ	X2.PUTTWD7	NO WRAP AROUND
	5120002161		SA2	TBFPNTS+OUTFST	
3157	10622		BX6	X2	WRAP AROUND
	*				
3160	5120002162	PUTTWD7	SA2	TBFPNTS+OUTOUT	
	37256		IX2	X2-X6	
3161	0312003163		NZ	X2.PUTTWD7	NOT YET FULL
	7116777776		SX1	=1	
3162	0270000000		JP	R7	FULL
	*				
3163	5160002166	PUTTWD7	SA6	TBFPNTS+OUTIN	SET NEW VALUE
	73310		SX3	X1	
	76410		SX4	R1	
3164	6110001061		DOXJ	W.WRITE,CX,USTI,X3,X4,I	
3174	5110001114		SA1	PUTTWD7	
	63710		SB7	X1	
	76100		SX1	BO	
3175	0270000000		JP	R7	
	*				
	*				

THIS SUBROUTINE XFRS B2 ITEMS  
( OR S, WHICH EVER IS LESS )  
FROM X1, X2, . . . XN TO B1, B1+1, . . . B1+S

IF XN IS POSITIVE, CONTENTS OF XN IS XFERED  
IF XN IS NEGATIVE, CONTENTS OF CELL ADDRESS -XN  
X1 WILL BE DESTROYED

B1 IS ADVANCED AND B2 DECREMENTED BY 1 FOR EACH XFER

3176	43074	SET	MX0	40
	66570		SB5	R7
	16671		BX5	X1
3177	6170003200	CALL	SETA	
3200	10622	BX6	X2	
3201	6170003202	CALL	SETA	
3202	10266	BX2	X6	
	10633	BX6	X3	
3203	6170003204	CALL	SETA	
3204	10366	BX3	X6	
	10644	BX6	X4	
3205	6170003206	CALL	SETA	
3206	10466	BX4	X6	
	10655	BX6	X5	
3207	6170003210	CALL	SETA	
3210	10566	BX5	X6	
3211	66750	SETB	S87	R5
	0270000000		JP	R7

3212	0602003211	SETA	GE	R0,B2,SETB
	0326003214		PL	x6,SETA1
3213	13660		BX6	x6-X0
	53160		SA1	X6
3214	56610	SETA1	BX6	X1
	6111000001		SA6	B1
3215	6122777776		SB1	B1+1
	0270000000		SB2	B2-1
			JP	R7

CRAASH

3216	01300032430000000001	ERR	XJ	SAVE
3220	01300032450000000001		XJ	DSPBEAD
3222	0306003255	ZR	x6,STOP	LIVE CASE
	6160000004	SB6	4	
3223	01300032420000000001	XJ	BEAD	
3225	0200003247	JP	DIE	

3226	01300032430000000001	DEBUG	XJ	SAVE
3230	01300032450000000001		XJ	DSPBEAD
3232	0306003235		ZR	X6, DEBUG1 LIVE CASE
	616000004		S86	
3233	01300032420000000001		XJ	READ
3235	01300032400000000001	DEBUG1	XJ	RESTORE
3237	0270000000		JP	R7
	*			
3240	40000000170000000004	RESTORE	MXCAP	RESTOR
3241	0000000000000002115		ITEMS	REGAREA
	*			
3242	00000000000000000006	BEAD	ITEMS	CX.BEAD
	*			
3243	40000000160000000004	SAVE	MXCAP	SAVE
3244	0000000000000002115		ITEMS	REGAREA
	*			
3245	40000000200000000004	DSPBEAD	MXCAP	DSPCAP
3246	00000000000000000006		ITEMS	CX.BEAD
	*			
3247	01300032510000000001	DIE	XJ	SRETURN
	*			
3251	40008001110000000004	SRETURN	MXCAP	RETPAR
3252	0000000010000003254		VFD	30/1,30/ZRO
3253	00000000000000000000		VFD	30/0,30/0
	*			
3254	00000000000000000000	ZRO	DATA	A
	*			
3255	00000000000000000000	STOP	DATA	6
3256	0200003255		JP	STOP

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FINAL STUFF

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FINAL STUFF

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3257 000000000000000000000000000000001  
3260 000000000000000000000000000000001

FL

DATA  
DATA

1

\*

END

0

35556

STORAGE USED

6600 ASSEMBLY

2880 STATEMENTS

11.745 SECONDS

273 SYMBOLS

1202 REFERENCES

CMM2 TTY SCANNER AND PANIC HANDLER  
SYMBOLIC REFERENCE TABLE.

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ALBSONX	2135	12/50 L	28/27 S	28/30	28/36			
BEAD	3242	31/52	32/08	32/17	L			
BLKCAPS	2654	26/03	26/24	L				
BLKNMS	2653	26/03	26/23	L				
BREAK	2524	19/22	24/09	L				
BREAKCNT	24	24/06 D	24/14	26/13				
CHNCNT	4	18/06	18/22	D				
CHNLST	2373	18/06	18/16	L	18/22			
CLSTSZ	1027	10/18	11/01	L				
CLTYPE	1377	2/23	D	28/32				
CREATE	2537	16/03	21/19	25/10	L			
CREATEX	2671	27/05	L					
CREATEY	2661	25/46	26/42	L				
CREATEY1	2707	27/01	27/18	L				
CREATEZ	2657	25/39	26/35	L				
CREATEZ1	2711	26/38	27/26	L				
CREATEI	2542	25/24	L					
CX.ALBS	423	10/48 L	23/27	23/36	25/26	28/26		
CX.ALLOC	16	10/42 L	23/36	25/48	26/43	27/17	29/14	29/25
		15/43	25/45	25/51	27/06	29/13	29/24	
CX.BDCC	14	10/40 L	21/14	24/18				
CX.BEAD	6	10/34 L	32/17	32/24				
CX.CMSTF	2	10/30 L	15/09					
CX.CODE	5	10/33 L	14/09					
CX.FGHST	15	10/41 L	22/16					
CX.JEVC	0	10/28 L	20/11					
CX.KICKV	11	10/37 L	18/19					
CX.LCLCL	3	10/31 L	15/09					
CX.MAST	4	10/32 L	14/18	14/23	14/28	14/33	17/12	23/31
		14/08	14/19	14/24	14/29	14/34	17/16	25/35
		14/15	14/20	14/25	14/30	14/35	17/20	25/36
		14/16	14/21	14/26	14/31	14/36	17/25	25/37
		14/17	14/22	14/27	14/32	15/22	17/30	32/13
CX.NWPR	13	10/39 L	26/03					
CX.PROC	12	10/38 L	26/10	26/27				
CX.SHTEV	10	10/36 L	18/18	26/04				
CX.SNDBG	21	10/45 L	25/45	26/43	27/17	29/25		
		15/43	25/48	27/06	29/14			
CX.SPCHN	7	10/35 L	18/16					
CX.SPCQ	1	10/39 L	29/48	29/49	29/50	29/51		
CX.SRESP	20	10/44 L	15/22	18/17				
CX.TEMP	22	10/46 L	28/30	28/32	28/44	28/49	28/50	
CX.TREQ	17	10/43 L	23/31	23/32	23/33			
CX.TTYP5	23	10/47 L	21/12	22/14	24/16	26/08	28/12	
CX.USAB	1023	10/49 L	25/51	26/24	28/30	29/13		
		25/28	26/03	28/26	29/04	29/24		
CX.UST1	1024	10/50 L	25/35	27/27	27/40	30/28		
CX.UST2	1025	10/51 L	25/36	27/41				
CX.UST3	1026	10/52 L	25/37					
C.ACAP	36	3/38 D						
C.ADDOPT	37	3/39 D						
C.ADDORD	61	4/04 D						
C.ALLOC	1	3/06 D						

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SYMBOLIC REFERENCE TABLE.

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C.ARMIT	140	5/10 D	
C.BDAT	105	4/34 D	
C.BLKCAP	106	4/35 D	
C.CAGEN	113	4/40 D	
C.CAPIN	23	3/26 D	14/15
C.CAPOU	24	3/27 D	3/28
C.CAPOUT	24	3/28 D	14/16
C.CBLK	11	3/74 D	
C.CCC	15	3/78 D	
C.CCCLOA	62	4/65 D	14/36
C.CCLIST	7	3/12 D	
C.CEVCH	13	3/16 D	14/30
C.CFILE	10	3/73 D	
C.CGEN	114	4/41 D	
C.CHKBLK	41	3/41 D	4/31
C.CHMBRO	123	4/48 D	
C.CHMPRW	122	4/67 D	
C.CHNGWD	67	4/11 D	
C.CLRDAE	70	4/15 D	
C.CLRIIB	74	4/79 D	
C.CLRMG	137	5/69 D	
C.COPYOP	60	3/40 D	
C.CPOUT	135	5/67 D	
C.CPROC	12	3/55 D	
C.CPUIN	134	5/66 D	
C.CPZRO	126	4/53 D	
C.CRALBK	64	4/27 D	14/27
C.CSPROC	14	3/17 D	
C.DELAB	76	4/21 D	
C.DELBLK	62	3/42 D	14/34
C.DELCL	57	4/62 D	14/33
C.DELFIL	43	3/43 D	14/35
C.DELSUB	72	4/17 D	
C.DSECH	101	4/26 D	
C.DISIT	141	5/11 D	
C.DISMAP	61	3/49 D	
C.DISPOP	107	4/36 D	
C.DISPTST	58	3/52 D	
C.DISSEN	55	3/63 D	17/25
C.DLOPR	132	5/64 D	
C.DLPROC	66	4/69 D	14/17
C.DONATE	63	4/66 D	14/28
C.DPRGD	67	4/10 D	4/11
C.DSCAP	20	3/21 D	3/22
C.DSCLX	124	4/51 D	
C.DSFMAP	56	4/01 D	
C.DSPAB	104	4/33 D	14/21
C.DSPALC	121	4/46 D	
C.DSPCAP	20	3/22 D	14/26
C.DSPCLX	102	4/27 D	
C.DSPOB	120	4/45 D	14/31
C.DSPSP	115	4/42 D	
C.ESMGEN	25	3/29 D	

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C.ESMLOC	26	3/30 D	17/20	
C.FIXC	32	3/34 D		
C.FIXD	33	3/35 D		
C.FRETUR	31	3/33 D	17/30	
C.FSON	21	3/23 D		
C.GETE	6	3/11 D	4/30	14/18
C.GETEVF	75	4/20 D		
C.GRAB	133	5/65 D		
C.HANG	6	4/30 D		
C.INCHR	117	4/44 D		
C.INMTR	131	5/63 D		
C.INTFIL	2	3/07 D	14/19	
C.JUMP	52	3/50 D		
C.MAPZRO	45	3/45 D		
C.MGETF	100	4/24 D		
C.MGETH	77	4/22 D	14/25	
C.MKMPRO	46	4/50 D		
C.MKMPRW	47	4/49 D		
C.MKOBR	27	3/31 D		
C.MODBC	65	4/08 D		
C.MOVBLK	50	3/48 D		
C.MOVCP	127	5/61 D		
C.MOVEC	22	3/24 D	3/25	
C.MOVMT	130	5/02 D	14/29	
C.MPCHRO	46	3/46 D	4/50	
C.MPCHRW	47	3/47 D	4/49	
C.MVECAP	22	3/25 D	14/20	
C.NEWUN	53	3/51 D		
C.NWTMP	103	4/32 D		
C.PINT	60	4/03 D	14/22	
C.PROBE	41	4/31 D		
C.READ	3	4/28 D	14/08	14/23
C.REDSHP	44	3/44 D		
C.RESTOR	17	3/20 D	17/16	32/13
C.RETPAR	111	4/38 D	32/30	
C.RETURN	30	3/32 D		
C.RFILE	3	3/68 D	4/28	
C.SAVE	16	3/19 D	17/12	32/19
C.SELF	0	3/05 D		
C.SENDE	5	3/10 D	14/24	
C.SETDAE	71	4/16 D		
C.SETIIB	73	4/18 D		
C.SPRET	125	4/52 D		
C.STMSG	136	5/08 D		
C.TIMDT	112	4/39 D		
C.TRDB	116	4/43 D		
C.UCAP	35	3/37 D		
C.UDAT	34	3/36 D		
C.USRER	110	4/37 D		
C.WFILE	4	3/09 D	4/29	
C.WRITE	4	4/29 D	14/32	
DDPRC2A	3007	28/29 L	28/39	28/44
DDPRC2B	3026	28/33	28/43 L	28/50

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DDPRC2C	3034	28/35	28/48 L					
DDPRC2D	3050	28/31	29/03 L					
DEADPRC	2760	18/13	28/05 L					
DEADPRC1	2761	28/10 L	28/17					
DEADPRC2	2777	28/16	28/24 L					
DEADPRC3	3114	29/21	29/26 L					
DEBUG	3226	15/31	18/07	26/05	32/04 L			
DEBUGI	3235	32/06	32/09 L					
DIE	3247	31/53	32/27 L					
DSPBEAD	3245	15/56	15/37	31/49	32/05	32/23 L		
EREGS	2136	13/63 L	17/13	17/17				
ERESTOR	2345	17/98	17/16 L					
ERR	3216	15/07	15/43	22/16	25/36	27/27	28/49	29/35
		15/08	17/06	23/27	25/37	27/40	28/50	29/36
		15/09	17/07	23/31	25/51	27/41	29/04	29/37
		15/15	17/08	23/32	26/06	28/12	29/13	30/28
		15/16	17/09	23/33	26/10	28/13	29/14	31/48 L
		15/22	17/10	23/36	26/43	28/26	29/24	31/49
		15/27	18/06	25/28	27/06	28/32	29/25	31/50
		15/38	20/11	25/35	27/17	28/44	29/34	31/53
ERRC	2331	15/05	17/05 L					
ESAVE	2343	17/05	17/12 L					
E.CNT	2755	26/35	27/51 L					
E.ECS	2757	26/51	27/53 L					
E.MOT	2756	27/08	27/52 L					
FL	3260	10/16	10/23	34/04 L				
FLTYPE	1577	2/24 D	28/34					
FRTN	2355	17/09	17/30 L					
JPROCECS	40000	2/14 D	16/10					
JPROCMDT	144	2/15 D	16/11					
KICKPRC	2436	18/14	22/05 L					

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LOCALPXJ	0	15/09 D	18/06 D	23/33 D	25/37	26/43 D	27/41 D	28/49	29/34 D
		15/09 D	18/06	23/33 D	25/45 D	26/43 D	27/41	28/50 D	29/34 D
		15/09 D	20/11 D	23/33	25/45 D	26/43 D	28/12 D	28/50 D	29/34 D
		15/09 D	20/11 D	23/36 D	25/45 D	26/43	28/12 D	28/50	29/35 D
		15/15 D	20/11 D	23/36 D	25/45	27/06 D	28/12 D	29/04 D	29/35 D
		15/15 D	20/11	23/36	25/48 D	27/06 D	28/12	29/04 D	29/35 D
		15/15 D	21/14 D	24/18 D	25/48 D	27/06 D	28/13 D	29/04 D	29/35 D
		15/15 D	21/14 D	24/18 D	25/48 D	27/06	28/13 D	29/04	29/36 D
		15/15 D	21/14 D	24/18 D	25/48	27/17 D	28/13	29/13 D	29/36 D
		15/15	21/14	24/18	25/51 D	27/17 D	28/26 D	29/13 D	29/36 D
		15/16 D	22/16 D	25/28 D	25/51 D	27/17 D	28/26 D	29/13 D	29/36 D
		15/16 D	22/16 D	25/28 D	25/51 D	27/17	28/26 D	29/13	29/37 D
		15/16 D	22/16 D	25/28 D	25/51	27/27 D	28/26	29/14 D	29/37 D
		15/16 D	22/16	25/28	26/03 D	27/27 D	28/30 D	29/14 D	29/37 D
		15/16 D	23/27 D	25/35 D	26/03 D	27/27 D	28/30 D	29/14 D	29/37 D
		15/16 D	23/27 D	25/35 D	26/03 D	27/27 D	28/30 D	29/14	30/28 D
		15/22 D	23/27	25/35 D	26/03	27/27 D	28/30	29/24 D	30/28 D
		15/22 D	23/31 D	25/35	26/03 D	27/27	28/32 D	29/24 D	30/28 D
		15/22 D	23/31 D	25/36 D	26/04 D	27/40 D	28/32 D	29/24 D	30/28 D
		15/43 D	23/31	25/36 D	26/04 D	27/40 D	28/32	29/24	30/28
		15/43 D	23/32 D	25/36 D	26/04	27/40 D	28/44 D	29/25 D	
		15/43 D	23/32 D	25/36	26/10 D	27/40 D	28/44 D	29/25 D	
		15/43 D	23/32 D	25/37 D	26/10 D	27/40	28/44	29/25 D	
		18/06 D	23/32	25/37 D	26/10 D	27/41 D	28/49 D	29/25 D	
		18/06 D	23/33 D	25/37 D	26/10	27/41 D	28/49 D	29/34 D	
MAIN	2232	10/17	15/06 L						
MAIN0	2305	15/27	15/35 L						
MAINOA	2312	15/38	15/42 L						
MAIN1	2320	15/50 L							
MAST.TTY	1112	12/21 L	15/29 S	15/50					
MXPROC	24	2/09 D	12/22						
MXTTY	1104	12/15 L	15/23 S						
M1	2752	27/27	27/47 L						
M2	2753	27/30	27/48 L						
M4	2754	27/36	27/49 L						
M.CAPIN	7775601	14/15 D	15/22	23/31	25/35	25/36	25/37		
M.CAPOUT	7775600	14/16 D	15/09						
M.CCCL0A	7775554	14/36 D	28/30						
M.CEVCH	7775562	14/30 D							
M.CRALBK	7775565	14/27 D	23/36						
M.DELBLK	7775556	14/34 D	28/49						
M.DELCL	7775557	14/33 D	28/44						
M.DEFLFIL	7775555	14/35 D	28/50						
M.DLPROC	7775577	14/17 D							
M.DONATE	7775564	14/28 D	15/43	25/45	25/51	26/43	27/17	29/13	29/14
M.DSPAB	7775573	14/21 D	29/04						
M.DSPCAP	7775566	14/26 D	23/27	28/13	28/32				
M.DSPOB	7775561	14/31 D	28/12						
M.GETE	7775576	14/18 D							
M.INTFIL	7775575	14/19 D	15/15	15/16					
M.MGETH	7775567	14/25 D	18/06						
M.MOVMT	7775563	14/29 D	25/48	27/06	29/24	29/25			
M.MVECAP	7775574	14/20 D	25/28	26/10	28/26				

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M.PINT	7775572	14/22 D	21/14	22/16	24/18					
M.READ	7775571	14/23 D	15/15	15/16	27/27					
M.SENDE	7775570	14/24 D	23/32	27/41	29/35	29/37				
		20/11	23/33	29/34	29/36					
M.WRITE	7775560	14/32 D	27/40	30/28						
NAMES	1054	11/10 L	26/23							
NEWTTY	2452	16/01	20/23	23/12 L						
NEWTTYB7	1110	12/19 L	23/13 S	23/41	23/46					
NEWTTYNM	1107	12/18 L	23/14 S	23/25	23/34	23/37				
NEWTTYX	2522	23/22	23/46 L							
NEWTTY1	2520	23/27	23/41 L							
NF_JPROC	2326	16/02	16/09 L							
NF_USER	2433	21/18	21/22 L							
OUTFST	0	13/12 D	30/15							
OUTIN	5	13/15 D	27/40	30/10	30/24 S					
OUTLAST	2	13/14 D	30/12							
OUTOUT	1	13/13 D	30/18							
PANIC	2421	19/23	21/08 L							
PANICI	2432	21/10	21/18 L							
PCOUNT	1113	12/22 L	25/38	27/18	29/26					
PRCDESC	1111	12/20 L	25/11 S	25/43	25/46	25/49	25/51	26/01	27/15	
PTABLE	1515	12/37 L	19/15	22/10	25/17	29/41 S				
		12/39	21/08	23/39 S	26/18 S					
PTABLSIZ	400	12/39 D	22/07							
PUTTWD	3153	27/29	27/32	27/35	27/38	30/08 L				
PUTTWD1	3160	30/14	30/18 L							
PUTTWD2	3163	30/20	30/24 L							
PUTTWD7	1114	12/23 L	30/09 S	30/28						
RDSTK	2352	17/07	17/25 L							
READSELF	2171	14/08 L	15/06							
REGAREA	2115	12/45 L	32/14	32/20						
RESTORE	3240	32/09	32/13 L							
RTNAUTH	2655	26/06	26/26 L							
SAVE	3243	31/48	32/04	32/19 L						
SCRSZ	2171	10/19	10/22	10/23	10/23	14/05 L	14/10			
SET	3176	15/09	18/06	23/33	25/45	27/06	28/12	28/50	29/35	
		15/15	20/11	23/36	25/48	27/17	28/13	29/04	29/36	
		15/15	21/14	24/18	25/51	27/27	28/26	29/13	29/37	
		15/16	22/16	25/28	26/03	27/27	28/30	29/14	30/28	
		15/16	23/27	25/35	26/04	27/40	28/32	29/24	30/28	
		15/22	23/31	25/36	26/10	27/40	28/44	29/25	31/15 L	
		15/43	23/32	25/37	26/43	27/41	28/49	29/34		
SETA	3212	31/19	31/21	31/24	31/27	31/30	31/36 L			
SETAI	3214	31/37	31/41 L							
SETB	3211	31/32 L	31/36							
SETEMSK	2347	15/07	17/06	17/20 L						
SNDBGMT	620	2/07 D								
SNDBGSPC	200000	2/06 D	15/35							
SPCEVNT	2406	18/11	20/05 L							
SPCEVNT1	2415	20/19 L	20/23							
SRETURN	3251	32/27	32/30 L							
STKBUF	2156	13/05 L	17/26							
STOP	3255	31/50	32/38 L	32/39						

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TBADNWS	2170	13/17 L	26/37 S	26/53 S	27/10 S	27/33				
TBFPNTS	2161	13/10 L	27/27	27/40	30/10	30/12	30/15	30/18	30/24	S
TLOOP0	2325	16/01	16/05 L	16/05						
TLOOP2	2356	18/05 L	21/15	22/09	22/16	24/19	27/29	27/38		
		19/16	21/15	22/11	24/12	25/19	27/32	27/41		
		20/24	22/08	22/13	24/19	26/20	27/35	29/43		
TLOOP2A	2366	18/08	18/10 L							
TSTSPC	40000	27/18 D	15/39							
TTABLE	1115	12/28 L	24/09	24/11 S	24/15 S	26/14 S				
TTYBASE	1102	12/13 L	15/18 S	23/18	25/32					
TTYEVNT	2377	18/12	19/06 L							
TTYLMT	1101	12/12 L	15/16	23/20						
TTYNUM	1105	12/16 L	19/14	20/19	25/24	26/07	28/05	S	29/39	
		15/52 S	19/18	22/05 S	25/28	26/11	28/10			
		19/09 S	20/06 S	25/16	26/04	26/16	28/24			
TTYRNT	1103	12/14 L	15/19 S							
TTYSPCX	1100	12/11 L	15/15	15/16						
TYPEVENT	1106	12/17 L	19/12 S	19/20						
USERECS	20000	2/11 D	21/23							
USERMOT	50	2/12 D	21/24							
WX.FE	3151	29/36	29/50	L						
WX.MT	3150	29/35	29/49	L						
WX.SE	3152	29/37	29/51	L						
WX.TD	3147	29/34	29/48	L						
XJLOC	1061	12/06 L	18/05	23/32	25/44	27/17	28/26	29/05	29/25	
		15/08	18/06	23/33	25/45	27/26	28/29	29/11	S	29/25
		15/09	20/10	23/35	25/47	27/27	28/30	29/12	S	29/33
		15/14	20/11	23/36	25/50	27/39	28/31	29/13	S	29/34
		15/15	21/13	24/17	25/51	27/40	28/32	29/13	S	29/34
		15/15	21/14	24/18	26/02	27/40	28/43	29/13	S	29/35
		15/16	22/15	25/27	26/05	27/41	28/44	29/14	S	29/35
		15/21	22/16	25/28	26/09	28/11	28/48	29/14	S	29/36
		15/22	23/26	25/34	26/10	28/12	28/49	29/15	S	29/36
		15/36 S	23/27	25/35	26/42	28/12	28/49	29/22	S	29/37
		15/40 S	23/30	25/35	26/43	28/12	28/50	29/23	S	30/27
		15/42	23/31	25/36	27/05	28/13	29/03	29/24	S	30/28
		15/43	23/31	25/36	27/06	28/13	29/04	29/24		
		15/43	23/32	25/37	27/16	28/25	29/04	29/24		
XMZERO	2652	25/28	26/10	26/22 L	28/26					
ZRO	3254	32/31	32/35	L						