



# DECUS

## PROGRAM LIBRARY

DECUS NO.	12-67
TITLE	PPG FOCAL
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COMPANY	Digital Equipment Corporation Pittsburgh, Pennsylvania
DATE	February 11, 1972
SOURCE LANGUAGE	LAP6-DIAL



## PPG FOCAL

DECUS Program Library Write-up

DECUS NO. 12-67

### ABSTRACT

PPG FOCAL is a modification of DECUS NO. 12-24. It combines the overlays \$DEVICE, \$CHARSIZ, and \$DTOA. The only change from the DECUS NO. 12-24 description of these overlays are the functions used.

\$CHARSIZ uses FNEW  
\$DEVICE uses FX  
\$DTOA uses FZ

The following functions have been removed:

FATN FCOS FSIN FEXP FLOG

The system does not check for a negative sign when doing a square root.

PPG FOCAL has room for approximately 200 variables.

### OPERATING INSTRUCTIONS

The program is loaded under LAP6/DIAL-MS by

—>LO FOCL-12K, unit ↓

Otherwise the program operates just as does FOCAL-12. (Document available from Digital Equipment Program Library as DEC-12-AJAA-D).

```

0000          *20
0001          PMODE
0002          /SCOPE SIZE USE FNEW
0003          /DEVICE (RELAYS & SENSE SW ) USE FX
0004          /DAC USE FZ
0005          FEXP=5350
0006          *BOTTOM
0007          0035  4737  FZ-7
0010          *3352
0011          3352  7000  NOP
0012          PFZ=412
0013          PFX=PFZ-1
0014          PFNEW=PFZ-2
0015          *PFNEW
0016          0410  5150  FNEW
0017          PWAFAKE=5161
0020          FX=5000
0021          FNEW=5150
0022          FZ=4746
0023          ERROR5=2725
0024          *PFZ
0025          0412  4746  FZ
0026          *PFX
0027          0411  5000  FX
0030          *402
0031          0402  2725  ERROR5
0032          0403  2725  ERROR5
0033          0404  2725  ERROR5
0034          0405  2725  ERROR5
0035          0406  2725  ERROR5
0036          *FNEW
0037          5150  6002  FNEW, IOF
0040          5151  1123  TAD 123
0041          5152  6141  LINC
0042          LMODE
0043          1153  0004  ESF
0044          1154  0002  PDP
0045          PMODE
0046          5155  7200  CLA
0047          5156  6001  ION
0050          5157  5536  JMP I 136
0051          /FX FOR ADDITIONAL FUNCTIONS
0052          /PRELIMINARY VERSION PER
0053          /DAVE COPE.
0054          /IMPLEMENTS FUNCTIONS AS
0055          /DESCRIBED ON PAGE 61
0056          /LAB. COMPUTER HANDBOOK.
0057          /15 JAN 1971.
0060          /
0061          PMODE
0062          BOTTOM=35
0063          FLAC=44
0064          EFUN31=136
0065          INTEGE=53

```

0066			/		
0067			/		
0070				*FX	
0071	5000	4453	FX,	JMS I INTEGE	/GET INTEGER ARG
0072	5001	6002		IOF	/FOR LMODE CODE
0073	5002	6141		LINC	
0074				LMODE	
0075	1003	1060		STA I	
0076	1004	0000	ARG,	0	/HOLD ARG
0077	1005	0011		CLR	
0100	1006	2000		ADD 0	
0101	1007	5147		STC ZERO	
0102	1010	3004		ADD ARG	
0103	1011	3035		ADD M5	
0104	1012	0471		APO I	/SENSE SWITCHES?
0105	1013	7041		JMP NOTSNS	/NO
0106	1014	1000		LDA	/YES
0107	1015	1004		ARG	
0110	1016	3036		ADD ISNSI	/FORM SNS I N
0111	1017	5020		STC .+1	
0112	1020	0000		0	/SNS I N
0113	1021	3037		ADD ONE	/SW=1
0114	1022	0002	EXIT,	PDP	/SW=0
0115				PMODE	
0116	5023	3046		DCA FLAC+2	/STORE ANSWER
0117	5024	3045		DCA FLAC+1	
0120	5025	1240		TAD 027	
0121	5026	3044		DCA FLAC	
0122	5027	6141		LINC	
0123				LMODE	
0124	1030	3147		ADD ZERO	/RESTORE LOC 0
0125	1031	4000		STC 0	
0126	1032	0002		PDP	
0127				PMODE	
0130	5033	6001		ION	
0131	5034	5536		JMP I EFUN3I	/BACK TO FOCAL.
0132				LMODE	
0133	1035	7772	M5,	-5	
0134	1036	0460	ISNSI,	SNS I	
0135	1037	0001	ONE,	1	
0136	1040	0027	027,	27	
0137			/		
0140			/		
0141	1041	3051	NOTSNS,	ADD M2	/HERE WITH ARG-5
0142	1042	0471		APO I	/LSW OR RSW?
0143	1043	7053		JMP STATUS	/NEITHER
0144	1044	0017		COM	/AC=-1 FOR LSW, OR -0 F
			OR RSW		
0145	1045	3052		ADD ISW	/FORM LSW OR RSW
0146	1046	5047		STC .+1	
0147	1047	0000		0	
0150	1050	7022		JMP EXIT	
0151	1051	7775	M2,	-2	
0152	1052	0516	ISW,	RSW	
0153			/		
0154			/		

0155	1053	3073	STATUS,	ADD M28	/HERE WITH ARG-7.
0156	1054	0471		APO I	/RELAYS?
0157	1055	7121		JMP XSENS	/NO, SENSE LINES
0160	1056	5004		STC ARG	/YES
0161	1057	0015		RTA	/GET RELAY STATUS
0162	1060	5120		STC RELAYS	
0163	1061	3004		ADD ARG	
0164	1062	3072		ADD P6	
0165	1063	0451		APO	/CLOSE RELAYS?
0166	1064	7074		JMP OPEN	/NO
0167	1065	7137		JMP GETBIT	/SET AC BIT
0170	1066	1600		BSE	
0171	1067	1120		RELAYS	/OR WITH RELAYS
0172	1070	0014		ATR	
0173	1071	7022		JMP EXIT	
0174	1072	0006	P6,	6	
0175	1073	7743	M28,	-34	
0176			/		
0177			/		
0200	1074	3105	OPEN,	ADD P10	
0201	1075	0451		APO	/OPEN RELAYS?
0202	1076	7106		JMP READX	/NO, READ STATUS
0203	1077	7137		JMP GETBIT	/YES
0204	1100	0017		COM	
0205	1101	0002		PDP	
0206				PMODE	
0207	5102	0320		AND RELAYS	
0210	5103	6141		LINC	
0211				LMODE	
0212	1104	7070		JMP OPEN-4	
0213	1105	0012	P10,	12	
0214			/		
0215			/		
0216	1106	3105	READX,	ADD P10	
0217	1107	7137		JMP GETBIT	
0220	1110	0002		PDP	
0221				PMODE	
0222	5111	0320		AND RELAYS	
0223	5112	6141		LINC	
0224				LMODE	
0225	1113	0470		AZE I	/RELAY CLOSED?
0226	1114	7022		JMP EXIT	/NO
0227	1115	0011		CLR	/YES
0230	1116	3037		ADD ONE	
0231	1117	7022		JMP EXIT	
0232	1120	0000	RELAYS,	0	
0233			/		
0234			/		
0235	1121	3135	XSENS,	ADD M20	
0236	1122	0451		APO	/SENSE LINES?
0237	1123	7126		JMP .+3	/YES
0240	1124	0011		CLR	/NO, INVALID ARG
0241	1125	7022		JMP EXIT	
0242	1126	3136		ADD P15	
0243	1127	1120		ADA I	
0244	1130	0420		SXL I	

0245	1131	5132	STC	+.1	
0246	1132	0000		0	/SXL I N
0247	1133	3037	ADD	ONE	
0250	1134	7022	JMP	EXIT	
0251	1135	7753	M20,	-24	
0252	1136	0017	P15,	17	
0253			/		
0254			/		
0255	1137	0017	GETBIT,	COM	
0256	1140	3072	ADD	P6	/WE MUST FORM A
0257	1141	1120	ADA	I	/BIT IN THE AC
0260	1142	0240	ROL		/CORRESPONDING
0261	1143	5145	STC	+.2	/TO THE
0262	1144	3037	ADD	ONE	/REQUIRED RELAY.
0263	1145	0000		0	
0264	1146	6000	JMP	0	
0265			/		
0266	1147	0000	ZERO,	0	
0267			/		
0270			PMODE		
0271			ERROR2=	4566	
0272			EVAL=	1613	
0273			PUSHJ=	4540	
0274			CHAR=	66	
0275			/12K EXTENSION FOR FOCAL-12		
0276			/TEXT IS IN FIELD 2; VARIABLES AND PDL, IN FIELD 0		
0277			PMODE		
0300			AXIN=	10	
0301			AXOUT=	17	
0302			BUFR=	60	
0303			CFRS=	133	
0304			CHFLAG=	147	
0305			COMBOT=	226	
0306			COMBUF=	132	
0307			COMEIN=	3140	
0310			C200=	123	
0311			DGRP1=	441	
0312			DOK=	2113	
0313			DOONE=	463	
0314			END=	134	
0315			ENDT=	135	
0316			ERG=	2227	
0317			ERT=	2216	
0320			ERV=	2221	
0321			ERVX=	2241	
0322			FEND3=	2267	
0323			FILSTR=	1326	
0324			FINDN=	2250	
0325			GET3=	2345	
0326			GOTO=	603	
0327			GS1=	1435	
0330			GTEM=	21	
0331			INBUF=	34	
0332			INPUTX=	271	
0333			ITSAGO=	1736	
0334			LASTV=	31	

0335\			LINE1=111
0336			LINENO=67
0337			LLOAD=1203
0340			LSAVE=1233
0341			LSBLK=1324
0342			M100=101
0343			OP=3115
0344			O6000=173
0345			O7=1776
0346			P=0
0347			PACX=2530
0350			PC=22
0351			PCK1=2535
0352			PT1=30
0353			PWAIT=174
0354			QADD=61
0355			RECOVR=2740
0356			RECOVX=2761
0357			RETRN=1563
0360			RITEOU=3651
0361			ROT=2557
0362			RUB3=3030
0363			SCONT=1266
0364			SRETN=261
0365			START=177
0366			T=20
0367			TDUMP=3052
0370			THISLN=23
0371			TSTGRP=4563
0372			WAIT=7657
0373			WALL=664
0374			WTEST2=653
0375			XENDLN=2360
0376			XGETOUT=1254
0377			XI33=2666
0400			XOUTL=2676
0401			XR1=14
0402			XR2=15
0403			XRT=11
0404			FIELD 0
0405			LINE0=100
0406			*PC
0407	0022	0000	0
0410			*LASTV
0411	0031	3140	COMEIN
0412			*BUFR
0413	0060	0111	LINE1
0414			*COMBUF
0415	0132	0010	10
0416			*CFRS
0417	0133	0100	LINE0 /START OF TEXT
0420			*ENDT
0421	0135	0111	LINE1
0422			*PWAIT
0423	0174	5302	DTHIS, THISD /THISLN
0424			*START+2
0425	0201	7000	NOP



0426			*COMBOT		
0427	0226	0100	LINE0		
0430			*SRETN-5		
0431	0254	4655	JMS I .+1	/DCA I AXIN	
0432	0255	5171	DAXINFAK		
0433			*INPUTX+2		
0434	0273	4674	JMS I .+1		
0435	0274	5255	DPCFAKE		
0436			*DGRP1-4		
0437	0435	4636	JMS I .+1	/TAD I XRT IN OTHER D	
			•F.		
0440	0436	5207	DXRTFAKE		
0441			*DGRP1+4		
0442	0445	4646	JMS I .+1		
0443	0446	5255	DPCFAKE		
0444			*DOONE-6		
0445	0455	4656	JMS I .+1	/TAD I PT1 IN OTHER DF	
0446	0456	5225	PT1DF1		
0447			*DOONE-3		
0450	0460	4661	JMS I .+1		
0451	0461	5236	PT1DF2		
0452			*WTEST2-1		
0453	0652	4574	JMS I DTHIS	/TAD I THISLN	
0454			*WALL-4		
0455	0660	4661	JMS I .+1	/TAD I PT1	
0456	0661	5245	PT1DF3		
0457			*WALL		
0460	0664	4665	JMS I .+1		
0461	0665	5236	PT1DF2		
0462			*SCONT-4		
0463	1262	4663	JMS I .+1	/DCA I AXIN)	
0464	1263	5171	DAXINFAK		
0465			*GS1+6		
0466	1443	1134	TAD END		
0467			*RETRN		
0470	1563	7000	NOP		
0471			*DOK-4		
0472	2107	6221	CDF T		
0473			*ERV-1		
0474	2220	6221	CDF T		
0475	2221	3533	DCA I CFRS	/LEAVE THE VARIABLES ALONE	
0476	2222	6201	CDF P		
0477			*ERG+4		
0500	2233	4574	JMS I DTHIS	/TAD I THISLN	
0501	2234	4563	TSTGRP		
0502	2235	5177	JMP START		
0503	2236	4574	JMS I DTHIS		
0504			*ERVX		
0505	2241	1134	TAD END		
0506			*FINDN+4		
0507	2254	4655	JMS I .+1		
0510	2255	5216	DXRTFK		
0511			*FEND3-3		
0512	2264	4574	JMS I DTHIS		
0513			*GET3		
0514	2345	4746	JMS I .+1		
0515	2346	5265	DXOFAKE		

0516			*XENDLN+1		
0517	2361	6221		CDF T	
0520			*XENDLN+14		
0521	2374	6201		CDF P	
0522	2375	5760		JMP I XENDLN	
0523			*PACX		
0524	2530	6201		CDF P	
0525			*PCK1+4		
0526	2541	4742		JMS I .+1	/CLEAR
0527	2542	5200		FDAXIND	
0530	2543	7100		CLL	
0531	2544	1101		TAD M100	/CMD BF ENDS
0532	2545	7000		NOP	/FLD,LOC.100
0533	2546	1010		TAD AXIN	/INPUT PTR
0534	2547	7640		SZA CLA	
0535			/MAKING CODING ROOM		
0536			*XI33+1		
0537	2667	4670		JMS I .+1	
0540	2670	5161		PWAFAKE	
0541	2671	7657	PWAIT1, WAIT		
0542			*XOUTL+5		
0543	2703	4671		JMS I PWAIT1	
0544			*RECOVR+10		
0545	2750	6201		CDF	
0546			*RECOVX+6		
0547	2767	4770		JMS I .+1	
0550	2770	5255		DPCFAKE	
0551			*RUB3-10		
0552	3020	6221		CDF T	
0553			*TDUMP		
0554	3052	1134		TAD END	
0555			*TDUMP+10		
0556	3062	5716		JMP I OP+1	
0557			*OP		
0560	3115	0003		0003	
0561	3116	5274		TDUMPX	
0562			*RITEOU-3		/SET UP FIELD 2 HDR
0563	3646	5647		JMP I .+1	
0564	3647	4000		SETFL2	
0565				*4000	
0566	4000	1232	SETFL2,	TAD M10	
0567	4001	3237		DCA MOVCTR	
0570	4002	1234		TAD DUMMY	
0571	4003	3014		DCA XR1	
0572	4004	1235		TAD REALOC	
0573	4005	3015		DCA XR2	
0574	4006	6201	LOOP1,	CDF P	
0575	4007	1414		TAD I XR1	
0576	4010	6221		CDF T	
0577	4011	3415		DCA I XR2	
0600	4012	2237		ISZ MOVCTR	
0601	4013	5206		JMP LOOP1	
0602	4014	1233		TAD M11	
0603	4015	3237		DCA MOVCTR	
0604	4016	1236		TAD RELOC2	
0605	4017	3015		DCA XR2	

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0606      4020  6201  LOOP2,  CDF P
0607      4021  1414          TAD I XR1
0610      4022  6221          CDF T
0611      4023  3415          DCA I XR2
0612      4024  2237          ISZ MOVCTR
0613      4025  5220          JMP LOOP2
0614      4026  6201          CDF P
0615      4027  6001          ION
0616      4030  5631          JMP I .+1
0617      4031  2216          ERT
0620      4032  7770  M10,    -10
0621      4033  7767  M11,    -11
0622      4034  4037  DUMMY,  TABLE-1
0623      4035  7777  REALOC, -1
0624      4036  0077  RELOC2, 77
0625      4037  0000  MOVCTR, 0
0626      4040  0000  TABLE, 0          /ZERO PC
0627      4041  0000          0
0630      4042  0000          0          /TDUMP DATA
0631      4043  0000          0
0632      4044  0000          0
0633      4045  5051          5051
0634      4046  0060          BUFR
0635      4047  0111          LINE1
0636      /10-77:COMMAND INPUT BUFFER
0637      /*LINE0-START OF TEXT
0640      4050  0000          0
0641      4051  0000          0
0642      4052  0355
0642      4053  6162
0642      4054  1340
0642      4055  0617
0642      4056  0314
0642      4057  6162
0642      TEXT ZC-12K FOCL12Z
0643      4060  7715          7715
0644      /*ST12K; START 12K USER FILE AT THIS ADDRESS,111.
          (LINE1=111)
0645      *PWAFAKE
0646      5161  0000  PWAFAKE,  0
0647      5162  2361          ISZ PWAFAKE
0650      5163  2361          ISZ PWAFAKE
0651      5164  1034          TAD INBUF
0652      5165  7450          SNA
0653      5166  4770          JMS I WAIT1
0654      5167  5761          JMP I PWAFAKE
0655      5170  7657  WAIT1,  WAIT
0656      5171  0000  DAXINFAK,  0
0657      5172  1067          TAD LINENO
0660      5173  6221          CDF T
0661      5174  3410          DCA I AXIN
0662      5175  6201          CDF P
0663      5176  2371          ISZ DAXINFAK
0664      5177  5771          JMP I DAXINFAK

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0665	5200	0000	FDAXIND,	0
0666	5201	6221		CDF T
0667	5202	3410		DCA I AXIN
0670	5203	6201		CDF P
0671	5204	3061		DCA QADD
0672	5205	2200		ISZ FDAXIND
0673	5206	5600		JMP I FDAXIND
0674	5207	0000	DXRTFAK,	0
0675	5210	3011		DCA XRT
0676	5211	6221		CDF T
0677	5212	1411		TAD I XRT
0700	5213	6201		CDF P
0701	5214	2207		ISZ DXRTFAK
0702	5215	5607		JMP I DXRTFAK
0703	5216	0000	DXRTFK,	0
0704	5217	7141		CLL CMA IAC
0705	5220	6221		CDF T
0706	5221	1411		TAD I XRT
0707	5222	6201		CDF P
0710	5223	2216		ISZ DXRTFK
0711	5224	5616		JMP I DXRTFK
0712	5225	0000	PT1DF1,	0
0713	5226	2225		ISZ PT1DF1
0714	5227	6221		CDF T
0715	5230	1430		TAD I PT1
0716	5231	6201		CDF P
0717	5232	4563		TSTGRP
0720	5233	5625		JMP I PT1DF1
0721	5234	2225		ISZ PT1DF1
0722	5235	5625		JMP I PT1DF1
0723	5236	0000	PT1DF2,	0
0724	5237	6221		CDF T
0725	5240	1430		TAD I PT1
0726	5241	6201		CDF P
0727	5242	3067		DCA LINENO
0730	5243	2236		ISZ PT1DF2
0731	5244	5636		JMP I PT1DF2
0732	5245	0000	PT1DF3,	0
0733	5246	2245		ISZ PT1DF3
0734	5247	7710		SPA CLA
0735	5250	5645		JMP I PT1DF3
0736	5251	6221		CDF T
0737	5252	1430		TAD I PT1
0740	5253	6201		CDF P
0741	5254	5645		JMP I PT1DF3
0742	5255	0000	DPCFAKE,	0
0743	5256	2255		ISZ DPCFAKE
0744	5257	6221		CDF T
0745	5260	1422		TAD I PC
0746	5261	6201		CDF P
0747	5262	7440		SZA
0750	5263	2255		ISZ DPCFAKE
0751	5264	5655		JMP I DPCFAKE
0752	5265	0000	DXOFAKE,	0
0753	5266	6221		CDF T
0754	5267	1417		TAD I AXOUT
0755	5270	6201		CDF P

0756	5271	3021		DCA	GTEM	
0757	5272	2265		ISZ	DXOFAKE	
0760	5273	5665		JMP	I DXOFAKE	
0761	5274	6221	TDUMPX,	CDF	T	
0762	5275	3700		DCA	I .+3	
0763	5276	6201		CDF	P	
0764	5277	5701		JMP	I .+2	
0765	5300	0004			4	
0766	5301	3063		TDUMP	+11	
0767	5302	0000	THISD,		0	
0770	5303	6221		CDF	T	
0771	5304	1423		TAD	I THISLN	
0772	5305	6201		CDF	P	
0773	5306	5702		JMP	I THISD	
0774			/			
0775			/	THIS	RTN SAVES OR LOADS	FIELD 2 TEXT
0776			/			
0777	5307	0000	DIALIO,	0		/TEMP
1000	5310	7774	PREAD,	7774		
1001	5311	1326	PFILSTR,		FILSTR	
1002	5312	1324	PLSBLK,	LSBLK		
1003	5313	0000	PTR,	0		/UNIT
1004	5314	0040		40		/FIELD 2
1005	5315	0000		0		/STARTING TBLK
1006	5316	0020		20		/ALL OF FIELD 2
1007	5317	7001	WRITE,	IAC		/7775 FOR WRITE
1010	5320	1310	READ,	TAD	PREAD	/7774 FOR READ
1011	5321	3307		DCA	DIALIO	
1012	5322	6211		CDF	10	
1013	5323	1712		TAD	I PLSBLK	/UNIT
1014	5324	3313		DCA	PTR	
1015	5325	7307		CLA	CLL IAC RTL	/4
1016	5326	1711		TAD	I PFILSTR	/STARTING TBLK
1017	5327	6201		CDF	0	
1020	5330	3315		DCA	PTR+2	
1021	5331	6212		CIF	10	
1022	5332	4707		JMS	I DIALIO	/READ OR WRITE
1023	5333	5313		PTR		
1024	5334	6001		ION		
1025	5335	7201		CLA	IAC	
1026	5336	6211		CDF	10	
1027	5337	2747		ISZ	I PCHFLAG	
1030	5340	7200		CLA		
1031	5341	6203		CDF	CIF 0	
1032	5342	7640		SZA	CLA	
1033	5343	5746		JMP	I PGOTO	
1034	5344	5745		JMP	I .+1	
1035	5345	0177		START		
1036	5346	0603	PGOTO,	GOTO		
1037	5347	0147	PCHFLAG,		CHFLAG	
1040			/			
1041			/	FIELD	1	CHANGES FOR SAVING AND LOADING PROGRAMS
1042			/			
1043				FIELD	1	
1044				*06000		
1045	0173	7754	MLENGTH,		7754	/COMP OF ID
1046	0174	0024	XLENGTH,		24	/24 TBLKS; ALSO NEW ID

1047				*LLOAD+6	
1050	1211	1174		TAD XLENGTH	/NEW LENGTH IS 24 TBLKS
1051				*LSAVE-6	
1052	1225	1173		TAD MLENGTH	/1ST WD MUST BE 24
1053				*LSAVE-1	
1054	1232	5257		JMP XGETOUT+3	
1055				*LSAVE+3	
1056	1236	1174		TAD XLENGTH	/24 TBLKS
1057				*XGETOUT-5	
1060	1247	1174		TAD XLENGTH	/ID IS 24
1061				*XGETOUT	
1062	1254	6203		CDF CIF	
1063	1255	5656		JMP I .+1	
1064	1256	5317		WRITE	
1065	1257	6203		CDF CIF	
1066	1260	5661		JMP I .+1	
1067	1261	5320		READ	
1070				*ITSAGO+3	
1071	1741	1377		TAD X6000	/MAKING CODING ROOM
1072				*07+1	
1073	1777	6000	X6000,	6000	
1074				FIELD 0	
1075				*FZ	
1076	4746	4453	FZ,	JMS I INTEGER	/GET VALUE
1077	4747	3375		DCA VALUE	/SAVE IT
1100	4750	1066		TAD CHAR	/GET NEXT CHAR
1101	4751	1373		TAD MCOMMA	/WHICH SHOULD BE COMMA
1102	4752	7640		SZA CLA	
1103	4753	4566		ERROR2	/BUT ISNT
1104	4754	4540		PUSHJ	/IT IS
1105	4755	1612		EVAL-1	/GET CHANNEL
1106	4756	4453		JMS I INTEGER	
1107	4757	7100		CLL	
1110	4760	7550		SPA SNA	/MUST BE 1 - 6
1111	4761	4566		ERROR2	/<=0
1112	4762	1374		TAD P7771	
1113	4763	7430		SZL	
1114	4764	4566		ERROR2	/>6
1115	4765	1376		TAD M1221	/MAKE A DACSN
1116	4766	3370		DCA .+2	/WHICH = 655N
1117	4767	1375		TAD VALUE	/GET VALUE
1120	4770	7402		HLT	/AND DO THE D/A
1121	4771	7300		CLA CLL	
1122	4772	5536		JMP I EFUN3I	
1123	4773	7524	MCOMMA,	-254	
1124	4774	7771	P7771,	7771	
1125	4775	0000	VALUE,	0	
1126	4776	6557	M1221,	-1221	
1127				XLO=126	
1130				XLC=130	
1131				XLL=132	
1132				*FZ-6	
1133	4740	6213	LO,	6213	
1134	4741	5126		JMP XLO	
1135	4742	6213	LC,	6213	
1136	4743	5130		JMP XLC	

1137	4744	6213	LL,	6213
1140	4745	5132		JMP XLL
1141				*6360
1142	6360	4740		LO
1143	6361	4742		LC
1144	6362	2572		2572
1145	6363	4744		LL
1146				LISTAPE-7

NO ERRORS

ARG	5004
AXIN	0010
AXOUT	0017
BOTTOM	0035
BUFR	0060
CFRS	0133
CHAR	0066
CHFLAG	0147
COMBOT	0226
COMBUF	0132
COMEIN	3140
C200	0123
DAXINF	5171
DGRP1	0441
DIALIO	5307
DOK	2113
DOONE	0463
DPCFAK	5255
DTHIS	0174
DUMMY	4034
DXOFAK	5265
DXRTFA	5207
DXRTFK	5216
EFUN3I	0136
END	0134
ENDT	0135
ERG	2227
ERROR2	4566
ERROR5	2725
ERT	2216
ERV	2221
ERVX	2241
EVAL	1613
EXIT	5022
FDAXIN	5200
FEND3	2267
FEXP	5350
FILSTR	1326
FINDN	2250
FLAC	0044
FNEW	5150
FX	5000
FZ	4746

GETBIT	5137
GET3	2345
GOTO	0603
GS1	1435
GTEM	0021
INBUF	0034
INPUTX	0271
INTEGE	0053
ISNS1	5036
ISW	5052
ITSAGO	1736
LASTV	0031
LC	4742
LINENO	0067
LINE0	0100
LINE1	0111
LL	4744
LLOAD	1203
LO	4740
LOOP1	4006
LOOP2	4020
LSAVE	1233
LSBLK	1324
MCOMMA	4773
MLENGT	0173
MOVCTR	4037
M10	4032
M100	0101
M11	4033
M1221	4776
M2	5051
M20	5135
M28	5073
M5	5035
NOTSNS	5041
ONE	5037
OP	3115
OPEN	5074
O27	5040
O6000	0173
O7	1776
P	0000
PACX	2530
PC	0022
PCHFLA	5347
PCK1	2535
PFILST	5311
PFNEW	0410
PFX	0411
PFZ	0412
PGOTO	5346
PLSBLK	5312
PREAD	5310
PTR	5313
PT1	0030



PT1DF1	5225
PT1DF2	5236
PT1DF3	5245
PUSHJ	4540
PWAFK	5161
PWAIT	0174
PWAIT1	2671
P10	5105
P15	5136
P6	5072
P7771	4774
QADD	0061
READ	5320
READX	5106
REALOC	4035
RECOVR	2740
RECOVX	2761
RELAYS	5120
RELOC2	4036
RETRN	1563
RITEOU	3651
ROT	2557
RUB3	3030
SCONT	1266
SETFL2	4000
SRETN	0261
START	0177
STATUS	5053
T	0020
TABLE	4040
TDUMP	3052
TDUMPX	5274
THISD	5302
THISLN	0023
TSTGRP	4563
VALUE	4775
WAIT	7657
WAIT1	5170
WALL	0664
WRITE	5317
WTEST2	0653
XENDLN	2360
XGETOU	1254
XI33	2666
XLC	0130
XLENGT	0174
XLL	0132
XLO	0126
XOUTL	2676
XRT	0011
XR1	0014
XR2	0015
XSENS	5121
X6000	1777
ZERO	5147

