

OPTIONS NODECK,LIST,XREF,NOREL,OBJ(P)

THE LIST OF OPTIONS USED DURING THIS ASSEMBLY IS-- NODECK,LIST,XREF,NOREL,OBJ

ERR LOC OBJECT CODE				ADDR STMT SOURCE STATEMENT	VER 15, MOD 00	29/05/22	PAGE	2
0000			1	#KWRT	START	0		
			2		PRINT	ON,NODATA		
			3	*	@SYS	EXP-N		
			214+		PRINT	ON		
			215	*	@FXD	EXP-N		
			620+		PRINT	ON		
			621	*	@CAN	EXP-N		
			724+		PRINT	ON		
			725	*	@ERM	EXP-N		
			1347+		PRINT	ON		
			1348	*	@SPF	EXP-N		
			1811+		PRINT	ON		

#KWRIT - WRITE KEYWORD PROGRAM

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	29/05/22	PAGE	4
	1814				*****				
	1815	*	5703-XM1		COPYRIGHT IBM CORP. 1970				*
	1816	*			REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083				*
	1817	*							*
	1818				*****				
	1819	*			*STATUS -				*
	1820	*			VERSION 1 MODIFICATION 0				*
	1821	*							*
	1822	*			*FUNCTION				*
	1823	*		*	KWRITE IS A SYSTEM KEYWORD PROGRAM WHICH FACILITATES THE				*
	1824	*			SPECIFICATION OF THE DEVICE(S) TO BE USED FOR SYSTEM OUTPUT.				*
	1825	*		*	PRINTER, CRT, OR BOTH MAY BE SPECIFIED.				*
	1826	*		*	KWRITE PLACES THE PHYSICAL CORE ADDRESS OF THE ENTRY POINT				*
	1827	*			TO THE DESIRED IOCS AT LOCATION \$PRDEV FOR USE BY NSPRNT.				*
	1828	*		*	THE DEVICE(S) SPECIFIED IS CHECKED FOR AVAILABILITY.				*
	1829	*							*
	1830	*			*ENTRY POINTS				*
	1831	*		*	THE FIRST EXECUTABLE INSTRUCTION IS THE ONLY ENTRY POINT.				*
	1832	*		*	KWRITE IS ALWAYS LOADED AND EXECUTED BY NBLOAD.				*
	1833	*							*
	1834	*			*INPUT				*
	1835	*		*	INPUT TAKES THE FORM OF THE KEYWORD COMMAND IN THE INPUT				*
	1836	*			LINE BUFFER.				*
	1837	*		*	THE ADDRESS OF THE FIRST DELIMITOR FOLLOWING THE PRIMARY				*
	1838	*			KEYWORD MUST BE AT LOCATION \$XRSV.				*
	1839	*							*
	1840	*			*OUTPUT				*
	1841	*			N/A				*
	1842	*							*
	1843	*			*EXTERNAL REFERENCES				*
	1844	*			\$XRSV - POINTS TO INPUT LINE BUFFER.				*
	1845	*			\$PRDEV - ADDRESS TO PLACE THE CORRECT IOCS ENTRY POINT.				*
	1846	*			\$CRTAV - INDICATES CRT AVAILABILITY.				*
	1847	*			\$MPDWN - INDICATES PRINTER AVAILABILITY.				*
	1848	*			\$CAERR - ADDRESS FOR ERROR MESSAGE CODE.				*
	1849	*			\$CAERK - ENTRY TO EXECUTE ERRPGM.				*
	1850	*			\$CARPL - ENTRY TO EXECUTE GUFUDI.				*
	1851	*			\$EXFTR - CORE EXTENSION FACTOR USED IN DETERMINING THE				*
	1852	*			PRESENT LOCATION OF DSPLYN.				*
	1853	*							*
	1854	*			*EXITS, NORMAL				*
	1855	*			NORMAL EXIT IS TO \$CARPL TO LOAD AND EXECUTE GUFUDI.				*
	1856	*							*
	1857	*			*EXITS, ERROR				*
	1858	*			THE ERROR EXIT IS TO \$CAERK TO LOAD AND EXECUTE ERRPGM.				*
	1859	*							*
	1860	*			*TABLES/WORK AREAS				*
	1861	*			N/A				*
	1862	*							*
	1863	*			*ATTRIBUTES				*
	1864	*		*	KWRITE MUST BE LOADED AND EXECUTED AT \$\$KLD3.				*
	1865	*		*	IT IS NOT KEUSABLE				*
	1866	*							*
	1867	*			*CHARACTER CODE DEPENDENCY				*
	1868	*			KWRITE USES THE STANDARD ENGLISH ALPHABETIC CHARACTERS CODED				*
	1869	*			IN EBCDIC FORMAT. FOREIGN LANGUAGES WILL REQUIRE MODIFICATION				*

#KWRTIT - WRITE KEYWORD PROGRAM

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	29/05/22	PAGE	5
		1870	*	TO INTERNAL CONSTANTS. CODES OTHER THAN EBCDIC MAY BE IMPLEMENTED	*			
		1871	*	BY REASSEMBLING KWRITE WITH AN ASSEMBLER RECOGNIZING THE REQUIRED	*			
		1872	*	CODE.	*			
		1873	*		*			
		1874	*	NOTES	*			
		1875	*	ERROR PROCEDURES	*			
		1876	*	* ALL ERRORS ARE PRINTED VIA ERRPGM.	*			
		1877	*	* SYNTAX ERRORS IN THE INPUT LINE CAUSE AN UPARROW TO BE	*			
		1878	*	PRINTED AT THE POINT OF ERROR.	*			
		1879	*	* UNAVAILABILITY OF DEVICES CAUSE AN ERROR MESSAGE TO BE	*			
		1880	*	PRINTED.	*			
		1881	*	* SYSTEM STATUS REMAINS UNCHANGED ON ALL ERRORS.	*			
		1882	*		*			
		1883	*	REGISTER USAGE	*			
		1884	*	* REGISTER 1 (@BR) IS USED AS THE PROGRAM BASE REGISTER.	*			
		1885	*	REGISTER 2 (@XR) IS USED AS A POINTER TO THE INPUT LINE.	*			
		1886	*		*			
		1887	*	SAVED/RESTORED AREAS	*			
		1888	*	N/A	*			
		1889	*		*			
		1890	*	MODIFICATION CONSIDERATIONS	*			
		1891	*	RELOCATION OF THE PHYSICAL IOCS DPRINT AND DSPLYN REQUIRE	*			
		1892	*	AT LEAS RASSEMBLY OF KWRITE.	*			
		1893	*		*			
		1894	*	REQUIRED MODULES	*			
		1895	*	@SYSEQ - COMMON SYSTEM EQUATES.	*			
		1896	*	@FXDEQ - NUCLEUS EQUATES.	*			
		1897	*	@CANEQ - TRANSCIENT MODULE EQUATES.	*			
		1898	*	@ERMEQ - ERROR MESSAGE EQUATES.	*			
		1899	*	\$CANIT - SCAN TO PARAMETER SUBROUTINE.	*			
		1900	*		*			
		1901	*	OTHER	*			
		1902	*	N/A	*			
		1903	*	*****	*			

#KWRT - WRITE KEYWORD PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	29/05/22	PAGE	6
					1905	*****					
		0C00			1906	ORG	\$\$KLD3				STARTING ADDR
				0C33	1907	USING	KWRBSE,@BR				BASE SPECIFICATION
					1908	*	HDR #KWRT,0				
					1909	*****					
					1910	*	PROGRAM HEADER FOR DISK LOAD				
					1911	*****					
					1912	*\$KWRT EQU	X'02B4'				DISK ADDR OF #KWRT
					1913	*\$SKWR EQU	X'0C00'				CORE LOAD ADDRESS OF #KWRT
					1914	*\$@KWR EQU	002				SECTOR CNT OF #KWRT
		0C00			1915	ORG	\$\$SKWR				CORE LOAD ADDRESS
				0C00	1916	\$\$\$\$\$ EQU	*				FIRST LOCATION IN PROGRAM
		0C00	D2E6D9C9E340		0C05	1917	DC	CL6'KWRT'			PROGRAM NAME
		0C06	14		0C06	1918	DC	IL1'020'			PROGRAM NUMBER OF #KWRT
					0C07	1919	#KWRT EQU	*			ENTRY POINT TO PROGRAM
					1920	***	END OF EXPANSION ***				
					0C07	1922	KWRITE EQU	*			ENTRY POINT
		0C07	C2 01 0C33		1923	LA	KWRBSE,@BR				LOAD BASE REG
		0C0B	35 02 03C7		1924	L	\$XRSV,@XR				XR POINTS TO INPUT LINE BUFFER
		0C0F	D0 87 CA		1925	B	SCANIT(,@BR)				SKIP TO FIRST PARAMETER
		0C12	D0 82 04		1926	BL	KWR080(,@BR)				BRANCH IF ERROR
		0C15	74 02 B9		1927	ST	KWRXRS(,@BR),@XR				SAVE PARM POINTER FOR ERROR
		0C18	7C 01 E7		1928	MVI	SCAMMA(,@BR),SCACOM				SKIP COMMAS
		0C1B	3C 10 03CD		1929	MVI	\$CAERR,@E130				SET POSSIBLE MISSING KEYWORD
		0C1F	BD 1E 00		1930	CLI	0(,@XR),@EOS				EOS AT CURRENT POSITION ?
		0C22	F2 81 12		1931	JE	KWR080				DO ERROR IF YES
		0C25	9D 06 06 C9		1932	CLC	KWRPRD(KWRPRD+1,@XR),KWRPRT(,@BR)				PRINTER SPECIFIED ?
		0C29	F2 81 0F		1933	JE	KWR100				DO PRINTER SPEC
		0C2C	9D 02 02 C2		1934	CLC	KWRCRD(KWRCRD+1,@XR),KWRCRT(,@BR)				CRT SPECIFIED ?
		0C30	F2 81 53		1935	JE	KWR200				SET CRT SPEC
		0C33	3C 11 03CD		1936	KWR070 MVI	\$CAERR,@E131				SET INVALID KEYWORD PARM
		0C37	C0 87 0469		1937	KWR080 B	\$CAERK				EXIT TO ERRPGM

#KWRIT - WRITE KEYWORD PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	29/05/22	PAGE	7
	0C3B	E2	02	07	1939	KWR100	LA KWRPRD+1(,@XR),@XR				INCREMENT PAST 'PRINTER'
	0C3E	D0	87	CA	1940		B SCANIT(,@BR)				GET NEX PARM
	0C41	D0	82	04	1941		BL KWR080(,@BR)				BRANCH IF ERROR
	0C44	D0	81	A8	1942		BE KWR800(,@BR)				GO CHECK INVALID PARM
	0C47	74	02	B9	1943		ST KWRXRS(,@BR),@XR				SAVE PARM POINTER
	0C4A	BD	1E	00	1944		CLI 0(,@XR),@EOS				EOS AT POSITION ?
	0C4D	F2	81	74	1945		JE KWR600				SET PRINTER AS DEVICE
	0C50	9D	02	02	1946		CLC KWRCRD(KWRCRD+1,@XR),KWRCRT(,@BR)				IS CRT ALSO SPECIFIED
	0C54	D0	01	00	1947		BNE KWR070(,@BR)				DO ERROR IF NOT
	0C57	E2	02	03	1948		LA KWRCRD+1(,@XR),@XR				SKIP OVER 'CRT'
	0C5A	D0	87	CA	1949	KWR150	B SCANIT(,@BR)				GO CHECK FOR EOS
	0C5D	D0	82	04	1950		BL KWR080(,@BR)				BRANCH IF ERROR
	0C60	D0	81	A8	1951		BE KWR800(,@BR)				GO CHECK FOR EOS
	0C63	BD	1E	00	1952		CLI 0(,@XR),@EOS				ANY MORE PARMS ?
	0C66	D0	01	00	1953		BNE KWR070(,@BR)				DO ERROR IF YES
	0C69	3C	38	03CD	1954		MVI \$CAERR,@E241				SET POSSIBLE NO CRT MSG
	0C6D	D2	02	00	1955		LA 0(,@BR),@XR				DON'T GIVE UP ARROW
	0C70	38	06	03D2	1956		TBN \$IOIND,\$CRTAV+\$CRTNO				IS CRT AVAILABLE ?
	0C74	D0	90	04	1957		BF KWR080(,@BR)				EXIT TO ERRPGM IF NOT
	0C77	38	01	03D2	1958		TBN \$IOIND,\$MPDWN				MATRIX PRINTER DOWN ?
	0C7B	F2	10	46	1959		JT KWR600				DO ERROR MSG IF YES
	0C7E	1C	01	044B	1960		MVC \$PRDEV(@CADDR),KWRCMP(,@BR)				SET CRT AND MATRIX PRINTER
	0C83	F2	87	35	1961		J KWR300				GO ADD EXPANSION FACTOR

#KWRIT - WRITE KEYWORD PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 29/05/22 PAGE 8
	0C86	E2	02 03		1963	KWR200	LA KWRCRD+1(, @XR), @XR	SKIP OVER 'CRT'
	0C89	D0	87 CA		1964		B SCANIT(, @BR)	GET NEXT PARM
	0C8C	D0	82 04		1965		BL KWR080(, @BR)	BRANCH IF ERROR
	0C8F	D0	81 A8		1966		BE KWR800(, @BR)	GO CHECK INVALID PARM
	0C92	74	02 B9		1967		ST KWRXRS(, @BR), @XR	SAVE PARM POINTER
	0C95	BD	1E 00		1968		CLI 0(, @XR), @EOS	ANY MORE PARMS ?
	0C98	F2	81 0D		1969		JE KWR250	SET DSPLYN IF NO
	0C9B	9D	06 06 C9		1970		CLC KWRPRD(KWRPRD+1, @XR), KWRPRT(, @BR)	'PRINTER' SPECIFIED ?
	0C9F	D0	01 00		1971		BNE KWR070(, @BR)	DO INVALID ERROR
	0CA2	E2	02 07		1972		LA KWRPRD+1(, @XR), @XR	SKIP OVER 'PRINTER'
	0CA5	D0	87 27		1973		B KWR150(, @BR)	GO SET CRT AND PRINTER
	0CA8	3C	38 03CD		1974	KWR250	MVI \$CAERR, @@E241	SET POSSIBLE NO CRT ERROR
	0CAC	D2	02 00		1975		LA 0(, @BR), @XR	DON'T GIVE UP ARROW
	0CAF	38	06 03D2		1976		TBN \$IOIND, \$CRTAV+\$CRTNO	IS CRT AVAILABLE ?
	0CB3	D0	90 04		1977		BF KWR080(, @BR)	DO ERROR IF NOT
	0CB6	1C	01 044B BB		1978		MVC \$PRDEV(@CADDR), KWRDSP(, @BR)	SET CRT AS DEVICE
	0CBB	0E	00 044A 043B		1979	KWR300	ALC \$PRDEV-1(1), \$EXFTR	ADD EXPANSION FACTOR
	0CC1	F2	87 13		1980		J KWR700	GO EXIT
	0CC4	3C	96 03CD		1982	KWR600	MVI \$CAERR, @@E549	SET POSSIBLE NO PRINTER MSG
	0CC8	D2	02 00		1983		LA 0(, @BR), @XR	DON'T GIVE UP ARROW
	0CCB	38	01 03D2		1984		TBN \$IOIND, \$MPDWN	IS PRINTER DOWN.
	0CCF	D0	10 04		1985		BT KWR080(, @BR)	GO PRINT ERROR
	0CD2	1C	01 044B BF		1986		MVC \$PRDEV(@CADDR), KWRPRN(, @BR)	SET MATRIX PRINTER AS DEVICE
	0CD7	C0	87 04A1		1987	KWR700	B \$CARPL	EXIT TO GUFUDI
	0CDB	74	08 B1		1988	KWR800	ST KWR810+@OP1(, @BR), @ARR	SAVE RETURN ADDRESS
	0CDE	BD	1E 00		1989		CLI 0(, @XR), @EOS	IS EOS AFTER PARM ?
	0CE1	C0	81 0000		1990	KWR810	BE *-*	RETURN TO PROCESS PARM IF YES
	0CE5	75	02 B9		1991		L KWRXRS(, @BR), @XR	POINT XR TO INVALID PARM
	0CE8	D0	87 00		1992		B KWR070(, @BR)	GO PRINT INVALID PARM MSG
					1993		*****	
				0C33	1994	KWRBSE	EQU KWR070	BASE ADDR
				0469	1995	SCAERR	EQU \$CAERK	SCANIT ERROR EXIT
				0006	1996	KWRPRD	EQU 6	'PRINTER' DISPLACEMENT
				0002	1997	KWRCRD	EQU 2	'CRT' DISPLACEMENT
				1998	*			
	0CEB			0CEC	1999	KWRXRS	DS CL(@REGL)	ADDR OF INVALID PARM
	0CED	2004		0CEE	2000	KWRDSP	DC AL2(\$\$PLYN)	ADDR FOR CRT ONLY
	0CEF	2000		0CF0	2001	KWRCMP	DC AL2(\$\$PYMP)	ADDR FOR BOTH CRT AND PRINTER
	0CF1	0707		0CF2	2002	KWRPRN	DC AL2(\$\$PRNT)	ADDR FOR PRINTER ONLY
	0CF3	C3D9E3		0CF5	2003	KWRCRT	DC CL3'CRT'	CRT PARM
	0CF6	D7D9C9D5E3C5D9		0CFC	2004	KWRPRT	DC CL7'PRINTER'	PRINTER PARM
				2005	*		\$CANI	

SCANIT - DELIMETER SCAN MODULE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	29/05/22	PAGE	9
		2007+		*****				
		2008+	*	5703-XM1	COPYRIGHT IBM CORP. 1970			*
		2009+	*		REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083			*
		2010+	*					*
		2011+		*****				*
		2012+	*	STATUS				*
		2013+	*	VERSION 1 MODIFICATION 0				*
		2014+	*					*
		2015+	*	FUNCTION				*
		2016+	*	THE FUNCTION OF SCANIT IS TO SCAN PAST VALID DELIMITERS AND				*
		2017+	*	RETURN A POINTER TO THE FIRST CHARACTER THAT'S NOT A DELIMITER.				*
		2018+	*					*
		2019+	*	ENTRY POINTS				*
		2020+	*	* THE ENTRY POINT IS SCANIT.				*
		2021+	*	* THE CALLING SEQUENCE IS AS FOLLOWS:				*
		2022+	*	B SCANIT				*
		2023+	*	WITH REGISTER 2 (@XR) POINTING TO THE FIRST CHARACTER TO BE				*
		2024+	*	EXAMINED.				*
		2025+	*					*
		2026+	*	INPUT				*
		2027+	*	NONE				*
		2028+	*					*
		2029+	*	OUTPUT				*
		2030+	*	NONE				*
		2031+	*					*
		2032+	*	EXTERNAL REFERENCES				*
		2033+	*	\$CAERR - ERROR CODE SAVE AREA				*
		2034+	*					*
		2035+	*	EXITS, NORMAL				*
		2036+	*	NORMAL EXIT FROM SCANIT IS TO THE BYTE FOLLOWING THE BRANCH TO				*
		2037+	*	SCANIT IN THE CALLING ROUTINE. THE PSR (REGISTER 4) WILL CONTAIN				*
		2038+	*	A ZERO IF NO DELIMITERS WERE FOUND OR A HIGH CONDITION IF ONE OR				*
		2039+	*	MORE DELIMITERS WERE SCANNED.				*
		2040+	*					*
		2041+	*	EXITS, ERROR				*
		2042+	*	ERROR EXIT FROM SCANIT IS TO THE BYTE FOLLOWING THE BRANCH TO				*
		2043+	*	SCANIT IN THE CALLING ROUTINE. THE PSR WILL CONTAIN A LOW				*
		2044+	*	CONDITION.				*
		2045+	*					*
		2046+	*	TABLES/WORKAREAS				*
		2047+	*	* SCACNT - AREA CONTAINING NUMBERS OF DELIMITERS SCANNED				*
		2048+	*	* SCAMMA - LOC WHERE SCACOM MAY BE MOVED IF ONE COMMA IS ALSO				*
		2049+	*	TO BE CONSIDERED A DELIMITER. MOVING SCACOF BACK INTO SCAMMA				*
		2050+	*	INDICATES THAT ONLY BLANKS SHOULD BE CONSIDERED DELIMITERS.				*
		2051+	*					*
		2052+	*	ATTRIBUTES				*
		2053+	*	RELOCATABLE AND RE-USABLE				*
		2054+	*					*
		2055+	*	CHARACTER CODE DEPENDENCY				*
		2056+	*	THE OPERATION OF THIS MODULE DOES NOT DEPEND UPON A PARTICULAR				*
		2057+	*	INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET.				*
		2058+	*					*
		2059+	*	NOTES				*
		2060+	*	ERROR PROCEDURES				*
		2061+	*	THE ONLY ERROR CONDITION DETECTED BY SCANIT IS THE CASE WHERE				*
		2062+	*	A CARRIAGE-RETURN CODE FOLLOWS A COMMA. UPON RETURN TO THE				*

SCANIT - DELIMETER SCAN MODULE

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2063+* CALLING ROUTINE, @PSR WILL BE SET TO A LOW CONDITION, THE *
2064+* ERROR CODE IS SET IN $CAERR, AND MG WILU BE POINTING TO THE *
2065+* CARRIAGE-RETURN CHARACTER. *
2066+* *
2067+* REGISTER USAGE *
2068+* REGISTER 2 (@XR) IS USED AS A POINTER ACROSS THE AREA BEING *
2069+* SCANNED FOR DELIMITERS. *
2070+* *
2071+* SAVED/RESTORED AREAS *
2072+* UPON ENTRY TO SCANIT, REGISTER 8 (@ARR) IS SAVED AND USED AS *
2073+* THE RETURN ADDRESS. *
2074+* *
2075+* MODIFICATION CONSIDERATIONS *
2076+* NONE *
2077+* *
2078+* REQUIRED MODULES *
2079+* * @SYSEQ - COMMON SYSTEM EQUATES *
2080+* * @FXDEQ - FIXED NUCLEUS ADDRESSES EQUATES *
2081+* *
2082+* OTHER *
2083+* SCANIT IS INITIALIZED TO BYPASS BLANKS ONLY. IF SCACOM IS *
2084+* MOVED TO SCAMMA, ONE COMMA WILL BE SCANNED ALONG WITH BLANKS. *
2085+* THE INSTRUCTION TO DO THIS IS AS FOLLOWS: *
2086+* MVI SCAMMA,SCACOM *
2087+* *
2088+* TO DROP THE COMMA FROM ITS DELIMITER STATUS, SCACOF SHOULD BE *
2089+* MOVED TO SCAMMA, USING THE FOLLOWING INSTRUCTION: *
2090+* MVI SCAMMA,SCACOF *
2091+* *
2092+*****

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2094+*

2095+* EQUATES USED IN THIS SUBROUTINE

2096+*

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0001 2097+SCAINC EQU 1 TO INCREMENT POINTER
0001 2098+SCACOM EQU @BNE SWITCH TO ALLOW SCANNING COMMA
0087 2099+SCACOF EQU @UCB SWITCH TO SET OFF THE INDICATON
2100+* * FOR SCANNING A COMMA
0CFD 2101+SCANIT EQU * ENTRY POINT TO THIS SUBROUTINE
0CFD 2102+ ST SCA500+@OP1,@ARR SAVE RETURN ADDRESS
0D01 2103+ ST SCASVE,@XR SAVE POINTER VALUE
0D05 2104+ MVI $CAERR,@E110 SET ERROR CODE
0D09 2105+ J SCA200 GO TO PROCESS
0D0C 2106+SCA100 LA SCAINC(,@XR),@XR INCREMENT POINTER TO NEXT CHAR
0D0F 2107+SCA200 CLI 0(,@XR),@BLANK IS THIS CHAR BLANK ?
0D12 2108+ BE SCA100 YES, FETCH NEXT ONE
0D16 2109+ CLI 0(,@XR),@COMMA IS IT A COMMA ?
0D19 2110+SCA250 JC SCA400,@UCB UCS TO RETURN -- OR NOP IF
2111+* * SCAMMA IS ACTIVE AND CHAR
0D1C 2112+SCA300 LA SCAINC(,@XR),@XR INCREMENT POINTER TO NEXT CHAR
0D1F 2113+ CLI 0(,@XR),@BLANK IS THIS CHAR A BLANK ?
0D22 2114+ BE SCA300 YES, FETCH NEXT ONE
0D26 2115+ CLI 0(,@XR),@EOS+1 IS THIS EOS ?
0D29 2116+ JL SCA500 IF NOT, SKIP ERROR ROUTINE
0D2C 2117+SCA400 ST SCACNT,@XR SAVE NEW POINTER VALUE

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SCANIT - DELIMETER SCAN MODULE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	29/05/22	PAGE 11
0D30	0F	01	0D3D 0D3B		2118+	SLC	SCACNT(2),SCASVE			SET PSR TO EQUAL IF POINTER
					2119+*					* NOT ADVANCED
0D36	C0	87	0000		2120+SCA500	B	*-*			YES, RETURN
				0D1A	2121+SCAMMA	EQU	SCA250+@Q			TO SET SCAN COMMA INDICATOR
					2122+*					
					2123+*		SAVE AREA			
					2124+*					
				0D3A	2125+SCASV1	EQU	*			FIRST BYTE OF SCASVE
0D3A				0D3B	2126+SCASVE	DS	CL2			ORIGINAL POINTER VALUE SAVE
0D3C				0D3D	2127+SCACNT	DS	CL2			SAVE AREA FOR TOTAL CHAR SCAN
					2128+***			END OF SCANIT		***
					2129	PRINT	ON			
				FFFF	2130	END				
TOTAL STATEMENTS IN ERROR IN THIS ASSEMBLY =					0					

CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$\$\$\$\$	001	0C00	1916	
\$\$\$CMD	001	0020	0659	
\$\$\$DAT	001	0040	0658	
\$\$\$EPL	001	0091	0655	
\$\$\$ERN	001	0080	0709	
\$\$\$FUN	001	0010	0660	
\$\$\$NLN	001	00A0	0705	
\$\$\$STD	001	0081	0654	
\$\$BNLN	001	0605	0635	0637
\$\$CDBS	001	08C0	0685	
\$\$CDND	001	0666	0644	
\$\$CDRD	001	0890	0683	0685
\$\$CKEY	001	0603	0633	
\$\$CKFF	001	0B3D	0665	
\$\$COFF	001	0B44	0664	
\$\$CSNS	001	209C	0694	
\$\$DATB	001	0BBF	0666	
\$\$EOSA	001	0AFE	0663	
\$\$ERSK	001	1C00	0704	
\$\$FITS	001	1D00	0712	
\$\$FLIB	001	06FF	0711	
\$\$ILEN	001	0601	0629	0631 0635
\$\$ILHD	001	0600	0627	0629
\$\$INLN	001	0607	0642	0644 0646
\$\$INND	001	06FA	0646	
\$\$KBDT	001	09E1	0653	0657
\$\$KBSN	001	09E2	0657	0662
\$\$KLD1	001	0600	0717	
\$\$KLD2	001	0700	0719	
\$\$KLD3	001	0C00	0721	1906
\$\$LPOS	001	09EB	0662	
\$\$PCNT	001	07E9	0678	
\$\$PLYN	001	2004	0692	2000
\$\$PRES	001	0890	0651	0653 0663 0664 0665 0666 0683
\$\$PRFL	001	2143	0696	
\$\$PRNT	001	0707	0672	0673 0677 0678 2002
\$\$PRTN	001	0782	0673	
\$\$PSIO	001	07CE	0677	
\$\$PYCD	001	2200	0698	
\$\$PYMP	001	2000	0690	0692 0694 0696 0698 2001
\$\$SLIB	001	1C00	0707	
\$\$TPCD	001	0606	0637	0642
\$\$UPAR	001	0602	0631	0633
\$\$WSPB	001	1E00	0710	
\$\$XIND	001	06FF	0708	0711
\$\$ZERO	001	0000	0223	0224 0226 0227 0228 0232 0690
\$ABORT	001	0010	0336	
\$BASIC	001	0080	0394	
\$BIGCD	001	0080	0470	
\$BLDPL	001	0579	0603	0605
\$BLNOE	001	0569	0593	
\$BLOAD	001	0522	0584	0586 0589 0602 0603
\$BLRTN	001	0550	0592	0593
\$BRSAV	001	03C5	0281	0282
\$BSADR	001	0587	0608	0610
\$BUFPT	001	03E3	0489	0490

CROSS REFERENCE											
SYMBOL	LEN	VALUE	DEFN	REFERENCES	VER 15, MOD 00 29/05/22 PAGE 13						
\$CABLD	001	04B4	0562	0563							
\$CAERK	001	0469	0539	0542	1937	1995					
\$CAERR	001	03CD	0287	0289	1929*	1936*	1954*	1974*	1982*	2104*	
\$CAIPL	001	049D	0558	0560							
\$CALLI	001	0008	0479								
\$CARDI	001	0001	0250								
\$CARPL	001	04A1	0560	0562	1987						
\$CIENT	001	0483	0549	0550							
\$CIEXT	001	0480	0548	0549							
\$CIMSK	001	0476	0545	0548							
\$CISUS	001	0496	0553	0558							
\$CLBFR	001	0010	0437								
\$CMDKY	001	0008	0349								
\$CMODE	001	0002	0399								
\$CONFIG	001	03DD	0462	0472							
\$CRPOS	001	03E2	0488	0489							
\$CRTAD	001	044D	0527	0528							
\$CRTAV	001	0002	0343	1956	1976						
\$CRTDN	001	0002	0367								
\$CRTIN	001	03D3	0364	0371							
\$CRTNO	001	0004	0346	1956	1976						
\$CRTPU	001	0004	0368								
\$CRTSP	001	0008	0369								
\$CRTUP	001	0001	0366								
\$CRUSH	001	0080	0475								
\$CSDPL	001	050E	0574	0575							
\$C0001	001	0464	0531	0537							
\$DATE	001	043A	0512	0513							
\$DBGUF	001	03E0	0474	0483							
\$DBLOK	001	0001	0424								
\$DFDET	001	03E8	0495	0496							
\$DISKN	001	0025	0226								
\$DKERR	001	0008	0405								
\$DKSIZ	001	03D7	0449	0457	0498						
\$DK100	001	0001	0451								
\$DK200	001	0002	0452								
\$DK400	001	0004	0453								
\$DK600	001	0008	0454								
\$DK800	001	0010	0455								
\$DPLSV	001	0449	0523	0525							
\$DTNMB	001	0040	0270								
\$DTRDR	001	0040	0358								
\$ENDNU	001	0600	0617	0627	0651	0672	0708	0717	0719	0721	
\$ERDPL	001	046F	0542	0544							
\$ERFIL	001	0040	0297								
\$ERHRD	001	0004	0429								
\$ERKEY	001	0080	0301								
\$ERLOG	001	0345	0231								
\$ERMAD	001	0472	0544	0545							
\$ERPND	001	0004	0402								
\$ERRCT	001	03CF	0303								
\$ERRPG	001	03CE	0291								
\$ERSFL	001	0035	0296								
\$ERSTK	001	0030	0294								

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$EXADR	001	0517	0577	0579
\$EXCMD	001	0001	0331	
\$EXFTR	001	043B	0513	0518 1979
\$FCIND	001	0010	0409	
\$FDIND	001	0040	0416	
\$FEARR	001	0004	0224	
\$FEMAP	001	0588	0610	0611
\$FILIB	001	03DA	0460	0461
\$FITIN	001	0010	0385	
\$FUIND	001	0020	0414	
\$GUFIO	001	0583	0607	0608
\$GUFIR	001	0008	0259	
\$HISTE	001	042E	0510	0511
\$HIST1	001	0435	0511	0512
\$HRDER	001	0020	0355	
\$INDR1	001	03D4	0371	0397
\$INDR2	001	03D5	0397	0422
\$INDR3	001	03D6	0422	0449
\$INLNO	001	03CF	0289	0291 0303 0310
\$INRPT	001	0020	0267	
\$IOIND	001	03D2	0338	0364 1956 1958 1976 1984
\$IOPGS	001	0010	0478	
\$IOYES	001	0002	0253	
\$IPLDV	001	05FF	0614	0617
\$IRKEY	001	0020	0477	
\$KEYBD	001	03E1	0483	0488
\$KEYCD	001	03C3	0247	0281
\$KEYDT	001	0040	0391	
\$KE090	001	00DE	0227	
\$KE130	001	01D5	0228	
\$KYBSY	001	0010	0264	
\$LDRTN	001	0571	0602	
\$LEVEL	001	03DF	0472	0474
\$LIST	001	0002	0426	
\$LMRGN	001	03C1	0242	0244
\$LNPTR	001	0080	0361	
\$LOADB	001	054A	0586	
\$LOADR	001	051A	0579	0582
\$LPRIO	001	03EA	0496	
\$LPROS	001	03E5	0491	0493
\$LPRP3	001	03E4	0490	0491
\$MOUNT	001	0020	0440	
\$MPDWN	001	0001	0340	1958 1984
\$NEXTB	001	03E6	0493	0494
\$NEXTL	001	03E7	0494	0495
\$NOENB	001	0008	0432	
\$NOLST	001	0004	0256	
\$NUCBS	001	03C0	0239	0240
\$NWRKF	001	0080	0445	
\$NWRKR	001	0040	0442	
\$PASWD	001	042D	0509	0510
\$PAUSD	001	04BA	0563	0565
\$PAUSE	001	0002	0333	
\$PGMDT	001	0020	0388	
\$PGMST	001	0010	0352	
\$PKERT	001	0419	0507	0509

CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$PLST1	001	0454	0528	0529
\$PLST2	001	045B	0529	0530
\$PLST3	001	0462	0530	0531
\$PRDEV	001	044B	0525	0527 1960* 1978* 1979* 1986*
\$PRESN	001	0002	0376	
\$PROCI	001	0001	0373	
\$PRPOS	001	03C2	0244	0247
\$PSDBR	001	04FA	0568	
\$PSDXR	001	04F2	0567	0568
\$PSTEP	001	0004	0334	
\$PSTMT	001	0008	0335	
\$PTCH1	001	03F5	0498	0502
\$READY	001	0080	0418	
\$REORD	001	0040	0476	
\$RLOAD	001	051E	0582	0584
\$RMGRN	001	03C0	0240	0242
\$RSTR	001	04D6	0565	0567 0569 0574
\$RUNIT	001	0001	0312	
\$SFAID	001	050D	0570	
\$SPRNT	001	0465	0537	0539
\$SRTRN	001	04FE	0569	0570
\$STEPT	001	0002	0313	
\$SWPCR	001	0511	0575	0577
\$TABLN	001	03CB	0284	0287
\$TFLOW	001	0008	0319	
\$TRACE	001	0004	0314	
\$TRALL	001	0010	0320	
\$TROVR	001	054E	0589	0592
\$TRUNK	001	0080	0272	
\$TRVAR	001	0020	0321	
\$UNMSK	001	048D	0550	0553
\$USRDR	001	03DC	0461	0462
\$VMDEF	001	0080	0325	
\$VOLF1	001	03FE	0504	0505
\$VOLF2	001	040E	0506	
\$VOLID	001	03F6	0502	0503 0507
\$VOLR1	001	03F6	0503	0504
\$VOLR2	001	0406	0505	0506
\$WAITF	001	057F	0605	0607
\$WFDEF	001	0040	0519	
\$WFLOK	001	0008	0382	
\$WFNME	001	0443	0518	0523
\$WSIND	001	0004	0379	
\$XIND1	001	03D0	0310	0329
\$XIND2	001	03D1	0329	0338
\$XIND3	001	03D8	0457	0460
\$XPREC	001	0040	0322	
\$XRSAB	001	03C7	0282	0284 1924
\$ZTRAD	001	05A2	0611	
\$12K	001	0004	0466	
\$16CKY	001	0008	0468	
\$16K	001	0002	0465	
\$22IMP	001	0001	0463	
###BL	001	0000	1672	
###CK	001	0000	1800	
###CN	001	0000	1768	

CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
###CO	001	0000	1560	
###CS	001	0000	1620	
###DR	001	0000	1364	
###ER	001	0000	1564	
###FS	001	0000	1660	
###IN	001	0000	1804	
###PW	001	0000	1808	
###RS	001	0000	1640	
###SA	001	0000	1628	
###SS	001	0000	1624	
###VU	001	0600	1584	
###OT	001	0700	1356	
###1T	001	0000	1360	
###BCO	001	0600	1372	
###BOV	001	0800	1644	
###DPR	001	0700	1380	
###DRE	001	0889	1396	
###DSP	001	2800	1416	
###ECM	001	0C00	1676	
###EFK	001	0C00	1696	
###ERR	001	0C00	1668	
###EXM	001	0C00	1556	
###FIL	001	0E00	1636	
###FIS	001	0E00	1632	
###FML	001	0200	1764	
###FMS	001	0200	1604	
###GRA	001	0889	1528	
###GUF	001	0C00	1664	
###INL	001	0600	1744	
###INS	001	0600	1368	
###KAL	001	0C00	1532	
###KCA	001	0C00	1748	
###KCH	001	0C00	1500	
###KCN	001	0C00	1616	
###KCT	001	0C00	1468	
###KDE	001	0C00	1464	
###KDI	001	0D00	1544	
###KDN	001	0C00	1452	
###KDO	001	0E00	1548	
###KED	001	0C00	1388	
###KEN	001	0C00	1392	
###KEX	001	0C00	1412	
###KGO	001	0C00	1384	
###KHE	001	0C00	1568	
###KKE	001	0C00	1796	
###KLI	001	0C00	1472	
###KLL	001	0920	1772	
###KLO	001	0C00	1476	
###KME	001	0D00	1456	
###KMO	001	0C00	1400	
###KNA	001	0C00	1512	
###KOV	001	0E00	1432	
###KPA	001	0C00	1408	
###KPO	001	0C00	1496	
###KPR	001	0C00	1520	
###KRE	001	0C00	1440	

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SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 29/05/22 PAGE 17

###KRL 001 0700 1536
###KRM 001 0C00 1404
###KRN 001 0700 1424
###KRO 001 0D00 1428
###KRS 001 0C00 1752
###KRU 001 0C00 1448
###KRV 001 0800 1540
###KSA 001 0C00 1484
###KSE 001 0E00 1524
###KSO 001 0C20 1576
###KSS 001 0C00 1508
###KSV 001 0980 1504
###KSY 001 0C00 1516
###KWI 001 0C00 1444
###KWR 001 0C00 1436
###LOA 001 0600 1376
###MIP 001 0C00 1572
###SDS 001 0C00 1684
###SFF 001 0E00 1688
###SFL 001 0F00 1680
###SFO 001 1500 1652
###SFS 001 0C00 1648
###SPA 001 0C00 1488
###SPO 001 0806 1492
###SPS 001 0C00 1480
###STR 001 1600 1656
###TDC 001 1000 1460
###TSY 001 1000 1420
###TVK 001 0FC0 1596
###UAL 001 0C00 1612
###UAT 001 0900 1708
###UCD 001 0900 1716
###UCN 001 0C00 1700
###UCP 001 0700 1704
###UDE 001 0C00 1720
###UDI 001 0C00 1724
###UEX 001 0C00 1608
###UIN 001 0C00 1712
###UPA 001 0C00 1692
###UPO 001 0C00 1760
###UPT 001 0C00 1756
###VCR 001 2000 1552
###VLO 001 0600 1588
###VOD 001 0600 1592
###VVM 001 0000 1600
###VXI 001 0600 1580
###ZDU 001 1100 1732
###ZLB 001 1100 1776
###ZLO 001 1100 1736
###ZLV 001 0F00 1792
###ZL1 001 0F00 1780
###ZL2 001 0F00 1784
###ZL3 001 0C00 1788
###ZTR 001 1000 1728
###ZUT 001 0C00 1740
##BLN 001 18D4 1671

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SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 29/05/22 PAGE 18

##CKT	001	2118	1799	
##CNF	001	2000	1767	
##COR	001	0800	1559	
##CSA	001	1000	1619	
##DRT	001	0000	1363	
##ERM	001	0928	1563	
##FSP	001	1880	1659	
##INV	001	212C	1803	
##PWR	001	2300	1807	
##RSP	001	1780	1639	
##SAV	001	1180	1627	
##SSA	001	1128	1623	
##VUF	001	0B08	1583	
##0TR	001	0000	1355	
##1TR	001	0080	1359	
##@BL	001	0001	1673	
##@CK	001	0004	1801	
##@CN	001	0001	1769	
##@CO	001	003A	1561	
##@CS	001	003A	1621	
##@DR	001	0008	1365	
##@ER	001	0032	1565	
##@FS	001	0030	1661	
##@IN	001	003A	1805	
##@PW	001	00C0	1809	
##@RS	001	0030	1641	
##@SA	001	0108	1629	
##@SS	001	0001	1625	
##@VU	001	0002	1585	
##@0T	001	0018	1357	
##@1T	001	0018	1361	
##@BCO	001	0018	1373	
##@BOV	001	0018	1645	
##@DPR	001	0005	1381	
##@DRE	001	0001	1397	
##@DSP	001	0004	1417	
##@ECM	001	0006	1677	
##@EFK	001	0002	1697	
##@ERR	001	0003	1669	
##@EXM	001	0003	1557	
##@FIL	001	0009	1637	
##@FIS	001	0009	1633	
##@FML	001	0052	1765	
##@FMS	001	0052	1605	
##@GRA	001	0003	1529	
##@GUF	001	0010	1665	
##@INL	001	0010	1745	
##@INS	001	0010	1369	
##@KAL	001	000F	1533	
##@KCA	001	000C	1749	
##@KCH	001	000C	1501	
##@KCN	001	0010	1617	
##@KCT	001	0009	1469	
##@KDE	001	0010	1465	
##@KDI	001	0005	1545	
##@KDN	001	0010	1453	

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SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 29/05/22 PAGE 19

#\$@KDO	001	000C	1549	
#\$@KED	001	000E	1389	
#\$@KEN	001	0006	1393	
#\$@KEX	001	0003	1413	
#\$@KGO	001	0002	1385	
#\$@KHE	001	000C	1569	
#\$@KKE	001	0006	1797	
#\$@KLI	001	0011	1473	
#\$@KLL	001	0001	1773	
#\$@KLO	001	0008	1477	
#\$@KME	001	0003	1457	
#\$@KMO	001	0004	1401	
#\$@KNA	001	0008	1513	
#\$@KOV	001	0009	1433	
#\$@KPA	001	0005	1409	
#\$@KPO	001	000D	1497	
#\$@KPR	001	0009	1521	
#\$@KRE	001	0002	1441	
#\$@KRL	001	0004	1537	
#\$@KRM	001	0003	1405	
#\$@KRN	001	0003	1425	
#\$@KRO	001	000A	1429	
#\$@KRS	001	000A	1753	
#\$@KRU	001	0003	1449	
#\$@KRV	001	000D	1541	
#\$@KSA	001	0011	1485	
#\$@KSE	001	0004	1525	
#\$@KSO	001	0005	1577	
#\$@KSS	001	000B	1509	
#\$@KSV	001	0002	1505	
#\$@KSY	001	000F	1517	
#\$@KWI	001	0002	1445	
#\$@KWR	001	0002	1437	
#\$@LOA	001	0013	1377	
#\$@MIP	001	000D	1573	
#\$@SDS	001	0004	1685	
#\$@SFF	001	0008	1689	
#\$@SFL	001	0005	1681	
#\$@SFO	001	0003	1653	
#\$@SFS	001	0011	1649	
#\$@SPA	001	0004	1489	
#\$@SPO	001	0003	1493	
#\$@SPS	001	0001	1481	
#\$@STR	001	0002	1657	
#\$@TDC	001	0003	1461	
#\$@TSY	001	0003	1421	
#\$@TVK	001	0001	1597	
#\$@UAL	001	0011	1613	
#\$@UAT	001	000C	1709	
#\$@UCD	001	000B	1717	
#\$@UCN	001	0009	1701	
#\$@UCP	001	000F	1705	
#\$@UDE	001	000E	1721	
#\$@UDI	001	0008	1725	
#\$@UEX	001	000E	1609	
#\$@UIN	001	000F	1713	

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SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 29/05/22 PAGE 20

#\$@UPA	001	0004	1693
#\$@UPO	001	0005	1761
#\$@UPT	001	0012	1757
#\$@VCR	001	0008	1553
#\$@VLO	001	0002	1589
#\$@VOD	001	0016	1593
#\$@VVM	001	0030	1601
#\$@VXI	001	0002	1581
#\$@ZDU	001	0008	1733
#\$@ZLB	001	0002	1777
#\$@ZLO	001	000C	1737
#\$@ZLV	001	0006	1793
#\$@ZL1	001	0007	1781
#\$@ZL2	001	000D	1785
#\$@ZL3	001	000A	1789
#\$@ZTR	001	0001	1729
#\$@ZUT	001	0014	1741
#\$BCOM	001	0080	1371
#\$BOLV	001	1780	1643
#\$DPRI	001	014C	1379
#\$DREA	001	0200	1395
#\$DSPL	001	0240	1415
#\$ECMA	001	1900	1675
#\$EFKE	001	1990	1695
#\$ERRP	001	18C0	1667
#\$EXMS	001	07D4	1555
#\$FILN	001	1724	1635
#\$FIST	001	1700	1631
#\$FMLN	001	1E00	1763
#\$FMST	001	0D00	1603
#\$GRAP	001	0690	1527
#\$GUFU	001	1880	1663
#\$INLN	001	1C84	1743
#\$INST	001	0020	1367
#\$KALL	001	06A4	1531
#\$KCAL	001	1CC4	1747
#\$KCHA	001	053C	1499
#\$KCND	001	0F80	1615
#\$KCTL	001	03BC	1467
#\$KDEL	001	035C	1463
#\$KDIS	001	0744	1543
#\$KDNT	001	0300	1451
#\$KDOV	001	0780	1547
#\$KEDI	001	0188	1387
#\$KENA	001	01C4	1391
#\$KEXT	001	0234	1411
#\$KGOS	001	0180	1383
#\$KHEL	001	0A30	1567
#\$KKEY	001	2100	1795
#\$KLIS	001	0400	1471
#\$KLLA	001	2004	1771
#\$KLOG	001	0444	1475
#\$KMER	001	030C	1455
#\$KMOU	001	0204	1399
#\$KNAM	001	05C0	1511
#\$KOVN	001	0290	1431

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SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 29/05/22 PAGE 21

#\$KPAS	001	0220	1407	
#\$KPOO	001	0508	1495	
#\$KPRT	001	063C	1519	
#\$KREA	001	02BC	1439	
#\$KRLA	001	0700	1535	
#\$KRMO	001	0214	1403	
#\$KRNU	001	0280	1423	
#\$KROV	001	028C	1427	
#\$KRSU	001	1D24	1751	
#\$KRUN	001	02CC	1447	
#\$KRVL	001	0710	1539	
#\$KSAV	001	0488	1483	
#\$KSET	001	0680	1523	
#\$KSOV	001	0AC8	1575	
#\$KSSP	001	0594	1507	
#\$KSVL	001	058C	1503	
#\$KSYM	001	0600	1515	
#\$KWID	001	02C4	1443	
#\$KWRI	001	02B4	1435	
#\$LOAD	001	0100	1375	
#\$MIPP	001	0A80	1571	
#\$SDSY	001	192C	1683	
#\$SFFI	001	193C	1687	
#\$SFLO	001	1918	1679	
#\$SFOV	001	1844	1651	
#\$SFSY	001	1800	1647	
#\$SPAC	001	04CC	1487	
#\$SPOV	001	04DC	1491	
#\$SPSY	001	0484	1479	
#\$STRO	001	1850	1655	
#\$TDCK	001	0350	1459	
#\$TSYK	001	0250	1419	
#\$TVKB	001	0BAC	1595	
#\$UALL	001	0F00	1611	
#\$UATR	001	1A38	1707	
#\$UCDI	001	1AD8	1715	
#\$UCNF	001	19B8	1699	
#\$UCPL	001	19DC	1703	
#\$UDEL	001	1B24	1719	
#\$UDIS	001	1B5C	1723	
#\$UEXL	001	0EA8	1607	
#\$UINI	001	1A88	1711	
#\$UPAC	001	1980	1691	
#\$UPOV	001	1D24	1759	
#\$UPTF	001	1D5C	1755	
#\$VCRT	001	07B4	1551	
#\$VLOA	001	0B80	1587	
#\$VODK	001	0B88	1591	
#\$VVMR	001	0C00	1599	
#\$VXIT	001	0B00	1579	
#\$ZDUM	001	1BA4	1731	
#\$ZLBM	001	2008	1775	
#\$ZLOA	001	1BC4	1735	
#\$ZLVR	001	20B0	1791	
#\$ZL1M	001	2010	1779	
#\$ZL2M	001	2030	1783	

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
#\$ZL3M	001	2088	1787	
#\$ZTRA	001	1B9C	1727	
#\$ZUTM	001	1C14	1739	
#KWRI	001	0C07	1919	
#KWRIT	001	0000	0001	
@@E001	001	0000	1259	1261
@@E003	001	0001	1261	1263
@@E004	001	0002	1263	1265
@@E005	001	0003	1265	1267
@@E006	001	0004	1267	1269
@@E007	001	0005	1269	1271
@@E008	001	0006	1271	1273
@@E009	001	0007	1273	1275
@@E010	001	0008	1275	1277
@@E011	001	0009	1277	1279
@@E012	001	000A	1279	1281
@@E013	001	000B	1281	1283
@@E014	001	000C	1283	1285
@@E015	001	000D	1285	1287
@@E016	001	000E	1287	1289
@@E017	001	000F	1289	1291
@@E018	001	0010	1291	1293
@@E019	001	0011	1293	1295
@@E020	001	0012	1295	1297
@@E021	001	0013	1297	1299
@@E023	001	0014	1299	1301
@@E024	001	0015	1301	1303
@@E025	001	0016	1303	1305
@@E026	001	0017	1305	1307
@@E027	001	0018	1307	1309
@@E028	001	0019	1309	1311
@@E029	001	001A	1311	1313
@@E030	001	001B	1313	1315
@@E031	001	001C	1315	1317
@@E032	001	001D	1317	1319
@@E035	001	001E	1319	1321
@@E036	001	001F	1321	1323
@@E037	001	0020	1323	1325
@@E038	001	0021	1325	1327
@@E039	001	0022	1327	1329
@@E040	001	0023	1329	1331
@@E041	001	0024	1331	1333
@@E042	001	0025	1333	1335
@@E043	001	0026	1335	1337
@@E044	001	0027	1337	1339
@@E045	001	0028	1339	1341
@@E046	001	0029	1341	1343
@@E060	001	002A	1343	1345
@@E080	001	002B	1345	
@@E100	001	0000	0731	0733
@@E101	001	0001	0733	0735
@@E102	001	0002	0735	0737
@@E103	001	0003	0737	0739
@@E110	001	0004	0739	0741 2104
@@E112	001	0005	0741	0743
@@E113	001	0006	0743	0745

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SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 29/05/22 PAGE 23

@@E114	001	0007	0745	0747	
@@E115	001	0008	0747	0749	
@@E116	001	0009	0749	0751	
@@E117	001	000A	0751	0753	
@@E120	001	000B	0753	0755	
@@E122	001	000C	0755	0757	
@@E123	001	000D	0757	0759	
@@E124	001	000E	0759	0761	
@@E129	001	000F	0761	0763	
@@E130	001	0010	0763	0765	1929
@@E131	001	0011	0765	0767	1936
@@E133	001	0012	0767	0769	
@@E134	001	0013	0769	0771	
@@E135	001	0014	0771	0773	
@@E136	001	0015	0773	0775	
@@E137	001	0016	0775	0777	
@@E138	001	0017	0777	0779	
@@E139	001	0018	0779	0781	
@@E142	001	0019	0781	0783	
@@E143	001	001A	0783	0785	
@@E150	001	001B	0785	0787	
@@E151	001	001C	0787	0789	
@@E160	001	001D	0789	0791	
@@E162	001	001E	0791	0793	
@@E163	001	001F	0793	0795	
@@E164	001	0020	0795	0797	
@@E200	001	0021	0797	0799	
@@E205	001	0022	0799	0801	
@@E210	001	0023	0801	0803	
@@E211	001	0024	0803	0805	
@@E212	001	0025	0805	0807	
@@E213	001	0026	0807	0809	
@@E215	001	0027	0809	0811	
@@E216	001	0028	0811	0813	
@@E217	001	0029	0813	0815	
@@E220	001	002A	0815	0817	
@@E221	001	002B	0817	0819	
@@E222	001	002C	0819	0821	
@@E223	001	002D	0821	0823	
@@E225	001	002E	0823	0825	
@@E226	001	002F	0825	0827	
@@E227	001	0030	0827	0829	
@@E228	001	0031	0829	0831	
@@E229	001	0032	0831	0833	
@@E230	001	0033	0833	0835	
@@E232	001	0034	0835	0837	
@@E234	001	0035	0837	0839	
@@E237	001	0036	0839	0841	
@@E240	001	0037	0841	0843	
@@E241	001	0038	0843	0845	1954 1974
@@E242	001	0039	0845	0847	
@@E248	001	003A	0847	0849	
@@E249	001	003B	0849	0851	
@@E250	001	003C	0851	0853	
@@E251	001	003D	0853	0855	
@@E252	001	003E	0855	0857	

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E253	001	003F	0857	0859
@@E254	001	0040	0859	0861
@@E255	001	0041	0861	0863
@@E256	001	0042	0863	0865
@@E300	001	0043	0865	0867
@@E301	001	0044	0867	0869
@@E302	001	0045	0869	0871
@@E303	001	0046	0871	0873
@@E304	001	0047	0873	0875
@@E305	001	0048	0875	0877
@@E308	001	0049	0877	0879
@@E310	001	004A	0879	0881
@@E315	001	004B	0881	0883
@@E316	001	004C	0883	0885
@@E320	001	004D	0885	0887
@@E325	001	004E	0887	0889
@@E330	001	004F	0889	0891
@@E335	001	0050	0891	0893
@@E338	001	0051	0893	0895
@@E340	001	0052	0895	0897
@@E350	001	0053	0897	0899
@@E351	001	0054	0899	0901
@@E352	001	0055	0901	0903
@@E360	001	0056	0903	0905
@@E361	001	0057	0905	0907
@@E362	001	0058	0907	0909
@@E371	001	0059	0909	0911
@@E380	001	005A	0911	0913
@@E390	001	005B	0913	0915
@@E400	001	005C	0915	0917
@@E410	001	005D	0917	0919
@@E415	001	005E	0919	0921
@@E417	001	005F	0921	0923
@@E420	001	0060	0923	0925
@@E430	001	0061	0925	0927
@@E432	001	0062	0927	0929
@@E433	001	0063	0929	0931
@@E450	001	0064	0931	0933
@@E451	001	0065	0933	0935
@@E460	001	0066	0935	0937
@@E461	001	0067	0937	0939
@@E464	001	0068	0939	0941
@@E465	001	0069	0941	0943
@@E466	001	006A	0943	0945
@@E467	001	006B	0945	0947
@@E469	001	006C	0947	0949
@@E470	001	006D	0949	0951
@@E471	001	006E	0951	0953
@@E473	001	006F	0953	0955
@@E474	001	0070	0955	0957
@@E475	001	0071	0957	0959
@@E476	001	0072	0959	0961
@@E477	001	0073	0961	0963
@@E478	001	0074	0963	0965
@@E479	001	0075	0965	0967
@@E480	001	0076	0967	0969

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SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 29/05/22 PAGE 25

@@E481	001	0077	0969	0971	
@@E482	001	0078	0971	0973	
@@E483	001	0079	0973	0975	
@@E484	001	007A	0975	0977	
@@E485	001	007B	0977	0979	
@@E486	001	007C	0979	0981	
@@E487	001	007D	0981	0983	
@@E488	001	007E	0983	0985	
@@E489	001	007F	0985	0987	
@@E490	001	0080	0987	0989	
@@E491	001	0081	0989	0991	
@@E492	001	0082	0991	0993	
@@E493	001	0083	0993	0995	
@@E494	001	0084	0995	0997	
@@E495	001	0085	0997	0999	
@@E496	001	0086	0999	1001	
@@E497	001	0087	1001	1003	
@@E498	001	0088	1003	1005	
@@E500	001	0089	1005	1007	
@@E501	001	008A	1007	1009	
@@E530	001	008B	1009	1011	
@@E531	001	008C	1011	1013	
@@E535	001	008D	1013	1015	
@@E540	001	008E	1015	1017	
@@E541	001	008F	1017	1019	
@@E542	001	0090	1019	1021	
@@E543	001	0091	1021	1023	
@@E544	001	0092	1023	1025	
@@E545	001	0093	1025	1027	
@@E546	001	0094	1027	1029	
@@E547	001	0095	1029	1031	
@@E548	001	FFFF	1235		
@@E549	001	0096	1031	1033	1982
@@E550	001	0097	1033	1035	
@@E551	001	0098	1035	1037	
@@E552	001	0099	1037	1039	
@@E553	001	009A	1039	1041	
@@E554	001	009B	1041	1043	
@@E555	001	009C	1043	1045	
@@E556	001	009D	1045	1047	
@@E558	001	009E	1047	1049	
@@E570	001	009F	1049	1051	
@@E571	001	00A0	1051	1053	
@@E572	001	00A1	1053	1055	
@@E573	001	00A2	1055	1057	
@@E574	001	00A3	1057	1059	
@@E575	001	FFFF	1237		
@@E578	001	00A4	1059	1061	
@@E579	001	FFFF	1239		
@@E580	001	FFFF	1241		
@@E585	001	00A5	1061	1063	
@@E595	001	FFFF	1243		
@@E597	001	FFFF	1245		
@@E598	001	FFFF	1247		
@@E600	001	00A6	1063	1065	
@@E601	001	00A7	1065	1067	

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E602	001	00A8	1067	1069
@@E603	001	00A9	1069	1071
@@E604	001	00AA	1071	1073
@@E606	001	00AB	1073	1075
@@E607	001	00AC	1075	1077
@@E608	001	00AD	1077	1079
@@E609	001	00AE	1079	1081
@@E610	001	00AF	1081	1083
@@E611	001	00B0	1083	1085
@@E612	001	00B1	1085	1087
@@E613	001	00B2	1087	1089
@@E614	001	00B3	1089	1091
@@E700	001	00B4	1091	1093
@@E701	001	00B5	1093	1095
@@E710	001	00B6	1095	1097
@@E712	001	00B7	1097	1099
@@E713	001	00B8	1099	1101
@@E714	001	00B9	1101	1103
@@E715	001	00BA	1103	1105
@@E716	001	00BB	1105	1107
@@E717	001	00BC	1107	1109
@@E718	001	00BD	1109	1111
@@E720	001	00BE	1111	1113
@@E721	001	00BF	1113	1115
@@E723	001	00C0	1115	1117
@@E724	001	00C1	1117	1119
@@E725	001	00C2	1119	1121
@@E726	001	00C3	1121	1123
@@E727	001	00C4	1123	1125
@@E728	001	00C5	1125	1127
@@E729	001	00C6	1127	1129
@@E730	001	00C7	1129	1131
@@E732	001	00C8	1131	1133
@@E752	001	00C9	1133	1135
@@E753	001	00CA	1135	1137
@@E754	001	00CB	1137	1139
@@E755	001	00CC	1139	1141
@@E756	001	00CD	1141	1143
@@E757	001	00CE	1143	1145
@@E758	001	00CF	1145	1147
@@E759	001	00D0	1147	1149
@@E760	001	00D1	1149	1151
@@E761	001	00D2	1151	1153
@@E762	001	00D3	1153	1155
@@E763	001	00D4	1155	1157
@@E764	001	00D5	1157	1159
@@E765	001	00D6	1159	1161
@@E766	001	00D7	1161	1163
@@E767	001	00D8	1163	1165
@@E768	001	00D9	1165	1167
@@E769	001	00DA	1167	1169
@@E770	001	00DB	1169	1171
@@E771	001	00DC	1171	1173
@@E772	001	00DD	1173	1175
@@E773	001	00DE	1175	1177
@@E774	001	00DF	1177	1179

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SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 29/05/22 PAGE 27

@@E775	001	00E0	1179	1181												
@@E776	001	00E1	1181	1183												
@@E777	001	00E2	1183	1185												
@@E778	001	00E3	1185	1187												
@@E779	001	00E4	1187	1189												
@@E780	001	00E5	1189	1191												
@@E781	001	00E6	1191	1193												
@@E782	001	00E7	1193	1195												
@@E783	001	00E8	1195	1197												
@@E784	001	00E9	1197	1199												
@@E785	001	00EA	1199	1201												
@@E786	001	00EB	1201	1203												
@@E790	001	00EC	1203	1205												
@@E791	001	00ED	1205	1207												
@@E792	001	00EE	1207	1209												
@@E793	001	00EF	1209	1211												
@@E794	001	00F0	1211	1213												
@@E795	001	00F1	1213	1215												
@@E796	001	00F2	1215	1217												
@@E797	001	00F3	1217	1219												
@@E798	001	00F4	1219	1221												
@@E800	001	FFFF	1249													
@@E801	001	FFFF	1251													
@@E802	001	FFFF	1253													
@@E803	001	FFFF	1255													
@@E804	001	FFFF	1257													
@@E900	001	00F5	1221	1223												
@@E901	001	00F6	1223	1225												
@@E902	001	00F7	1225	1227												
@@E903	001	00F8	1227	1229												
@@E905	001	00F9	1229	1231												
@@E906	001	00FA	1231	1233												
@@E910	001	00FB	1233													
@ARR	001	0008	0016	1988	2102											
@ASIGN	001	007C	0071													
@ASTER	001	005C	0069													
@BCRDL	001	0050	0088													
@BE	001	0081	0043													
@BF	001	0090	0052													
@BH	001	0084	0041													
@BL	001	0082	0042													
@BLANK	001	0040	0065	2107	2113											
@BM	001	0082	0054													
@BNE	001	0001	0046	2098												
@BNH	001	0004	0044													
@BNL	001	0002	0045													
@BNM	001	0002	0057													
@BNOL	001	0020	0050													
@BNOZ	001	0008	0049													
@BNP	001	0004	0056													
@BNZ	001	0001	0058													
@BOL	001	00A0	0048													
@BOZ	001	0088	0047													
@BP	001	0084	0053													
@BR	001	0001	0013	1907	1923*	1925	1926	1927	1928	1932	1934	1940	1941	1942	1943	
				1946	1947	1949	1950	1951	1953	1955	1957	1960	1964	1965	1966	

[illegible]

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
@FLACE	001	0009	0197	
@FLDBC	001	0001	0196	
@FLENT	001	0004	0201	
@FLFNA	001	0002	0199	
@FLHLN	001	0002	0209	
@FLLNC	001	0002	0194	
@FLNSC	001	0001	0211	
@FLSD	001	0001	0207	
@HDRLN	001	0007	0092	0672
@IAR	001	0010	0017	
@INDEX	001	0001	0156	0157
@INST3	001	0003	0032	
@INST4	001	0004	0033	
@INST5	001	0005	0034	
@INST6	001	0006	0035	
@I1IAR	001	00C0	0020	
@LINSZ	001	00F4	0084	0646
@MAPEN	001	0005	0089	
@MINCR	001	2000	0083	
@MINUS	001	0060	0080	
@NOP	001	0080	0040	
@NUMBR	001	007B	0070	
@OPD2	001	0004	0029	
@OP1	001	0003	0027	1988* 2102*
@OP2	001	0005	0031	
@PCTRL	001	0000	0149	
@PDATA	001	0003	0151	
@PGCSZ	001	0020	0082	0083
@PPLNG	001	0004	0148	
@PRCNT	001	0001	0150	
@PRETR	001	00C0	0154	
@PRINT	001	0040	0152	0154
@PSR	001	0004	0015	
@PWAIT	001	00FF	0158	
@P1IAR	001	0020	0018	
@P2IAR	001	0040	0019	
@Q	001	0001	0024	2121
@REGL	001	0002	0012	1999
@RETRN	001	0080	0153	0154
@RLDWN	001	004F	0159	
@RTRNC	001	0080	0161	
@SBLN	001	0005	0170	
@SBLNL	001	0002	0184	
@SCTSZ	001	0100	0100	
@SDFLN	001	0007	0090	
@SDF0	001	0000	0166	
@SDF1	001	0001	0167	
@SDF2	001	0002	0168	
@SDF3	001	0003	0169	
@SECCY	001	0030	0086	
@SIST	001	0001	0181	
@SLASH	001	0061	0067	
@SLAST	001	0002	0183	
@SMIDL	001	0003	0182	
@SNULL	001	0080	0173	
@SONLY	001	0000	0180	

CROSS REFERENCE

SYMBOL	LEN	VALUE	DEFN	REFERENCES	VER 15, MOD 00	29/05/22	PAGE	30
@STEXT	001	0007	0172					
@STYPE	001	0006	0171					
@TBCNT	001	0000	0160					
@TBLEF	001	0010	0155	0157				
@TBLIX	001	0011	0157					
@UCB	001	0087	0039	2099 2110				
@UPARW	001	005A	0078					
@VADDR	001	0002	0141					
@VENTA	001	0056	0113					
@VMDDV	001	00FE	0114					
@VMFD1	001	0000	0109					
@VMFD2	001	0001	0110					
@VMRS3	001	0002	0112					
@VMTRL	001	0001	0111					
@VOLID	001	0006	0091					
@VQ	001	0001	0025					
@WSFIT	001	0500	0101					
@WSTBL	001	0503	0102					
@XR	001	0002	0014	1924* 1927 1930 1932 1934 1939 1939* 1943 1944 1946 1948 1948* 1952 1955* 1963 1963* 1967 1968 1970 1972 1972* 1975* 1983* 1989 1991* 2103 2106 2106* 2107 2109 2112 2112* 2113 2115 2117				
@ZERO	001	0000	0062					
KWRBSE	004	0C33	1994	1907 1923				
KWRCMP	002	0CF0	2001	1960				
KWRCRD	001	0002	1997	1934 1934 1946 1946 1948 1963				
KWRCRT	003	0CF5	2003	1934 1946				
KWRDSP	002	0CEE	2000	1978				
KWRITE	001	0C07	1922					
KWRPRD	001	0006	1996	1932 1932 1939 1970 1970 1972				
KWRPRN	002	0CF2	2002	1986				
KWRPRT	007	0CFC	2004	1932 1970				
KWRXRS	002	0CEC	1999	1927* 1943* 1967* 1991				
KWR070	004	0C33	1936	1947 1953 1971 1992 1994				
KWR080	004	0C37	1937	1926 1931 1941 1950 1957 1965 1977 1985				
KWR100	003	0C3B	1939	1933				
KWR150	003	0C5A	1949	1973				
KWR200	003	0C86	1963	1935				
KWR250	004	0CA8	1974	1969				
KWR300	006	0CBB	1979	1961				
KWR600	004	0CC4	1982	1945 1959				
KWR700	004	0CD7	1987	1980				
KWR800	003	0CDB	1988	1942 1951 1966				
KWR810	004	0CE1	1990	1988*				
SCACNT	002	0D3D	2127	2117* 2118*				
SCACOF	001	0087	2099					
SCACOM	001	0001	2098	1928				
SCAERR	001	0469	1995					
SCAINC	001	0001	2097	2106 2112				
SCAMMA	003	0D1A	2121	1928*				
SCANIT	001	0CFD	2101	1925 1940 1949 1964				
SCASVE	002	0D3B	2126	2103* 2118				
SCASV1	001	0D3A	2125					
SCA100	003	0D0C	2106	2108				
SCA200	003	0D0F	2107	2105				
SCA250	003	0D19	2110	2121				
SCA300	003	0D1C	2112	2114				

CROSS REFERENCE

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SCA400 004 0D2C 2117 2110
SCA500 004 0D36 2120 2102* 2116

TOTAL STATEMENTS IN ERROR IN THIS ASSEMBLY = 0

OL105 I THE CODE LENGTH OF #KWRT IS 3390 DECIMAL.
OL103 I TOTAL NUMBER OF LIBRARY SECTORS REQUIRED IS 2
 NAME-#KWRT,PACK-R1R1R1,UNIT-R1,RETAIN-P,LIBRARY-R,CATEGORY-000

START ADDRESS	CATEGORY	NAME AND ENTRY	CODE LENGTH HEXADECIMAL	DECIMAL
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0C00	0	#KWrit	0D3E	3390
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OL100	I	THE TOTAL CORE USED BY #KWrit IS 3390 DECIMAL.		
OL101	I	THE START CONTROL ADDRESS OF THIS MODULE IS 0C00.		
OL104	I	TOTAL NUMBER OF LIBRARY SECTORS REQUIRED IS 14		
		NAME-#KWrit,PACK-R1R1R1,UNIT-R1,RETAIN-P,LIBRARY-O		