

PDP-11/44 Processor Maintenance

Supplementary Listings

PDP-11/44 Processor Maintenance Supplementary Listings

Course Number
EY-C3245-LE-001
(J6038)

Part Number
EY-C3012-RB-001

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;1007 ; 1144 FLOWS ETC
;1008 ;REV U -14 SEPT 79 FIX BUF GETS FPS FOR CORRECT ABORTS
;1009 ;BASE MACHINE CODE UNCHANGED FROM REV T
;1010 ;REV T -5 SEPT 79 ADD BACK LOC 1002 TO SAVE A PROM !
;1011 ;ALSO FIX BUG IN STST INST.
;1012 ;REV S - 22 AUG 79 1ST ATTEMPT TO FIX FP I/D SPACE
;1013 ;REV R - 19 JUL 79 - FIX CSM AND SR1 LOAD IN MTP1(D)
;1014 ;REV Q - 6 JUN 79 - MFM SERVICE STATE
;1015 ;REV M -20 APR 79 -KERNEL RTI
;1016 ;REV K -CALL SUPER,SPL -29 MAR 79
;1017 ;REV J -19 MARS 79 CLEANUP 2
;1018 ;REV I - 23 FEB 79 \REDEF ID SPACE,D SP MACRO =ID SP MACRO
;1019 ;REV H -29 DEC 78 - FINAL EDIT FIRST PASS
;1020 ;REV G - 5 DEC 78 COMBINED BASE FLOWS WITH FP FLOWS REV C FP)
;1021 ;REV F 27 NOV 78 1144 FUNCTIONALITY
;1022 ;REV E -15 SEP 78 - 1144 FUNCTIONALITY
;1023 ;22 AUG 78 - DEL MULT DEF 7-E;CHANGE BUT IR9 TOBUT DEST
;1024 ;28 AUG 78- ADD STATE TO ALLOW BUT DEST AND C-16IN MULT
;1025 ;30 AUG 78 - CHANGE R17 TO R15 SCRATCH REG
;1026 ;11 SEP 78 - FIX TARGET FOR MFPT
;1027 ;15 SEP 78 - FIX SHIFT RIGHT TARGETS
;1028 ;27 NOV 78 - R17 TO R10 SCRATCH REG,CIS EDIT
;1029 ;7 DEC 78 - ADD FIXES FROM FP DEBUG (CC_FP)
;1030 ;28 DEC 78 - EDIT COMBINED FIXES + MTP1,D &MFPI,D
;1031 ;9 JAN 79 - FINAL CLEANUP
;1032 ;23 FEB 79 - REDEF ID SPACE,D SP = ID SP
;1033 ;9 MAR 79 FIX MOV DEST TARGETS
;1034 ;19 MARS 79 - CLEANUP 2
;1035 ;27 MAR 79 CHANGE WRITE NO LOAD TARGET,SPL CSM
;1036 ;10 APR 79 -FIX RTI
;1037 ;29 MAY 79 -FIX WAIT R15,TRAP BUT NOSERV
;1038
;1039
U 0000, 0010,6045,0001,4166,3340,3033,4000,0422,017 ;1040 000: 1-A: R15_UDATA,BUT SERVICE,J/1-B,SR1 Z
;1041
U 0010, 0015,6345,0300,0146,1740,3033,4000,0000,017 ;1042 010: 1-B: BA_PC,DATI,IR B_UDATA,SR1 Z,J/1-C,I SPACE,FPP_IR
;1043
U 0015, 0000,2064,0401,4140,1746,3633,4000,0150,177 ;1044 015: 1-C: BX_PC_PC+2,BUF_FPS,J/1-A
;1045
U 0200, 0000,2645,4031,2140,3700,3033,4000,0422,017 ;1046 200: 2-A: RD_(RS OP B),LOAD CC,BUT NOSERV,J/1-A
;1047
U 0140, 0200,2045,0200,0140,3640,3033,4000,0422,017 ;1048 140: 2-B: B_RD,J/2-A
;1049
U 0270, 0201,2045,0200,0140,3640,3033,4000,0422,017 ;1050 270: 2-C: B_RD,J/2-D
;1051
U 0201, 0000,2645,4000,2140,3700,3033,4000,0422,017 ;1052 201: 2-D: T_RS OP B,LOAD CC,BUT NOSERV,J/1-A
;1053
U 0240, 0204,2045,0200,0140,3700,3033,4000,0422,017 ;1054 240: 2-E: B_RS,J/2-F
;1055
U 0204, 0000,2645,4001,2140,3640,3033,4000,0422,017 ;1056 204: 2-F: RD_RD OP B,LOAD CC,BUT NOSERV,J/1-A
;1057
U 0150, 0120,5045,0001,4140,2740,3033,4000,0422,017 ;1058 150: 2-G: R13_0,BUT DEST,J/7-A
;1059
U 0002, 0461,2040,0001,4140,0140,3033,4000,0422,017 ;1060 002: 2-H: R0_0,J/2-I
;1061
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; 440UTU,MCR [160,1311] Micro-2,1 1B(41)      14:3:34 14-Sep-1979      COMBINED 1144 AND FLOATING POINT FIELD DEFS Page 22
; 44FLWU,FP [160,1311]

U 0461, 0000,2042,0001,4140,0140,3033,4000,0422,017      ;1062 461: 2-I:  R0_R0+1,J/1-A
;1063
U 0732, 0043,6005,0104,0140,3740,3033,4000,0422,017      ;1064 732: 2-J:  DAT0,UDATA,J/2-L
;1065
U 0717, 0043,6045,0100,0140,3740,3033,4000,0422,017      ;1066 717: 2-K:  DAT1,UDATA,J/2-L
;1067
U 0043, 0010,6045,0000,0166,3740,3033,4000,0422,017      ;1068 043: 2-L:  UDATA,SR1 Z,BUT SERVICE,J/1-B
;1069
U 0300, 0600,3045,0201,4140,2500,3033,4000,0422,017      ;1070 300: 3-A:  R12 B_RS,BUT DEST,J/4-A
;1071
U 0310, 0600,7145,0331,4141,2500,3033,4000,0422,017      ;1072 310: 3-B:  BA_RS,DATI,R12 B_(UDATA),BUT DEST,J/4-A,ID SPACE
;1073
U 0340, 0310,3265,0030,4142,3700,3033,4000,0422,017      ;1074 340: 3-C:  RS_RS-(2),ENAB STOV,J/3-B,SR1 L
;1075
U 0320, 0205,6145,0331,4141,2500,3033,4000,0422,017      ;1076 320: 3-D:  BA_RS,DATI,R12 B_(UDATA),J/3-E,ID SPACE
;1077
U 0205, 0600,3064,0030,4142,3700,3033,4000,0422,017      ;1078 205: 3-E:  RS_RS+(2),BUT DEST,J/4-A,SR1 L
;1079
U 0330, 0206,6145,0101,4141,2500,3033,4000,0422,017      ;1080 330: 3-F:  BA_RS,DATI,R12_UDATA,J/3-G,ID SPACE
;1081
U 0206, 0211,2064,0000,4142,3700,3033,4000,0422,017      ;1082 206: 3-G:  RS_RS+2,J/3-J,SR1 L
;1083
U 0350, 0207,3265,0000,4142,3700,3033,4000,0422,017      ;1084 350: 3-H:  RS_RS-2,ENAB STOV,J/3-I,SR1 L
;1085
U 0207, 0211,6145,0101,4141,2500,3033,4000,0422,017      ;1086 207: 3-I:  BA_RS,DATI,R12_UDATA,J/3-J,ID SPACE
;1087
U 0211, 0600,7145,0331,4141,2540,3033,4000,0422,017      ;1088 211: 3-J:  BA_R12,DATI,R12 B_(UDATA),BUT DEST,J/4-A,ID SPACE
;1089
U 0360, 0212,6145,0300,0140,1740,3033,4000,0422,017      ;1090 360: 3-K:  BA_PC,DATI,B_UDATA,J/3-L,I SPACE
;1091
U 0212, 0213,2064,0001,4140,1740,3033,4000,0422,017      ;1092 212: 3-L:  PC_PC+2,J/3-M
;1093
U 0213, 0211,2050,0001,4140,2500,3033,4000,0422,017      ;1094 213: 3-M:  R12_RS+B,J/3-J
;1095
U 0370, 0214,6145,0300,0140,1740,3033,4000,0422,017      ;1096 370: 3-N:  BA_PC,DATI,B_UDATA,J/3-O,I SPACE
;1097
U 0214, 0215,2064,0001,4140,1740,3033,4000,0422,017      ;1098 214: 3-O:  PC_PC+2,J/3-P
;1099
U 0215, 0216,2050,0001,4140,2500,3033,4000,0422,017      ;1100 215: 3-P:  R12_RS+B,J/3-Q
;1101
U 0216, 0211,6145,0101,4141,2540,3033,4000,0422,017      ;1102 216: 3-Q:  BA_R12,DATI,R12_UDATA,J/3-J,ID SPACE
;1103
U 0600, 0000,2645,4031,2140,2540,3033,4000,0422,017      ;1104 600: 4-A:  RD_(R12 OP B),LOAD CC,BUT NOSERV,J/1-A
;1105
U 0601, 1267,2145,0040,0141,3640,3033,4000,0422,017      ;1106 601: 4-B:  BA_RD,MAINT,J/4-E,ID SPACE
;1107
U 0604, 0601,3265,0031,0144,3640,3033,4000,0422,017      ;1108 604: 4-C:  RD_RD-(2),ENAB STOV,J/4-B,SR1 H
;1109
U 0602, 1267,2164,0071,0145,3640,3033,4000,0422,017      ;1110 602: 4-D:  BA_RD,MAINT,RD_RD+(2),J/4-E,ID SPACE,SR1 H
;1111
U 1267, 0000,2605,4176,2140,2540,3033,4000,0422,017      ;1112 1267: 4-E:  DAT0B,UDATA_(R12 OP B),LOAD CC,MAINT,BUT NOSERV,J/1-
A
;1113
U 0603, 0141,6145,0101,4141,2640,3033,4000,0422,017      ;1114 603: 4-F:  BA_RD,DATI,R13_UDATA,J/4-G,ID SPACE
;1115
U 0141, 0143,2064,0001,0144,3640,3033,4000,0422,017      ;1116 141: 4-G:  RD_RD+2,J/4-Q,SR1 H

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; 440UTU,MCR [160,1311] Micro-2.1 1R(41)
; 44FLWU,FP [160,1311]

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U 0605, 0142,3265,0001,0144,3640,3033,4000,0422,017	;1117 ;1118 ;1119	605:	4-H:	RD_RD-2,ENAB STOV,J/4-I,SR1 H
U 0142, 0143,6145,0101,4141,2640,3033,4000,0422,017	;1120 ;1121	142:	4-I:	BA_RD,DATI,R13_UDATA,J/4-Q,ID SPACE
U 0606, 0144,6145,0300,0140,1740,3033,4000,0422,017	;1122 ;1123	606:	4-J:	BA_PC,DATI,B_UDATA,J/4-K,I SPACE
U 0144, 0145,2064,0001,4140,1740,3033,4000,0422,017	;1124 ;1125	144:	4-K:	PC_PC+2,J/4-L
U 0145, 0143,2050,0001,4140,2640,3033,4000,0422,017	;1126 ;1127	145:	4-L:	R13_RD+B,J/4-Q
U 0607, 0146,6145,0300,0140,1740,3033,4000,0422,017	;1128 ;1129	607:	4-M:	BA_PC,DATI,B_UDATA,J/4-N,I SPACE
U 0146, 0147,2064,0001,4140,1740,3033,4000,0422,017	;1130 ;1131	146:	4-N:	PC_PC+2,J/4-O
U 0147, 0731,2050,0001,4140,2640,3033,4000,0422,017	;1132 ;1133	147:	4-O:	R13_RD+B,J/4-P
U 0731, 0143,6145,0101,4141,2740,3033,4000,0422,017	;1134 ;1135	731:	4-P:	BA_R13,DATI,R13_UDATA,J/4-Q,ID SPACE
U 0143, 1267,2145,0040,0141,2740,3033,4000,0422,017	;1136 ;1137	143:	4-Q:	BA_R13,MAINT,J/4-E,ID SPACE
U 0630, 0600,2045,0201,4140,2640,3033,4000,0422,017	;1138 ;1139	630:	5-A:	R13_B_RD,J/4-A
U 0631, 1267,6145,0373,4141,2640,3033,4000,0422,017	;1140 ;1141	631:	5-B:	BA_RD,DATIP,R13_B_(UDATA),MAINT,J/4-E,ID SPACE
U 0634, 0631,3265,0031,0144,3640,3033,4000,0422,017	;1142 ;1143	634:	5-C:	RD_RD-(2),ENAB STOV,J/5-B,SR1 H
U 0632, 0640,6145,0373,4141,2640,3033,4000,0422,017	;1144 ;1145	632:	5-D:	BA_RD,DATIP,R13_B_(UDATA),MAINT,J/5-E,ID SPACE
U 0640, 1267,2064,0031,0144,3640,3033,4000,0422,017	;1146 ;1147	640:	5-E:	RD_RD+(2),J/4-E,SR1 H
U 0633, 0243,6145,0101,4141,2640,3033,4000,0422,017	;1148 ;1149	633:	5-F:	BA_RD,DATI,R13_UDATA,J/5-G,ID SPACE
U 0243, 0245,2064,0001,0144,3640,3033,4000,0422,017	;1150 ;1151	243:	5-G:	RD_RD+2,J/5-J,SR1 H
U 0635, 0244,3265,0001,0144,3640,3033,4000,0422,017	;1152 ;1153	635:	5-H:	RD_RD-2,ENAB STOV,J/5-I,SR1 H
U 0244, 0245,6145,0101,4141,2640,3033,4000,0422,017	;1154 ;1155	244:	5-I:	BA_RD,DATI,R13_UDATA,J/5-J,ID SPACE
U 0245, 1267,6145,0373,4141,2740,3033,4000,0422,017	;1156 ;1157	245:	5-J:	BA_R13,DATIP,R13_B_(UDATA),MAINT,J/4-E,ID SPACE
U 0636, 0246,6145,0300,0140,1740,3033,4000,0422,017	;1158 ;1159	636:	5-K:	BA_PC,DATI,B_UDATA,J/5-L,I SPACE
U 0246, 0247,2064,0001,4140,1740,3033,4000,0422,017	;1160 ;1161	246:	5-L:	PC_PC+2,J/5-M
U 0247, 0245,2050,0001,4140,2640,3033,4000,0422,017	;1162 ;1163	247:	5-M:	R13_RD+B,J/5-J
U 0637, 0704,6145,0300,0140,1740,3033,4000,0422,017	;1164 ;1165	637:	5-N:	BA_PC,DATI,B_UDATA,J/5-O,I SPACE
U 0704, 0711,2064,0001,4140,1740,3033,4000,0422,017	;1166 ;1167	704:	5-O:	PC_PC+2,J/5-P
U 0711, 0705,2050,0001,4140,2640,3033,4000,0422,017	;1168 ;1169	711:	5-P:	R13_RD+B,J/5-Q
U 0705, 0245,6145,0101,4141,2740,3033,4000,0422,017	;1170 ;1171	705:	5-Q:	BA_R13,DATI,R13_UDATA,J/5-J,ID SPACE

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44OUTU.MCR [160,1311] Micro-2.1 1B(41)
44FLWU.FP [160,1311]

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U 0670, 0265,2045,0201,4140,2640,3033,4000,0422,017	#1172	670:	6-A:	R13 B_RD,J/6-H
	#1173			
U 0671, 0265,6145,0371,4141,2640,3033,4000,0422,017	#1174	671:	6-B:	BA_RD,DATI,R13 B_(UDATA),MAINT,J/6-H,ID SPACE
	#1175			
U 0674, 0671,3265,0031,0144,3640,3033,4000,0422,017	#1176	674:	6-C:	RD_RD-(2),ENAB STOV,J/6-B,SR1 H
	#1177			
U 0672, 0263,6145,0371,4141,2640,3033,4000,0422,017	#1178	672:	6-D:	BA_RD,DATI,R13 B_(UDATA),MAINT,J/6-E,ID SPACE
	#1179			
U 0263, 0265,2064,0031,0144,3640,3033,4000,0422,017	#1180	263:	6-E:	KD_RD+(2),J/6-H,SR1 H
	#1181			
U 0673, 0264,6145,0101,4141,2640,3033,4000,0422,017	#1182	673:	6-F:	BA_RD,DATI,R13_UDATA,J/6-G,ID SPACE
	#1183			
U 0264, 0501,2064,0001,0144,3640,3033,4000,0422,017	#1184	264:	6-G:	RD_RD+2,J/6-K,SR1 H
	#1185			
U 0265, 0000,2645,4000,2140,2540,3033,4000,0422,017	#1186	265:	6-H:	T_R12 DP B,LOAD CC,BUT NOSERV,J/1-A
	#1187			
U 0675, 0266,3265,0001,0144,3640,3033,4000,0422,017	#1188	675:	6-I:	RD_RD-2,ENAB STOV,J/6-J,SR1 H
	#1189			
U 0266, 0501,6145,0101,4141,2640,3033,4000,0422,017	#1190	266:	6-J:	BA_RD,DATI,R13_UDATA,J/6-K,ID SPACE
	#1191			
U 0501, 0265,6145,0371,4141,2740,3033,4000,0422,017	#1192	501:	6-K:	BA_R13,DATI,R13 B_(UDATA),MAINT,J/6-H,ID SPACE
	#1193			
U 0676, 0700,6145,0300,0140,1740,3033,4000,0422,017	#1194	676:	6-L:	BA_PC,DATI,B_UDATA,J/6-M,I SPACE
	#1195			
U 0700, 0271,2064,0001,4140,1740,3033,4000,0422,017	#1196	700:	6-M:	PC_PC+2,J/6-N
	#1197			
U 0271, 0501,2050,0001,4140,2640,3033,4000,0422,017	#1198	271:	6-N:	R13_RD+B,J/6-K
	#1199			
U 0677, 0272,6145,0300,0140,1740,3033,4000,0422,017	#1200	677:	6-O:	BA_PC,DATI,B_UDATA,J/6-P,I SPACE
	#1201			
U 0272, 0273,2064,0001,4140,1740,3033,4000,0422,017	#1202	272:	6-P:	PC_PC+2,J/6-Q
	#1203			
U 0273, 0274,2050,0001,4140,2640,3033,4000,0422,017	#1204	273:	6-Q:	R13_RD+B,J/6-R
	#1205			
U 0274, 0501,6145,0101,4141,2740,3033,4000,0422,017	#1206	274:	6-R:	BA_R13,DATI,R13_UDATA,J/6-K,ID SPACE
	#1207			
U 0120, 0000,2645,4031,2140,3640,3033,4000,0422,017	#1208	120:	7-A:	RD_(RD OF B),LOAD CC,BUT NOSERV,J/1-A
	#1209			
U 0121, 1267,7145,0373,4141,2440,3033,4000,0422,017 EST	#1210	121:	7-B:	BA_RD,DATIP,R12 B_(UDATA),MAINT,J/4-E,ID SPACE,BUT D
	#1211			
U 0124, 0121,3265,0031,0142,3640,3033,4000,0422,017	#1212	124:	7-C:	RD_RD-(2),ENAB STOV,J/7-B,SR1 L
	#1213			
U 0122, 0275,6145,0373,4141,2440,3033,4000,0422,017	#1214	122:	7-D:	BA_RD,DATIP,R12 B_(UDATA),MAINT,J/7-E,ID SPACE
	#1215			
U 0275, 1267,3064,0031,0142,3640,3033,4000,0422,017	#1216	275:	7-E:	RD_RD+(2),J/4-E,SR1 L,BUT DEST
	#1217			
U 0123, 0276,6145,0101,4141,2440,3033,4000,0422,017	#1218	123:	7-F:	BA_RD,DATI,R12_UDATA,J/7-G,ID SPACE
	#1219			
U 0276, 0277,3064,0001,0142,3640,3033,4000,0422,017	#1220	276:	7-G:	RD_RD+2,J/7-J,SR1 L,BUT DEST
	#1221			
U 0125, 0512,3265,0001,0142,3640,3033,4000,0422,017	#1222	125:	7-H:	RD_RD-2,ENAB STOV,J/7-I,SR1 L
	#1223			
U 0512, 0277,7145,0101,4141,2440,3033,4000,0422,017	#1224	512:	7-I:	BA_RD,DATI,R12_UDATA,J/7-J,ID SPACE,BUT DEST
	#1225			
U 0277, 1267,6145,0173,4141,2540,3033,4000,0422,017	#1226	277:	7-J:	BA_R12,DATIP,R12_(UDATA),MAINT,J/4-E,ID SPACE

; 44OUTU.MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU.FP [160,1311]

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U 0126,	0301,6145,0500,0140,1740,3033,4000,0422,017	;1227 ;1228	126:	7-K:	BA_PC,DATI,BX_UDATA,J/7-L,I SPACE
U 0301,	0302,2064,0001,4140,1740,3033,4000,0422,017	;1229 ;1230	301:	7-L:	PC_PC+2,J/7-M
U 0302,	0277,3061,0001,4140,2440,3033,4000,0422,017	;1231 ;1232	302:	7-M:	R12_RD+BX,J/7-J,BUT DEST
U 0127,	0303,6145,0500,0140,1740,3033,4000,0422,017	;1233 ;1234	127:	7-N:	BA_PC,DATI,BX_UDATA,J/7-O,I SPACE
U 0303,	0304,2064,0001,4140,1740,3033,4000,0422,017	;1235 ;1236	303:	7-O:	PC_PC+2,J/7-P
U 0304,	0305,2061,0001,4140,2440,3033,4000,0422,017	;1237 ;1238	304:	7-P:	R12_RD+BX,J/7-Q
U 0305,	0277,7145,0101,4141,2540,3033,4000,0422,017	;1239 ;1240	305:	7-Q:	BA_R12,DATI,R12_UDATA,J/7-J,ID SPACE,BUT DEST
U 0130,	0714,2045,0200,0140,3640,3033,4000,0422,017	;1241 ;1242	130:	7-R:	B_RD,J/7-S
U 0714,	0000,2645,4031,2140,2740,3033,4000,0422,017	;1243 ;1244	714:	7-S:	RD_(R13 OP B),LOAD CC,BUT NOSERV,J/1-A
U 1367,	0000,2605,4176,2140,2740,3033,4000,0422,017 A	;1245 ;1246	1367:	7-T:	DATOB,UDATA_(R13 OP B),LOAD CC,MAINT,BUT NOSERV,J/1-A
U 0040,	0120,3045,0001,4140,2700,3033,4000,0422,017	;1247 ;1248	040:	7-U:	R13_RS,J/7-A,BUT DEST
U 0377,	1367,6145,0373,4141,2540,3033,4000,0422,017	;1249 ;1250	377:	7-W:	BA_R12,DATIP,R12_B_(UDATA),MAINT,ID SPACE,J/7-T
U 0160,	0000,2645,4000,2140,3640,3033,4000,0422,017	;1251 ;1252	160:	8-A:	T_RD OP B,LOAD CC,BUT NOSERV,J/1-A
U 0161,	0265,6145,0171,4141,2440,3033,4000,0422,017	;1253 ;1254	161:	8-B:	BA_RD,DATI,R12_(UDATA),MAINT,J/6-H,ID SPACE
U 0164,	0161,3265,0031,0142,3640,3033,4000,0422,017	;1255 ;1256	164:	8-C:	RD_RD-(2),ENAB STOV,J/8-B,SR1 L
U 0162,	0306,6145,0171,4141,2440,3033,4000,0422,017	;1257 ;1258	162:	8-D:	BA_RD,DATI,R12_(UDATA),MAINT,J/8-E,ID SPACE
U 0306,	0265,2064,0031,0142,3640,3033,4000,0422,017	;1259 ;1260	306:	8-E:	RD_RD+(2),J/6-H,SR1 L
U 0163,	0516,6145,0101,4141,2440,3033,4000,0422,017	;1261 ;1262	163:	8-F:	BA_RD,DATI,R12_UDATA,J/8-G,ID SPACE
U 0516,	0311,2064,0001,0142,3640,3033,4000,0422,017	;1263 ;1264	516:	8-G:	RD_RD+2,J/8-J,SR1 L
U 0165,	0111,3265,0001,0142,3640,3033,4000,0422,017	;1265 ;1266	165:	8-H:	RD_RD-2,ENAB STOV,J/8-I,SR1 L
U 0111,	0311,6145,0101,4141,2440,3033,4000,0422,017	;1267 ;1268	111:	8-I:	BA_RD,DATI,R12_UDATA,J/8-J,ID SPACE
U 0311,	0265,6145,0171,4141,2540,3033,4000,0422,017	;1269 ;1270	311:	8-J:	BA_R12,DATI,R12_(UDATA),MAINT,J/6-H,ID SPACE
U 0166,	0312,6145,0300,0140,1740,3033,4000,0422,017	;1271 ;1272	166:	8-K:	BA_PC,DATI,B_UDATA,J/8-L,I SPACE
U 0312,	0313,2064,0001,4140,1740,3033,4000,0422,017	;1273 ;1274	312:	8-L:	PC_PC+2,J/8-M
U 0313,	0311,2050,0001,4140,2440,3033,4000,0422,017	;1275 ;1276	313:	8-M:	R12_RD+B,J/8-J
U 0167,	0314,6145,0300,0140,1740,3033,4000,0422,017	;1277 ;1278	167:	8-N:	BA_PC,DATI,B_UDATA,J/8-O,I SPACE
U 0314,	0315,2064,0001,4140,1740,3033,4000,0422,017	;1279 ;1280	314:	8-O:	PC_PC+2,J/8-P
		;1281			

; 440UTU.MCR [160,1311] Micro-2.1 1R(41)
; 44FLWU.FP [160,1311]

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U 0315,	0316,2050,0001,4140,2440,3033,4000,0422,017	;	1282	315:	8-P:	R12_RD+B,J/8-G
		;	1283			
U 0316,	0311,6145,0101,4141,2540,3033,4000,0422,017	;	1284	316:	8-Q:	BA_R12,DATI,R12_UDATA,J/8-J, ID SPACE
		;	1285			
U 0021,	0000,2045,0001,6140,1640,3033,4000,0422,017	;	1286	021:	9-A:	FC_RD,BUT NOSERV,J/1-A
		;	1287			
U 0024,	0021,3265,0001,0142,3640,3033,4000,0422,017	;	1288	024:	9-B:	RD_RD-2,ENAB STOV,J/9-A,SR1 L
		;	1289			
U 0022,	0517,2045,0200,0140,3640,3033,4000,0422,017	;	1290	022:	9-C:	B_RD,J/9-E
		;	1291			
U 0023,	0517,6145,0300,0141,3640,3033,4000,0422,017	;	1292	023:	9-D:	BA_RD,DATI,B_UDATA,J/9-E, ID SPACE
		;	1293			
U 0517,	0112,2064,0001,0142,3640,3033,4000,0422,017	;	1294	517:	9-E:	RD_RD+2,J/9-F,SR1 L
		;	1295			
U 0112,	0000,2046,0001,6140,1740,3033,4000,0422,017	;	1296	112:	9-F:	FC_B,BUT NOSERV,J/1-A
		;	1297			
U 0025,	0321,3265,0001,0142,3640,3033,4000,0422,017	;	1298	025:	9-G:	RD_RD-2,ENAB STOV,J/9-H,SR1 L
		;	1299			
U 0321,	0112,6145,0300,0141,3640,3033,4000,0422,017	;	1300	321:	9-H:	BA_RD,DATI,B_UDATA,J/9-F, ID SPACE
		;	1301			
U 0026,	0322,6145,0300,0140,1740,3033,4000,0422,017	;	1302	026:	9-I:	BA_PC,DATI,B_UDATA,J/9-J, I SPACE
		;	1303			
U 0322,	0323,2064,0001,4140,1740,3033,4000,0422,017	;	1304	322:	9-J:	PC_PC+2,J/9-K
		;	1305			
U 0323,	0000,2050,0001,6140,1640,3033,4000,0422,017	;	1306	323:	9-K:	FC_RD+B,BUT NOSERV,J/1-A
		;	1307			
U 0027,	0324,6145,0300,0140,1740,3033,4000,0422,017	;	1308	027:	9-L:	BA_PC,DATI,B_UDATA,J/9-M, I SPACE
		;	1309			
U 0324,	0325,2064,0001,4140,1740,3033,4000,0422,017	;	1310	324:	9-M:	PC_PC+2,J/9-N
		;	1311			
U 0325,	0326,2050,0001,4140,2440,3033,4000,0422,017	;	1312	325:	9-N:	R12_RD+B,J/9-O
		;	1313			
U 0326,	0112,6145,0300,0141,2540,3033,4000,0422,017	;	1314	326:	9-O:	BA_R12,DATI,B_UDATA,J/9-F, ID SPACE
		;	1315			
U 0151,	0336,2045,0200,0140,3640,3033,4000,0422,017	;	1316	151:	10-A:	B_RD,J/10-O
		;	1317			
U 0154,	0336,3265,0201,0142,3640,3033,4000,0422,017	;	1318	154:	10-B:	B RD_RD-2,ENAB STOV,J/10-O,SR1 L
		;	1319			
U 0152,	0327,2045,0200,0140,3640,3033,4000,0422,017	;	1320	152:	10-C:	B_RD,J/10-E
		;	1321			
U 0153,	0327,6145,0300,0141,3640,3033,4000,0422,017	;	1322	153:	10-D:	BA_RD,DATI,B_UDATA,J/10-E, ID SPACE
		;	1323			
U 0327,	0336,2064,0001,0142,3640,3033,4000,0422,017	;	1324	327:	10-E:	RD_RD+2,J/10-O,SR1 L
		;	1325			
U 0155,	0113,3265,0001,0142,3640,3033,4000,0422,017	;	1326	155:	10-F:	RD_RD-2,ENAB STOV,J/10-G,SR1 L
		;	1327			
U 0113,	0336,6145,0300,0141,3640,3033,4000,0422,017	;	1328	113:	10-G:	BA_RD,DATI,B_UDATA,J/10-O, ID SPACE
		;	1329			
U 0156,	0331,6145,0300,0140,1740,3033,4000,0422,017	;	1330	156:	10-H:	BA_PC,DATI,B_UDATA,J/10-I, I SPACE
		;	1331			
U 0331,	0332,2064,0001,4140,1740,3033,4000,0422,017	;	1332	331:	10-I:	PC_PC+2,J/10-J
		;	1333			
U 0332,	0336,2050,0200,0140,3640,3033,4000,0422,017	;	1334	332:	10-J:	B_RD+B,J/10-O
		;	1335			
U 0157,	0333,6145,0300,0140,1740,3033,4000,0422,017	;	1336	157:	10-K:	BA_PC,DATI,B_UDATA,J/10-L, I SPACE

; 44DUTU.MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU.FP [160,1311]

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U 0333, 0334,2064,0001,4140,1740,3033,4000,0422,017	#1337	333:	10-L:	PC_PC+2,J/10-M
	#1338			
	#1339			
U 0334, 0335,2050,0001,4140,2440,3033,4000,0422,017	#1340	334:	10-M:	R12_RD+B,J/10-N
	#1341			
U 0335, 0336,6145,0300,0141,2540,3033,4000,0422,017	#1342	335:	10-N:	BA_R12,DATI,B_UDATA,J/10-O,ID SPACE
	#1343			
U 0336, 0713,3265,0001,4144,1540,3033,4000,0422,017	#1344	336:	10-O:	R6_R6-2,ENAB STOV,J/10-P,SR1 H
	#1345			
U 0713, 0114,2145,0000,0141,1540,3033,4000,0422,017	#1346	713:	10-P:	BA_R6,J/10-Q,ID SPACE
	#1347			
U 0114, 0651,2005,0104,0140,3700,3033,4000,0422,017	#1348	114:	10-Q:	DATO,UDATA_RS,J/10-R
	#1349			
U 0651, 0112,2045,0000,4140,1740,3033,4000,0422,017	#1350	651:	10-R:	RS_PC,J/9-F
	#1351			
U 0030, 0343,2045,0021,4140,2440,3033,4000,0422,017	#1352	030:	11-A:	R12_RD,SWAB,J/11-B
	#1353			
U 0343, 0000,2645,4001,2140,2540,3033,4000,0422,017	#1354	343:	11-B:	RD_R12 OP B,LOAD CC,BUT NOSERV,J/1-A
	#1355			
U 0031, 0355,6145,0123,4141,2440,3033,4000,0422,017	#1356	031:	11-C:	BA_RD,DATIP,R12_UDATA,SWAB,J/11-S,ID SPACE
	#1357			
U 0034, 0031,3265,0001,0142,3640,3033,4000,0422,017	#1358	034:	11-D:	RD_RD-2,ENAB STOV,J/11-C,SR1 L
	#1359			
U 0032, 0344,6145,0163,4141,2440,3033,4000,0422,017	#1360	032:	11-E:	BA_RD,DATIP,R12_UDATA,SWAB,MAINT,J/11-F,ID SPACE
	#1361			
U 0344, 0355,2064,0001,0142,3640,3033,4000,0422,017	#1362	344:	11-F:	RD_RD+2,J/11-S,SR1 L
	#1363			
U 0033, 0345,6145,0101,4141,2440,3033,4000,0422,017	#1364	033:	11-G:	BA_RD,DATI,R12_UDATA,J/11-H,ID SPACE
	#1365			
U 0345, 0354,2064,0001,0142,3640,3033,4000,0422,017	#1366	345:	11-H:	RD_RD+2,J/11-R,SR1 L
	#1367			
U 0035, 0346,3265,0001,0142,3640,3033,4000,0422,017	#1368	035:	11-I:	RD_RD-2,ENAB STOV,J/11-J,SR1 L
	#1369			
U 0346, 0354,6145,0101,4141,2440,3033,4000,0422,017	#1370	346:	11-J:	BA_RD,DATI,R12_UDATA,J/11-R,ID SPACE
	#1371			
U 0036, 0347,6145,0300,0140,1740,3033,4000,0422,017	#1372	036:	11-K:	BA_PC,DATI,B_UDATA,J/11-L,I SPACE
	#1373			
U 0347, 0115,2064,0001,4140,1740,3033,4000,0422,017	#1374	347:	11-L:	PC_PC+2,J/11-M
	#1375			
U 0115, 0354,2050,0001,4140,2440,3033,4000,0422,017	#1376	115:	11-M:	R12_RD+B,J/11-R
	#1377			
U 0037, 0351,6145,0300,0140,1740,3033,4000,0422,017	#1378	037:	11-N:	BA_PC,DATI,B_UDATA,J/11-O,I SPACE
	#1379			
U 0351, 0352,2064,0001,4140,1740,3033,4000,0422,017	#1380	351:	11-O:	PC_PC+2,J/11-P
	#1381			
U 0352, 0353,2050,0001,4140,2440,3033,4000,0422,017	#1382	352:	11-P:	R12_RD+B,J/11-Q
	#1383			
U 0353, 0354,6145,0101,4141,2540,3033,4000,0422,017	#1384	353:	11-Q:	BA_R12,DATI,R12_UDATA,J/11-R,ID SPACE
	#1385			
U 0354, 0355,6145,0163,4141,2540,3033,4000,0422,017	#1386	354:	11-R:	BA_R12,DATIP,R12_UDATA,SWAB,MAINT,J/11-S,ID SPACE
	#1387			
U 0355, 0000,2605,4144,2140,2540,3033,4000,0422,017	#1388	355:	11-S:	DATO,MAINT,UDATA_R12 OP B,LOAD CC,BUT NOSERV,J/1-A
	#1389			
U 0170, 0356,2045,0200,0140,3640,3033,4000,0422,017	#1390	170:	12-A:	B_RD,J/12-B
	#1391			

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; 440UTU.MCR [160,1311] Micro-2.1 1B(41)      14:3:34 14-Sep-1979      COMBINED 1144 AND FLOATING POINT FIELD DEFS Page 28
; 44FLWU.FP [160,1311]

U 0356, 0600,2046,4200,0140,3740,3033,4000,0422,017 ;1392 356: 12-B: B_(B),J/4-A
;1393
U 0171, 0117,6145,0373,4141,2440,3033,4000,0422,017 ;1394 171: 12-C: BA_RD,DATIP,R12 B_(UDATA),MAINT,J/12-S,ID SPACE
;1395
U 0174, 0171,3265,0031,0142,3640,3033,4000,0422,017 ;1396 174: 12-D: RD_RD-(2),ENAB STOV,J/12-C,SR1 L
;1397
U 0172, 0357,6145,0373,4141,2440,3033,4000,0422,017 ;1398 172: 12-E: BA_RD,DATIP,R12 B_(UDATA),MAINT,J/12-F,ID SPACE
;1399
U 0357, 0117,2064,0031,0142,3640,3033,4000,0422,017 ;1400 357: 12-F: RD_RD+(2),J/12-S,SR1 L
;1401
U 0173, 0116,6145,0101,4141,2440,3033,4000,0422,017 ;1402 173: 12-G: BA_RD,DATI,R12_UDATA,J/12-H,ID SPACE
;1403
U 0116, 0655,2064,0001,0142,3640,3033,4000,0422,017 ;1404 116: 12-H: RD_RD+2,J/12-K,SR1 L
;1405
U 0175, 0721,3265,0001,0142,3640,3033,4000,0422,017 ;1406 175: 12-I: RD_RD-2,ENAB STOV,J/12-J,SR1 L
;1407
U 0721, 0655,6145,0101,4141,2440,3033,4000,0422,017 ;1408 721: 12-J: BA_RD,DATI,R12_UDATA,J/12-K,ID SPACE
;1409
U 0655, 0117,6145,0373,4141,2540,3033,4000,0422,017 ;1410 655: 12-K: BA_R12,DATIP,R12 B_(UDATA),MAINT,J/12-S,ID SPACE
;1411
U 0176, 0363,6145,0300,0140,1740,3033,4000,0422,017 ;1412 176: 12-L: BA_PC,DATI,B_UDATA,J/12-M,I SPACE
;1413
U 0363, 0364,2064,0001,4140,1740,3033,4000,0422,017 ;1414 363: 12-M: PC_PC+2,J/12-N
;1415
U 0364, 0655,2050,0001,4140,2440,3033,4000,0422,017 ;1416 364: 12-N: R12_RD+B,J/12-K
;1417
U 0177, 0365,6145,0300,0140,1740,3033,4000,0422,017 ;1418 177: 12-O: BA_PC,DATI,B_UDATA,J/12-P,I SPACE
;1419
U 0365, 0366,2064,0001,4140,1740,3033,4000,0422,017 ;1420 365: 12-P: PC_PC+2,J/12-Q
;1421
U 0366, 0367,2050,0001,4140,2440,3033,4000,0422,017 ;1422 366: 12-Q: R12_RD+B,J/12-R
;1423
U 0367, 0655,6145,0101,4141,2540,3033,4000,0422,017 ;1424 367: 12-R: BA_R12,DATI,R12_UDATA,J/12-K,ID SPACE
;1425
U 0117, 1267,2046,4200,0140,3740,3033,4000,0422,017 ;1426 117: 12-S: B_(B),J/4-E
;1427
U 0100, 0463,2045,0001,4100,2440,3033,4000,0422,017 ;1428 100: 13-A: R12_RD,PREVIOUS,J/13-S
;1429
U 0101, 0075,2045,0001,4140,2440,3033,4000,0422,017 ;1430 101: 13-B: R12_RD,J/13-V
;1431
U 0104, 0101,3265,0001,0142,3640,3033,4000,0422,017 ;1432 104: 13-C: RD_RD-2,ENAB STOV,J/13-B,SR1 L
;1433
U 0102, 0371,2045,0001,4140,2440,3033,4000,0422,017 ;1434 102: 13-D: R12_RD,J/13-F
;1435
U 0371, 0075,2064,0001,0142,3640,3033,4000,0422,017 ;1436 371: 13-F: RD_RD+2,J/13-V,SR1 L
;1437
U 0103, 0372,6145,0101,4141,2440,3033,4000,0422,017 ;1438 103: 13-G: BA_RD,DATI,ID SPACE,R12_UDATA,J/13-H
;1439
U 0372, 0075,2064,0001,0142,3640,3033,4000,0422,017 ;1440 372: 13-H: RD_RD+2,J/13-V,SR1 L
;1441
U 0105, 0373,3265,0001,0142,3640,3033,4000,0422,017 ;1442 105: 13-I: RD_RD-2,ENAB STOV,J/13-J,SR1 L
;1443
U 0373, 0075,6145,0101,4141,2440,3033,4000,0422,017 ;1444 373: 13-J: BA_RD,DATI,R12_UDATA,J/13-V,ID SPACE
;1445
U 0106, 0374,6145,0300,0140,1740,3033,4000,0422,017 ;1446 106: 13-K: BA_PC,DATI,B_UDATA,J/13-L,I SPACE

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; 44OUTU.MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU.FP [160,1311]

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U 0374,	0375,2064,0001,4140,1740,3033,4000,0422,017	;1447 ;1448	374:	13-L:	FC_PC+2,J/13-M
U 0375,	0075,2050,0001,4140,2440,3033,4000,0422,017	;1449 ;1450	375:	13-M:	R12_RD+B,J/13-V
U 0107,	0376,6145,0300,0140,1740,3033,4000,0422,017	;1451 ;1452	107:	13-N:	BA_PC,DATI,B_UDATA,J/13-O,I SPACE
U 0376,	1400,2064,0001,4140,1740,3033,4000,0422,017	;1453 ;1454	376:	13-O:	FC_PC+2,J/13-P
U 1400,	0652,2050,0001,4140,2440,3033,4000,0422,017	;1455 ;1456	1400:	13-P:	R12_RD+B,J/13-Q
U 0652,	0075,6145,0101,4141,2540,3033,4000,0422,017	;1457 ;1458	652:	13-Q:	BA_R12,DATI,R12_UDATA,J/13-V, ID SPACE
U 0067,	0463,6145,0301,4100,2540,3033,4000,0422,017	;1459 ;1460	067:	13-R:	BA_R12,DATI,R12_B_UDATA,PREVIOUS,J/13-S,I SPACE
U 0463,	0472,3265,0001,4144,1540,3033,4000,0422,017	;1461 ;1462	463:	13-S:	R6_R6-2,ENAB STOV,J/13-T,SR1 H
U 0472,	1267,2145,0040,0141,1540,3033,4000,0422,017	;1463 ;1464	472:	13-T:	BA_R6,MAINT,J/4-E, ID SPACE
U 0077,	0463,6145,0301,4101,2540,3033,4000,0422,017	;1465 ;1466	077:	13-U:	BA_R12,DATI,R12_B_UDATA,PREVIOUS,J/13-S, ID SPACE
U 0075,	0067,3045,0000,0100,3740,3033,4000,0422,017	;1467 ;1468	075:	13-V:	PREVIOUS,BUT DEST,J/13-R
U 0250,	0003,2645,4001,0100,2540,3033,4000,0422,017	;1469 ;1470	250:	14-A:	RD_R12 OF B,LOAD CC,PREVIOUS,J/15-0
U 0251,	0073,2045,0001,4140,2640,3033,4000,0422,017	;1471 ;1472	251:	14-B:	R13_RD,J/14-Y
U 0254,	0251,3265,0001,0144,3640,3033,4000,0422,017	;1473 ;1474	254:	14-C:	RD_RD-2,ENAB STOV,J/14-B,SR1 H
U 0110,	0644,6145,0300,0141,1540,3033,4000,0422,017	;1475 ;1476	110:	14-D:	BA_R6,DATI,B_UDATA,J/14-T, ID SPACE
U 0644,	0642,2046,0001,4140,2540,3033,4000,0422,017	;1477 ;1478	644:	14-T:	R12_B,J/14-E
U 0642,	0250,3064,0001,4142,1540,3033,4000,0422,017	;1479 ;1480	642:	14-E:	R6_R6+2,BUT DEST,J/14-A,SR1 L
U 0252,	0513,2045,0001,4140,2640,3033,4000,0422,017	;1481 ;1482	252:	14-F:	R13_RD,J/14-G
U 0513,	0073,2064,0001,0144,3640,3033,4000,0422,017	;1483 ;1484	513:	14-G:	RD_RD+2,J/14-Y,SR1 H
U 0253,	0513,6145,0101,4141,2640,3033,4000,0422,017	;1485 ;1486	253:	14-H:	BA_RD,DATI,R13_UDATA, ID SPACE,J/14-G
U 0255,	0475,3265,0001,0144,3640,3033,4000,0422,017	;1487 ;1488	255:	14-I:	RD_RD-2,ENAB STOV,J/14-J,SR1 H
U 0475,	0073,6145,0101,4141,2640,3033,4000,0422,017	;1489 ;1490	475:	14-J:	BA_RD,DATI,R13_UDATA,J/14-Y, ID SPACE
U 0256,	0476,6145,0300,0140,1740,3033,4000,0422,017	;1491 ;1492	256:	14-K:	BA_PC,DATI,B_UDATA,J/14-L, I SPACE
U 0476,	0552,2064,0001,4140,1740,3033,4000,0422,017	;1493 ;1494	476:	14-L:	FC_PC+2,J/14-M
U 0552,	0073,2050,0001,4140,2640,3033,4000,0422,017	;1495 ;1496	552:	14-M:	R13_RD+B,J/14-Y
U 0257,	0506,6145,0300,0140,1740,3033,4000,0422,017	;1497 ;1498	257:	14-N:	BA_PC,DATI,B_UDATA,J/14-O, I SPACE
U 0506,	0510,2064,0001,4140,1740,3033,4000,0422,017	;1499 ;1500	506:	14-O:	FC_PC+2,J/14-P
		;1501			

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; 44OUTU,MCR [160,1311] Micro-2.1 1B(41)      14:3:34 14-Sep-1979      COMBINED 1144 AND FLOATING POINT FIELD DEFS Page 30
; 44FLWU,FP [160,1311]

U 0510, 0514,2050,0001,4140,2640,3033,4000,0422,017      #1502  510:  14-F:  R13_RD+B,J/14-Q
                                     #1503
U 0514, 0073,6145,0101,4141,2740,3033,4000,0422,017      #1504  514:  14-Q:  BA_R13,DATI,R13_UDATA,J/14-Y, ID SPACE
                                     #1505
U 0307, 0520,2145,0040,0100,2740,3033,4000,0422,017      #1506  307:  14-R:  BA_R13,MAINT,PREVIOUS,J/14-S,I SPACE
                                     #1507
U 0520, 0003,2605,4144,0100,2540,3033,4000,0422,017      #1508  520:  14-S:  DAT0,UDATA_R12 OF B,LOAD CC,MAINT,PREVIOUS,J/15-D
                                     #1509
U 0317, 0520,2145,0040,0101,2740,3033,4000,0422,017      #1510  317:  14-V:  BA_R13,MAINT,PREVIOUS,J/14-S, ID SPACE
                                     #1511
                                     #1512
                                     #1513
U 0073, 0307,3045,0000,0100,3740,3033,4000,0422,017      #1514  073:  14-Y:  PREVIOUS,BUT DEST,J/14-R
                                     #1515
U 0210, 0522,2046,0210,0140,3740,3033,4000,0422,017      #1516  210:  15-A:  B_B,SEX,J/15-B
                                     #1517
U 0522, 0523,2046,1400,0140,3740,3033,4000,0422,017      #1518  522:  15-B:  T_B,ASL B,J/15-C
                                     #1519
U 0523, 0000,2050,0001,6140,1740,3033,4000,0422,017      #1520  523:  15-C:  PC_PC+B,BUT NOSERV,J/1-A
                                     #1521
U 0004, 0435,2045,0001,4140,1640,3033,4000,0422,017      #1522  004:  15-D:  PC_RD,J/15-E
                                     #1523
U 0435, 0527,6145,0300,0141,1540,3033,4000,0422,017      #1524  435:  15-E:  BA_R6,DATI,B_UDATA,J/15-F, ID SPACE
                                     #1525
U 0527, 0533,2064,0001,4142,1540,3033,4000,0422,017      #1526  527:  15-F:  R6_R6+2,J/15-G,SR1 L
                                     #1527
U 0533, 0000,2046,0001,2140,3740,3033,4000,0422,017      #1528  533:  15-G:  RD_B,BUT NOSERV,J/1-A
                                     #1529
U 0016, 0645,6145,0300,0141,1540,3033,4000,0422,017      #1530  016:  15-H:  BA_R6,DATI,B_UDATA,J/15-T, ID SPACE
                                     #1531
U 0535, 0537,2064,0001,4142,1540,3033,4000,0422,017      #1532  535:  15-I:  R6_R6+2,J/15-J,SR1 L
                                     #1533
U 0537, 0401,6145,0300,0141,1540,3033,4000,0422,017      #1534  537:  15-J:  BA_R6,DATI,B_UDATA,J/15-K, ID SPACE
                                     #1535
U 0401, 0474,2064,0001,4144,1540,3033,4000,0422,017      #1536  401:  15-K:  R6_R6+2,J/15-U,SR1 H
                                     #1537
U 0014, 0012,6045,0001,4160,3340,3033,4000,0422,017      #1538  014:  15-L:  R15_UDATA,BUT SERVICE,J/15-M
                                     #1539
U 0012, 0014,2045,0000,0140,3740,3033,4000,0422,017      #1540  012:  15-M:  NOP,J/15-L
                                     #1541
U 0013, 0011,2045,0000,0140,3740,3033,4000,0422,017      #1542  013:  15-N:  NOP,J/17-A
                                     #1543
U 0003, 0000,2045,0000,2140,3740,3033,4000,0422,017      #1544  003:  15-O:  J/1-A,BUT NOSERV
                                     #1545
U 0006, 0541,0045,0001,4140,2540,3033,4000,0422,017      #1546  006:  15-P:  R12_PSW,J/15-Q
                                     #1547
U 0541, 0000,2655,0000,2140,2540,3033,4000,0422,017      #1548  541:  15-Q:  CC_R12,BBAR,BUT NOSERV,J/1-A
                                     #1549
U 0007, 0542,0045,0001,4140,2540,3033,4000,0422,017      #1550  007:  15-R:  R12_PSW,J/15-S
                                     #1551
U 0542, 0000,2653,0000,2140,2540,3033,4000,0422,017      #1552  542:  15-S:  CC_R12 V B,BUT NOSERV,J/1-A
                                     #1553
U 0645, 0535,2046,0001,4140,1740,3033,4000,0422,017      #1554  645:  15-T:  PC_B,J/15-I
                                     #1555
U 0474, 0500,0045,0001,4140,2140,3033,4000,0422,017      #1556  474:  15-U:  R10_PSW,J/15-W

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; 440UTU.MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU.FP [160,1311]

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U 0500,	0561,4045,0420,0140,3770,3033,4000,0422,017	;1557			
		;1558	500:	15-W:	BX_366,SWAB,J/15-X
U 0561,	0412,2057,0001,6140,2140,3033,4000,0422,017	;1559			
		;1560	561:	15-X:	R10_BX,R10,BUT NOSERV,J/15-Y
U 0412,	0000,2453,0000,0140,2140,3033,4000,0422,017	;1561			
		;1562	412:	15-Y:	PSW_R10,DR,B,J/1-A
U 0005,	0611,6145,0300,0141,1540,3033,4000,0422,017	;1563			
		;1564	005:	15-Z:	BA_R6,DATI,B_UDATA,ID SPACE,J/15-EE
U 0611,	0616,2046,0001,4140,1740,3033,4000,0422,017	;1565			
		;1566	611:	15-EE:	PC_B,J/15-AA
U 0616,	0617,2064,0001,4142,1540,3033,4000,0422,017	;1567			
		;1568	616:	15-AA:	R6_R6+2,SR1 L,J/15-BB
U 0617,	1667,6145,0300,0141,1540,3033,4000,0422,017	;1569			
		;1570	617:	15-BB:	BA_R6,DATI,B_UDATA,ID SPACE,J/15-CC
U 1667,	1004,2064,0001,4144,1540,3033,4000,0422,017	;1571			
		;1572	1667:	15-CC:	R6_R6+2,SR1 H,J/15-DD
U 1004,	0000,2446,0000,0140,3740,3033,4000,0422,017	;1573			
		;1574	1004:	15-DD:	PSW_B,J/1-A
U 0260,	0134,2003,0000,4542,3700,3033,4000,0422,017	;1575	260:	16-A:	RS_RS-1,BUT ZBIT,J/16-B,SR1 L
U 0134,	0546,2046,1421,4140,2140,3033,4000,0422,017	;1576			
		;1577	134:	16-B:	R10_B,SWAB,ASL B,J/16-C
U 0546,	0547,2051,0210,0140,2140,3033,4000,0422,017	;1578			
		;1579	546:	16-C:	B_(R10,B),SEX,J/16-D
U 0547,	0000,2044,0001,6140,1740,3033,4000,0422,017	;1580			
		;1581	547:	16-D:	PC_PC-B,BUT NOSERV,J/1-A
U 0730,	0556,2046,0001,4140,1340,3033,4000,0422,017	;1582			
		;1583	730:	16-E:	R5_B,J/16-J
U 0136,	0000,2045,0000,2140,3740,3033,4000,0422,017	;1584			
		;1585	136:	16-F:	BUT NOSERV,J/1-A
U 0020,	0553,2046,0210,0140,3740,3033,4000,0422,017	;1586			
		;1587	020:	16-G:	B_B,SEX,J/16-H
U 0553,	0540,2045,1600,0140,1340,3033,4000,0422,017	;1588			
		;1589	553:	16-H:	BX_R5 ASL B,J/16-I
U 0540,	0436,2050,0200,0140,1740,3033,4000,0422,017	;1590			
		;1591	540:	16-I:	R_PC+B,J/16-M
U 0556,	0041,2067,0001,4140,1740,3033,4000,0422,017	;1592			
		;1593	556:	16-J:	PC_BX,J/16-N
U 0557,	0730,6145,0300,0141,2140,3033,4000,0422,017	;1594			
		;1595	557:	16-K:	BA_R10,DATI,B_UDATA,J/16-E,ID SPACE
U 0436,	0557,2046,0001,4140,2140,3033,4000,0422,017	;1596			
		;1597	436:	16-M:	R10_B,J/16-K
U 0041,	0042,2064,0200,0140,2140,3033,4000,0422,017	;1598			
		;1599	041:	16-N:	B_R10+2,J/16-O
U 0042,	0000,2046,0001,6140,1540,3033,4000,0422,017	;1600			
		;1601	042:	16-O:	R6_B,BUT NOSERV,J/1-A
U 0011,	0044,0045,0200,0140,3740,3033,4000,0422,017	;1602			
		;1603	011:	17-A:	B_PSW,J/17-C
U 0044,	0504,2064,0001,4150,3340,3033,4000,0422,017	;1604			
		;1605	044:	17-C:	R15_R15+2,J/17-D,KERNEL
U 0504,	0560,6545,3700,0151,3340,3033,4000,0422,017	;1606			
E		;1607	504:	17-D:	BA_R15,DATI,PSW_UDATA,KERNEL,ENAB DBE,J/17-E,ID SPAC
U 0560,	0562,3265,0001,4140,1540,3033,4000,0422,017	;1608			
		;1609			
		;1610	560:	17-E:	R6_R6-2,ENAB STOV,J/17-F
		;1611			

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 # 44FLWU.FP [160,1311]

U 0562,	0566,3365,0001,4141,1540,3033,4000,0422,017	#1612	562:	17-F:	BA_R6,SP_SF-2,ENAB STOV,J/17-G, ID SPACE
		#1613			
U 0566,	0052,2006,3704,0140,3740,3033,4000,0422,017	#1614	566:	17-G:	DATO,UDATA_B,ENAB DBE,J/17-I
		#1615			
U 0052,	0053,2145,0000,0141,1540,3033,4000,0422,017	#1616	052:	17-I:	BA_R6,J/17-J, ID SPACE
		#1617			
U 0053,	0202,2005,3704,0140,1740,3033,4000,0422,017	#1618	053:	17-J:	DATO,UDATA_PC,ENAB DBE,J/17-K
		#1619			
U 0202,	0646,2065,0001,4150,3340,3033,4000,0422,017	#1620	202:	17-K:	R15_R15-2,J/17-L, KERNEL
		#1621			
U 0646,	0734,6145,0300,0151,3340,3033,4000,0422,017	#1622	646:	17-L:	BA_R15,DATI,B_UDATA,KERNEL,J/17-U, ID SPACE
		#1623			
U 0733,	0647,4045,0001,4150,3366,7673,4200,2562,177	#1624	733:	17-M:	R15_K26,FPS_0,J/17-N, KERNEL
		#1625			
U 0647,	0202,6545,0100,1151,3340,3033,4000,0422,017	#1626	647:	17-N:	BA_R15,DATI,PSW_UDATA,KERNEL, ID SPACE,BUT BOOT,J/17-K
K					
		#1627			
U 0654,	0656,4045,0220,0140,3770,3033,4000,0422,017	#1628	654:	17-O:	B_K366,SWAB,J/17-P
		#1629			
U 0656,	0057,2050,0001,4150,3340,3033,4000,0422,017	#1630	656:	17-P:	R15_B+R15,J/17-Q, KERNEL
		#1631			
U 0057,	0202,6545,0100,0151,3340,3033,4000,0422,017	#1632	057:	17-Q:	BA_R15,DATI,PSW_UDATA,KERNEL, ID SPACE,J/17-K
		#1633			
U 0203,	0654,2440,0000,0140,3740,3033,4000,0422,017	#1634	203:	17-R:	PSW_0,J/17-D
		#1635			
U 0001,	0432,2045,0200,0140,1740,3033,4000,0422,017	#1636	001:	17-S:	B_PC,J/17-T
		#1637			
U 0432,	0733,2046,0001,4140,1340,3033,4000,0422,017	#1638	432:	17-T:	R5_B,J/17-M
		#1639			
U 0734,	0000,2046,0001,4140,1740,3033,4000,0422,017	#1640	734:	17-U:	PC_B,J/1-A
		#1641			
		#1642			
U 0220,	0441,3445,0401,4140,2440,3033,4000,0422,017	#1643	220:	18-A:	C R12 BX_RD,J/18-U
		#1644			
U 0221,	0441,7545,0501,4141,2440,3033,4000,0422,017	#1645	221:	18-B:	BA_RD,DATI,C R12 BX_UDATA,J/18-U, ID SPACE
		#1646			
U 0224,	0221,3265,0001,0142,3640,3033,4000,0422,017	#1647	224:	18-C:	RD_RD-2,ENAB STOV,J/18-B,SR1 L
		#1648			
U 0222,	0563,7545,0501,4141,2440,3033,4000,0422,017	#1649	222:	18-D:	BA_RD,DATI,C R12 BX_UDATA,J/18-E, ID SPACE
		#1650			
U 0563,	0441,2064,0001,0142,3640,3033,4000,0422,017	#1651	563:	18-E:	RD_RD+2,J/18-U,SR1 L
		#1652			
U 0223,	0565,6145,0101,4141,2440,3033,4000,0422,017	#1653	223:	18-F:	BA_RD,DATI,R12_UDATA,J/18-G, ID SPACE
		#1654			
U 0565,	0571,2064,0001,0142,3640,3033,4000,0422,017	#1655	565:	18-G:	RD_RD+2,J/18-Q,SR1 L
		#1656			
U 0225,	0567,3265,0001,0142,3640,3033,4000,0422,017	#1657	225:	18-H:	RD_RD-2,ENAB STOV,J/18-I,SR1 L
		#1658			
U 0567,	0571,6145,0101,4141,2440,3033,4000,0422,017	#1659	567:	18-I:	BA_RD,DATI,R12_UDATA,J/18-Q, ID SPACE
		#1660			
U 0226,	0051,6145,0300,0140,1740,3033,4000,0422,017	#1661	226:	18-J:	BA_PC,DATI,B_UDATA,J/18-K, I SPACE
		#1662			
U 0051,	0054,2064,0001,4140,1740,3033,4000,0422,017	#1663	051:	18-K:	PC_PC+2,J/18-L
		#1664			
U 0054,	0571,2050,0001,4140,2440,3033,4000,0422,017	#1665	054:	18-L:	R12_RD+B,J/18-Q
		#1666			

‡ 44DUTU.MCR [160,1311] Micro-2.1 1B(41)
‡ 44FLWU.FP [160,1311]

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U 0227, 0055,6145,0300,0140,1740,3033,4000,0422,017	‡1667	227:	18-M:	BA_PC,DATI,BLUDATA,J/18-N,I SPACE
	‡1668			
U 0055, 0056,2064,0001,4140,1740,3033,4000,0422,017	‡1669	055:	18-N:	PC_PC+2,J/18-O
	‡1670			
U 0056, 0570,2050,0001,4140,2440,3033,4000,0422,017	‡1671	056:	18-O:	R12_RD+B,J/18-P
	‡1672			
U 0570, 0571,6145,0101,4141,2540,3033,4000,0422,017	‡1673	570:	18-P:	BA_R12,DATI,R12_UDATA,J/18-Q,ID SPACE
	‡1674			
U 0571, 0441,7545,0501,4141,2540,3033,4000,0422,017	‡1675	571:	18-Q:	BA_R12,DATI,C R12 BX_UDATA,J/18-U,ID SPACE
	‡1676			
U 0460, 0572,5445,0000,0140,3750,3033,4000,0422,017	‡1677	460:	18-R:	C_16,J/18-S
	‡1678			
U 0572, 0402,2031,0001,4340,2740,3033,4000,0422,017	‡1679	572:	18-S:	R13_BXBAR,BUT NBIT,J/19-A
	‡1680			
U 0045, 0404,4027,0001,4540,2140,3033,4000,0422,017	‡1681	045:	18-T:	R10_0,T_BX,BUT ZBIT,J/21-A
	‡1682			
U 0441, 0400,3045,0000,0140,3740,3033,4000,0422,017	‡1683	441:	18-U:	BUT DEST,J/18-W
	‡1684			
U 0470, 0045,5445,0000,0140,3750,3033,4000,0422,017	‡1685	470:	18-V:	C_16,J/18-T
	‡1686			
U 0400, 0430,3645,0000,0740,3740,3033,4000,0422,017	‡1687	400:	18-W:	COUNT,BUT C05,J/25-A
	‡1688			
U 0410, 0430,3645,0000,0740,3740,3033,4000,0422,017	‡1689	410:	18-X:	COUNT,BUT C05,J/25-A
	‡1690			
U 0237, 0000,2045,0000,0140,3740,3033,4000,0422,017	‡1691	237:	18-Y:	J/1-A
	‡1692			
U 0402, 0403,4002,0200,0340,2740,3033,4000,0422,017	‡1693	402:	19-A:	E_0,T_R13+1,BUT NBIT,J/19-J
	‡1694			
U 0503, 0405,2005,0001,4340,2500,3033,4000,0422,017	‡1695	503:	19-B:	R12_RS,BUT NBIT,J/19-D
	‡1696			
U 0505, 0573,2041,0001,4140,2700,3033,4000,0422,017	‡1697	505:	19-C:	R13_RSBR,J/19-E
	‡1698			
U 0405, 0407,2041,0001,4140,2700,3033,4000,0422,017	‡1699	405:	19-D:	R13_RSBR,J/19-U
	‡1700			
U 0573, 0407,2002,0000,0340,2740,3033,4000,0422,017	‡1701	573:	19-E:	T_R13+1,BUT NBIT,J/19-U
	‡1702			
U 0507, 0574,2046,3400,0140,3740,3033,4000,0422,017	‡1703	507:	19-F:	T_B,SR(B15-B-BX),J/19-G
	‡1704			
U 0574, 0575,2067,0200,4140,3740,3033,4000,0422,017	‡1705	574:	19-G:	E_RS_BX,J/19-H
	‡1706			
U 0575, 0610,4045,0000,4040,3740,3033,4000,0422,017	‡1707	575:	19-H:	RSV1_0,J/20-B
	‡1708			
U 0502, 0403,4045,0200,0140,3740,3033,4000,0422,017	‡1709	502:	19-I:	E_0,J/19-J
	‡1710			
U 0403, 0576,2045,0400,0140,3700,3033,4000,0422,017	‡1711	403:	19-J:	BX_RS,J/19-K
	‡1712			
U 0576, 0407,2067,0000,1340,3740,3033,4000,0422,017	‡1713	576:	19-K:	T_BX,BUT BX00,J/19-U
	‡1714			
U 0427, 0407,2060,0200,0140,2740,3033,4000,0422,017	‡1715	427:	19-L:	E_R13+B+1,J/19-U
	‡1716			
U 0413, 0413,3667,3400,3140,3740,3033,4000,0422,017	‡1717	413:	19-M:	T_BX,SR(B15-B-BX),COUNT,BUT C05 BX01 BX00,J/19-M
	‡1718			
U 0473, 0413,3667,3400,3140,3740,3033,4000,0422,017	‡1719	473:	19-N:	T_BX,SR(B15-B-BX),COUNT,BUT C05 BX01 BX00,J/19-M
	‡1720			
U 0453, 0413,2060,0200,0140,2740,3033,4000,0422,017	‡1721	453:	19-O:	E_R13+B+1,J/19-M

‡ 44DUTU.MCR [160,1311] Micro-2.1 1B(41)
‡ 44FLWU.FP [160,1311]

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U 0417,	0577,2046,0000,4140,3740,3033,4000,0422,017	‡1722	417:	19-F:	RS_B,J/20-A
		‡1723			
		‡1724			
U 0437,	0577,2046,0000,4140,3740,3033,4000,0422,017	‡1725	437:	19-Q:	RS_B,J/20-A
		‡1726			
U 0457,	0577,2046,0000,4140,3740,3033,4000,0422,017	‡1727	457:	19-R:	RS_B,J/20-A
		‡1728			
U 0477,	0577,2046,0000,4140,3740,3033,4000,0422,017	‡1729	477:	19-S:	RS_B,J/20-A
		‡1730			
U 0433,	0473,2050,0200,0140,2540,3033,4000,0422,017	‡1731	433:	19-T:	B_R12+B,J/19-N
		‡1732			
U 0407,	0413,3667,3400,3140,3740,3033,4000,0422,017	‡1733	407:	19-U:	T_BX,SR(B15-B-BX),COUNT,BUT C05 BX01 BX00,J/19-M
		‡1734			
U 0577,	0610,2067,0000,4040,3740,3033,4000,0422,017	‡1735	577:	20-A:	RSV1_BX,J/20-B
		‡1736			
U 0610,	0725,4066,3001,4140,2100,3033,4000,0422,017	‡1737	610:	20-B:	R10_0,T_RS+RS,SL(BX-COUT),J/20-N
		‡1738			
U 0074,	0420,2030,2200,0540,3740,3033,4000,0422,017	‡1739	074:	20-C:	T_BBAR,SL(BX-0),BUT ZBIT,J/20-E
		‡1740			
U 0422,	0415,2005,2200,0240,3700,3033,4000,0422,017	‡1741	422:	20-D:	T_RSV1,SL(BX-0),BUT NBIT,J/20-G
		‡1742			
U 0420,	0415,2067,2200,0140,3740,3033,4000,0422,017	‡1743	420:	20-E:	T_BX,SL(BX-0),J/20-G
		‡1744			
U 0515,	0641,2067,2200,0140,3740,3033,4000,0422,017	‡1745	515:	20-F:	T_BX,SL(BX-0),J/24-N
		‡1746			
U 0415,	0641,2067,2400,0140,3740,3033,4000,0422,017	‡1747	415:	20-G:	T_BX,SL(BX-1),J/24-N
		‡1748			
U 0076,	0414,2005,2200,0440,3700,3033,4000,0422,017	‡1749	076:	20-H:	T_RSV1,SL(BX-0),BUT ZBIT,J/20-J
		‡1750			
U 0416,	0414,2063,0400,0140,2140,3033,4000,0422,017	‡1751	416:	20-I:	BX_R10+BX+1,J/20-J
		‡1752			
U 0414,	0454,2005,2200,0240,3700,3033,4000,0422,017	‡1753	414:	20-J:	T_RSV1,SL(BX-0),BUT NBIT,J/24-K
		‡1754			
U 0725,	0074,2006,0000,0540,3740,3033,4000,0422,017	‡1755	725:	20-N:	T_B,BUT ZBIT,J/20-C
		‡1756			
U 0404,	0612,2071,0001,4140,2740,3033,4000,0422,017	‡1757	404:	21-A:	R13_BXBAR,J/21-B
		‡1758			
U 0612,	0421,2005,0200,0340,3700,3033,4000,0422,017	‡1759	612:	21-B:	B_RS,BUT NBIT,J/21-L
		‡1760			
U 0521,	0613,2045,0400,0040,3700,3033,4000,0422,017	‡1761	521:	21-C:	BX_RSV1
		‡1762			
U 0613,	0423,2022,0400,1740,2140,3033,4000,0422,017	‡1763	613:	21-D:	BX_R10-BX,BUT COUT,J/21-F
		‡1764			
U 0623,	0424,2004,0200,0340,2140,3033,4000,0422,017	‡1765	623:	21-E:	B_R10-B,BUT NBIT,J/21-M
		‡1766			
U 0423,	0424,2070,0200,0140,3740,3033,4000,0422,017	‡1767	423:	21-F:	B_BBAR,J/21-M
		‡1768			
U 0442,	0242,3605,2000,2540,2540,3033,4000,0422,017	‡1769	442:	21-G:	T_R12,SL(B-BX15),COUNT,BUT BX00 NBIT,J/21-J
		‡1770			
U 0262,	0442,2060,1000,0740,2740,3033,4000,0422,017	‡1771	262:	21-H:	SL(BX-COUT) B_R13+B+1,BUT C05,J/21-G
		‡1772			
U 0362,	0442,2050,1000,0740,2540,3033,4000,0422,017	‡1773	362:	21-I:	SL(BX-COUT) B_R12+B,BUT C05,J/21-G
		‡1774			
U 0242,	0442,2050,1000,0740,2540,3033,4000,0422,017	‡1775	242:	21-J:	SL(BX-COUT) B_R12+B,BUT C05,J/21-G
		‡1776			

; 44DUTU.MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU.FP [160,1311]

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U 0342, 0442,2060,1000,0740,2740,3033,4000,0422,017	;1777	342:	21-K:	SL(BX-COUT) B_R13+B+1,BUT C05,J/21-G
	;1778			
U 0421, 0424,2045,0400,0040,3700,3033,4000,0422,017	;1779	421:	21-L:	BX_RSV1,J/21-M
	;1780			
U 0424, 0425,2005,2000,0340,2540,3033,4000,0422,017	;1781	424:	21-M:	T_R12,SL(B-BX15),BUT NBIT,J/21-D
	;1782			
U 0525, 0440,2010,1000,0540,2540,3033,4000,0422,017	;1783	525:	21-N:	SL(BX-COUT) B_R12+B,BUT ZBIT,J/21-P
	;1784			
U 0425, 0440,2020,1000,0540,2740,3033,4000,0422,017	;1785	425:	21-O:	SL(BX-COUT) B_R13+B+1,BUT ZBIT,J/21-P
	;1786			
U 0440, 0442,2067,0000,1340,3740,3033,4000,0422,017	;1787	440:	21-P:	T_BX,BUT BX00,J/21-G
	;1788			
U 0446, 0241,2005,0000,2540,2540,3033,4000,0422,017	;1789	446:	22-A:	T_R12,BUT BX00 NBIT,J/22-B
	;1790			
U 0241, 0261,2050,0200,0140,2540,3033,4000,0422,017	;1791	241:	22-B:	B_R12+B,J/22-C
	;1792			
U 0261, 0444,2005,0000,0340,3700,3033,4000,0422,017	;1793	261:	22-C:	T_RS,BUT NBIT,J/22-D
	;1794			
U 0444, 0614,2046,0000,4040,3740,3033,4000,0422,017	;1795	444:	22-D:	RSV1_B,J/22-F
	;1796			
U 0544, 0615,2044,0000,4040,2140,3033,4000,0422,017	;1797	544:	22-E:	RSV1_R10-B,J/22-D
	;1798			
U 0614, 0530,2027,2200,4540,3740,3033,4000,0422,017	;1799	614:	22-F:	RS_BX,SL(BX-0),BUT ZBIT,J/22-G
	;1800			
U 0530, 0431,2005,2200,0340,3700,3033,4000,0422,017	;1801	530:	22-G:	T_RS,SL(BX-0),BUT NBIT,J/22-J
	;1802			
U 0532, 0431,2042,0400,0140,2140,3033,4000,0422,017	;1803	532:	22-H:	BX_R10+1,J/22-J
	;1804			
U 0531, 0550,2067,2400,0140,3740,3033,4000,0422,017	;1805	531:	22-I:	T_BX,SL(BX-1),J/24-M
	;1806			
U 0431, 0550,2067,2200,0140,3740,3033,4000,0422,017	;1807	431:	22-J:	T_BX,SL(BX-0),J/24-M
	;1808			
U 0341, 0361,2060,0200,0140,2740,3033,4000,0422,017	;1809	341:	22-K:	B_R13+B+1,J/22-L
	;1810			
U 0361, 0443,2005,0000,0340,3700,3033,4000,0422,017	;1811	361:	22-L:	T_RS,BUT NBIT,J/22-N
	;1812			
U 0543, 0614,2044,0000,4040,2140,3033,4000,0422,017	;1813	543:	22-M:	RSV1_R10-B,J/22-F
	;1814			
U 0443, 0615,2046,0000,4040,3740,3033,4000,0422,017	;1815	443:	22-N:	RSV1_B,J/22-D
	;1816			
U 0615, 0534,2022,2400,4540,2140,3033,4000,0422,017	;1817	615:	22-O:	RS_R10-BX,SL(BX-1),BUT ZBIT,J/22-Q
	;1818			
U 0536, 0526,2042,0400,0140,2140,3033,4000,0422,017	;1819	536:	22-P:	BX_R10+1,J/22-R
	;1820			
U 0534, 0426,2005,2200,0340,3700,3033,4000,0422,017	;1821	534:	22-Q:	T_RS,SL(BX-0),BUT NBIT,J/22-S
	;1822			
U 0526, 0550,2067,2200,0140,3740,3033,4000,0422,017	;1823	526:	22-R:	T_BX,SL(BX-0),J/24-M
	;1824			
U 0426, 0550,2067,2400,0140,3740,3033,4000,0422,017	;1825	426:	22-S:	T_BX,SL(BX-1),J/24-M
	;1826			
U 0524, 0000,2664,0000,2140,2140,3033,4000,0422,017	;1827	524:	22-V:	CC_R10+2,BUT NOSE RV,J/1-A
	;1828			
U 0406, 0620,2064,0001,4140,2140,3033,4000,0422,017	;1829	406:	22-W:	R10_R10+2,J/22-X
	;1830			
U 0620, 0000,2642,0000,2140,2140,3033,4000,0422,017	;1831	620:	22-X:	CC_R10+1,BUT NOSE RV,J/1-A

; 44DUTU.MCR [160,1311] Micro-2.1 1B(41) 14:3:34 14-Sep-1979 COMBINED 1144 AND FLOATING POINT FIELD DEFS Page 36
 ; 44FLWU.FP [160,1311]

U 0462, 0000,2664,0000,2140,2140,3033,4000,0422,017	;1832 ;1833 ;1834	462:	22-Y:	CC_R10+2,BUT NOSERV,J/1-A
U 0017, 0735,2046,0220,0140,3740,3033,4000,0422,017	;1835 ;1836 ;1837	017:	23-A:	B_B SWAB,J/23-B
U 0735, 0715,0045,3401,4140,2540,3033,4000,0422,017	;1838 ;1839 ;1840	735:	23-B:	SR(B15-B-BX),R12_PSW,J/23-C
U 0715, 0712,4045,3401,4140,2770,3033,4000,0422,017	;1841 ;1842 ;1843	715:	23-C:	SR(B15-B-BX),R13_366,J/23-D
U 0712, 0626,2045,3400,0140,3740,3033,4000,0422,017	;1844 ;1845 ;1846	712:	23-D:	SR(B15-B-BX),J/23-G
U 0626, 0625,4045,0400,0140,3760,3033,4000,0422,017	;1847 ;1848 ;1849	626:	23-G:	BX_26,J/23-H
U 0625, 0624,2062,0400,0140,2740,3033,4000,0422,017	;1850 ;1851 ;1852	625:	23-H:	BX_R13-BX,J/23-I
U 0624, 0622,2046,0001,4140,2740,3033,4000,0422,017	;1853 ;1854 ;1855	624:	23-I:	R13_B,J/23-J
U 0622, 0621,2057,0200,0140,2740,3033,4000,0422,017	;1856 ;1857 ;1858	622:	23-J:	B_R13.BX,J/23-K
U 0621, 0471,2056,0001,4140,2540,3033,4000,0422,017	;1859 ;1860 ;1861	621:	23-K:	R12_R12.BXBAR,J/23-L
U 0471, 0000,2453,0000,2140,2540,3033,4000,0422,017	;1862 ;1863 ;1864	471:	23-L:	PSW_R12.OR.B,BUT NOSERV,J/1-A
U 0450, 0337,4045,0001,4140,2750,3033,4000,0422,017	;1865 ;1866 ;1867	450:	23-M:	R13_16,J/23-N
U 0337, 0236,2042,0401,4140,2740,3033,4000,0422,017	;1868 ;1869 ;1870	337:	23-N:	R13 BX_R13+1,J/23-O
U 0236, 0235,2047,0200,0140,3740,3033,4000,0422,017	;1871 ;1872 ;1873	236:	23-O:	B_MINUS 1,J/23-P
U 0235, 0234,2045,4200,0140,3740,3033,4000,0422,017	;1874 ;1875 ;1876	235:	23-P:	B_SR(0-B),J/23-Q
U 0234, 0233,2046,0001,4140,3140,3033,4000,0422,017	;1877 ;1878 ;1879	234:	23-Q:	R14_B,J/23-R
U 0233, 0232,2062,0001,4140,3140,3033,4000,0422,017	;1880 ;1881 ;1882	233:	23-R:	R14_R14-BX,J/23-S
U 0232, 0231,2043,0200,0140,3140,3033,4000,0422,017	;1883 ;1884 ;1885	232:	23-S:	B_R14-1,J/23-T
U 0231, 0230,0045,0001,4140,3140,3033,4000,0422,017	;1886 ;1887 ;1888	231:	23-T:	R14_PSW,J/23-U
U 0230, 0217,2045,0400,0140,1540,3033,4000,0422,017	;1889 ;1890 ;1891	230:	23-U:	BX_SF,J/23-W
U 0217, 0137,2451,0000,0150,3140,3033,4000,0422,017	;1892 ;1893 ;1894	217:	23-W:	PSW_B.AND.R14,KERNEL,J/23-X
U 0137, 0070,2067,0201,4140,1540,3033,4000,0422,017	;1895 ;1896 ;1897	137:	23-X:	SP_B_BX,J/23-XX
U 0070, 0267,2045,0200,0140,2740,3033,4000,0422,017	;1898 ;1899 ;1900	070:	23-XX:	B_R13,J/23-YY
U 0267, 0071,2065,0001,4140,1540,3033,4000,0422,017	;1901 ;1902 ;1903	267:	23-YY:	SP_SF-2,J/23-Y
U 0071, 0066,3365,0001,4141,1540,3033,4000,0422,017	;1904 ;1905 ;1906	071:	23-Y:	BA_R6 SP_SF-2,ENAB STOV,ID SPACE,J/23-Z
U 0066, 0065,2015,0104,0140,3140,3033,4000,0422,017	;1907 ;1908 ;1909	066:	23-Z:	IATO,UDATA_R14.AND.BBAR,J/23-AA
U 0065, 0064,3365,0001,4141,1540,3033,4000,0422,017	;1910 ;1911 ;1912	065:	23-AA:	BA_R6 SP_SF-2,ENAB STOV,ID SPACE,J/23-BB

U 0064, 0063,2005,0104,0140,1740,3033,4000,0422,017	;	1887	064:	23-BB:	DATO,UDATA_PC,J/23-CC
	;	1888			
U 0063, 0062,3345,0000,0141,1540,3033,4000,0422,017	;	1889	063:	23-CC:	BA_R6,ENAB STOV,ID SPACE,J/23-DD
	;	1890			
U 0062, 0060,2005,0104,0140,2540,3033,4000,0422,017	;	1891	062:	23-DD:	DATO,UDATA_R12,J/23-FF
	;	1892			
U 0060, 0061,4045,0200,0140,3750,3033,4000,0422,017	;	1893	060:	23-FF:	B_16,J/23-II
	;	1894			
U 0061, 0047,4045,0001,4140,1760,3033,4000,0422,017	;	1895	061:	23-II:	R7_26,J/23-GG
	;	1896			
U 0047, 0046,2044,0001,4140,1740,3033,4000,0422,017	;	1897	047:	23-GG:	R7_R7-B,J/23-HH
	;	1898			
U 0046, 0000,6145,0101,6140,1740,3033,4000,0422,017	;	1899	046:	23-HH:	BA_PC,DATI,R7_UDATA,I SPACE,BUT NOSERV,J/1-A
	;	1900			
U 0434, 0706,3045,0200,0140,3700,3033,4000,0422,017	;	1901	434:	24-A:	B_RS,BUT DEST,J/24-B
	;	1902			
U 0706, 0702,3667,3400,0740,3740,3033,4000,0422,017	;	1903	706:	24-B:	T_BX,SR(B15-B-BX),COUNT,BUT C05,J/24-C
	;	1904			
U 0702, 0445,2006,0000,6340,3740,3033,4000,0422,017	;	1905	702:	24-C:	RS_B,BUT NBIT ZBIT,J/24-E
	;	1906			
U 0447, 0135,2067,0600,0140,3740,3033,4000,0422,017	;	1907	447:	24-D:	B_BX SL(BX-0),J/24-G
	;	1908			
U 0445, 0133,2067,0600,0140,3740,3033,4000,0422,017	;	1909	445:	24-E:	B_BX SL(BX-0),J/24-H
	;	1910			
U 0545, 0133,2067,1200,0140,3740,3033,4000,0422,017	;	1911	545:	24-F:	B_BX SL(BX-1),J/24-H
	;	1912			
U 0135, 0132,2067,2400,0140,3740,3033,4000,0422,017	;	1913	135:	24-G:	T_BX,SL(BX-1),J/24-I
	;	1914			
U 0133, 0132,2067,2200,0140,3740,3033,4000,0422,017	;	1915	133:	24-H:	T_BX,SL(BX-0),J/24-I
	;	1916			
U 0132, 0454,2006,2600,0340,3740,3033,4000,0422,017	;	1917	132:	24-I:	T_B,SL(BX-OVX),BUT NBIT,J/24-K
	;	1918			
U 0131, 0550,2067,2600,0740,3740,3033,4000,0422,017	;	1919	131:	24-J:	T_BX,SL(BX-OVX),BUT C05,J/24-M
	;	1920			
U 0454, 0641,2067,2200,0140,3740,3033,4000,0422,017	;	1921	454:	24-K:	T_BX,SL(BX-0),J/24-N
	;	1922			
U 0554, 0641,2067,2400,0140,3740,3033,4000,0422,017	;	1923	554:	24-L:	T_BX,SL(BX-1),J/24-N
	;	1924			
U 0550, 0641,2067,2200,0140,3740,3033,4000,0422,017	;	1925	550:	24-M:	T_BX,SL(BX-0),J/24-N
	;	1926			
U 0641, 0000,2667,0000,2140,3740,3033,4000,0422,017	;	1927	641:	24-N:	CC_BX,BUT NOSERV,J/1-A
	;	1928			
U 0716, 0707,2045,0400,0040,3700,3033,4000,0422,017	;	1929	716:	24-O:	BX_RSV1,J/24-Q
	;	1930			
U 0727, 0703,3667,3400,3540,3740,3033,4000,0422,017	;	1931	727:	24-P:	T_BX,SR(B15-B-BX),COUNT,BUT BX00 C05,J/24-R
	;	1932			
U 0707, 0703,3667,3400,3540,3740,3033,4000,0422,017	;	1933	707:	24-Q:	T_BX,SR(B15-B-BX),COUNT,BUT BX00 C05,J/24-R
	;	1934			
U 0703, 0723,3667,0000,0140,3740,3033,4000,0422,017	;	1935	703:	24-R:	T_BX,CDUNT,J/24-S
	;	1936			
U 0723, 0464,2006,0000,6340,3740,3033,4000,0422,017	;	1937	723:	24-S:	RS_B,BUT NBIT ZBIT,J/24-U
	;	1938			
U 0466, 0465,2027,2200,4440,3740,3033,4000,0422,017	;	1939	466:	24-T:	RSV1_BX,SL(BX-0),BUT ZBIT,J/24-X
	;	1940			
U 0464, 0465,2067,2200,4040,3740,3033,4000,0422,017	;	1941	464:	24-U:	RSV1_BX,SL(BX-0),J/24-X

; 440UTU,MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU,FP [160,1311]

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U 0564, 0465,2067,2400,4040,3740,3033,4000,0422,017	;1942 ;1943 ;1944	564:	24-V:	RSV1_BX,SL(BX-1),J/24-X
U 0467, 0131,2067,2400,0140,3740,3033,4000,0422,017	;1945 ;1946 ;1947	467:	24-W:	T_BX,SL(BX-1),J/24-J
U 0465, 0131,2067,2200,0140,3740,3033,4000,0422,017	;1948 ;1949 ;1950	465:	24-X:	T_BX,SL(BX-0),J/24-J
U 0430, 0452,3645,0200,0740,3700,3033,4000,0422,017	;1951 ;1952 ;1953	430:	25-A:	B_RS,COUNT,BUT C05,J/25-D
U 0456, 0726,3045,0400,0040,3700,3033,4000,0422,017	;1954 ;1955 ;1956	456:	25-B:	BX_RSV1,BUT DEST,J/25-C
U 0726, 0702,4045,0400,0140,3740,3033,4000,0422,017	;1957 ;1958 ;1959	726:	25-C:	BX_0,J/24-C
U 0452, 0643,3045,0400,0040,3700,3033,4000,0422,017	;1960 ;1961 ;1962	452:	25-D:	BX_RSV1,BUT DEST,J/25-H
U 0653, 0653,3646,3201,4740,2140,3033,4000,0422,017	;1963 ;1964 ;1965	653:	25-E:	R10_B,SL(B-BX-0),COUNT,BUT C05,J/25-E
U 0657, 0451,2005,0000,0340,2140,3033,4000,0422,017	;1966 ;1967 ;1968	657:	25-F:	T_R10,BUT NBIT,J/25-N
U 0551, 0451,3646,0000,0140,3740,3033,4000,0422,017	;1969 ;1970 ;1971	551:	25-G:	T_B,COUNT,J/25-N
U 0643, 0720,4045,0400,0140,3740,3033,4000,0422,017	;1972 ;1973 ;1974	643:	25-H:	BX_0,J/25-I
U 0720, 0720,3646,3201,4740,2140,3033,4000,0422,017	;1975 ;1976 ;1977	720:	25-I:	R10_B,SL(B-BX-0),COUNT,BUT C05,J/25-I
U 0724, 0455,2005,0000,0340,2140,3033,4000,0422,017	;1978 ;1979 ;1980	724:	25-J:	T_R10,BUT NBIT,J/25-K
U 0455, 0702,4045,0400,0140,3740,3033,4000,0422,017	;1981 ;1982 ;1983	455:	25-K:	BX_0,J/24-C
U 0555, 0702,2047,0400,0140,3740,3033,4000,0422,017	;1984 ;1985 ;1986	555:	25-L:	BX_MINUS 1,J/24-C
U 0736, 0464,2006,0000,6340,3740,3033,4000,0422,017	;1987 ;1988 ;1989	736:	25-M:	RS_B,BUT NBIT ZBIT,J/24-U
U 0451, 0464,2006,0000,6340,3740,3033,4000,0422,017	;1990 ;1991 ;1992	451:	25-N:	RS_B,BUT NBIT ZBIT,J/24-U
U 0660, 0000,2645,4031,2140,3640,3033,4000,0422,017	;1993 ;1994 ;1995	660:	26-A:	RD_(RD OF B),LOAD CC,BUT NOSERV,J/1-A
U 0661, 1267,6145,0173,4141,2440,3033,4000,0422,017	;1996 ;1997 ;1998	661:	26-B:	BA_RD,DATIP,R12_(UDATA),MAINT,J/4-E,ID SPACE
U 0664, 0661,3265,0031,0144,3640,3033,4000,0422,017	;1999 ;2000 ;2001	664:	26-C:	RD_RD-(2),ENAB STOV,J/26-B,SR1 H
U 0662, 0701,6145,0173,4141,2440,3033,4000,0422,017	;2002 ;2003 ;2004	662:	26-D:	BA_RD,DATIP,R12_(UDATA),MAINT,J/26-E,ID SPACE
U 0701, 1267,2064,0031,0144,3640,3033,4000,0422,017	;2005 ;2006 ;2007	701:	26-E:	RD_RD+(2),J/4-E,SR1 H
U 0663, 0722,6145,0101,4141,2440,3033,4000,0422,017	;2008 ;2009 ;2010	663:	26-F:	BA_RD,DATI,R12_UDATA,J/26-G,ID SPACE
U 0722, 0277,2064,0001,0144,3640,3033,4000,0422,017	;2011 ;2012 ;2013	722:	26-G:	RD_RD+2,J/7-J,SR1 H
U 0665, 0512,3265,0001,0144,3640,3033,4000,0422,017	;2014 ;2015 ;2016	665:	26-H:	RD_RD-2,ENAB STOV,J/7-I,SR1 H
U 0666, 0301,6145,0500,0140,1740,3033,4000,0422,017	;2017 ;2018 ;2019	666:	26-K:	BA_PC,DATI,BX_UDATA,J/7-L,I SPACE
U 0667, 0303,6145,0500,0140,1740,3033,4000,0422,017	;2020 ;2021 ;2022	667:	26-N:	BA_PC,DATI,BX_UDATA,J/7-O,I SPACE

; 44OUTU.MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU.FP [160,1311]

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U 0777, 0000,2045,0000,3340,3740,3033,4000,0422,017	;1997	777:	29-S:	BUT ALL,J/1-A
	;1998			
U 0740, 0000,2045,0001,4140,2540,3033,4000,0422,017	;1999	740:	29-A:	R12_R12,J/1-A
	;2000			
U 0741, 0000,2005,0001,4140,0140,3033,4000,0422,017	;2001	741:	29-B:	R0L_R0L,J/1-A
	;2002			
U 0742, 0000,2005,0001,4140,0340,3033,4000,0422,017	;2003	742:	29-C:	R1L_R1L,J/1-A
	;2004			
U 0743, 0000,2005,0001,4140,0540,3033,4000,0422,017	;2005	743:	29-D:	R2L_R2L,J/1-A
	;2006			
U 0744, 0000,2005,0001,4140,0740,3033,4000,0422,017	;2007	744:	29-E:	R3L_R3L,J/1-A
	;2008			
U 0745, 0000,2005,0001,4140,1140,3033,4000,0422,017	;2009	745:	29-F:	R4L_R4L,J/1-A
	;2010			
U 0746, 0000,2005,0001,4140,1340,3033,4000,0422,017	;2011	746:	29-G:	R5L_R5L,J/1-A
	;2012			
U 0747, 0000,3205,0001,4140,1540,3033,4000,0422,017	;2013	747:	29-H:	R6L_R6L,J/1-A,ENAB STOV
	;2014			
U 0750, 0000,2005,0001,4140,1740,3033,4000,0422,017	;2015	750:	29-I:	R7L_R7L,J/1-A
	;2016			
U 0751, 0000,3325,0001,4141,1540,3033,4000,0422,017	;2017	751:	29-K:	BA R6L_R6L-2,J/1-A,ENAB STOV,ID SPACE
	;2018			
U 0752, 0000,3324,0001,4141,1540,3033,4000,0422,017	;2019	752:	29-L:	BA R6L_R6L+2,J/1-A,ENAB STOV,ID SPACE
	;2020			
U 0753, 0000,2045,0001,4140,3140,3033,4000,0422,017	;2021	753:	29-M:	R14_R14,J/1-A
	;2022			
U 0754, 0000,2045,0001,4140,2140,3033,4000,0422,017	;2023	754:	29-N:	R10_R10,J/1-A
	;2024			
U 0755, 0000,3245,0001,4140,1540,3033,4000,0422,017	;2025	755:	29-O:	R6_R6,J/1-A,ENAB STOV
	;2026			
U 0756, 0000,2045,0001,4140,1740,3033,4000,0422,017	;2027	756:	29-Q:	R7_R7,J/1-A
	;2028			
U 0757, 0000,2005,0001,4140,2540,3033,4000,0422,017	;2029	757:	29-R:	R12L_R12L,J/1-A
	;2030			
U 0760, 0000,2005,0001,4140,2740,3033,4000,0422,017	;2031	760:	29-S:	R13L_R13L,J/1-A
	;2032			
U 0761, 0000,2005,0001,4140,3140,3033,4000,0422,017	;2033	761:	29-T:	R14L_R14L,J/1-A
	;2034			
U 0762, 0000,2005,0001,4140,2140,3033,4000,0422,017	;2035	762:	29-U:	R10L_R10L,J/1-A
	;2036			
U 0763, 0000,0445,0000,0140,3740,3033,4000,0422,017	;2037	763:	29-V:	PSW_PSW,J/1-A
	;2038			
U 0764, 0000,6145,0300,0141,1540,3033,4000,0422,017	;2039	764:	29-W:	BA_R6,DATI,B_UDATA,J/1-A,ID SPACE
	;2040			
U 0765, 0000,6145,0130,0141,2740,3033,4000,0422,017	;2041	765:	29-X:	BA_R13,DATI,EXTRNL_UDATA,J/1-A,ID SPACE
	;2042			
U 0766, 0000,6145,0130,0141,3140,3033,4000,0422,017	;2043	766:	29-Y:	BA_R14,DATI,EXTRNL_UDATA,J/1-A,ID SPACE
	;2044			
U 0767, 0000,6145,0130,0141,2140,3033,4000,0422,017	;2045	767:	29-Z:	BA_R10,DATI,EXTRNL_UDATA,J/1-A,ID SPACE
	;2046			
U 0770, 0000,6145,0300,0141,2140,3033,4000,0422,017	;2047	770:	29-AA:	BA_R10,DATI,B_UDATA,J/1-A,ID SPACE
	;2048			
U 0771, 0000,6145,0300,0140,2140,3033,4000,0422,017	;2049	771:	29-BB:	BA_R10,DATI,B_UDATA,J/1-A,I SPACE
	;2050			
U 0772, 0000,2145,0000,0141,1540,3033,4000,0422,017	;2051	772:	29-CC:	BA_R6,J/1-A,ID SPACE

U 0773,	0000,2145,0000,0141,2140,3033,4000,0422,017	#2052 #2053	773:	29-DD:	BA_R10,J/1-A, ID SPACE
U 0774,	0000,2006,0104,0141,3740,3033,4000,0422,017	#2054 #2055	774:	29-EE:	DAT0,UDATA_B,J/1-A, ID SPACE
U 0775,	0000,2006,0136,0141,3740,3033,4000,0422,017	#2056 #2057	775:	29-FF:	DAT0B,UDATA_EXTRNL,J/1-A, ID SPACE
U 0776,	0000,2105,0000,0141,2140,3033,4000,0422,017	#2058 #2059	776:	29-HH:	BA_R10L,J/1-A, ID SPACE
		#2060 #2061			X01:
		#2062			X02:
		#2063			X03:
		#2064			X04:
		#2065			X05:
		#2066			X06:
		#2067			X07:
		#2068			X08:
		#2069			X09:
		#2070			X10:
		#2071			#FLOATING POINT 44 FUNCTIONALITY FLOWS 1ST PASS
		#2072			# REV G COMBINED FP AND BASE FLOWS 5 DEC 78
		#2073			#REVC 17 NOV 78
		#2074			#REV B 25 AUG 78
		#2075			# 2-OCT-78 DELETE ABORT STATUS TO FIT IN 512 WORDS
		#2076			#4-OCT-78 REPLACE R17 WITH R14
		#2077			#17 NOV 78 CHANGE R17 SCRATCH REG TO R10
		#2078			
U 0050,	1760,2045,0200,0140,3746,4643,2214,7222,037	#2079	050:	FF1-A:	B_(10,4,2),X11_AC,BUT BREAKOUT,J/FP2-A
U 1236,	1365,2067,0001,4140,2346,7673,4200,2162,137	#2080 #2081	1236:	FF10-A:	R11_BX,FEC_04,J/FP37-B
U 1036,	1365,2067,0001,4140,2346,7673,4200,2162,137	#2082 #2083	1036:	FF10-B:	R11_BX,FEC_04,J/FP37-B
U 1226,	1424,2045,0000,0140,3740,3033,4015,2156,017	#2084 #2085	1226:	FF10-C:	FCC_04(FZ),BUT FD,J/FP36-F
U 1026,	1461,2045,0001,4140,3141,1117,6200,2763,077	#2086 #2087	1026:	FF10-D:	X13_X13-X14,R14_(72,32),J/FP10-E
U 1461,	1462,2005,0000,0140,3740,5053,4200,3022,677	#2088 #2089	1461:	FF10-E:	X13_X13+200,J/FP10-I
U 1464,	1466,2045,0000,0140,3746,3423,5200,0422,057	#2090 #2091	1464:	FF10-F:	F12_SR1(F12) E12_ZERO,J/FP10-G
U 1466,	1436,2005,0000,0140,3746,3633,4726,4422,057	#2092 #2093	1466:	FF10-G:	X12_SR0(X12),BUT BR.OR.PFAIL,J/FP10-H
U 1436,	1175,2045,0000,0140,3744,2613,0400,0422,017	#2094 #2095	1436:	FF10-H:	X10_ROT(L(ZERO*(EAC.XOR.E10)),J/FP11-A
U 1462,	1464,2045,0000,0140,3744,2423,4300,0422,017	#2096 #2097	1462:	FF10-I:	Q_ZERO,J/FP10-F
U 1536,	1750,2065,0001,4140,1740,3033,4035,0422,017	#2098 #2099	1536:	FF10-J:	FC_PC-2,BUT SRC,J/FP20-A
U 1175,	1171,2003,0001,4540,3141,1117,5530,4422,437	#2100 #2101	1175:	FF11-A:	X11_SL0(X11-X12) Q_SLC63(Q),R14_R14-1,BUT CO
UT63 ZBIT,J/FP11-B					
U 1171,	1171,2003,0001,4540,3140,1013,5530,4422,437	#2102 #2103	1171:	FF11-B:	X11_SL0(X12+X11) Q_SLC63(Q),R14_R14-1,BUT CO
UT63 ZBIT,J/FP11-B					
U 1177,	1006,2005,0000,0140,3746,2623,4622,0362,057	#2104 #2105	1177:	FF11-C:	X12_SL0(Q),BUT Y61#J/FP11-F
		#2106			

; 440UTU.MCR [160,1311] Micro-2.1 1R(41)
; 44FLWU.FP [160,1311]

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U 1173,	1006,2005,0000,0140,3746,2623,4622,0362,057	;2107	1173:	FP11-D:	X12_SL0(Q),BUT Y61,J/FP11-F
		;2108			
U 1206,	1113,2005,0000,0140,3740,3037,4222,0002,077	;2109	1206:	FP11-E:	X13_X13+1,TBUS_BUF,BUT FT,J/FP34-A
		;2110			
U 1006,	1113,2005,0000,0140,3746,3633,4622,0002,057	;2111	1006:	FP11-F:	X12_SL0(X12),TBUS_BUF,BUT FT,J/FP34-A
		;2112			
U 1234,	1424,2045,0000,0140,3740,3033,4015,2156,017	;2113	1234:	FP12-A:	FCC_04(FZ),BUT FD,J/FP36-F
		;2114			
U 1232,	1424,2045,0000,0140,3740,3033,4015,2156,017	;2115	1232:	FP12-B:	FCC_04(FZ),BUT FD,J/FP36-F
		;2116			
U 1034,	1075,2005,0000,0140,3746,3632,4026,0422,017	;2117	1034:	FP12-C:	F_AC,BUT ENBT,J/FP36-B
		;2118			
U 1032,	1075,2005,0000,0140,3746,3632,4026,0422,017	;2119	1032:	FP12-D:	F_AC,BUT ENBT,J/FP36-B
		;2120			
U 1224,	1003,2005,0000,0140,3746,3653,4226,3022,017	;2121	1224:	FP12-E:	F10_F10 E10_E10.XDR,200,BUT ENBT,J/FP6-H
		;2122			
U 1222,	1003,2005,0000,0140,3746,3633,4026,0422,017	;2123	1222:	FP12-F:	F_X10,BUT ENBT,J/FP6-H
		;2124			
U 1024,	1472,2045,0000,0140,3746,3653,4200,3022,017	;2125	1024:	FP12-G:	F10_F10 E10_E10.XDR,200,J/FP12-H
		;2126			
U 1472,	1022,2045,0000,0140,3746,4643,4400,0422,057	;2127	1472:	FP12-H:	X12_ROT(L(X10),J/FP12-I
		;2128			
U 1022,	1474,2045,0001,4140,2146,4632,6300,2722,417	;2129	1022:	FP12-I:	Q_(F12*EAC),R10_(71,31),J/FP12-J
		;2130			
U 1474,	1476,2005,0220,0140,3741,1117,6026,4462,717	;2131	1474:	FP12-J:	R_X14-X13 SWAB,BUT BR,DR,PFAIL,J/FP12-K
		;2132			
U 1476,	1011,2006,0001,6340,3146,3423,5200,0422,057	;2133	1476:	FP12-K:	F12_SR1(F12) E12_ZERO,R14_B,BUT NBIT ZBIT,J/FP13-I
U 1576,	1151,2045,0200,0140,3740,3033,6000,3222,017	;2134	1576:	FP12-L:	R_(10,4.2),J/FP19-J
		;2135			
		;2136			
U 1013,	1216,2045,0000,0140,3746,3633,4700,0422,057	;2137	1013:	FP13-A:	X12_SR0(X12),J/FP13-F
		;2138			
U 1114,	1075,2005,0000,0140,3746,3632,4026,0422,017	;2139	1114:	FP13-B:	F_AC,BUT ENBT,J/FP36-B
		;2140			
U 1111,	1014,2010,0000,2340,2146,3633,4700,0422,057	;2141	1111:	FP13-D:	X12_SR0(X12),T_R10+B,BUT NBIT ZBIT,J/FP13-E
		;2142			
U 1014,	1214,2002,0001,4540,3146,3633,4700,0422,057	;2143	1014:	FP13-E:	X12_SR0(X12),R14_R14+1,BUT ZBIT,J/FP13-G
		;2144			
U 1216,	1040,2005,0000,0140,3746,2623,4032,0462,017	;2145	1216:	FP13-F:	F_Q,BUT ENBT Y8,J/FP14-K
		;2146			
U 1214,	1214,2002,0001,4540,3146,3633,4700,0422,057	;2147	1214:	FP13-G:	X12_SR0(X12),R14_R14+1,BUT ZBIT,J/FP13-G
		;2148			
U 1015,	1003,2005,0000,0140,3746,3633,4026,0422,017	;2149	1015:	FP13-H:	F_X10,BUT ENBT,J/FP6-H
		;2150			
U 1011,	1316,2045,0200,0140,2146,4643,4200,0423,077	;2151	1011:	FP13-I:	X13_X14,B_R10,J/FP13-L
		;2152			
U 1115,	1115,2003,0001,4540,3146,3633,4700,0422,037	;2153	1115:	FP13-J:	X11_SR0(X11),R14_R14-1,BUT ZBIT,J/FP13-J
		;2154			
U 1117,	1040,2005,0000,0140,3746,2623,4032,0462,017	;2155	1117:	FP13-K:	F_Q,BUT ENBT Y8,J/FP14-K
		;2156			
U 1316,	1015,2004,0000,0340,3146,3633,4700,0422,057	;2157	1316:	FP13-L:	X12_SR0(X12),T_R14-B,BUT NBIT,J/FP13-H
		;2158			
U 1016,	1075,2005,0000,0140,3746,3632,4026,0422,017	;2159	1016:	FP13-M:	F_AC,BUT ENBT,J/FP36-B
		;2160			
U 1440,	1364,2005,0000,0140,3741,1117,4200,0422,257	;2161	1440:	FP14-A:	X12_X12-X11,J/FP14-Q

; 44OUTU,MCR [160,1311] Micro-2.1 1R(41)
; 44FLWU,FP [160,1311]

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U 1042,	1364,2005,0000,0140,3742,1217,4200,0422,257	;2162 ;2163	1042:	FP14-B:	X12_X11-X12,J/FP14-Q
U 1121,	1424,2045,0000,0140,3740,3033,4015,2156,017	;2164 ;2165	1121:	FP14-C:	FCC_04(FZ),BUT FD,J/FP36-F
U 1101,	1102,2005,0000,0140,3744,2423,4121,4362,417	;2166 ;2167	1101:	FP14-D:	CLEAR SIGN T_X12,BUT Y62,J/FP14-G
U 1141,	1477,2045,0000,0140,3744,2673,4600,3022,017	;2168 ;2169	1141:	FP14-E:	SET SIGN,J/FP14-F
U 1477,	1563,2005,0000,0140,3742,3237,4200,0422,057	;2170 ;2171	1477:	FP14-F:	X12_-X12,J/FP14-R
U 1102,	1102,2003,0001,4140,3146,3633,4622,0362,057	;2172 ;2173	1102:	FP14-G:	X12_SL0(X12),R14_R14-1,BUT Y61,J/FP14-G
U 1302,	1533,2045,0021,4140,3140,3033,4000,0422,017	;2174 ;2175	1302:	FP14-H:	R14_R14 SWAB,J/FP14-F
U 1534,	1113,2005,0000,0140,3740,1013,4222,0003,077	;2176 ;2177	1534:	FP14-I:	X13_X13+X14,TBUS_BUF,BUT FT,J/FP34-A
U 1442,	1500,2045,0000,0140,3744,2673,4600,3022,017	;2178 ;2179	1442:	FP14-J:	SET SIGN,J/FP14-L
U 1040,	1500,2045,0000,0140,3744,2423,4200,0422,017	;2180 ;2181	1040:	FP14-K:	CLEAR SIGN,J/FP14-L
U 1500,	1527,2005,0000,0140,3740,1013,4200,0422,257	;2182 ;2183	1500:	FP14-L:	X12_X12+X11,J/FP14-S
U 1502,	1113,2005,0000,0140,3740,3033,4022,0002,017	;2184 ;2185	1502:	FP14-M:	TBUS_BUF,BUT FT,J/FP34-A
U 1542,	1665,2045,0000,0140,3746,3633,4700,0422,057	;2186 ;2187	1542:	FP14-N:	X12_SRO(X12),J/FP14-D
U 1665,	1113,2005,0000,0140,3740,3037,4222,0002,077	;2188 ;2189	1665:	FP14-O:	X13_X13+1,TBUS_BUF,BUT FT,J/FP34-A
U 1533,	1534,2005,0000,0140,3146,7673,4200,0000,117	;2190 ;2191	1533:	FP14-P:	X14_R14,J/FP14-I
U 1364,	1101,2005,0000,0140,3746,3633,4033,0422,057	;2192 ;2193	1364:	FP14-Q:	F_X12,BUT XNBT XZBT,J/FP14-D
U 1563,	1102,2005,0000,0140,3746,3633,4021,4362,057	;2194 ;2195	1563:	FP14-R:	F_X12,BUT Y62,J/FP14-G
U 1527,	1502,2005,0000,0140,3746,3633,4027,0422,057	;2196 ;2197	1527:	FP14-S:	F_X12,BUT XNBT,J/FP14-M
U 1231,	1142,2045,0000,0140,3740,3033,4015,2156,017	;2198 ;2199	1231:	FP15-A:	FCC_04(FZ),BUT FD,J/FP15-E
U 1031,	1142,2045,0000,0140,3740,3033,4015,2156,017	;2200 ;2201	1031:	FP15-B:	FCC_04(FZ),BUT FD,J/FP15-E
U 1221,	1142,2045,0000,0140,3740,3033,4015,2156,017	;2202 ;2203	1221:	FP15-C:	FCC_04(FZ),BUT FD,J/FP15-E
U 1143,	1425,2045,0000,0140,3744,2420,4200,0422,017	;2204 ;2205	1143:	FP15-D:	AC.OR.1_ZERO,J/FP36-E
U 1142,	1424,2045,0000,0140,3744,2420,4200,0422,014	;2206 ;2207	1142:	FP15-E:	AC.OR.1(32)_ZERO,J/FP36-F
U 1021,	1506,2045,0001,4140,3140,1013,6200,2663,077	;2208 ;2209	1021:	FP15-F:	X13_X13+X14,R14_(70,30),J/FP16-E
U 1230,	1424,2045,0000,0140,3740,3033,4015,2156,017	;2210 ;2211	1230:	FP16-A:	FCC_04(FZ),BUT FD,J/FP36-F
U 1030,	1424,2045,0000,0140,3740,3033,4015,2156,017	;2212 ;2213	1030:	FP16-B:	FCC_04(FZ),BUT FD,J/FP36-F
U 1220,	1424,2045,0000,0140,3740,3033,4015,2156,017	;2214 ;2215	1220:	FP16-C:	FCC_04(FZ),BUT FD,J/FP36-F
		;2216			

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# 44OUTU.MCR [160,1311] Micro-2.1 1B(41)      14:3:34 14-Sep-1979      COMBINED 1144 AND FLOATING POINT FIELD DEFS Page 43
# 44FLWU.FP [160,1311]

U 1020, 1506,2045,0001,4140,3140,1013,6200,2663,077      #2217 1020: FP16-D:      X13_X13+X14,R14_(70,30),J/FP16-E
#2218
U 1506, 1507,2005,0000,0140,3741,5157,4200,3022,677      #2219 1506: FP16-E:      X13_X13-200,J/FP16-F
#2220
U 1507, 1154,2045,0000,0140,3746,3423,5200,0422,057      #2221 1507: FP16-F:      F12_SR1(F12) E12_ZERO,J/FP16-G
#2222
U 1154, 1511,2045,0000,0140,3746,3633,4300,0422,057      #2223 1154: FP16-G:      Q_X12,J/FP16-H
#2224
U 1511, 1270,2005,0000,0140,3744,2613,0426,4422,017      #2225 1511: FP16-H:      X10_ROT(L(ZERO*(EAC,XOR,E10)),BUT BR,OR,PF,FAIL,
J/FP16-I
#2226
U 1270, 1513,2045,0000,0140,3744,2423,4200,0422,057      #2227 1270: FP16-I:      X12_ZERO,J/FP17-K
#2228
U 1370, 1750,2065,0001,4140,1740,3033,4035,0422,017      #2229 1370: FP16-J:      PC_PC-2,BUT SRC,J/FP20-A
#2230
U 1240, 1240,2003,0001,4540,3146,3633,5430,0422,057      #2231 1240: FP17-A:      X12_SR0(X12) Q_SR0(Q),R14_R14-1,BUT (Q8,Q40)
ZBIT,J/FP17-A
#2232
U 1250, 1240,2003,0001,4540,3140,1013,5430,0422,257      #2233 1250: FP17-B:      X12_SR0(X11+X12) Q_SR0(Q),R14_R14-1,BUT (Q8,
Q40) ZBIT,J/FP17-A
#2234
U 1242, 1044,2005,0000,0140,3746,3633,4001,4362,057      #2235 1242: FP17-D:      F_X12,BUT Y62 OF1A,J/FP17-F
#2236
U 1045, 1215,2045,0000,0140,3746,3633,4600,0422,057      #2237 1045: FP17-E:      X12_SL0(X12),J/FP17-G
#2238
U 1044, 1514,2045,0000,0140,3746,3633,4600,0422,057      #2239 1044: FP17-F:      X12_SL0(X12),J/FP17-H
#2240
U 1215, 1445,2045,0000,0140,3741,3133,4200,0422,077      #2241 1215: FP17-G:      X13_X13-1,J/FP17-I
#2242
U 1514, 1444,2045,0000,0140,3741,3133,4200,0422,077      #2243 1514: FP17-H:      X13_X13-1,J/FP17-J
#2244
U 1445, 1041,2005,0000,0140,3746,3633,4031,0462,077      #2245 1445: FP17-I:      F_X13,BUT EZBT Y9 Y8,J/FP18-P
#2246
U 1444, 1113,2005,0000,0140,3740,3033,4022,0002,017      #2247 1444: FP17-J:      TBUS_BUF,BUT FT,J/FP34-A
#2248
U 1513, 1240,2005,0000,0140,3746,3633,5430,0422,057      #2249 1513: FP17-K:      X12_SR0(X12) Q_SR0(Q),BUT (Q8,Q40),J/FP17-A
#2250
U 1047, 1126,2045,0000,0140,3740,3033,4015,0422,017      #2251 1047: FP18-A:      BUT FD,J/FP18-D
#2252
U 1127, 1113,2005,0000,0140,3744,2420,4222,0002,017      #2253 1127: FP18-C:      AC,OR,1_ZERO,TBUS_BUF,BUT FT,J/FP34-A
#2254
U 1126, 1113,2005,0000,0140,3744,2420,4222,0002,014      #2255 1126: FP18-D:      AC,OR,1(32)_ZERO,TBUS_BUF,BUT FT,J/FP34-A
#2256
U 1043, 1516,2045,0000,0140,3746,3633,4600,0422,057      #2257 1043: FP18-E:      X12_SL0(X12),J/FP18-G
#2258
U 1243, 1516,2045,0000,0140,3746,3633,4600,0422,057      #2259 1243: FP18-F:      X12_SL0(X12),J/FP18-G
#2260
U 1516, 1517,2045,0000,0140,3746,3643,5100,0422,657      #2261 1516: FP18-G:      F12_SL0(F12) E12_E13,J/FP18-H
#2262
U 1517, 1557,2045,0000,0140,3743,1633,4500,2216,057      #2263 1517: FP18-H:      X12_ROT(R(F10,OR,F12)*E12),FCC_06(FZFV),J/FP18-I
B-I
#2264
U 1557, 1142,2005,0000,0140,3746,7673,4201,0002,177      #2265 1557: FP18-I:      FPS_BUF,BUT FIV FD,J/FP15-E
#2266
U 1163, 1247,2045,0000,0140,3746,4640,4200,0422,417      #2267 1163: FP18-J:      AC,OR,1_X12,J/FP18-L
#2268
U 1162, 1164,2045,0000,0140,3746,4640,4200,0422,414      #2269 1162: FP18-K:      AC,OR,1(32)_X12,J/FP18-M
#2270
U 1247, 1523,2045,0000,0140,3744,2422,4200,0422,017      #2271 1247: FP18-L:      AC_ZERO,J/FP18-N

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U 1164, 1523,2045,0000,0140,3744,2422,4200,0422,014	‡2272				
	‡2273	1164:	FP18-M:	AC(32)_ZERO,J/FP18-N	
	‡2274				
U 1523, 1365,2067,0001,4140,2346,7673,4200,2262,137	‡2275	1523:	FP18-N:	R11_BX,FEC_10,J/FP37-B	
	‡2276				
U 1241, 1126,2045,0000,0140,3740,3033,4015,0422,017	‡2277	1241:	FP18-O:	BUT FD,J/FP18-D	
	‡2278				
U 1041, 1046,2005,0000,0140,3746,5653,4233,7022,717	‡2279	1041:	FP18-P:	X14_X13.XOR,200,BUT ENBT EZBT,J/FP18-S	
	‡2280				
U 1446, 1126,2045,0000,0140,3740,3033,4015,0422,017	‡2281	1446:	FP18-Q:	BUT FD,J/FP18-D	
	‡2282				
U 1246, 1126,2045,0000,0140,3740,3033,4015,0422,017	‡2283	1246:	FP18-R:	BUT FD,J/FP18-D	
	‡2284				
U 1046, 1401,2005,0000,0140,3742,5257,4200,3423,037	‡2285	1046:	FP18-S:	X11_(70,30)-X14,J/FP19-A	
	‡2286				
U 1401, 1525,2005,0021,4140,3146,3633,6000,0462,037	‡2287	1401:	FP19-A:	R14_X11 SWAB,J/FP19-C	
	‡2288				
U 1525, 1050,2005,0000,0340,3146,3633,4600,0422,057	‡2289	1525:	FP19-C:	X12_SL0(X12),T_R14,BUT NBIT,J/FP19-H	
	‡2290				
U 1150, 1526,2045,0000,0140,3746,3643,5100,0422,657	‡2291	1150:	FP19-D:	F12_SL0(F12) E12_E13,J/FP19-E	
	‡2292				
U 1526, 1134,2045,0000,0140,3743,1633,4515,2156,057 J/FP19-G	‡2293	1526:	FP19-E:	X12_ROTTR(F10,OR.F12)*E12),FCC_04(FZ),BUT FD, J/FP19-G	
	‡2294				
U 1135, 1425,2045,0000,0140,3746,4640,4200,0422,417	‡2295	1135:	FP19-F:	AC,OR,1_X12,J/FP36-E	
	‡2296				
U 1134, 1424,2045,0000,0140,3746,4640,4200,0422,414	‡2297	1134:	FP19-G:	AC,OR,1(32)_X12,J/FP36-F	
	‡2298				
U 1050, 1051,2005,0000,0140,3744,2423,4226,4422,037	‡2299	1050:	FP19-H:	X11_ZERO,BUT BR,OR,PFAIL,J/FP19-I	
	‡2300				
U 1051, 1130,2005,0021,4140,3146,3633,6000,0462,117	‡2301	1051:	FP19-I:	R14_X14 SWAB,J/FP19-K	
	‡2302				
U 1151, 1750,2065,0001,4140,1740,3033,4035,0422,017	‡2303	1151:	FP19-J:	PC_PC-2,BUT SRC,J/FP20-A	
	‡2304				
U 1130, 1130,2003,0001,4540,3146,3633,5000,0422,037	‡2305	1130:	FP19-K:	X11_SR1(X11),R14_R14-1,BUT ZBIT,J/FP19-K	
	‡2306				
U 1132, 1210,2045,0000,0140,3746,4643,4200,0422,517	‡2307	1132:	FP19-L:	X14_X12,J/FP19-M	
	‡2308				
U 1210, 1530,2045,0000,0140,3744,1413,4200,0422,317	‡2309	1210:	FP19-M:	X14_X11.AND,X14,J/FP19-N	
	‡2310				
U 1530, 1633,2005,0000,0140,3746,3643,5126,4422,717 D	‡2311	1530:	FP19-N:	F14_SL0(F14) E14_E13,BUT BR,OR,PFAIL,J/FP19- D	
	‡2312				
U 1633, 1156,2045,0000,0140,3743,1633,4515,0422,117	‡2313	1633:	FP19-O:	X14_ROTTR(F10,OR.F14)*E14),BUT FD,J/FP19-Q	
	‡2314				
U 1157, 1532,2045,0000,0140,3746,4640,4200,0423,017	‡2315	1157:	FP19-P:	AC,OR,1_X14,J/FP19-R	
	‡2316				
U 1156, 1532,2045,0000,0140,3746,4640,4200,0423,014	‡2317	1156:	FP19-Q:	AC,OR,1(32)_X14,J/FP19-R	
	‡2318				
U 1532, 1433,2045,0000,0140,3745,1513,4700,0422,257	‡2319	1532:	FP19-R:	X12_SR0(X11BAR.AND,X12),J/FP19-U	
	‡2320				
U 1122, 1424,2045,0000,0140,3740,3033,4015,2156,017	‡2321	1122:	FP19-S:	FCC_04(FZ),BUT FD,J/FP36-F	
	‡2322				
U 1733, 1750,2065,0001,4140,1740,3033,4035,0422,017	‡2323	1733:	FP19-T:	PC_PC-2,BUT SRC,J/FP20-A	
	‡2324				
U 1433, 1102,2005,0000,0140,3746,3453,4227,7462,457	‡2325	1433:	FP19-U:	F12_F12 E12_E12.AND,360,BUT XZBT,J/FP14-G	
	‡2326				

; 44OUTU.MCR [160,1311] Micro-2.1 1B(41) 14:3:34 14-Sep-1979 COMBINED 1144 AND FLOATING POINT FIELD DEFS Page 45
 ; 44FLWU.FP [160,1311]

U 1760, 1200,2045,0000,0140,3740,3033,4037,4422,017	;	2327	1760:	FP2-A:	BUT OP2A,J/FP2-B
	;	2328			
U 1200, 1702,2067,0001,4140,2346,7673,4200,2062,137	;	2329	1200:	FP2-B:	R11_BX,FEC_02,J/FP37-A
	;	2330			
U 1201, 0000,2645,0000,2140,3746,3633,6000,0162,177	;	2331	1201:	FP2-C:	CC_FCC(FPS),BUT NOSERV,J/1-A
	;	2332			
U 1202, 1413,2045,0000,0140,3745,5553,4200,2463,777	;	2333	1202:	FP2-D:	CLEAR FD(FPS),J/FP2-H
	;	2334			
U 1203, 1413,2045,0000,0140,3743,5353,4200,2463,777	;	2335	1203:	FP2-E:	SET FD(FPS),J/FP2-H
	;	2336			
U 1204, 1413,2045,0000,0140,3745,5553,4200,2423,777	;	2337	1204:	FP2-F:	CLEAR FL(FPS),J/FP2-H
	;	2338			
U 1205, 1413,2045,0000,0140,3743,5353,4200,2423,777	;	2339	1205:	FP2-G:	SET FL(FPS),J/FP2-H
	;	2340			
U 1413, 0000,2045,0000,2140,3746,3633,4000,0166,177	;	2341	1413:	FP2-H:	FDL_BUF_FPS,BUT NOSERV,J/1-A
	;	2342			
U 1750, 1535,2045,0000,0140,3740,3033,4000,0420,017	;	2343	1750:	FP20-A:	SERV(BR,OR,PFail),J/FP20-Q
	;	2344			
U 1754, 1751,2050,0001,0146,3640,3033,4000,0422,017	;	2345	1754:	FP20-B:	RD_RD+B,J/FP20-P,SR1 Z
	;	2346			
U 1752, 1751,2044,0001,0146,3640,3033,4000,0422,017	;	2347	1752:	FP20-G:	RD_RD-B,J/FP20-P,SR1 Z
	;	2348			
U 1753, 1535,2065,0001,0146,3640,3033,4000,0420,017	;	2349	1753:	FP20-L:	RD_RD-2,SERV(BR,OR,PFail),J/FP20-Q,SR1 Z
	;	2350			
U 1755, 1535,2064,0001,0146,3640,3033,4000,0420,017	;	2351	1755:	FP20-M:	RD_RD+2,SERV(BR,OR,PFail),J/FP20-Q,SR1 Z
	;	2352			
U 1756, 1535,2065,0001,4140,1740,3033,4000,0420,017	;	2353	1756:	FP20-N:	PC_PC-2,SERV(BR,OR,PFail),J/FP20-Q
	;	2354			
U 1757, 1535,2065,0001,4140,1740,3033,4000,0420,017	;	2355	1757:	FP20-O:	PC_PC-2,SERV(BR,OR,PFail),J/FP20-Q
	;	2356			
U 1751, 1535,2045,0000,0140,3740,3033,4000,0420,017	;	2357	1751:	FP20-F:	SERV(BR,OR,PFail),J/FP20-Q
	;	2358			
U 1535, 0010,6045,0001,4160,3340,3033,4000,0420,017	;	2359	1535:	FP20-Q:	R15_UDATA,BUT SERV(BR,OR,PFail),J/1-B
	;	2360			
U 1770, 1607,3440,0000,0140,3744,2423,4234,4422,037	;	2361	1770:	FP21-A:	X11_ZERO,CLEAR FLAG,BUT FDST,J/FP21-Y
	;	2362			
U 1252, 1541,6045,0140,0140,3740,3033,4000,0012,017	;	2363	1252:	FP21-AA:	DATI,BUF_UDATA,MAINT,J/FP21-M
	;	2364			
U 1771, 1720,2045,0001,4140,2140,3033,6034,6062,017	;	2365	1771:	FP21-B:	R10_2,BUT FDST,J/FP21-F
	;	2366			
U 1730, 1702,2067,0001,4140,2346,7673,4200,2062,137	;	2367	1730:	FP21-C:	R11_BX,FEC_02,J/FP37-A
	;	2368			
U 1721, 1252,2145,0001,4141,2440,3033,4000,0422,017	;	2369	1721:	FP21-D:	BA R12_RD,J/FP21-AA,ID SPACE
	;	2370			
U 1722, 1252,2145,0001,4141,2446,7673,4200,0002,177	;	2371	1722:	FP21-E:	BA R12_RD,FPS_BUF,J/FP21-AA,ID SPACE
	;	2372			
U 1724, 1362,2044,0001,4140,2440,3033,4000,0422,017	;	2373	1724:	FP21-G:	R12_RD-B,J/FP21-L
	;	2374			
U 1362, 1541,6145,0140,0141,2540,3033,4000,0012,017	;	2375	1362:	FP21-L:	BA_R12,DATI,BUF_UDATA,MAINT,J/FP21-M,ID SPAC
E					
	;	2376			
U 1541, 1552,2045,0000,0140,3746,7673,4200,0002,010	;	2377	1541:	FP21-M:	X10(3)_BUF,J/FP22-C
	;	2378			
U 1723, 1362,6145,0101,4141,2440,3033,4000,0422,017	;	2379	1723:	FP21-N:	BA_RD,DATI,R12_UDATA,J/FP21-L,ID SPACE
	;	2380			
U 1725, 1546,2065,0001,4140,2440,3033,4000,0422,017	;	2381	1725:	FP21-O:	R12_RD-2,J/FP21-U

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; 44FLWU.FP [160,1311]

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U 1617, 1702,2067,0001,4140,2346,7673,4200,2062,137	;2382 ;2383 ;2384	1617:	FP21-P:	R11_BX,FEC_02,J/FP37-A
U 1726, 1734,6145,0300,0140,1740,3033,4035,4422,017	;2385 ;2386 ;2387	1726:	FP21-Q:	BA_PC,DATI,B_UDATA,BUT GR7,J/FP21-R,I SPACE
U 1734, 1362,2050,0001,4140,2440,3033,4000,0422,017	;2388 ;2389 ;2390	1734:	FP21-R:	R12_RD+B,J/FP21-L
U 1727, 1545,6145,0300,0140,1740,3033,4035,4422,017	;2391 ;2392 ;2393	1727:	FP21-S:	BA_PC,DATI,B_UDATA,BUT GR7,J/FP21-T,I SPACE
U 1545, 1546,2050,0001,4140,2440,3033,4000,0422,017	;2394 ;2395 ;2396	1545:	FP21-T:	R12_RD+B,J/FP21-U
U 1546, 1362,6145,0101,4141,2540,3033,4000,0422,017	;2397 ;2398 ;2399	1546:	FP21-U:	BA_R12,DATI,R12_UDATA,J/FP21-L,ID SPACE
U 1337, 1550,2045,0000,0140,3746,2623,4200,0422,017	;2400 ;2401 ;2402	1337:	FP21-V:	X10_Q,J/FP22-A
U 1736, 1734,2050,0201,4140,2140,3033,4000,0422,017	;2403 ;2404 ;2405	1736:	FP21-W:	B_B+R10,J/FP21-R
U 1547, 1545,2050,0201,4140,2140,3033,4000,0422,017	;2406 ;2407 ;2408	1547:	FP21-X:	B_B+R10,J/FP21-T
U 1607, 1640,2045,0000,0140,3740,3033,4034,6156,017	;2409 ;2410 ;2411	1607:	FP21-Y:	FCC_04(FZ),BUT FDST,J/FP27-B
U 1720, 1337,2045,0000,0140,3746,3631,4300,0422,017	;2412 ;2413 ;2414	1720:	FP21-F:	Q_FDST,J/FP21-V
U 1550, 1551,2045,0200,0140,3746,4643,6400,3222,057	;2415 ;2416 ;2417	1550:	FP22-A:	B_(10.4.2),X12_ROT(L(X10)),J/FP22-B
U 1551, 1055,3400,0000,0140,3746,3633,4025,0422,057	;2418 ;2419 ;2420	1551:	FP22-B:	F_X12,CLEAR FLAG,BUT EZBT,J/FP22-F
U 1552, 1402,2045,0200,0140,3746,4643,6400,3222,057	;2421 ;2422 ;2423	1552:	FP22-C:	B_(10.4.2),X12_ROT(L(X10)),J/FP22-D
U 1402, 1055,3400,0000,0140,3746,3633,4031,4462,057	;2424 ;2425 ;2426	1402:	FP22-D:	F_X12,CLEAR FLAG,BUT EZBT Y8,J/FP22-F
U 1057, 1334,2045,0000,0140,3746,3633,4016,0150,177	;2427 ;2428 ;2429	1057:	FP22-E:	BUF_FPS,BUT OP1B,J/FP23-F
U 1055, 1334,2045,0000,0140,3746,3633,4016,0150,177	;2430 ;2431 ;2432	1055:	FP22-F:	BUF_FPS,BUT OP1B,J/FP23-F
U 1255, 1310,2045,0000,0140,3746,3633,4016,0150,177	;2433 ;2434 ;2435	1255:	FP22-G:	BUF_FPS,BUT OP1B,J/FP22-K
U 1257, 1255,2005,0000,0140,3746,3633,4023,0150,177	;2436 ;2437 ;2438	1257:	FP22-H:	BUF_FPS,BUT FIUV,J/FP22-G
U 1355, 1255,3667,0001,4140,2346,7673,4200,2362,137	;2439 ;2440 ;2441	1355:	FP22-I:	R11_BX,FEC_14,SET FLAG,J/FP22-G
U 1312, 1640,2045,0000,0140,3744,2423,4234,6156,037	;2442 ;2443 ;2444	1312:	FP22-J:	X11_ZERO,FCC_04(FZ),BUT FDST,J/FP27-B
U 1310, 1153,2005,0000,0140,3746,3633,4026,0422,017	;2445 ;2446 ;2447	1310:	FP22-K:	F_X10,BUT ENBT,J/FP22-M
U 1553, 1740,2045,0000,0140,3740,3033,4034,6356,017	;2448 ;2449 ;2450	1553:	FP22-L:	FCC_14(FNFZ),BUT FDST,J/FP24-A
U 1153, 1740,2045,0000,0140,3740,3033,4034,6156,017	;2451 ;2452 ;2453	1153:	FP22-M:	FCC_04(FZ),BUT FDST,J/FP24-A
U 1311, 1640,2045,0000,0140,3744,2423,4234,6156,037	;2454 ;2455 ;2456	1311:	FP22-N:	X11_ZERO,FCC_04(FZ),BUT FDST,J/FP27-B
U 1335, 1053,2045,0000,0140,3746,3553,4200,3022,017	;2457 ;2458 ;2459	1335:	FP23-A:	F10_F10 E10_E10.AND.177,J/FP23-D
U 1336, 1053,2005,0000,0140,3746,3653,4226,3022,017	;2460 ;2461 ;2462	1336:	FP23-C:	F10_F10 E10_E10.XOR.200,BUT ENBT,J/FP23-D

; 44OUTU.MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU.FP [160,1311]

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U 1053, 1740,2045,0000,0140,3740,3033,4034,6556,017	;2437	1053:	FP23-D:	FCC_00,BUT FDST,J/FP24-A
	;2438			
U 1453, 1740,2045,0000,0140,3740,3033,4034,6256,017	;2439	1453:	FP23-E:	FCC_10(FN),BUT FDST,J/FP24-A
	;2440			
U 1334, 1053,2005,0000,0140,3746,3633,4026,0422,017	;2441	1334:	FP23-F:	F_X10,BUT ENBT,J/FP23-D
	;2442			
U 1740, 1276,2045,0000,0140,3746,4641,4200,0422,010	;2443	1740:	FP24-A:	FDST(3)_X10,J/FP36-I
	;2444			
U 1744, 1520,2044,0001,0142,3640,3033,4016,0422,017	;2445	1744:	FP24-B:	RD_RD-B,BUT OP1B,J/FP24-U,SR1 L
	;2446			
U 1741, 1520,2045,0000,0140,3740,3033,4016,0422,017	;2447	1741:	FP24-C:	BUT OP1B,J/FP24-U
	;2448			
U 1742, 1520,2050,0001,0142,3640,3033,4016,0422,017	;2449	1742:	FP24-G:	RD_RD+B,BUT OP1B,J/FP24-U,SR1 L
	;2450			
U 1341, 0000,2005,0144,2140,3746,3633,6000,0422,017	;2451	1341:	FP24-M:	DATO,MAINT,UDATA_X10(3),BUT NOSERV,J/1-A
	;2452			
U 1345, 1365,2005,0144,0140,3746,3633,6000,0422,017	;2453	1345:	FP24-N:	DATO,MAINT,UDATA_X10(3),J/FP37-B
	;2454			
U 1743, 1520,2064,0001,0142,3640,3033,4016,0422,017	;2455	1743:	FP24-O:	RD_RD+2,BUT OP1B,J/FP24-U,SR1 L
	;2456			
U 1745, 1520,2065,0001,0142,3640,3033,4016,0422,017	;2457	1745:	FP24-P:	RD_RD-2,BUT OP1B,J/FP24-U,SR1 L
	;2458			
U 1746, 1520,2064,0001,4140,1740,3033,4016,0422,017	;2459	1746:	FP24-Q:	PC_PC+2,BUT OP1B,J/FP24-U
	;2460			
U 1747, 1520,2064,0001,4140,1740,3033,4016,0422,017	;2461	1747:	FP24-R:	PC_PC+2,BUT OP1B,J/FP24-U
	;2462			
U 1522, 1341,2045,0000,0740,3746,7673,4200,0002,177	;2463	1522:	FP24-S:	FPS_BUF,BUT FLAG,J/FP24-M
	;2464			
U 1521, 1341,2045,0000,0740,3746,7673,4200,0002,177	;2465	1521:	FP24-T:	FPS_BUF,BUT FLAG,J/FP24-M
	;2466			
U 1520, 1361,2045,0000,0740,3746,7673,4200,0002,177	;2467	1520:	FP24-U:	FPS_BUF,BUT FLAG,J/FP37-H
	;2468			
U 1765, 1640,3440,0000,0140,3740,3033,4034,4422,017	;2469	1765:	FP25-A:	CLEAR FLAG,BUT FDST,J/FP27-B
	;2470			
U 1766, 1767,2045,0000,0140,3744,2423,4200,0422,023	;2471	1766:	FP25-B:	X11(10)_ZERO,J/FP25-C
	;2472			
U 1767, 1567,3440,0000,0140,3740,3033,4034,7314,017	;2473	1767:	FP25-C:	FDL_FDFLBAR,CLEAR FLAG,BUT FDST,J/FP25-E
	;2474			
U 1577, 1702,2067,0001,4140,2346,7673,4200,2062,137	;2475	1577:	FP25-D:	R11_BX,FEC_02,J/FP37-A
	;2476			
U 1567, 1060,2005,0200,0140,3746,4643,6426,3222,257	;2477	1567:	FP25-E:	B_(10,4,2),X12_ROT(L(X11),BUT ENBT,J/FP25-G
	;2478			
U 1460, 1556,2045,0000,0140,3744,2673,4600,3022,017	;2479	1460:	FP25-F:	SET SIGN,J/FP25-L
	;2480			
U 1060, 1556,2045,0000,0140,3744,2423,4200,0422,017	;2481	1060:	FP25-G:	CLEAR SIGN,J/FP25-L
	;2482			
U 1560, 1061,2005,0000,0140,3744,2643,4225,0422,477	;2483	1560:	FP25-H:	F13_ZERO E13_E12,BUT EZBT,J/FP25-J
	;2484			
U 1261, 1640,2045,0000,0140,3744,2423,4234,6156,037	;2485	1261:	FP25-I:	X11_ZERO,FCC_04(FZ),BUT FDST,J/FP27-B
	;2486			
U 1061, 1561,2045,0000,0140,3746,3423,5200,0422,057	;2487	1061:	FP25-J:	F12_SR1(F12) E12_ZERO,J/FP25-K
	;2488			
U 1561, 1113,2005,0000,0140,3746,3633,4722,0002,057	;2489	1561:	FP25-K:	X12_SR0(X12),TBUS_BUF,BUT FT,J/FP34-A
	;2490			
U 1556, 1560,2045,0000,0140,3746,3633,4000,0150,177	;2491	1556:	FP25-L:	BUF_FPS,J/FP25-H

; 44DUTU.MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU.FP [160,1311]

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U 1262, 1103,2005,0000,0140,3740,3033,4021,0002,017	‡2492 ‡2493 ‡2494	1262:	FP26-A:	TBUS_BUF,BUT FIV,J/FP26-B
U 1103, 1640,2045,0000,0140,3744,2423,4234,6216,037	‡2495 ‡2496	1103:	FP26-B:	X11_ZERO,FCC_06(FZFW),BUT FDST,J/FP27-B
U 1123, 1562,3645,0000,0140,3743,5353,4200,2063,557	‡2497 ‡2498	1123:	FP26-C:	FCCR_FCCR,OR,02,SET FLAG,J/FP26-D
U 1562, 1167,2045,0000,0140,3746,3633,4000,0156,157	‡2499 ‡2500	1562:	FP26-D:	FCC_FCCR,J/FP26-E
U 1167, 1062,2067,0001,4140,2346,7673,4200,2262,137	‡2501 ‡2502	1167:	FP26-E:	R11_BX,FEC_10,J/FP26-F
U 1062, 1640,2045,0000,0140,3746,4643,4534,4422,437	‡2503 ‡2504	1062:	FP26-F:	X11_ROT(X12),BUT FDST,J/FP27-B
U 1650, 1702,2067,0001,4140,2346,7673,4200,2062,137	‡2505 ‡2506	1650:	FP27-A:	R11_BX,FEC_02,J/FP37-A
U 1600, 1601,2005,0144,0140,3746,3633,6000,0222,037	‡2507 ‡2508	1600:	FP27-AA:	DATO,MAINT,UDATA_X11(1),J/FP27-BB
U 1640, 1160,2045,0000,0140,3746,7673,4215,0002,177	‡2509 ‡2510	1640:	FP27-B:	FPS_BUF,BUT FD,J/FP27-D
U 1601, 1602,2145,0040,0141,2540,3033,4000,0422,017	‡2511 ‡2512	1601:	FP27-BB:	BA_R12,MAINT,J/FP27-CC,ID SPACE
U 1161, 1361,2045,0000,0740,3746,4641,4200,0422,217	‡2513 ‡2514	1161:	FP27-C:	FSRC_X11,BUT FLAG,J/FP37-H
U 1602, 1361,2005,0144,0740,3746,3633,6000,0162,037	‡2515 ‡2516	1602:	FP27-CC:	DATO,MAINT,UDATA_X11(0),BUT FLAG,J/FP37-H
U 1160, 1361,2045,0000,0740,3746,4641,4200,0422,214	‡2517 ‡2518	1160:	FP27-D:	FSRC(32)_X11,BUT FLAG,J/FP37-H
U 1646, 1571,6145,0300,0140,1746,7673,4200,0002,177	‡2519 ‡2520	1646:	FP27-DD:	BA_PC,DATI,B_UDATA,FPS_BUF,J/FP27-EE,I SPACE
U 1644, 1641,2044,0001,0142,3640,3033,4000,0422,017	‡2521 ‡2522	1644:	FP27-E:	RD_RD-B,J/FP27-KK,SR1 L
U 1571, 1572,2064,0001,4140,1740,3033,4000,0422,017	‡2523 ‡2524	1571:	FP27-EE:	PC_PC+2,J/FP27-FF
U 1572, 1537,2050,0001,4140,2440,3033,4000,0422,017	‡2525 ‡2526	1572:	FP27-FF:	R12_RD+B,J/FP27-T
U 1647, 1573,6145,0300,0140,1746,7673,4200,0002,177	‡2527 ‡2528	1647:	FP27-GG:	BA_PC,DATI,B_UDATA,FPS_BUF,J/FP27-HH,I SPACE
U 1573, 1574,2064,0001,4140,1740,3033,4000,0422,017	‡2529 ‡2530	1573:	FP27-HH:	PC_PC+2,J/FP27-II
U 1574, 1575,2050,0001,4140,2440,3033,4000,0422,017	‡2531 ‡2532	1574:	FP27-II:	R12_RD+B,J/FP27-JJ
U 1147, 1361,2005,0144,0740,3746,3633,6000,0422,037	‡2533 ‡2534	1147:	FP27-J:	DATO,MAINT,UDATA_X11(3),BUT FLAG,J/FP37-H
U 1575, 1537,6145,0101,4141,2540,3033,4000,0422,017	‡2535 ‡2536	1575:	FP27-JJ:	BA_R12,DATI,R12_UDATA,J/FP27-T,ID SPACE
U 1412, 1145,2064,0041,4140,2540,3033,4035,4422,017	‡2537 ‡2538	1412:	FP27-K:	R12_R12+2,MAINT,BUT GR7,J/FP27-Q
U 1641, 1412,2145,0001,4141,2446,7673,4200,0002,177	‡2539 ‡2540	1641:	FP27-KK:	BA R12_RD,FPS_BUF,J/FP27-K,ID SPACE
U 1642, 1565,2145,0001,4141,2446,7673,4200,0002,177	‡2541 ‡2542	1642:	FP27-L:	BA R12_RD,FPS_BUF,J/FP27-M,ID SPACE
U 1307, 1145,2064,0041,4140,2540,3033,4035,4422,017	‡2543 ‡2544	1307:	FP27-LL:	R12_R12+2,MAINT,BUT GR7,J/FP27-Q
U 1565, 1307,2050,0001,0142,3640,3033,4000,0422,017	‡2545 ‡2546	1565:	FP27-M:	RD_RD+B,J/FP27-LL,SR1 L

U 1145, 1707,2005,0144,0140,3746,3633,6000,0422,037	#2547	1145:	FP27-Q:	DATO,MAINT,UDATA_X11(3),J/FP27-R
	#2548			
U 1707, 1244,2164,0041,4141,2540,3033,4015,0422,017 ACE	#2549	1707:	FP27-R:	BA_R12 R12_R12+2,MAINT,BUT FD,J/FP27-S,ID SP
	#2550			
U 1244, 1361,2005,0144,0740,3746,3633,6000,0322,037	#2551	1244:	FP27-S:	DATO,MAINT,UDATA_X11(2),BUT FLAG,J/FP37-H
	#2552			
U 1537, 1145,2164,0041,4141,2540,3033,4000,0422,017	#2553	1537:	FP27-T:	BA_R12 R12_R12+2,MAINT,J/FP27-Q,ID SPACE
	#2554			
U 1643, 1213,6145,0101,4141,2446,7673,4200,0002,177 CE	#2555	1643:	FP27-U:	BA_RD,DATI,R12_UDATA,FPS_BUF,J/FP27-V,ID SPA
	#2556			
U 1213, 1537,2064,0001,0142,3640,3033,4000,0422,017	#2557	1213:	FP27-V:	RD_RD+2,J/FP27-T,SR1 L
	#2558			
U 1645, 1570,2065,0001,0142,3646,7673,4200,0002,177	#2559	1645:	FP27-W:	RD_RD-2,FPS_BUF,J/FP27-X,SR1 L
	#2560			
U 1570, 1537,6145,0101,4141,2440,3033,4000,0422,017	#2561	1570:	FP27-X:	BA_RD,DATI,R12_UDATA,J/FP27-T,ID SPACE
	#2562			
U 1245, 1172,2005,0144,0140,3746,3633,6000,0322,037	#2563	1245:	FP27-Y:	DATO,MAINT,UDATA_X11(2),J/FP27-Z
	#2564			
U 1172, 1600,2164,0041,4141,2540,3033,4000,0422,017	#2565	1172:	FP27-Z:	BA_R12 R12_R12+2,MAINT,J/FP27-AA,ID SPACE
	#2566			
U 1670, 1301,2045,0200,0140,3644,2423,4200,0012,057	#2567	1670:	FP28-A:	X12_ZERO,BUF_RD B_RD,J/FP28-G
	#2568			
U 1772, 1604,2045,0000,0140,3740,3033,4017,4422,017	#2569	1772:	FP28-AA:	BUT OP1E,J/FP28-CC
	#2570			
U 1350, 0000,2045,0000,2140,3746,7673,4200,0024,177	#2571	1350:	FP28-B:	FDFL,FPS_BUF,BUT NOSERV,J/1-A
	#2572			
U 1671, 1277,2145,0001,4141,2444,2423,4200,0422,057	#2573	1671:	FP28-BB:	X12_ZERO,BA R12_RD,J/FP28-F,ID SPACE
	#2574			
U 1674, 1671,2044,0001,0142,3640,3033,4000,0422,017	#2575	1674:	FP28-C:	RD_RD-B,J/FP28-BB,SR1 L
	#2576			
U 1604, 1670,2045,0200,0140,3740,3033,6035,2054,017	#2577	1604:	FP28-CC:	B_2 CLEAR FDFL,BUT DST,J/FP28-A
	#2578			
U 1404, 1300,6045,0300,0140,3740,3033,4036,0012,017 28-0	#2579	1404:	FP28-D:	DATI,B_UDATA BUF_UDATA,BUT GR7.OR,FLBAR,J/FP
	#2580			
U 1605, 1670,2045,0200,0140,3740,3033,6035,2054,017	#2581	1605:	FP28-DD:	B_2 CLEAR FDFL,BUT DST,J/FP28-A
	#2582			
U 1606, 1670,2045,0200,0140,3740,3033,6035,3262,017	#2583	1606:	FP28-EE:	B_(4.2),BUT DST,J/FP28-A
	#2584			
U 1277, 1300,6045,0300,0140,3740,3033,4036,0012,017 28-0	#2585	1277:	FP28-F:	DATI,B_UDATA BUF_UDATA,BUT GR7.OR,FLBAR,J/FP
	#2586			
U 1301, 1350,2045,0000,0140,3746,7673,4217,4002,044	#2587	1301:	FP28-G:	X12(2)_BUF,BUT OP1E,J/FP28-B
	#2588			
U 1672, 1603,2145,0001,4141,2444,2423,4200,0422,057	#2589	1672:	FP28-I:	X12_ZERO,BA R12_RD,J/FP28-J,ID SPACE
	#2590			
U 1603, 1404,2050,0001,0142,3640,3033,4000,0422,017	#2591	1603:	FP28-J:	RD_RD+B,J/FP28-D,SR1 L
	#2592			
U 1673, 1314,6145,0101,4141,2440,3033,4000,0422,017	#2593	1673:	FP28-L:	BA_RD,DATI,R12_UDATA,J/FP28-M,ID SPACE
	#2594			
U 1314, 1616,2064,0001,0142,3644,2423,4200,0422,057	#2595	1314:	FP28-M:	RD_RD+2,X12_ZERO,J/FP28-N,SR1 L
	#2596			
U 1616, 1300,6145,0300,0141,2540,3033,4037,0012,017 28-0,ID SPACE	#2597	1616:	FP28-N:	BA_R12,DATI,B_UDATA BUF_UDATA,BUT FLBAR,J/FP
	#2598			
U 1300, 1620,2064,0001,4140,2546,7673,4200,0002,044	#2599	1300:	FP28-O:	X12(2)_BUF,R12_R12+2,J/FP28-P
	#2600			
U 1620, 1621,6145,0100,0141,2540,3033,4000,0012,017	#2601	1620:	FP28-P:	BA_R12,DATI,BUF_UDATA,J/FP28-Q,ID SPACE

; 44DUTU,MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU,FF [160,1311]

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U 1621,	1350,2045,0000,0140,3746,7673,4217,4002,042	;2602 ;2603 ;2604	1621:	FP28-Q:	X12(1)_BUF,BUT OP1E,J/FP28-B
U 1675,	1610,2065,0001,0142,3644,2423,4200,0422,057	;2605 ;2606 ;2607 ;2608	1675:	FP28-R:	X12_ZERO,RD_RD-2,J/FP28-S,SR1 L
U 1610,	1616,6145,0101,4141,2440,3033,4000,0422,017	;2609 ;2610 ;2611	1610:	FP28-S:	BA_RD,R12_UDATA,DATI,J/FP28-N, ID SPACE
U 1676,	1611,6145,0300,0140,1740,3033,4000,0422,017	;2612 ;2613 ;2614	1676:	FP28-T:	BA_PC,DATI,B_UDATA,J/FP28-U, I SPACE
U 1611,	1612,2064,0001,4140,1744,2423,4200,0422,057	;2615 ;2616 ;2617	1611:	FP28-U:	X12_ZERO,PC_PC+2,J/FP28-V
U 1612,	1616,2050,0001,4140,2440,3033,4000,0422,017	;2618 ;2619 ;2620	1612:	FP28-V:	R12_RD+B,J/FP28-N
U 1677,	1613,6145,0300,0140,1740,3033,4000,0422,017	;2621 ;2622 ;2623	1677:	FP28-W:	BA_PC,DATI,B_UDATA,J/FP28-X, I SPACE
U 1613,	1614,2064,0001,4140,1744,2423,4200,0422,057	;2624 ;2625 ;2626	1613:	FP28-X:	X12_ZERO,PC_PC+2,J/FP28-Y
U 1614,	1615,2050,0001,4140,2440,3033,4000,0422,017	;2627 ;2628 ;2629	1614:	FP28-Y:	R12_RD+B,J/FP28-Z
U 1615,	1616,6145,0101,4141,2540,3033,4000,0422,017	;2630 ;2631 ;2632	1615:	FP28-Z:	BA_R12,DATI,R12_UDATA,J/FP28-N, ID SPACE
U 1351,	1622,2046,0220,0140,3746,7673,4200,0002,010	;2633 ;2634 ;2635	1351:	FP29-A:	X10(3)_BUF,B_B SWAB,J/FP29-B
U 1622,	1623,2045,0000,0140,3746,4643,4400,0422,257	;2636 ;2637 ;2638	1622:	FP29-B:	X12_ROT(X11),J/FP29-E
U 1503,	1625,2045,0000,0140,3746,7673,4200,2256,157	;2639 ;2640 ;2641	1503:	FP29-C:	FCC_10 FCCR_10,J/FP29-G
U 1501,	1625,2045,0000,0140,3746,7673,4200,2556,157	;2642 ;2643 ;2644	1501:	FP29-D:	FCC_00 FCCR_00,J/FP29-G
U 1623,	1624,2046,0000,0140,3746,3673,4200,0000,057	;2645 ;2646 ;2647	1623:	FP29-E:	F12_F12 E12_B,J/FP29-F
U 1624,	1063,2005,0000,0140,3746,3053,4200,3022,457	;2648 ;2649 ;2650	1624:	FP29-F:	F12_F12 E12_E12+200,J/FP29-S
U 1625,	1104,2005,0000,0140,3746,3633,4132,4173,617 P29-J	;2651 ;2652 ;2653	1625:	FP29-G:	FDFL,BUFH_FPS X10_X10,BUT ENBT EZBT XNBT,J/F
U 1144,	1116,2005,0000,0140,3746,4643,4521,0002,417	;2654 ;2655 ;2656	1144:	FP29-H:	X10_ROT(X12),TBUS_BUF,BUT FIV,J/FP35-J
U 1344,	1116,2005,0000,0140,3746,4643,4521,0002,417		1344:	FP29-I:	X10_ROT(X12),TBUS_BUF,BUT FIV,J/FP35-J
U 1104,	1116,2005,0000,0140,3746,4643,4521,0002,417		1104:	FP29-J:	X10_ROT(X12),TBUS_BUF,BUT FIV,J/FP35-J
U 1504,	1515,2005,0000,0140,3746,4643,4522,4002,417		1504:	FP29-K:	X10_ROT(X12),TBUS_BUF,BUT FIU,J/FP35-D
U 1544,	1504,2005,0000,0140,3747,3733,4025,0422,017		1544:	FP29-L:	F_X10BAR,BUT EZBT,J/FP29-K
U 1704,	1064,2005,0000,0140,3746,3633,4025,0422,057		1704:	FP29-M:	F_X12,BUT EZBT,J/FP29-D
U 1264,	1515,2005,0000,0140,3746,4643,4522,4002,417		1264:	FP29-N:	X10_ROT(X12),TBUS_BUF,BUT FIU,J/FP35-D
U 1064,	1422,2045,0000,0140,3746,4643,4515,0422,417		1064:	FP29-O:	X10_ROT(X12),BUT FD,J/FP36-D
U 1304,	1422,2045,0000,0140,3746,4643,4515,0422,417		1304:	FP29-P:	X10_ROT(X12),BUT FD,J/FP36-D
U 1703,	1625,2045,0000,0140,3746,7673,4200,2356,157		1703:	FP29-Q:	FCC_14 FCCR_14,J/FP29-G

; 44DUTU.MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU.FP [160,1311]

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U 1701, 1625,2045,0000,0140,3746,7673,4200,2156,157	;2657	1701:	FP29-R:	FCC_04 FCCR_04,J/FP29-G
	;2658			
U 1063, 1501,2005,0000,0140,3746,3633,4031,4462,057	;2659	1063:	FP29-S:	F_X12,BUT EZBT Y8,J/FP29-D
	;2660			
U 1761, 1217,2045,0200,0140,3740,3033,6000,3362,017	;2661	1761:	FP3-A:	B_(4,10,2),J/FP3-E
	;2662			
U 1017, 1410,2045,0000,0140,3744,2643,4200,0422,277	;2663	1017:	FP3-B:	F13_ZERO E13_E11,J/FP3-F
	;2664			
U 1762, 1627,2045,0000,0140,3740,3033,4034,4422,017	;2665	1762:	FP3-C:	BUT FSRC,J/FP3-J
	;2666			
U 1763, 1017,2045,0000,0140,3746,3633,4400,0422,037	;2667	1763:	FP3-D:	X11_ROT(L(X11),J/FP3-B
	;2668			
U 1217, 1627,2045,0000,0140,3740,3033,4034,7314,017	;2669	1217:	FP3-E:	FDFL_FDFLBAR,BUT FSRC,J/FP3-J
	;2670			
U 1410, 1155,2045,0000,0140,3746,3423,5200,0422,037	;2671	1410:	FP3-F:	F11_SR1(F11) E11_ZERO,J/FP3-G
	;2672			
U 1155, 1320,2045,0000,0140,3746,3633,4734,4422,037	;2673	1155:	FP3-G:	X11_SR0(X11),BUT FSRC,J/FP4-B
	;2674			
U 1764, 1763,2045,0000,0140,3744,2423,4200,0422,023	;2675	1764:	FP3-I:	X11(10)_ZERO,J/FP3-D
	;2676			
U 1627, 1320,2045,0000,0140,3743,5353,4234,6363,777	;2677	1627:	FP3-J:	FPS_FPS.OR.14,BUT FSRC,J/FP4-B
	;2678			
U 1637, 1702,2067,0001,4140,2346,7673,4200,2062,137	;2679	1637:	FP3-K:	R11_BX,FEC_02,J/FP37-A
	;2680			
U 1352, 1626,2045,0000,0140,3746,3633,4000,0150,177	;2681	1352:	FP30-A:	BUF_FPS,J/FP30-F
	;2682			
U 1146, 1566,2045,0000,0140,3744,2673,4600,3022,017	;2683	1146:	FP30-B:	SET_SIGN,J/FP30-C
	;2684			
U 1566, 1372,2005,0000,0140,3742,3237,4200,0422,057	;2685	1566:	FP30-C:	X12_X12,J/FP30-P
	;2686			
U 1152, 1630,2045,0000,0140,3746,3633,4700,0422,057	;2687	1152:	FP30-D:	X12_SR0(X12),J/FP30-E
	;2688			
U 1630, 1631,2042,0021,4140,3140,3033,4000,0422,017	;2689	1630:	FP30-E:	R14_R14+1 SWAB,J/FP30-N
	;2690			
U 1626, 1105,2005,0001,4140,3146,3633,6027,6162,057	;2691	1626:	FP30-F:	F_X12,R14_4,BUT XZBT,J/FP30-G
	;2692			
U 1105, 1105,2003,0001,4540,3140,1013,4600,0422,457	;2693	1105:	FP30-G:	X12_SL00(X12),R14_R14-1,BUT ZBIT,J/FP30-G
	;2694			
U 1107, 1106,2005,0001,4140,3146,3633,6027,3122,057	;2695	1107:	FP30-H:	R14_(237,217),F_X12,BUT XNBT,J/FP30-J
	;2696			
U 1125, 1424,2045,0000,0140,3740,3033,4015,2156,017	;2697	1125:	FP30-I:	FCC_04(FZ),BUT FD,J/FP36-F
	;2698			
U 1106, 1112,2045,0000,0140,3744,2423,4200,0422,017	;2699	1106:	FP30-J:	CLEAR_SIGN,J/FP30-K
	;2700			
U 1112, 1065,2005,0000,0140,3746,3633,4021,4362,057	;2701	1112:	FP30-K:	F_X12,BUT Y62,J/FP30-L
	;2702			
U 1065, 1065,2003,0001,4140,3146,3633,4622,0362,057	;2703	1065:	FP30-L:	X12_SL0(X12),R14_R14-1,BUT Y61,J/FP30-L
	;2704			
U 1465, 1631,2045,0021,4140,3140,3033,4000,0422,017	;2705	1465:	FP30-M:	R14_R14 SWAB,J/FP30-N
	;2706			
U 1631, 1444,2005,0000,0140,3146,7673,4200,0000,077	;2707	1631:	FP30-N:	X13_R14,J/FP17-J
	;2708			
U 1265, 1631,2045,0021,4140,3140,3033,4000,0422,017	;2709	1265:	FP30-O:	R14_R14 SWAB,J/FP30-N
	;2710			
U 1372, 1112,2005,0000,0140,3746,3633,4027,0422,057	;2711	1372:	FP30-P:	F_X12,BUT XNBT,J/FP30-K

; 440UTU,MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU,FP [160,1311]

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U 1347, 1317,2045,0000,0140,3744,2643,4200,2554,277	;2712	1347:	FP31-A:	F13_ZERO E13_E11,CLEAR FDFL,J/FP31-B
U 1166, 1305,2005,0000,0140,3740,3033,4023,4002,017	;2713	1166:	FP31-AA:	TRBUS_BUF,BUT FIC,J/FP32-N
U 1317, 1376,2005,0000,0140,3741,5157,4200,3022,677	;2714			
U 1052, 1305,2005,0000,0140,3740,3033,4023,4002,017	;2715	1317:	FP31-B:	X13_X13-200,J/FP31-EE
U 1471, 1001,2005,0021,4140,2146,3633,6000,0462,077	;2716	1052:	FP31-BB:	TRBUS_BUF,BUT FIC,J/FP32-N
U 1071, 1072,2005,0021,4140,2146,3633,6025,0462,077	;2717	1471:	FP31-C:	R10_X13 SWAB,J/FP33-K
U 1374, 1067,2005,0000,0140,3746,3633,4026,0422,077	;2718	1071:	FP31-D:	R10_X13 SWAB,BUT EZBT,J/FP31-E
U 1072, 1001,2045,0000,0140,3740,3033,4000,2556,017	;2719	1374:	FP31-DD:	F_X13,BUT ENBT,J/FP31-S
U 1376, 1071,2005,0000,0140,3746,3633,4026,0422,077	;2720	1072:	FP31-E:	FCC_00,J/FP33-K
U 1266, 1554,2040,0400,0140,3740,3033,4000,2156,017	;2721	1376:	FP31-EE:	F_X13,BUT ENBT,J/FP31-D
U 1377, 1166,2005,0000,0140,3746,3633,4025,0422,077	;2722	1266:	FP31-F:	BX_ZERO,FCC_04(FZ),J/FP33-BB
U 1000, 1346,3440,0001,4140,2146,3633,4417,2256,037	;2723	1377:	FP31-FF:	F_X13,BUT EZBT,J/FP31-AA
,BUT OP1D,J/FP31-H	;2724	1000:	FP31-G:	X11_ROT(L(X11)),FCC_10(FN),R10_ZERO,CLEAR FLAG
U 1774, 1000,2045,0000,0140,3746,3633,4000,0150,177	;2725			
U 1346, 1266,2005,0000,0140,3746,3633,5226,0422,037	;2726	1774:	FP31-GG:	BUF_FPS,J/FP31-G
U 1666, 1066,2005,0000,0140,3744,2653,4225,3022,277	;2727	1346:	FP31-H:	F11_SR1(F11) E11_E11,BUT ENBT,J/FP31-F
U 1066, 1374,2005,0000,0140,3742,5257,4200,2622,677	;2728	1666:	FP31-I:	F13_ZERO E13_E11,XOR,200,BUT EZBT,J/FP31-J
U 1070, 1070,2003,0001,4340,3146,3633,4700,0422,037	;2729	1066:	FP31-J:	X13_(37,17)-X13,J/FP31-DD
U 1170, 1632,2045,0220,0140,3746,3633,6000,0362,037	;2730	1070:	FP31-K:	X11_SRO(X11),R14_R14-1,BUT NBIT,J/FP31-K
U 1632, 1073,2005,0420,0140,3746,3643,2026,0262,037	;2731	1170:	FP31-L:	B_X11(H) SWAB,J/FP31-M
U 1773, 1774,2045,0000,0140,3744,2423,4200,0422,023	;2732	1632:	FP31-M:	BX_X11(L) SWAB F_EAC,BUT ENBT,J/FP32-J
U 1467, 1052,2005,0220,0140,3746,3643,2026,0362,037	;2733	1773:	FP31-N:	X11(10)_ZERO,J/FP31-GG
U 1272, 1001,2045,0000,0140,3740,3033,4000,2156,017	;2734	1467:	FP31-O:	B_X11(H) SWAB F_EAC,BUT ENBT,J/FP31-BB
U 1067, 1070,2005,0021,4140,3146,3633,6000,0462,077	;2735	1272:	FP31-R:	FCC_04(FZ),J/FP33-K
U 1452, 1377,2045,0000,0140,3740,3037,4200,0422,077		1067:	FP31-S:	R14_X13 SWAB,J/FP31-K
U 1366, 1654,2067,0001,4140,3140,3033,4036,4422,017		1452:	FP31-U:	X13_X13+1,J/FP31-FF
U 1655, 1360,2045,0420,0140,3746,3633,6000,0262,037		1366:	FP31-V:	R14_BX,BUT FL,J/FP31-Z
U 1360, 1454,2022,0400,1740,2140,3033,4000,0422,017		1655:	FP31-W:	BX_X11(L) SWAB,J/FP31-X
		1360:	FP31-X:	BX_R10-BX,BUT COUT15,J/FP31-Y

; 440UTU.MCR [160,1311] Micro-2.1 1B(41)
; 44FLWU.FP [160,1311]

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U 1454,	1305,2005,0400,0140,3140,3033,4023,4002,017	;2767	1454:	FP31-Y:	BX_R14,TBUS_BUF,BUT FIC,J/FP32-N
		;2768			
U 1654,	1454,2004,0001,4340,2140,3033,4000,0422,017	;2769	1654:	FP31-Z:	R10_R10-B,BUT NBIT,J/FP31-Y
		;2770			
U 1775,	1431,3440,0000,0140,3740,3033,4000,2554,017	;2771	1775:	FP32-A:	CLEAR FDFL,CLEAR FLAG,J/FP32-P
		;2772			
U 1634,	1710,2005,0001,4140,2146,3633,6035,0162,177	;2773	1634:	FP32-B:	R10_FFS,BUT DST,J/FP33-A
		;2774			
U 1776,	1635,3440,0000,0140,3740,3033,4000,0422,017	;2775	1776:	FP32-C:	CLEAR FLAG,J/FP32-D
		;2776			
U 1635,	1636,2005,0001,4140,2146,3633,6000,0162,137	;2777	1635:	FP32-D:	R10_FEC,J/FP32-E
		;2778			
U 1636,	1540,2045,0400,0140,2340,3033,4000,2014,017	;2779	1636:	FP32-E:	SET FDFL,BX_R11,J/FP32-Q
		;2780			
U 1473,	1274,2045,0000,0140,3740,3033,4036,4422,017	;2781	1473:	FP32-F:	BUT FL,J/FP32-I
		;2782			
U 1275,	1074,2022,0400,1740,2140,3033,4000,0422,017	;2783	1275:	FP32-G:	BX_R10-BX,BUT COUT15,J/FP32-H
		;2784			
U 1074,	1554,2070,0001,4140,2140,3033,4000,0422,017	;2785	1074:	FP32-H:	R10_BBAR,J/FP33-BB
		;2786			
U 1274,	1554,2044,0001,4140,2140,3033,4000,0422,017	;2787	1274:	FP32-I:	R10_R10-B,J/FP33-BB
		;2788			
U 1073,	1554,2046,0001,4140,2140,3033,4000,2556,017	;2789	1073:	FP32-J:	FCC_00,R10_B,J/FP33-BB
		;2790			
		;2791			
U 1564,	1634,2045,0000,0140,3744,5453,4200,3163,777	;2792	1564:	FP32-L:	FPS_FFS.AND.147757,J/FP32-B
		;2793			
U 1305,	1554,2040,0401,4140,2140,3033,4000,2116,017	;2794	1305:	FP32-N:	BX_ZERO,R10_ZERO,FCC_05(FZFC),J/FP33-BB
		;2795			
U 1431,	1564,2045,0200,0140,3740,3033,6000,2062,017	;2796	1431:	FP32-P:	B_2,J/FP32-L
		;2797			
U 1540,	1710,2045,0200,0140,3740,3033,6035,3262,017	;2798	1540:	FP32-Q:	B_(4.2),BUT DST,J/FP33-A
		;2799			
U 1315,	1305,3667,0001,4140,2346,7673,4200,2222,137	;2800	1315:	FP32-O:	R11_BX,SET FLAG,FEC_06,J/FP32-N
		;2801			
U 1710,	1361,2045,0001,0740,2140,3033,4000,0422,017	;2802	1710:	FP33-A:	RD_R10,BUT FLAG,J/FP37-H
		;2803			
U 1711,	1357,2145,0001,4141,2440,3033,4000,0422,017	;2804	1711:	FP-33AA:	BA R12_RD,J/FP33-E,ID SPACE
		;2805			
U 1714,	1306,2044,0001,0142,3640,3033,4000,0422,017	;2806	1714:	FP33-B:	RD_RD-B,J/FP33-D,SR1 L
		;2807			
U 1554,	1001,2045,0200,0140,3740,3033,6000,3262,017	;2808	1554:	FP33-BB:	B_(4.2),J/FP33-K
		;2809			
U 1306,	1357,2145,0001,4141,2440,3033,4000,0422,017	;2810	1306:	FP33-D:	BA R12_RD,J/FP33-E,ID SPACE
		;2811			
U 1357,	1416,2064,0041,4140,2540,3033,4036,0422,017	;2812	1357:	FP33-E:	R12_R12+2,MAINT,BUT GR7.OR.FLBAR,J/FP33-O
		;2813			
U 1417,	1361,2005,0144,0740,2140,3033,4000,0422,017	;2814	1417:	FP33-G:	DATO,MAINT,UDATA_R10,BUT FLAG,J/FP37-H
		;2815			
U 1712,	1731,2145,0001,4141,2440,3033,4000,0422,017	;2816	1712:	FP33-H:	BA R12_RD,J/FP33-I,ID SPACE
		;2817			
U 1731,	1356,2050,0001,0142,3640,3033,4036,0422,017	;2818	1731:	FP33-I:	RD_RD+B,BUT GR7.OR.FLBAR,J/FP33-J,SR1 L
		;2819			
U 1356,	1416,2064,0041,4140,2540,3033,4036,0422,017	;2820	1356:	FP33-J:	R12_R12+2,MAINT,BUT GR7.OR.FLBAR,J/FP33-O
		;2821			

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; 44DUTU.MCR [160,1311] Micro-2.1 1B(41)      14:3:34 14-Sep-1979      COMBINED 1144 AND FLOATING POINT FIELD DEFS Page 54
; 44FLWU.FP [160,1311]

U 1001, 1710,2645,0000,0140,3746,7673,6235,0002,177      ;2822 1001: FP33-K:      FPS_BUF CC_BUF,BUT DST,J/FP33-A
;2823
U 1713, 1651,6145,0101,4141,2440,3033,4000,0422,017      ;2824 1713: FP33-L:      BA_RD,DATI,R12_UDATA,J/FP33-M, ID SPACE
;2825
U 1651, 1660,2064,0001,0142,3640,3033,4000,0422,017      ;2826 1651: FP33-M:      RD_RD+2,J/FP33-N,SR1 L
;2827
U 1660, 1416,2164,0041,4141,2540,3033,4037,0422,017      ;2828 1660: FP33-N:      BA_R12 R12_R12+2,MAINT,BUT FLBAR,J/FP33-O, ID
SPACE
;2829
U 1416, 1661,2005,0144,0140,2140,3033,4000,0422,017      ;2830 1416: FP33-O:      DATO,MAINT,UDATA_R10,J/FP33-P
;2831
U 1661, 1662,2145,0040,0141,2540,3033,4000,0422,017      ;2832 1661: FP33-P:      BA_R12,MAINT,J/FP33-Q, ID SPACE
;2833
U 1662, 1361,2027,0144,0740,3740,3033,4000,0422,017      ;2834 1662: FP33-Q:      DATO,MAINT,UDATA_BX,BUT FLAG,J/FP37-H
;2835
U 1715, 1652,2065,0001,0142,3640,3033,4000,0422,017      ;2836 1715: FP33-R:      RD_RD-2,J/FP33-S,SR1 L
;2837
U 1652, 1660,6145,0101,4141,2440,3033,4000,0422,017      ;2838 1652: FP33-S:      BA_RD,DATI,R12_UDATA,J/FP33-N, ID SPACE
;2839
U 1716, 1653,6145,0300,0140,1740,3033,4000,0422,017      ;2840 1716: FP33-T:      BA_PC,DATI,B_UDATA,J/FP33-U, I SPACE
;2841
U 1653, 1342,2064,0001,4140,1740,3033,4000,0422,017      ;2842 1653: FP33-U:      PC_PC+2,J/FP33-V
;2843
U 1342, 1660,2050,0001,4140,2440,3033,4000,0422,017      ;2844 1342: FP33-V:      R12_RD+B,J/FP33-N
;2845
U 1717, 1343,6145,0300,0140,1740,3033,4000,0422,017      ;2846 1717: FP33-W:      BA_PC,DATI,B_UDATA,J/FP33-X, I SPACE
;2847
U 1343, 1656,2064,0001,4140,1740,3033,4000,0422,017      ;2848 1343: FP33-X:      PC_PC+2,J/FP33-Y
;2849
U 1656, 1657,2050,0001,4140,2440,3033,4000,0422,017      ;2850 1656: FP33-Y:      R12_RD+B,J/FP33-Z
;2851
U 1657, 1660,6145,0101,4141,2540,3033,4000,0422,017      ;2852 1657: FP33-Z:      BA_R12,DATI,R12_UDATA,J/FP33-N, ID SPACE
;2853
U 1113, 1414,2045,0000,0140,3744,2423,4215,0422,117      ;2854 1113: FP34-A:      X14_ZERO,BUT FD,J/FP34-C
;2855
U 1415, 1663,2045,0000,0140,3746,7673,4200,3062,110      ;2856 1415: FP34-B:      X14(3)_40000,J/FP34-D
;2857
U 1414, 1663,2045,0000,0140,3746,7673,4200,3062,102      ;2858 1414: FP34-C:      X14(1)_40000,J/FP34-D
;2859
U 1663, 1373,2005,0000,0140,3740,1013,4200,0423,057      ;2860 1663: FP34-D:      X12_X12+X14,J/FP34-P
;2861
U 1353, 1664,2045,0000,0140,3740,3037,4200,0422,077      ;2862 1353: FP34-E:      X13_X13+1,J/FP34-G
;2863
U 1313, 1664,2045,0000,0140,3746,3633,4600,0422,057      ;2864 1313: FP34-F:      X12_SL0(X12),J/FP34-G
;2865
U 1664, 1505,2005,0000,0140,3746,3643,5125,0422,657      ;2866 1664: FP34-G:      F12_SL0(F12) E12_E13,BUT EZBT,J/FP34-H
;2867
U 1505, 1251,2005,0000,0140,3743,1633,4224,0162,057      ;2868 1505: FP34-H:      F12_F12.OR,F10 E12_E12,BUT Y8,J/FP34-J
;2869
U 1253, 1420,2045,0000,0140,3746,7673,4216,6256,157      ;2870 1253: FP34-I:      FCC_10 FCCR_10,BUT OP1C,J/FP34-K
;2871
U 1251, 1420,2045,0000,0140,3746,7673,4216,6556,157      ;2872 1251: FP34-J:      FCC_00 FCCR_00,BUT OP1C,J/FP34-K
;2873
U 1420, 1131,2005,0000,0140,3746,3633,4031,0462,077      ;2874 1420: FP34-K:      F_X13,BUT EZBT Y9 Y8,J/FP35-L
;2875
U 1421, 1062,2005,0000,0140,3746,3633,4025,0422,077      ;2876 1421: FP34-L:      F_X13,BUT EZBT,J/FP26-F

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; 44OUTU.MCR [160,1311] Micro-2.1 1R(41)
; 44FLWU.FP [160,1311]

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U 1705, 1735,2005,0000,0140,3743,1633,4224,0162,057	;2877 ;2878	1705:	FP34-M:	F12_F12.OR,F10 E12_E12,BUT Y8,J/FP34-O
U 1737, 1420,2045,0000,0140,3746,7673,4216,6356,157	;2879 ;2880	1737:	FP34-N:	FCC_14 FCCR_14,BUT OP1C,J/FP34-K
U 1735, 1420,2045,0000,0140,3746,7673,4216,6156,157	;2881 ;2882	1735:	FP34-O:	FCC_04 FCCR_04,BUT OP1C,J/FP34-K
U 1373, 1313,2005,0000,0140,3746,3633,4027,0422,057	;2883 ;2884	1373:	FP34-P:	F_X12,BUT XNBT,J/FP34-F
U 1137, 1515,2005,0000,0140,3746,4643,4522,4002,417	;2885 ;2886	1137:	FP35-A:	X10_ROT(X12),TBUS_BUF,BUT FIU,J/FP35-D
U 1555, 1426,2067,0001,4140,2346,7673,4215,2322,137	;2887 ;2888	1555:	FP35-B:	R11_BX,FEC_12,BUT FD,J/FP36-H
U 1515, 1424,2045,0000,0140,3740,3033,4015,2156,017	;2889 ;2890	1515:	FP35-D:	FCC_04(FZ),BUT FD,J/FP36-F
U 1133, 1116,2005,0000,0140,3746,4643,4521,0002,417	;2891 ;2892	1133:	FP35-E:	X10_ROT(X12),TBUS_BUF,BUT FIV,J/FP35-J
U 1136, 0737,2045,0000,0140,3743,5353,4200,2063,557	;2893 ;2894	1136:	FP35-F:	FCCR_FCCR.OR.02,J/FP35-G
U 0737, 1700,2045,0000,0140,3746,3633,4000,0156,157	;2895 ;2896	737:	FP35-G:	FCC_FCCR,J/FP35-H
U 1700, 1426,2067,0001,4140,2346,7673,4215,2262,137	;2897 ;2898	1700:	FP35-H:	R11_BX,FEC_10,BUT FD,J/FP36-H
U 1333, 1116,2005,0000,0140,3746,4643,4521,0002,417	;2899 ;2900	1333:	FP35-I:	X10_ROT(X12),TBUS_BUF,BUT FIV,J/FP35-J
U 1116, 1424,2045,0000,0140,3740,3033,4015,2216,017	;2901 ;2902	1116:	FP35-J:	FCC_06(FZFU),BUT FD,J/FP36-F
U 1331, 1515,2005,0000,0140,3746,4643,4522,4002,417	;2903 ;2904	1331:	FP35-K:	X10_ROT(X12),TBUS_BUF,BUT FIU,J/FP35-D
U 1131, 1422,2045,0000,0140,3746,4643,4515,0422,417	;2905 ;2906	1131:	FP35-L:	X10_ROT(X12),BUT FD,J/FP36-D
U 1475, 1276,2045,0000,0140,3740,3033,4000,2256,017	;2907 ;2908	1475:	FP36-A:	FCC_10(FN),J/FP36-I
U 1075, 1276,2045,0000,0140,3740,3033,4000,2556,017	;2909 ;2910	1075:	FP36-B:	FCC_00,J/FP36-I
U 1423, 1276,2045,0000,0140,3746,4642,4200,0422,017	;2911 ;2912	1423:	FP36-C:	AC_X10,J/FP36-I
U 1422, 1276,2045,0000,0140,3746,4642,4200,0422,014	;2913 ;2914	1422:	FP36-D:	AC(32)_X10,J/FP36-I
U 1425, 1276,2045,0000,0140,3744,2422,4200,0422,017	;2915 ;2916	1425:	FP36-E:	AC_ZERO,J/FP36-I
U 1424, 1276,2045,0000,0140,3744,2422,4200,0422,014	;2917 ;2918	1424:	FP36-F:	AC(32)_ZERO,J/FP36-I
U 1427, 1702,2045,0000,0140,3746,4642,4200,0422,017	;2919 ;2920	1427:	FP36-G:	AC_X10,J/FP37-A
U 1426, 1702,2045,0000,0140,3746,4642,4200,0422,014	;2921 ;2922	1426:	FP36-H:	AC(32)_X10,J/FP37-A
U 1276, 0000,2045,0000,2140,3746,7673,4200,0002,177	;2923 ;2924	1276:	FP36-I:	FPS_BUF,BUT NOSERV,J/1-A
U 1702, 1365,2045,0000,0140,3746,7673,4200,0002,177	;2925 ;2926	1702:	FP37-A:	FPS_BUF,J/FP37-B
U 1365, 1531,2045,0000,0140,3743,5353,4200,3023,777	;2927 ;2928	1365:	FP37-B:	FPS_FPS.OR.100000,J/FP37-C
U 1531, 1430,2005,0000,0140,3746,3633,4020,4166,177	;2929 ;2930	1531:	FP37-C:	FDFL_BUF_FPS,BUT FID,J/FP37-E
	;2931			

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; 44DUTU,MCR [160,1311] Micro-2.1 1B(41)      14:3:34 14-Sep-1979      COMBINED 1144 AND FLOATING POINT FIELD DEFS Page 56
; 44FLWU,FP [160,1311]

U 1432, 0000,2065,0001,6140,2340,3033,4000,0422,017      ;2932 1432: FP37-D:      R11_R11-2,BUT NOSERV,J/1-A
;2933
U 1430, 1732,2065,0001,4140,2340,3033,4000,0422,017      ;2934 1430: FP37-E:      R11_R11-2,J/FP37-F
;2935
U 1732, 0011,2045,0001,4140,3340,3033,6000,2522,017      ;2936 1732: FP37-F:      R15_244,J/17-A
;2937
U 1361, 0000,2045,0000,2140,3746,3633,4000,0166,177      ;2938 1361: FP37-H:      FDFL,BUF_FPS,BUT NOSERV,J/1-A
;2939
U 1330, 1702,2067,0001,4140,2346,7673,4200,2062,137      ;2940 1330: FP4-A:      R11_BX,FEC_02,J/FP37-A
;2941
U 1406, 1411,2064,0001,4140,2546,7673,4200,0002,002      ;2942 1406: FP4-AA:      X10(1)_BUF,R12_R12+2,J/FP4-BB
;2943
U 1320, 1543,2045,0000,0140,3746,3631,4300,0422,017      ;2944 1320: FP4-B:      Q_FSRC,J/FP4-LL
;2945
U 1411, 1271,6145,0100,0141,2540,3033,4000,0012,017      ;2946 1411: FP4-BB:      BA_R12,DATI,BUF_UDATA,J/FP4-CC, ID SPACE
;2947
U 1271, 1437,2045,0000,0140,3746,7673,4200,0002,001      ;2948 1271: FP4-CC:      X10(0)_BUF,J/FP5-C
;2949
U 1434, 1435,2045,0000,0140,3744,2423,4200,0422,003      ;2950 1434: FP4-D:      X10(10)_ZERO,J/FP5-A
;2951
U 1326, 1273,6145,0300,0140,1740,3033,4000,0422,017      ;2952 1326: FP4-DD:      BA_PC,DATI,B_UDATA,J/FP4-KK, I SPACE
;2953
U 1324, 1321,2044,0001,0142,3640,3033,4000,0422,017      ;2954 1324: FP4-E:      RD_RD+B,J/FP4-MM,SR1 L
;2955
U 1303, 1260,2050,0001,4140,2440,3033,4000,0422,017      ;2956 1303: FP4-EE:      R12_RD+B,J/FP4-T
;2957
U 1076, 1437,2045,0000,0140,3744,2423,4200,0422,003      ;2958 1076: FP4-FF:      X10(10)_ZERO,J/FP5-C
;2959
U 1327, 1332,6145,0300,0140,1740,3033,4000,0422,017      ;2960 1327: FP4-GG:      BA_PC,DATI,B_UDATA,J/FP4-HH, I SPACE
;2961
U 1332, 1371,2064,0001,4140,1740,3033,4000,0422,017      ;2962 1332: FP4-HH:      PC_PC+2,J/FP4-II
;2963
U 1371, 1375,2050,0001,4140,2440,3033,4000,0422,017      ;2964 1371: FP4-II:      R12_RD+B,J/FP4-JJ
;2965
U 1212, 1207,6045,0100,0140,3740,3033,4000,0012,017      ;2966 1212: FP4-J:      DATI,BUF_UDATA,J/FP4-K
;2967
U 1375, 1260,6145,0101,4141,2540,3033,4000,0422,017      ;2968 1375: FP4-JJ:      BA_R12,DATI,R12_UDATA,J/FP4-T, ID SPACE
;2969
U 1207, 1174,2064,0001,4140,2546,7673,4235,4002,010      ;2970 1207: FP4-K:      X10(3)_BUF,R12_R12+2,BUT GR7,J/FP4-X
;2971
U 1273, 1303,2064,0001,4140,1740,3033,4000,0422,017      ;2972 1273: FP4-KK:      PC_PC+2,J/FP4-EE
;2973
U 1176, 1437,2045,0000,0140,3744,2423,4200,0422,007      ;2974 1176: FP4-L:      X10(210)_ZERO,J/FP5-C
;2975
U 1543, 1434,2045,0000,0140,3746,2623,4215,0422,017      ;2976 1543: FP4-LL:      X10_Q,BUT FD,J/FP4-D
;2977
U 1322, 1165,2145,0001,4141,2440,3033,4000,0422,017      ;2978 1322: FP4-M:      BA R12_RD,J/FP4-N, ID SPACE
;2979
U 1321, 1212,2145,0001,4141,2440,3033,4000,0422,017      ;2980 1321: FP4-MM:      BA R12_RD,J/FP4-J, ID SPACE
;2981
U 1165, 1212,2050,0001,0142,3640,3033,4000,0422,017      ;2982 1165: FP4-N:      RD_RD+B,J/FP4-J,SR1 L
;2983
U 1002, 0144,6145,0100,0141,2540,3033,4000,0012,017      ;2984 1002: FP4-NN:      BA_R12,DATI,BUF_UDATA,J/4-K, ID SPACE
;2985
U 1323, 1211,6145,0101,4141,2440,3033,4000,0422,017      ;2986 1323: FP4-R:      BA_RD,DATI,R12_UDATA,J/FP4-S, ID SPACE

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; 44FLWU,FP [160,1311]

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U 1211,	1260,2064,0001,0142,3640,3033,4000,0422,017	;2987 ;2988	1211:	FP4-S:	RD_RD+2,J/FP4-T,SR1 L
U 1260,	1263,6145,0100,0141,2540,3033,4000,0012,017	;2989 ;2990	1260:	FP4-T:	BA_R12,DATI,BUF_UDATA,J/FP4-U,ID SPACE
U 1263,	1174,2064,0001,4140,2546,7673,4200,0002,010	;2991 ;2992	1263:	FP4-U:	X10(3)_BUF,R12_R12+2,J/FP4-X
U 1325,	1463,2065,0001,0142,3640,3033,4000,0422,017	;2993 ;2994	1325:	FP4-V:	RD_RD-2,J/FP4-W,SR1 L
U 1463,	1260,6145,0101,4141,2440,3033,4000,0422,017	;2995 ;2996	1463:	FP4-W:	BA_RD,DATI,R12_UDATA,J/FP4-T,ID SPACE
U 1174,	1441,6145,0100,0141,2540,3033,4000,0012,017	;2997 ;2998	1174:	FP4-X:	BA_R12,DATI,BUF_UDATA,J/FP4-Y,ID SPACE
U 1441,	1076,2064,0001,4140,2546,7673,4215,0002,004	;2999 ;3000	1441:	FP4-Y:	X10(2)_BUF,R12_R12+2,BUT FD,J/FP4-FF
U 1077,	1406,6145,0100,0141,2540,3033,4000,0012,017	;3001 ;3002	1077:	FP4-Z:	BA_R12,DATI,BUF_UDATA,J/FP4-AA,ID SPACE
U 1435,	1470,2045,0000,0140,3746,4643,4400,0422,057	;3003 ;3004	1435:	FP5-A:	X12_ROT(L(X10),J/FP5-B
U 1470,	1054,2005,0000,0140,3744,2643,4225,0422,517	;3005 ;3006	1470:	FP5-B:	F14_ZERO E14_E12,BUT EZBT,J/FP5-F
U 1437,	1443,2045,0000,0140,3746,4643,4400,0422,057	;3007 ;3008	1437:	FP5-C:	X12_ROT(L(X10),J/FP5-D
U 1443,	1054,2005,0000,0140,3744,2643,4131,4462,517	;3009 ;3010	1443:	FP5-D:	F14_ZERO E14_E12 T_X12,BUT EZBT Y8,J/FP5-F
U 1056,	1020,2005,0000,0140,3746,3643,4005,4166,777	;3011 ;3012	1056:	FP5-E:	FDFL,BUF_FPS F_E13,BUT EZBT OP1A,J/FP16-D
U 1054,	1020,2005,0000,0140,3746,3643,4005,4166,777	;3013 ;3014	1054:	FP5-F:	FDFL,BUF_FPS F_E13,BUT EZBT OP1A,J/FP16-D
U 1254,	1030,2005,0000,0140,3746,3643,4005,4166,777	;3015 ;3016	1254:	FP5-G:	FDFL,BUF_FPS F_E13,BUT EZBT OP1A,J/FP16-B
U 1256,	1254,2005,0000,0140,3746,3633,4023,0166,177	;3017 ;3018	1256:	FP5-H:	FDFL,BUF_FPS,BUT FIUV,J/FP5-G
U 1354,	1365,2067,0001,4140,2346,7673,4200,2362,137	;3019 ;3020	1354:	FP5-I:	R11_BX,FEC_14,J/FP37-B
U 1233,	1124,2005,0000,0140,3746,3633,4026,0422,017	;3021 ;3022	1233:	FP6-A:	F_X10,BUT ENBT,J/FP6-D
U 1033,	1124,2005,0000,0140,3746,3633,4026,0422,017	;3023 ;3024	1033:	FP6-B:	F_X10,BUT ENBT,J/FP6-D
U 1524,	1422,2045,0000,0140,3740,3033,4015,2356,017	;3025 ;3026	1524:	FP6-C:	FCC_14(FNFZ),BUT FD,J/FP36-D
U 1124,	1422,2045,0000,0140,3740,3033,4015,2156,017	;3027 ;3028	1124:	FP6-D:	FCC_04(FZ),BUT FD,J/FP36-D
U 1223,	1003,2005,0000,0140,3746,3633,4026,0422,017	;3029 ;3030	1223:	FP6-E:	F_X10,BUT ENBT,J/FP6-H
U 1023,	1003,2005,0000,0140,3746,3633,4026,0422,017	;3031 ;3032	1023:	FP6-F:	F_X10,BUT ENBT,J/FP6-H
U 1403,	1422,2045,0000,0140,3740,3033,4015,2256,017	;3033 ;3034	1403:	FP6-G:	FCC_10(FN),BUT FD,J/FP36-D
U 1003,	1422,2045,0000,0140,3740,3033,4015,2556,017	;3035 ;3036	1003:	FP6-H:	FCC_00,BUT FD,J/FP36-D
U 1237,	1424,2045,0000,0140,3740,3033,4015,2156,017	;3037 ;3038	1237:	FP7-A:	FCC_04(FZ),BUT FD,J/FP36-F
U 1037,	1424,2045,0000,0140,3740,3033,4015,2156,017	;3039 ;3040	1037:	FP7-B:	FCC_04(FZ),BUT FD,J/FP36-F
		;3041			

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U 1227, 1510,2005,0000,0140,3744,2643,4124,0162,477	#3042	1227:	FP7-C:	F13_ZERO E13_E12 T_X12,BUT Y8,J/FP7-F
	#3043			
U 1027, 1510,2005,0000,0140,3744,2643,4124,0162,477	#3044	1027:	FP7-D:	F13_ZERO E13_E12 T_X12,BUT Y8,J/FP7-F
	#3045			
U 1512, 1447,2045,0000,0140,3744,2673,4600,3022,017	#3046	1512:	FP7-E:	SET SIGN,J/FP7-G
	#3047			
U 1510, 1447,2045,0000,0140,3744,2423,4200,0422,017	#3048	1510:	FP7-F:	CLEAR SIGN,J/FP7-G
	#3049			
U 1447, 1450,2045,0000,0140,3746,3423,5200,0422,057	#3050	1447:	FP7-G:	F12_SR1(F12) E12_ZERO,J/FP7-H
	#3051			
U 1450, 1113,2005,0000,0140,3746,3633,4722,0002,057	#3052	1450:	FP7-H:	X12_SR0(X12),TRUS_BUF,BUT FT,J/FP34-A
	#3053			
U 1235, 1424,2045,0000,0140,3740,3033,4015,2156,017	#3054	1235:	FP8-A:	FCC_04(FZ),BUT FD,J/FP36-F
	#3055			
U 1035, 1075,2005,0000,0140,3746,5653,0026,3022,017	#3056	1035:	FP8-B:	F_AC.XOR,200,BUT ENBT,J/FP36-B
	#3057			
U 1005, 1456,2005,0220,0140,3741,1117,6000,0462,717	#3058	1005:	FP8-C:	B_X14-X13 SWAB,J/FP9-A
	#3059			
U 1025, 1457,2045,0000,0140,3746,4632,4300,0422,417	#3060	1025:	FP8-D:	Q_(F12*EAC),J/FP8-L
	#3061			
U 1407, 1451,2045,0000,0140,3746,4643,4200,0422,217	#3062	1407:	FP8-E:	X10_X11,J/FP8-F
	#3063			
U 1451, 1340,2045,0000,0140,3746,4643,4200,0422,437	#3064	1451:	FP8-F:	X11_X12,J/FP8-G
	#3065			
U 1340, 1455,2045,0000,0140,3746,4643,4200,0422,057	#3066	1340:	FP8-G:	X12_X10,J/FP8-H
	#3067			
U 1455, 1456,2005,0220,0140,3742,1217,6000,0462,717	#3068	1455:	FP8-H:	B_X13-X14 SWAB,J/FP9-A
	#3069			
U 1405, 1276,2045,0000,0140,3740,3033,4000,2556,017	#3070	1405:	FP8-I:	FCC_00,J/FP36-I
	#3071			
U 1225, 1075,2005,0000,0140,3746,3633,4026,0422,017	#3072	1225:	FP8-J:	F_X10,BUT ENBT,J/FP36-B
	#3073			
U 1007, 1276,2045,0000,0140,3740,3033,4000,2256,017	#3074	1007:	FP8-K:	FCC_10(FN),J/FP36-I
	#3075			
U 1457, 1706,2045,0000,0140,3746,3423,5200,0422,057	#3076	1457:	FP8-L:	F12_SR1(F12) E12_ZERO,J/FP8-M
	#3077			
U 1706, 1777,2045,0000,0140,3746,3633,4700,0422,057	#3078	1706:	FP8-M:	X12_SR0(X12),J/FP8-N
	#3079			
U 1777, 1005,2005,0000,0140,3746,2623,4032,0462,017	#3080	1777:	FP8-N:	F_Q,BUT ENBT Y8,J/FP8-C
	#3081			
U 1456, 1010,2006,0000,2340,3740,3033,4000,0422,017	#3082	1456:	FP9-A:	T_B,BUT NBIT ZBIT,J/FP9-H
	#3083			
U 1012, 1363,2005,0000,0140,3741,1117,4200,0422,257	#3084	1012:	FP9-C:	X12_X12-X11,J/FP9-I
	#3085			
U 1140, 1276,2045,0000,0140,3740,3033,4000,2256,017	#3086	1140:	FP9-D:	FCC_10(FN),J/FP36-I
	#3087			
U 1120, 1276,2045,0000,0140,3740,3033,4000,2156,017	#3088	1120:	FP9-E:	FCC_04(FZ),J/FP36-I
	#3089			
U 1100, 1276,2045,0000,0140,3740,3033,4000,2556,017	#3090	1100:	FP9-F:	FCC_00,J/FP36-I
	#3091			
U 1110, 1276,2045,0000,0140,3740,3033,4000,2256,017	#3092	1110:	FP9-G:	FCC_10(FN),J/FP36-I
	#3093			
U 1010, 1276,2045,0000,0140,3740,3033,4000,2556,017	#3094	1010:	FP9-H:	FCC_00,J/FP36-I
	#3095			
U 1363, 1100,2005,0000,0140,3746,3633,4033,0422,057	#3096	1363:	FP9-I:	F_X12,BUT XNBT XZBT,J/FP9-F

U 0000	1040:	1636:	1060:	1544:	1522:	1564:	1546:	1550:
U 0010	1042:	1604:	1540:	1542:	1538:	1044:	1530:	1835:
U 0020	1587:	1286:	1290:	1292:	1288:	1298:	1302:	1308:
U 0030	1352:	1356:	1360:	1364:	1358:	1368:	1372:	1378:
U 0040	1248:	1599:	1601:	1068:	1606:	1681:	1899:	1897:
U 0050	2079:	1663:	1616:	1618:	1665:	1669:	1671:	1632:
U 0060	1893:	1895:	1891:	1889:	1887:	1885:	1883:	1460:
U 0070	1877:	1881:		1514:	1739:	1468:	1749:	1466:
U 0100	1428:	1430:	1434:	1438:	1432:	1442:	1446:	1452:
U 0110	1476:	1268:	1296:	1328:	1348:	1376:	1404:	1426:
U 0120	1208:	1210:	1214:	1218:	1212:	1222:	1228:	1234:
U 0130	1242:	1919:	1917:	1915:	1577:	1913:	1585:	1875:
U 0140	1048:	1116:	1120:	1136:	1124:	1126:	1130:	1132:
U 0150	1058:	1316:	1320:	1322:	1318:	1326:	1330:	1336:
U 0160	1252:	1254:	1258:	1262:	1256:	1266:	1272:	1278:
U 0170	1390:	1394:	1398:	1402:	1396:	1406:	1412:	1418:
U 0200	1046:	1052:	1620:	1634:	1056:	1078:	1082:	1086:
U 0210	1516:	1088:	1092:	1094:	1098:	1100:	1102:	1873:
U 0220	1643:	1645:	1649:	1653:	1647:	1657:	1661:	1667:
U 0230	1871:	1869:	1867:	1865:	1863:	1861:	1859:	1691:
U 0240	1054:	1791:	1775:	1150:	1154:	1156:	1160:	1162:
U 0250	1470:	1472:	1482:	1486:	1474:	1488:	1492:	1498:
U 0260	1575:	1793:	1771:	1180:	1184:	1186:	1190:	1879:
U 0270	1050:	1198:	1202:	1204:	1206:	1216:	1220:	1226:
U 0300	1070:	1230:	1232:	1236:	1238:	1240:	1260:	1506:
U 0310	1072:	1270:	1274:	1276:	1280:	1282:	1284:	1510:
U 0320	1076:	1300:	1304:	1306:	1310:	1312:	1314:	1324:
U 0330	1080:	1332:	1334:	1338:	1340:	1342:	1344:	1857:
U 0340	1074:	1809:	1777:	1354:	1362:	1366:	1370:	1374:
U 0350	1084:	1380:	1382:	1384:	1386:	1388:	1392:	1400:
U 0360	1090:	1811:	1773:	1414:	1416:	1420:	1422:	1424:
U 0370	1096:	1436:	1440:	1444:	1448:	1450:	1454:	1250:
U 0400	1687:	1536:	1693:	1711:	1757:	1699:	1829:	1733:
U 0410	1689:		1562:	1717:	1753:	1747:	1751:	1723:
U 0420	1743:	1779:	1741:	1767:	1781:	1785:	1825:	1715:
U 0430	1949:	1807:	1638:	1731:	1901:	1524:	1597:	1725:
U 0440	1787:	1683:	1769:	1815:	1795:	1909:	1789:	1907:
U 0450	1855:	1975:	1955:	1721:	1921:	1969:	1951:	1727:
U 0460	1677:	1062:	1833:	1462:	1941:	1947:	1939:	1945:
U 0470	1685:	1853:	1464:	1719:	1556:	1490:	1494:	1729:
U 0500	1558:	1192:	1709:	1695:	1608:	1697:	1500:	1703:
U 0510	1502:		1224:	1484:	1504:	1745:	1264:	1294:
U 0520	1508:	1761:	1518:	1520:	1827:	1783:	1823:	1526:
U 0530	1801:	1805:	1803:	1528:	1821:	1532:	1819:	1534:
U 0540	1591:	1548:	1552:	1813:	1797:	1911:	1579:	1581:
U 0550	1925:	1961:	1496:	1589:	1923:	1971:	1593:	1595:
U 0560	1610:	1560:	1612:	1651:	1943:	1655:	1614:	1659:
U 0570	1673:	1675:	1679:	1701:	1705:	1707:	1713:	1735:
U 0600	1104:	1106:	1110:	1114:	1108:	1118:	1122:	1128:
U 0610	1737:	1566:	1759:	1763:	1799:	1817:	1568:	1570:
U 0620	1831:	1851:	1849:	1765:	1847:	1845:	1843:	
U 0630	1138:	1140:	1144:	1148:	1142:	1152:	1158:	1164:
U 0640	1146:	1927:	1480:	1963:	1478:	1554:	1622:	1626:
U 0650		1350:	1458:	1957:	1628:	1410:	1630:	1959:
U 0660	1977:	1979:	1983:	1987:	1981:	1991:	1993:	1995:

; 440UTU.MCR [160,1311] Micro-2.1 1B(41) 14:3:34 14-Sep-1979
;

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Location / Line Number Index

U 1550	2405:	2407:	2409:	2427:	2808:	2888:	2491:	2265:
U 1560	2483:	2489:	2499:	2195:	2792:	2545:	2685:	2477:
U 1570	2561:	2523:	2525:	2529:	2531:	2535:	2135:	2475:
U 1600	2507:	2511:	2515:	2591:	2577:	2581:	2583:	2401:
U 1610	2607:	2611:	2613:	2617:	2619:	2621:	2597:	2383:
U 1620	2601:	2603:	2625:	2631:	2633:	2635:	2691:	2677:
U 1630	2689:	2707:	2749:	2313:	2773:	2777:	2779:	2679:
U 1640	2509:	2539:	2541:	2555:	2521:	2559:	2519:	2527:
U 1650	2505:	2826:	2838:	2842:	2769:	2763:	2850:	2852:
U 1660	2828:	2832:	2834:	2840:	2866:	2189:	2741:	1572:
U 1670	2567:	2573:	2589:	2593:	2575:	2605:	2609:	2615:
U 1700	2898:	2657:	2926:	2655:	2647:	2878:	3078:	2549:
U 1710	2802:	2804:	2816:	2824:	2806:	2836:	2840:	2846:
U 1720	2403:	2369:	2371:	2379:	2373:	2381:	2385:	2389:
U 1730	2367:	2818:	2936:	2323:	2387:	2882:	2397:	2880:
U 1740	2443:	2447:	2449:	2455:	2445:	2457:	2459:	2461:
U 1750	2343:	2357:	2347:	2349:	2345:	2351:	2353:	2355:
U 1760	2327:	2661:	2665:	2667:	2675:	2469:	2471:	2473:
U 1770	2361:	2365:	2569:	2751:	2737:	2771:	2775:	3080:

U 0670	1172:	1174:	1178:	1182:	1176:	1188:	1194:	1200:
U 0700	1196:	1985:	1905:	1935:	1166:	1170:	1903:	1933:
U 0710		1168:	1841:	1346:	1244:	1839:	1929:	1066:
U 0720	1965:	1408:	1989:	1937:	1967:	1755:	1953:	1931:
U 0730	1583:	1134:	1064:	1624:	1640:	1837:	1973:	2896:
U 0740	1999:	2001:	2003:	2005:	2007:	2009:	2011:	2013:
U 0750	2015:	2017:	2019:	2021:	2023:	2025:	2027:	2029:
U 0760	2031:	2033:	2035:	2037:	2039:	2041:	2043:	2045:
U 0770	2047:	2049:	2051:	2053:	2055:	2057:	2059:	1997:
U 1000	2735:	2822:	2984:	3036:	1574:	3058:	2111:	3074:
U 1010	3094:	2151:	3084:	2137:	2143:	2149:	2159:	2663:
U 1020	2217:	2209:	2129:	3032:	2125:	3060:	2087:	3044:
U 1030	2213:	2201:	2119:	3024:	2117:	3056:	2083:	3040:
U 1040	2181:	2279:	2163:	2257:	2239:	2237:	2285:	2251:
U 1050	2299:	2301:	2719:	2437:	3014:	2415:	3012:	2413:
U 1060	2481:	2487:	2503:	2659:	2651:	2703:	2743:	2757:
U 1070	2745:	2723:	2727:	2789:	2785:	2910:	2958:	3002:
U 1100	3090:	2167:	2173:	2495:	2641:	2693:	2699:	2695:
U 1110	3092:	2141:	2701:	2854:	2139:	2153:	2902:	2155:
U 1120	3088:	2165:	2321:	2497:	3028:	2697:	2255:	2253:
U 1130	2305:	2906:	2307:	2892:	2297:	2295:	2894:	2886:
U 1140	3086:	2169:	2207:	2205:	2637:	2547:	2683:	2533:
U 1150	2291:	2303:	2687:	2429:	2223:	2673:	2317:	2315:
U 1160	2517:	2513:	2269:	2267:	2273:	2982:	2715:	2501:
U 1170	2747:	2103:	2565:	2107:	2998:	2101:	2974:	2105:
U 1200	2329:	2331:	2333:	2335:	2337:	2339:	2109:	2970:
U 1210	2309:	2988:	2966:	2557:	2147:	2241:	2145:	2669:
U 1220	2215:	2203:	2123:	3030:	2121:	3072:	2085:	3042:
U 1230	2211:	2199:	2115:	3022:	2113:	3054:	2081:	3038:
U 1240	2231:	2277:	2235:	2259:	2551:	2563:	2283:	2271:
U 1250	2233:	2872:	2363:	2870:	3016:	2417:	3018:	2419:
U 1260	2990:	2485:	2493:	2992:	2649:	2709:	2731:	1112:
U 1270	2227:	2948:	2755:	2972:	2787:	2783:	2924:	2585:
U 1300	2599:	2587:	2175:	2956:	2653:	2794:	2810:	2543:
U 1310	2425:	2431:	2423:	2864:	2595:	2800:	2157:	2717:
U 1320	2944:	2980:	2978:	2986:	2954:	2994:	2952:	2960:
U 1330	2940:	2904:	2962:	2900:	2441:	2433:	2435:	2395:
U 1340	3066:	2451:	2844:	2848:	2639:	2453:	2739:	2713:
U 1350	2571:	2623:	2681:	2862:	3020:	2421:	2820:	2812:
U 1360	2765:	2938:	2375:	3096:	2193:	2928:	2761:	1246:
U 1370	2229:	2964:	2711:	2884:	2725:	2968:	2729:	2733:
U 1400	1456:	2287:	2411:	3034:	2579:	3070:	2942:	3062:
U 1410	2671:	2946:	2537:	2341:	2858:	2856:	2830:	2814:
U 1420	2874:	2876:	2914:	2912:	2918:	2916:	2922:	2920:
U 1430	2934:	2796:	2932:	2325:	2950:	3004:	2095:	3008:
U 1440	2161:	3000:	2179:	3010:	2247:	2245:	2281:	3050:
U 1450	3052:	3064:	2759:	2439:	2767:	3068:	3082:	3076:
U 1460	2479:	2089:	2097:	2996:	2091:	2705:	2093:	2753:
U 1470	3006:	2721:	2127:	2781:	2131:	2908:	2133:	2171:
U 1500	2183:	2629:	2185:	2627:	2643:	2868:	2219:	2221:
U 1510	3048:	2225:	3046:	2249:	2243:	2890:	2261:	2263:
U 1520	2467:	2465:	2463:	2275:	3026:	2289:	2293:	2197:
U 1530	2311:	2930:	2319:	2191:	2177:	2359:	2099:	2553:
U 1540	2798:	2377:	2187:	2976:	2645:	2391:	2393:	2399:

```
*****  
*                                     *  
*                                     *  
*          11/44 PROM/PLA FILES AND READING THEM          *  
*                                     *  
*                                     *  
*                                     *  
*                                     *  
*****
```

1. GENERAL

11/44 PROMS AND PLAS ARE CODED USING PLATO ASSEMBLER FORMAT, WHILE THE MECHANICS OF ASSEMBLY ARE UNIMPORTANT HERE, THE LOGICAL ORGANIZATION OF INPUTS, OUTPUTS AND THEIR RELATIONSHIPS IN A MNEMONIC FORM IS VALUABLE. USING FIVE SIMPLE CONSTRUCTS, THE PROGRAM ASSIGNS MNEMONIC NAMES TO INPUTS, OUTPUTS OR SELECTED COMBINATIONS AND SHOWS THE ACTUAL FUNCTION OF A DEVICE. THOUGH THE TERMINOLOGY MAY SEEM ARCAIC AT FIRST, IT IS EASY TO COMPREHEND AND ALLOWS THE USER TO UNDERSTAND A DEVICE AS IT OPERATES ON THE MACHINE LEVEL--NOT SIMPLY AS A MASS OF ONE'S AND ZERO'S.

2. CONSTRUCTS

EQUATION FILES ARE ORGANIZED INTO FIVE CONSTRUCTS--INPUTS, OUTPUTS, BINDS, DATA PATHS AND OUTPUTS--AND FOUR BOOLEAN OPERATORS--AND(.), OR(+), NOT(-) AND EQUIVALENCE(=). THE LATTER CAN BE READ AS "IS TRUE IF "; E.G. THE STATEMENT

$$A=B+C.D+E.-F$$

CAN BE READ "A IS TRUE IF B IS TRUE OR IF C AND D ARE TRUE OR IF E AND NOT F ARE TRUE. WE THUS HAVE A MAPPING OF INPUTS TO OUTPUTS.

NOTE $A.-B+C.D = (A.(-B)) + (C.D)$

INPUTS THE INPUTS DECLARATION LISTS THE MNEMONIC NAMES ASSOCIATED WITH THE DEVICE. THESE APPEAR LATER ON THE RIGHT SIDE OF EQUATIONS STATEMENTS OR AS ARGUMENTS IN THE BIND DECLARATION (SEE BELOW). INPUTS ARE L TO R STARTING WITH THE DEVICE'S PHYSICAL MSB, I.E. THE FIRST ENTRY IS THE MSB, AND THE LAST ENTRY IS THE LSB. ALL INPUTS ARE ASSUMED ACTIVE HIGH.

OUTPUTS OUTPUTS ARE LISTED IN A SIMILAR FASHION TO INPUTS, A LIST OF MNEMONICS GOING FROM PHYSICAL MSB TO PHYSICAL LSB OF THE DEVICE. OUTPUTS CAN BE ACTIVE HIGH OR LOW, I.E., WHEN THEY APPEAR ON THE LEFT SIDE OF AN EQUATION STATEMENT, THEIR "TRUENESS" CAN BE HIGH OR LOW.

BIND BIND DECLARATIONS APPLY A BIT MASK TO THE INPUT VARIABLE NAMES IN A STRING-LIKE FORMAT FROM LEFT TO RIGHT. THE MASK SAYS SELECTIVELY RECOGNIZE THE THE INPUT BIT (1) OR IGNORE IT (0). OTHER MNEMONICS CAN THEN BE DEFINED AS COMBINATIONS OF SELECTED INPUTS. FOR EX., WITH THE FOLLOWING INPUT DECLARATION

```
INPUTS 'IR4,IR3,IR2,I1,IR0'
```

THE BIND

```
BIND '00111'
```

```
MUL=01
```

```
DIV=02
```

```
END
```

SAYS TO IGNORE THE 1ST TWO INPUT BITS. THEN WHEN THE COMBINATION OF IR2,IR1,AND IRO IS EQUAL TO OCTAL 1,MUL IS RECOGNIZED -REGARDLESS OF THE STATE OF IR4 AND IR3.

DATAPATHS THE DATAPATHS DECLARATION ALLOWS YOU TO GROUP OUTPUTS TOGETHER AND ASSIGN A VALUE TO THAT SET OF OUTPUTS WHEN CERTAIN INPUT CONDITIONS ARE RECOGNIZED. THIS IS INDICATED BY A BACKSLASH FOLLOWED BY AN OCTAL VALUE. AS AN EXAMPLE THE STATEMENT

```
DATAPATHS  
MPC=MPC01,MPC02,MPC03,MPC04  
END
```

ALLOWS AN EQUATION TO BE WRITTEN

```
MPC\03=A,B,-C+E
```

WHERE MPC04 AND MPC03 ARE TRUE IF A AND B AND NOT C ARE TRUE OR IF E IS TRUE.

EQUATIONS THE EQUATIONS STATEMENTS CONTAIN AN OUTPUT (OR GROUP OF OUTPUTS IN THE CASE OF A DATAPATH DECLARATION) ON THE LEFT SIDE OF AN EQUALS SIGN ALONG WITH DISCREET INPUTS AND BOUND MNEMONICS FROM BIND DECLARATIONS ON THE RIGHT SIDE. THE OUTPUT IS MADE ACTIVE WHEN THE RIGHT SIDE IS TRUE--FROM AN APPEARANCE OF A RECOGNIZED TERM.

3. NOMENCLATURE

EXCEPT FOR THE BIND STATEMENT BIT MASKS WHICH ARE IN BINARY, ALL NUMBERING IS IN OCTAL FORM.

ANY UNUSED INPUTS ARE DESIGNATED BY AN 'X'. ANY UNUSED OUTPUTS ARE DESIGNATED BY 'BL'. THESE SYMBOLS APPEAR IN THE INPUTS/OUTPUTS DECLARATION.

SINCE THE INPUTS ARE ASSUMED TRUE HIGH, A TRUE LOW INPUT IS SHOWN BY 'NOT ING' THE MNEMONIC. FOR EXAMPLE:

BUT DEST L IS SHOWN ACTIVE AS -BUT DEST L

AN OUTPUT THAT IS TRUE LOW IS MENTIONED IN THE INITIAL HEADER BLOCK OF EACH FILE.

TO FIND A PARTICULAR DEC PART NUMBER FROM/PLA, STRIP OFF THE '23' AND THE DASH VARIATION FROM THE PART NUMBER DESCRIPTION AND SUBSTITUTE THE FOLLOWING LETTER DEPENDING ON THE MODULE. THEN TURN TO THE APPROPRIATE FILE NAME.

LETTER	***MODULE***
X	M7095
Y	M7094
Z	M7098
A	M7096

EX. TO FIND 23-0024C6-00 ON THE M7094, STRIP OFF THE 23 AND PLACE A Y IN FRONT, YIELDING Y024C6. THEN LOOK IN THE TABLE OF CONTENTS AND TURN TO THE FILE.

DSKB: [160,1311]

X026C6	EQN	X028C6	EQN	X029C6	EQN	X030C6	EQN
X046B1	EQN	X055B1	EQN	X163A2	EQN	X257A1	EQN
X258A1	EQN	X259A1	EQN	X260A1	EQN	X449F1	EQN
X450F1	EQN	X493A2	EQN	X494A2	EQN	X568A2	EQN
X846A9	EQN						
Y023C6	EQN	Y024C6	EQN	Y025C6	EQN	Y164A2	EQN
Y444F1	EQN						
Z032C6	EQN	Z033C6	EQN	Z034C6	EQN		
A261A1	EQN	A847A9	EQN	A848A9	EQN		

Total of 28 files

"SERVICE DECODING PLA, #23-026C6-00, E99, K2-2, 82S100 OR EQUIV"
 "ALL INPUTS AND OUTPUTS ACTIVE HIGH-X INDICATES AN UNUSED INPUT"
 "THIS DEVICE PLACES CONSTANTS ON THE OUTPUT LINES WHEN NOT IN"
 "SERVICE, DEFAULTING TO THE PIRQ ADDRESS [240] . WHEN IN SERVICE, IT"
 "ENABLES/DISABLES GRANTS AND SERVICE LINES ACCORDING TO THE CLASS"
 "OF INSTRUCTION BEING DECODED AND THE ERROR CONDITION PRESENT."

INVERTIN 0
 INVERTOUT 0

INPUTS 'X, X, SERV, X, BE, PE, KTE, PFAIL, IRC2, IRC1, IRC0, CONS1, CONS0, TBIT, HAL
 T, STOV'

OUTPUTS 'GRANTS, C2, C3, C4, C6, C5ANDC7, STOVSRV, PFAILSRV'

RADIX OCTAL

BIND '0000000011100000'
 "IR CODES 0-7"
 IHLT=000000
 TRAF=000040
 EMT=000100
 IOT=000140
 BPT=000200
 ILG=000240
 RES=000300
 OKAY=000340
 END

BIND '0000000000011000'
 "UWORD CONSTANTS"
 CON000=000000
 CON016=000020
 CON026=000010
 CON366=000030
 END

DATAPATHS
 OUT=C2, C3, C4, C6, C5ANDC7
 END

EQUATIONS
 OUT\00=CON000, -SERV
 OUT\20=IHLT, -PE, -KTE, -BE, -HALT, SERV
 OUT\20=STOV, -PE, -KTE, -BE, -TBIT, OKAY, SERV
 OUT\20=BE, -HALT, SERV
 OUT\10=RES, -PE, -KTE, -BE, -HALT, SERV
 OUT\10=ILG, -PE, -KTE, -BE, -HALT, SERV
 OUT\30=BPT, -PE, -KTE, -BE, -HALT, SERV
 OUT\30=TBIT, -PE, -KTE, -BE, -HALT, OKAY, SERV
 OUT\30=CON016, -SERV
 OUT\04=IOT, -PE, -KTE, -BE, -HALT, SERV
 OUT\24=PFail, -PE, -KTE, -BE, -TBIT, -STOV, OKAY, SERV
 OUT\24=CON026, -SERV
 OUT\14=EMT, -PE, -KTE, -BE, -HALT, SERV
 OUT\34=TRAF, -PE, -KTE, -BE, -HALT, SERV
 OUT\32=PE, -KTE, -BE, -HALT, SERV
 OUT\01=-PFail, -PE, -KTE, -BE, -TBIT, -STOV, OKAY, SERV
 OUT\11=KTE, -BE, -HALT, SERV
 OUT\27=CON366, -SERV

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PFAILSRV=PFAIL,-PE,-KTE,-BE,-TBIT,-STOV,OKAY,SERV
STOVSrv=STOV,SERV
GRANTS=HALT,SERV+PE,-BE,-KTE,-TBIT,-STOV,-PFAIL,OKAY,SERV
END

OPTIMIZE -2
PUNCHTAPE
)OUT X026C6,OUT
PRINTTABS
STATISTICS
)OUT

"%END OF X026C6 PLA SOURCE"

"DOUBLE OP AND BRANCH DECODING PLA,K2-5,E116,#23-028C6-00,82S101"
"ALL INPUTS ARE ACTIVE HIGH;ALL OUTPUTS ARE ACTIVE LOW"
"DURING IRDEC OR B DEST L,UVECTORS ARE GENERATED TO STEER"
"THE UADDRESS TO THE PROPER DESTINATION"
"SOME MPC BRANCHES ARE SPLIT W/X029C6"

INVERTIN 0
INVERTOUT 776000000000

INPUTS 'DM0,IRDEC,BDEST L,IR15,IR14,IR13,IR12,IR11,IR10,IR9,IR8,NBIT,Z
BIT,VBIT,CBIT,FP11F'

OUTPUTS 'DEST,IRCODE0,MOVE,MPC3,MPC4,MPC5,MPC6,MPC7'

RADIX OCTAL

BIND '0001111111000000'
MUL=007000
DIV=007100
ASH=007200
ASHC=007300
XOR=007400
SOB=007700
END

BIND '0001111111100000'
CSM=000700
END

BIND '0001111000000000'
ADD=006000
SUB=016000
FFF=017000
END

BIND '0000111000000000'
MOV(B)=001000
CMP(B)=002000
BIT(B)=003000
BIC(B)=004000
BIS(B)=005000
END

BIND '1100000111000000'
SM0-DMOIRD=040000
SMODMOIRD=140000
END

BIND '0100000111000000'
SM1IRD=040100
SM2IRD=040200
SM3IRD=040300
SM4IRD=040400
SM5IRD=040500
SM6IRD=040600
SM7IRD=040700
END

```

BIND '010111111100000'
BR=040040
BNE=040100
BEQ=040140
BGE=040200
BLT=040240
BGT=040300
BLE=040340
BPL=050000
BMI=050040
BHI=050100
BLOS=050140
BVC=050200
BVS=050240
BCC=050300
BCS=050340
END

```

```

DATAPATHS
MPC=MPC3,MPC4,MPC5,MPC6,MPC7
END

```

```

EQUATIONS
MPC\24=PPP.--FP11F.IRDEC ; *MPC 050*
MPC\11=MUL.IRDEC+DIV.IRDEC ; *MPC 220*
MPC\11=ASH.IRDEC+ASHC.IRDEC+CSM.IRDEC ; *MPC 220*
MPC\15=SOB.IRDEC ; *MPC 260*
MPC\04=XOR.IRDEC ; *MPC 040*
MPC\14=MUL.--BDEST L ; *MPC 060*
MPC\34=DIV.--BDEST L ; *MPC 070*
MPC\20=ASHC.--BDEST L ; *MPC 010*
MPC\12=XOR.--BDEST L.--DMO ; *MPC 120*
MPC\32=XOR.--BDEST L.DMO ; *MPC 130*
MPC\21=BR+BNE.--ZBIT+BEQ.ZBIT ; *MPC 210*
MPC\21=BGE.--NBIT.--VBIT+BGE.NBIT.VBIT
MPC\21=BLT.--NBIT.VBIT+BLT.NBIT.--VBIT
MPC\21=BGT.--ZBIT.--NBIT.--VBIT+BGT.--ZBIT.NBIT.VBIT
MPC\21=BLE.ZBIT+BLE.--NBIT.VBIT+BLE.NBIT.--VBIT
MPC\21=BPL.--NBIT+BMI.NBIT+BHI.--CBIT.--ZBIT+BLOS.ZBIT+BLOS.CBIT
MPC\21=BVC.--VBIT+BVS.VBIT+ECS.CBIT+BCC.--CBIT
MPC\03=MOV(B).SM0--DMOIRD+CMF(B).SM0--DMOIRD+BIT(B).SM0--DMOIRD ; *MPC
300*
MPC\03=BIC(B).SM0--DMOIRD+BIS(B).SM0--DMOIRD+ADD.SM0--DMOIRD+SUB.SM0--DMOIR
RD
MPC\23=MOV(B).SM1IRD+CMF(B).SM1IRD+BIT(B).SM1IRD ; *MPC 310*
MPC\23=BIC(B).SM1IRD+BIS(B).SM1IRD+ADD.SM1IRD+SUB.SM1IRD
MPC\13=MOV(B).SM2IRD+CMF(B).SM2IRD+BIT(B).SM2IRD ; *MPC 320*
MPC\13=BIC(B).SM2IRD+BIS(B).SM2IRD+ADD.SM2IRD+SUB.SM2IRD
MPC\33=MOV(B).SM3IRD+CMF(B).SM3IRD+BIT(B).SM3IRD ; *MPC 330*
MPC\33=BIC(B).SM3IRD+BIS(B).SM3IRD+ADD.SM3IRD+SUB.SM3IRD
MPC\07=MOV(B).SM4IRD+CMF(B).SM4IRD+BIT(B).SM4IRD ; *MPC 340*
MPC\07=BIC(B).SM4IRD+BIS(B).SM4IRD+ADD.SM4IRD+SUB.SM4IRD
MPC\27=MOV(B).SM5IRD+CMF(B).SM5IRD+BIT(B).SM5IRD ; *MPC 350*
MPC\27=BIC(B).SM5IRD+BIS(B).SM5IRD+ADD.SM5IRD+SUB.SM5IRD
MPC\17=MOV(B).SM6IRD+CMF(B).SM6IRD+BIT(B).SM6IRD ; *MPC 360*
MPC\17=BIC(B).SM6IRD+BIS(B).SM6IRD+ADD.SM6IRD+SUB.SM6IRD
MPC\37=MOV(B).SM7IRD+CMF(B).SM7IRD+BIT(B).SM7IRD ; *MPC 370*
MPC\37=BIC(B).SM7IRD+BIS(B).SM7IRD+ADD.SM7IRD+SUB.SM7IRD
MPC\01=MOV(B).SM0DMOIRD ; *MPC 200*
MPC\35=CMF(B).SM0DMOIRD+BIT(B).SM0DMOIRD ; *MPC 270*
MPC\05=SUB.SM0DMOIRD ; *MPC 240*

```

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```
MOVE=MOV(B)
IRCODE0=FFF,FP11F
DEST=XOR.--BDEST L.--DMO
DEST=MUL.IRDEC+DIV.IRDEC+ASH.IRDEC+ASHC.IRDEC
END
```

```
OPTIMIZE -2
PUNCHTAPE
)OUTPUT X028C6,OUT
PRINTTABS
STATISTICS
)OUT
```

'%END OF X028C6 PLA SOURCE'

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"SINGLE OPERAND DECODING PLA, #23-029C6-00, K2-5, E115, 82S101"
"ALL INPUTS ACTIVE HIGH, BDEST L IS TRUE LOW, ALL OUTPUTS ACTIVE LOW"
"EXCEPT FOR BRNBUT WHICH IS ACTIVE HIGH FOR ANY BRANCH DETECTED."
"MOST DESTS ARE DECODED HERE. SOME MPC'S ARE SPLIT WITH X028C6."

INVERTIN 0
INVERTOUT 676000000000

INPUTS 'FANDC H, IRDEC, BDEST L, IR15, IR14, IR13, IR12, IR11, IR10, IR09, IR08,
IR07, IR06, IR05, IR04, IR03'

OUTPUTS 'IRCO, IRC1, BRNBUT, MPC3, MPC4, MPC5, MPC6, DEST'

RADIX OCTAL

BIND '0001111111000000'
JSR=000400
RES1=007500
RES2=007600
END

BIND '000111111111000'
CSM=000700
JMP=000010
SWAB=000030
MARK=000640
MFPI=000650
MTPI=000660
SXT=000670
MTPS=010640
MFPI=010650
MTPD=010660
MFPS=010670
END

BIND '0000111111111000'
CLR(B)=000500
COM(B)=000510
INC(B)=000520
DEC(B)=000530
NEG(B)=000540
ADC(B)=000550
SBC(B)=000560
TST(B)=000570
ROR(B)=000600
ROL(B)=000610
ASR(B)=000620
ASL(B)=000630
END

BIND '0001111111111000'
"LOCK INSTRUCTION"
ASRB=010620
END

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BIND '00011110000000000'
ADD=006000
SUB=016000
END

BIND '00001110000000000'
MOV(B)=001000
CMP(B)=002000
BIT(B)=003000
BIC(B)=004000
BIS(B)=005000
END

BIND '0000000000000111'
DMO=000000
END

BIND '0100000111000111'
SMODMOIRD=040000
END

"THE NEXT 3 BINDS DETECT 'NOT DEST MODE 0'."
BIND '0000000000000100'
N1DMO=000004
END

BIND '0000000000000010'
N2DMO=000002
END

BIND '0000000000000001'
N3DMO=000001
END

"THE NEXT TWO BINDS DECODE ALL BRANCHES"
BIND '0101111111000000'
BR=040040
BNE=040100
BEQ=040140
BGE=040200
BLT=040240
BGT=040300
BLE=040340
END

BIND '0101111100000000'
BEX=050000
END

DATAPATHS
MPC=MPC3,MPC4,MPC5,MPC6
END

```

EQUATIONS
MPC\12=CSM,-BDEST L ; *MFC 050*
MPC\10=MFFI,PANDC H,-BDEST L ; *MFC 010*
MPC\10=MFFD,-BDEST L+MTPD,-BDEST L
MPC\03=BIC(B),SMODMOIRD ; *MFC 140*
MPC\03=BIS(B),SMODMOIRD+ADD,SMODMOIRD
MPC\11=MTPI,IRDEC+MTPD,IRDEC ; *MFC 110*
MPC\01=MFFI,IRDEC+MFFD,IRDEC ; *MFC 100*
MPC\04=JMP,N1DM0,IRDEC+JMP,N2DM0,IRDEC ; *MFC 020*
MPC\04=JMP,N3DM0,IRDEC+MARK,IRDEC
MPC\14=SWAB,IRDEC+BIC(B),-BDEST L+BIS(B),-BDEST L ; *MFC 030*
MPC\14=ADD,-BDEST L
MPC\06=SUB,-BDEST L ; *MFC 060*
MPC\16=CMF(B),SMODMOIRD+BIT(B),SMODMOIRD ; *MFC 070*
MPC\16=CMF(B),-BDEST L+BIT(B),-BDEST L
MPC\13=JSR,N1DM0,IRDEC+JSR,N2DM0,IRDEC+JSR,N3DM0,IRDEC ; *MFC 150*
MPC\13=NEG(B),IRDEC
MPC\05=CLR(B),IRDEC+COM(B),IRDEC+INC(B),IRDEC ; *MFC 120*
MPC\05=DEC(B),IRDEC+ADC(B),IRDEC+SBC(B),IRDEC+SXT,IRDEC
MPC\05=NEG(B),-BDEST L,N1DM0+NEG(B),-BDEST L,N2DM0
MPC\05=NEG(B),-BDEST L,N3DM0
MPC\07=TST(B),IRDEC ; *MFC 160*
MPC\17=ROR(B),IRDEC+ROL(B),IRDEC+ASR(B),IRDEC ; *MFC 170*
MPC\17=ASL(B),IRDEC
MPC\15=NEG(B),DM0,-BDEST L ; *MFC 130*
DEST=JMP,N1DM0,IRDEC+JMP,N2DM0,IRDEC+JMP,N3DM0,IRDEC+JSR,N1DM0,IRDEC
DEST=JSR,N2DM0,IRDEC+JSR,N3DM0,IRDEC+SWAB,IRDEC
DEST=CLR(B),IRDEC+COM(B),IRDEC+INC(B),IRDEC+DEC(B),IRDEC
DEST=ADC(B),IRDEC+SBC(B),IRDEC+TST(B),IRDEC+ROR(B),IRDEC+ROL(B),IRDEC
DEST=ASR(B),IRDEC+ASRB,-IRDEC,BDEST L+ASL(B),IRDEC
DEST=MFFI,IRDEC+MFFD,IRDEC
DEST=MTPI,-BDEST L+MTPD,-BDEST L
DEST=SXT,IRDEC
DEST=NEG(B),-BDEST L,N1DM0+NEG(B),-BDEST L,N2DM0+NEG(B),-BDEST L,N3DM0
DEST=ADD,-BDEST L+SUB,-BDEST L+MOV(B),-BDEST L+CMF(B),-BDEST L
DEST=BIT(B),-BDEST L+BIC(B),-BDEST L+BIS(B),-BDEST L+CSM,IRDEC
IRCO=RES1+RES2
BRNBUT=BR+BNE+BEQ+BGE+BLT+BGT+BLE+BEX
END

```

```

OPTIMIZE -2
PUNCHTAPE
)OUTPUT X029C6,OUT
PRINTTABS
STATISTICS
)OUTPUT

```

'XEND OF X029C6 PLA SOURCE'

"LOWER OF DECODING PLA,#23-030C6-00,K2-6,E100,82S101"
"ALL INPUTS ACTIVE HIGH,ALL OUTPUTS ACTIVE LOW"
"ALMOST ALL IR CODES ARE GENERATED IN THIS PLA. ALSO"
"WACKD INST,TRAPS DECODED HERE;CSM IS SPLIT WITH X028C6"
"RTI,RTT VECTOR TO 005 IN KERNEL,016 OTHERWISE"

INVERTIN 0
INVERTOUT 776000000000

INPUTS 'IR DEC (1)H,U OR S,EN CALL SUP,IR 15(1)H,IR 11(1)H,IR 10(1)H,I
R 09(1),IR 08(1)H,IR 07(1)H,IR 06(1)H,IR 05(1)H,IR 04(1)H,IR 03(1)H,IR
02(1)H,IR 01(1)H,IR 00(1)H'

OUTPUTS 'IRC 00L,IRC 01L,IRC 02L,MPC 00L,MPC 01L,MPC 02L,MPC 03L,HALT'

RADIX OCTAL

BIND '0001111111111111'
HLT=000000
WAIT=000001
RTI=000002
BPT=000003
IDT=000004
RESET=000005
RTT=000006
MFPT=000007
END

BIND '0001111111000000'
CSM=007000
ICSM1=007100
ICSM2=007200
ICSM3=007300
JMP=000100
MTFS=016400
MFPS=016700
END

BIND '0001111100000000'
EMT=014000
TRAP=014400
END

BIND '0001111000000000'
JSR=004000
RES 00=017000
END

BIND '0001111110000000'
RES 01=007100
RES 02=007200
RES 03=007300
RES 04=007400
RES 05=007500
RES 06=007600
RES 07=007700
END

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BIND '0000000000111000'
DMO=000000
END

BIND '0001111111111000'
RES 21=000010
RES 22=000020
RES 23=000030
RES 24=000040
RES 25=000050
RES 26=000060
RES 27=000070
RTS=000200
RES 30=000210
RES 31=000220
SPL=000230
END

BIND '0001111111110000'
CCC=000240
SCC=000260
END

DATAFATHS
MPC=MPC 00L,MPC 01L,MPC 02L,MPC 03L
IRC=IRC 00L,IRC 01L,IRC 02L
END

EQUATIONS
MPC\04=MFFT,IR DEC (1)H ;*MPC 002*
MPC\03=WAIT,IR DEC (1)H ;*MPC 140*
MPC\07=RTI,IR DEC (1)H,U OR S ;*MPC 016*
MPC\07=RTT,IR DEC (1)H,U OR S
MPC\12=RTI,IR DEC (1)H,-U OR S ;*MPC 005*
MPC\12=RTT,IR DEC (1)H,-U OR S
MPC\17=CSM,IR DEC (1)H,-U OR S ;*MPC 017*
MPC\17=SPL,IR DEC (1)H,-U OR S
MPC\17=CSM,IR DEC (1)H,-EN CALL SUP
MPC\17=ICSM1,IR DEC (1)H+ICSM2,IR DEC (1)H
MPC\17=ICSM3,IR DEC (1)H
MPC\14=RESET,IR DEC (1)H ;*MPC 003*
MPC\14=SPL,IR DEC (1)H,U OR S
MPC\02=RTS,IR DEC (1)H ;*MPC 004*
MPC\06=CCC,IR DEC (1)H ;*MPC 006*
MPC\16=SCC,IR DEC (1)H ;*MPC 007*
IRC\0=HLT,-U OR S
IRC\2=JMF,DMO+JSR,DMO
IRC\5=EMT
IRC\3=TRAF
IRC\7=HLT,U OR S
IRC\4=MTPS+MFPs+CSM,-U OR S
IRC\4=CSM,-EN CALL SUP+ICSM1+ICSM2+ICSM3
IRC\4=RES 00+RES 01+RES 02+RES 03+RES 04
IRC\4=RES 05+RES 06+RES 07
IRC\4=RES 21+RES 22+RES 23+RES 24
IRC\4=RES 25+RES 26+RES 27+RES 30+RES 31
IRC\1=IOT
IRC\6=BPT

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HALT=HLT.-U OR S
END

OPTIMIZE -2
PUNCHTAPE
)OUTPUT X030C6,OUT
PRINTTABS
STATISTICS
)OUT

'%END OF X030C6 PLA SOURCE'

PLT044.DOC PAGE 15

"SOP AUX FROM, #23-046B1-00, K2-4, E46, 74S471 OR EQUIV"
"ALL INPUTS AND OUTPUTS ACTIVE HIGH"
"CONTROLS ALU WHEN AUX CONTROL ASSERTED FOR SOP INST"

INVERTIN 0
INVERTOUT 0

INPUTS 'IR 06(1)H, IR 07(1)H, IR 08(1)H, IR 09(1)H, IR 10(1)H,
IR 15(1)H, CBIT, NBIT'

OUTPUTS 'D07, D06, D05, D04, D03, D02, D01, D00'

RADIX OCTAL

BIND '11111100'
SWAB=300
MARK=050
SXT=350
MTPS=054
MFPF=354
END

BIND '11111000'
CLR(B)=020
COM(B)=220
INC(B)=120
DEC(B)=320
NEG(B)=060
ADC(B)=260
SBC(B)=160
TST(B)=300
ROR(B)=010
ROL(B)=210
ASR(B)=110
ASL(B)=310
MFFI(B)=250
MTPI(B)=150
END

DATAPATHS
OUT=D07, D06, D05, D04, D03, D02, D01, D00
END

EQUATIONS
OUT\012=SWAB+ADC(B).-CBIT+SBC(B).-CBIT+TST(B)+MFFI(B)+MTPI(B)+MTPS+MFP
S
OUT\312=CLR(B)+MARK+SXT.-NBIT
OUT\372=COM(B)
OUT\362=INC(B)+ADC(B).CBIT
OUT\006=DEC(B)+SBC(B).CBIT
OUT\220=NEG(B)
OUT\130=ROR(B)+ROL(B)+ASR(B)+ASL(B)
OUT\072=SXT.NBIT
END

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```
DEFAULTROM 0
MAKEROM
)OUT X046B1,OUT
PRINTTABS
STATISTICS
)OUT
```

'%END OF X046B1 FROM SOURCE'

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```
"SR1 ENCODING FROM,#23-055B1-00,K2-10,E72,74S471 OR EQUIV"
"ALL INPUTS AND OUTPUTS ARE ACTIVE HIGH."
"THIS FROM PASSES THE AMT A GEN REG IS AUTOINC/DEC TO SR1 AND "
"CONTROLS LOADING HIGH AND LOW BYTES OF SAME."
"SR1C1,SR1C0 COME FROM THE UCODE,BMUX BITS COME FROM"
"THE DATA PATH TO PASS THE AMOUNT ACTUALLY CHANGED."
```

```
INVERTIN 0
INVERTOUT 0
```

```
INPUTS 'SR1C1(1)H,SR1C0(1)H,ALUS3H,ALUCINL,BMUX03H,BMUX02H,BMUX01H,BMU
X00H'
```

```
OUTPUTS 'BL,LOADSR1HL,LOADSR1LL,D5,D4,D3,D2,D1'
```

```
RADIX OCTAL
```

```
BIND '11000000'
SR1ZR=300
SR1HL=200
SR1LL=100
END
```

```
BIND '1000000'
"NOF OR LOAD LOW BYTE"
X=000
END
```

```
BIND '01000000'
"LOAD HIGH BYTE OR ZERO SR1"
Y=000
END
```

```
BIND '00110000'
"INCREMENT OR DECREMENT WITH/WITHOUT CARRY"
INCC=040
INCB=060
DECC=000
DECB=020
END
```

```
BIND '00001111'
"VALUE OF INCREMENT/DECREMENT"
ZE=000
ONE=001
TWO=002
FOUR=004
TEN=010
END
```

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DATAPATHS
OUT=D5,D4,D3,D2,D1
END

EQUATIONS
LOADSR1HL=SR1HL+SR1ZR
LOADSR1LL=SR1LL+SR1ZR
OUT\0=SR1ZR
OUT\1=INCC.ZE.X+INCC.ZE.Y+INCB.ONE.X+INCB.ONE.Y
OUT\2=INCC.ONE.X+INCC.ONE.Y+INCB.TWO.X+INCB.TWO.Y
OUT\4=INCB.FOUR.X+INCB.FOUR.Y
OUT\10=INCB.TEN.X+INCB.TEN.Y
OUT\37=DECC.ONE.X+DECC.ONE.Y+DECB.ZE.X+DECB.ZE.Y
OUT\36=DECC.TWO.X+DECC.TWO.Y+DECB.ONE.X+DECB.ONE.Y
OUT\34=DECB.FOUR.X+DECB.FOUR.Y
OUT\30=DECB.TEN.X+DECB.TEN.Y
END

DEFAULTROM 0
MAKEROM
)OUT X055B1,OUT
PRINTTABS
STATISTICS
)OUT

'%END OF X055B1 FROM SOURCE'

PLT044.DOC PAGE 19

"SSMUX ROM,K2-7,#23-163A2-00, E92,82S129 OR EQUIV"
"ALL INPUTS ACTIVE HIGH,UPPER BYTE L IS ACTIVE LOW"
"ALL OTHER OUTPUTS ARE ACTIVE HIGH. SWAP/SEX INFO IS CREATED"
"ASSUMING A BYTE INST MAY BE CALLED FOR."

INVERTIN 0
INVERTOUT 100000000000

INPUTS 'S0,GND,S1,DAT TRAN,AUX H,MOV L,VBA 00,BYTE H'
OUTPUTS 'SWAP,SEX,BL,UPPER BYTE L'

RADIX OCTAL

BIND '10100000'
"THIS IS THE UCODE FIELD WHICH DETERMINES "
"STRAIGHT THRU,SWAP,SIGN EXTEND OR EXTERNAL CONTROL"
ST=000
SE=200
SW=040
EXT=240
END

EQUATIONS
BL=ST.DAT TRAN,VBA 00+SW.DAT TRAN,VBA 00
BL=SE.DAT TRAN,VBA 00+EXT.--DAT TRAN.BYTE H.--AUX H.--GND
BL=EXT.DAT TRAN.--BYTE H.VBA 00
SWAP=SW+EXT.DAT TRAN.BYTE H.VBA 00
SEX=SE+EXT.--DAT TRAN.BYTE H.AUX H+EXT.DAT TRAN.BYTE H.--VBA 00
UPPER BYTE L=EXT.--DAT TRAN.BYTE H.AUX H.MOV L
END

DEFAULTROM 0
MAKEROM
)OUTPUT X163A2,OUT
PRINTTABS
STATISTICS
)OUT

'%END OF X163A2 FROM SOURCE'

PLT044.DOC PAGE 20

"DOP AUX FROM, #23-257A1-00, K2-4, E25, 82S123 OR EQUIV"
"ALL INPUTS AND OUTPUTS ACTIVE HIGH"
"ASSUMES ALU CONTROL FOR DOP'S WHEN AUX CONTROL IS ASSERTED"

INVERTIN 0
INVERTOUT 0

INPUTS 'X, IR 15(1)H, IR 14(1)H, IR 13(1)H, IR 12(1)H'

OUTPUTS 'D07, D06, D05, D04, D03, D02, D01, D00'

RADIX OCTAL

BIND '10111'
MOV(B)=01
CMP(B)=02
BIT(B)=03
BIC(B)=04
BIS(B)=05
END

BIND '11111'
ADD=06
XOR=07
SUB=16
END

DATAPATHS
OUT=D07, D06, D05, D04, D03, D02, D01, D00
END

EQUATIONS
OUT\012=MOV(B)
OUT\220=CMF(B)+SUB
OUT\110=BIT(B)
OUT\330=BIC(B)
OUT\030=BIS(B)
OUT\144=ADD
OUT\230=XOR
END

DEFAULTROM 0
MAKEROM
>OUT X257A1, OUT
PRINTTABS
STATISTICS
>OUT

'%END OF X257A1 FROM SOURCE'

ALU FUNCTION DECODE FROM #23-25BA1-00,K2-7,E67,82S123
THIS FROM DECODES THE ALU UCONTROL FIELD AND DETERMINES THE
THE STATE OF THE BLEG MULTIPLEXER AS WELL AS THE CURRENT
ARITHMETIC/BOOLEAN OPERATION. ALL INPUTS ARE ACTIVE HIGH
BLEG 00H,BLEG 01H, AND ALUMODE H ARE ACTIVE HIGH OUTPUTS-ALL
OTHER OUTPUTS ARE ACTIVE LOW

INVERTIN 0
INVERTOUT 136000000000

INPUTS 'IN4,IN3,IN2,IN1,IN0'

OUTPUTS 'BLEG 00H,BLEG 01H,ALUCIN L,ALUMODE H,ALUS0 L,
ALUS1L,ALUS2 L,ALUS3 L'

RADIX OCTAL

BIND '11111'
AANDBXBAR=16
AANDBX=17
ITCARE3=33
ZERO=00
AFLS1=02
AMIN1=03
AMINB=04
A=05
B=06
AFLSB=10
AMINBX=22
AFLS2=24
AMIN2=25
BX=27
BBAR=30
ABAR=1
AFLSBX=21
ONEBAR=07
AFLSBXFPLS1=23
AFLSA=26
BXBAR=31
AFLSAFPLS1=32
AANDB=11
ABARANDB=12
AVB=13
ASTRB=14
AANDBBAR=15
AFLSBFPLS1=20
END

DATAPATHS
ALUSEL=ALUS0 L,ALUS1 L,ALUS2 L,ALUS3 L
BLEG=BLEG 00H,BLEG 01H
END

BIND '11100'
ITCARE4=34
END

EQUATIONS

ALUSEL\00=ABAR+AFLS1
ALUSEL\03=ONEBAR+AFLSA+AFLSAFLS1
ALUSEL\04=ABARANDB
ALUSEL\05=B+BX
ALUSEL\06=AMINB+ASTRB+AMINBX+AMIN2
ALUSEL\07=AVB
ALUSEL\11=AFLSB+AFLSBFLS1+AFLSBX+AFLSBXFLS1+AFLS2
ALUSEL\12=BBAR+BXBAR
ALUSEL\14=ZERO
ALUSEL\15=AANDB+AANDBX
ALUSEL\16=AANDBBAR+AANDBXBAR
ALUSEL\17=AMIN1+A+DTCARE3+DTCARE4
ALUMODE H=ZERO+ABAR+A+B+ONEBAR+AANDB+ABARANDB+AVB+ASTRB+AANDBBAR+BX
ALUMODE H=BBAR+BXBAR+AANDBX+AANDBXBAR
ALUCIN L=ZERO+ABAR+AFLS1+AMINB+A+B+ONEBAR+AANDB
ALUCIN L=AFLS2+BX+BBAR+BXBAR+AFLSAFLS1+DTCARE3+DTCARE4
BLEG\0=AMINB+B+AFLSB+AANDB+ABARANDB+AVB+ASTRB
BLEG\0=AANDBBAR+BBAR+DTCARE3+DTCARE4
BLEG\1=ZERO+ABAR+AFLS1+AMIN1+A+ONEBAR+AFLSA+AFLSAFLS1
BLEG\2=AFLSBX+AMINBX+AFLSBXFLS1+BX+BXBAR+AANDBX+AANDBXBAR
BLEG\3=AFLS2+AMIN2
END

DEFAULTROM 0
MAKEROM
)OUT X258A1,OUT
PRINTTABS
STATISTICS
)OUT

"%END OF X258A1 FROM SOURCE"

PLT044.DOC PAGE 23

B,BX MODE AND SHIFT CONTROL PROM,K2-7,E54,#23-259A1-00,82S123
THIS PROM CONTROLS THE B AND BX SHIFT/LOAD CAPABILITIES AS WELL
AS DETERMINING WHAT IS SHIFTED INTO THE REGISTER.
ALL INPUTS ARE ACTIVE HIGH,EN DBE L AND EN OVX L ARE
ACTIVE LOW,ALL OTHER OUTPUTS ARE ACTIVE HIGH.

INVERTIN 0
INVERTOUT 600000000000

INPUTS 'IN4,IN3,IN2,IN1,IN0'

OUTPUTS 'EN DBE L,EN OVX L,SHMUX 00L,SHMUX 01L,BXMODE 00L,
BXMODE 01L,BMODE 00H,BMODE 01H'

RADIX OCTAL

BIND '11110'
"OPERATION CALLED BY UCODE"
HOLD=00
LOADB=02
SL(BX-0)LDB=06
SL(BX-C)LDB=10
SL(BX-1)LDB=12
SL(B-0)=14
SL(B-0)LDBX=16
SL(B-BX15)=20
SL(BX-0)=22
SL(BX-1)=24
LOADBX=04
SL(BX-OVX)=26
SL(BX-C)=30
SL(B-BX-0)=32
SR(B15-B-BX)=34
ENABDBE=36
END

DATAFATHS
BMODE=BMODE 00H,BMODE 01H
BXMODE=BXMODE 00L,BXMODE 01L
SHFTMD=SHMUX 00L,SHMUX 01L
END

```

EQUATIONS
BMODE\0=LOADB+SL(BX-0)LDB+SL(BX-C)LDB+SL(BX-1)LDB      ;"LOAD B"
BMODE\1=SR(B15-B-BX)                                     ;"SR B"
BMODE\2=SL(B-0)+SL(B-0)LDBX+SL(B-BX15)+SL(B-BX-0)      ;"SL B"
BMODE\3=HOLD+LOADBX+SL(BX-0)+SL(BX-1)                   ;"HOLD B"
BMODE\3=SL(BX-OVX)+SL(BX-C)+ENABDBE
BXM0DE\0=HOLD+LOADB+SL(B-0)+SL(B-BX15)+ENABDBE         ;"HOLD BX"
BXM0DE\1=SL(BX-0)LDB+SL(BX-C)LDB+SL(BX-1)LDB           ;"SL BX"
BXM0DE\1=SL(BX-0)+SL(BX-1)+SL(BX-OVX)+SL(BX-C)+SL(B-BX-0)
BXM0DE\2=SR(B15-B-BX)                                    ;"SR BX"
BXM0DE\3=LOADBX+SL(B-0)LDBX                              ;"LOAD BX"
SHFTMD\0=LOADBX+SL(BX-C)LDB+SL(BX-C)+ENABDBE+SR(B15-B-BX)
SHFTMD\1=SL(BX-1)LDB+SL(B-0)+SL(B-0)LDBX+SL(BX-1)
SHFTMD\2=LOADB+SL(BX-OVX)
SHFTMD\3=SL(BX-0)LDB+SL(B-BX15)+SL(BX-0)+SL(B-BX-0)
EN OVX L=SL(B-BX-0)
EN DBE L=ENABDBE
END

```

```

DEFAULTROM 0
MAKEROM
)OUT X259A1,OUT
PRINTTABS
STATISTICS
)OUT

```

"%END OF X259A1 FROM SOURCE"

PLT044.DOC PAGE 25

"BUT EXPANSION FROM,K2-8,E103,23-260A1-00,82S123 OR EQUIV"
"THIS DEVICE EXPANDS THE UWORD BUT FIELD INTO THE APPROPRIATE"
"CONTROL SIGNALS TO VECTOR THE UDESTINATION."
"ALL INPUTS AND OUTPUTS ARE ACTIVE HIGH."

INVERTIN 0
INVERTOUT 0

INPUTS 'IN4,IN3,IN2,IN1,IN0'

OUTPUTS 'Z,BOOT,NSRV,CNT05,RBX00,RBX01,CCN,ALUCOUT'

RADIX OCTAL

BIND '11111'
"BUT ALL IS USED IN GR TEST ONLY,NOT IN NORMAL OPERATION"
NOF=00
NBIT=01
ALL=15
ZBIT=02
C05=03
NZ=11
NOSERV=10
BOOT=04
BX00=05
BX01=06
COUT=07
BX00NBIT=12
C05BX01BX00=14
BX00C05=16
END

EQUATIONS
ALUCOUT=COUT+ALL
CCN=NBIT+NZ+BX00NBIT+ALL
RBX01=BX01+C05BX01BX00+ALL
RBX00=BX00+BX00NBIT+C05BX01BX00+BX00C05+ALL
CNT05=C05+C05BX01BX00+BX00C05+ALL
NSRV=NOSERV+ALL
BOOT=BOOT+ALL
Z=ZBIT+NZ+ALL
END

DEFAULTROM 0
MAKEROM
>OUT X260A1,OUT
PRINTTABS
STATISTICS
>OUT

"%END OF X260A1 FROM SOURCE"

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"INSTRUCTION CATEGORIZING FROM, #23-449F1-00, K2-4, E108, 82S137 OR EQUIV"
"ALL INPUTS ACTIVE HIGH, BYTE L IS ACTIVE LOW, ALL OTHER OUTPUTS"
"ARE ACTIVE HIGH. INST ARE GROUPED ACCORDING TO THEIR"
"EFFECT ON THE CONDITION CODES."

INVERTIN 0
INVERTOUT 400000000000

INPUTS 'IR06,IR07,IR08,IR09,IR10,IR11,IR12,IR13,IR14,IR15'

OUTPUTS 'BYTE, CODE2, CODE1, CODE0'

RADIX OCTAL

BIND '1111111111'
SWAB=1400
MARK=0260
MFFI=1260
MTPI=0660
SXT=1660
MTPS=0261
MFFD=1261
MTPD=0661
MFFS=1661
END

BIND '1111111110'
CLR(B)=0120
COM(B)=1120
INC(B)=0520
DEC(B)=1520
NEG(B)=0320
ADC(B)=1320
SBC(B)=0720
TST(B)=1720
ROR(B)=0060
ROL(B)=1060
ASR(B)=0460
ASL(B)=1460
END

BIND '0000001110'
MOV(B)=0010
CMP(B)=0004
BIT(B)=0014
BIC(B)=0002
BIS(B)=0012
END

BIND '0000001111'
ADD=0006
SUB=0007
END

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```
BIND '0001111111'  
"OF CODES 105XXX"  
BSOP1=0121  
END
```

```
BIND '0011111111'  
"OF CODES 106XXX AND 107XXX"  
BSOP2=0061  
END
```

```
BIND '0001111111'  
XOR=0036  
CIS=0076  
END
```

```
DATAPATHS  
CODE=CODE2, CODE1, CODE0  
END
```

```
EQUATIONS  
BYTE=SWAB+BSOP1+BSOP2+MTFS+MFPS  
BYTE=IR15.MOV(B)+IR15.CMP(B)+IR15.BIT(B)  
BYTE=IR15.BIC(B)+IR15.BIS(B)+CIS  
CODE\0=SWAB+CLR(B)+TST(B)  
CODE\1=COM(B)  
CODE\2=INC(B)  
CODE\3=DEC(B)  
CODE\4=NEG(B)+SBC(B)+CMP(B)+SUB  
CODE\5=ADC(B)+ADD  
CODE\6=ROR(B)+ROL(B)+ASR(B)+ASL(B)  
CODE\7=MOV(B)+BIT(B)+BIC(B)+BIS(B)+MARK  
CODE\7=MFFI+MTP1+SXT+MTFS+MFPD+MTPD+MFPS+XOR  
END
```

```
DEFAULTROM 0  
MAKEROM  
)OUTPUT X449F1,OUT  
PRINTTABS  
STATISTICS  
)OUT
```

```
'ZEND OF X449F1 FROM SOURCE'
```

T-BIT FROM,#23-450F1-00,K2-6,EBB,82S137 OR EQUIV
ALL INPUTS ACTIVE HIGH,OUTPUT DIS TBIT L IS ACTIVE LOW
ALL OTHERS ACTIVE HIGH. THIS FROM ENABLES RESET IN KERNEL MODE,
PREVENTS TBIT LOADING ON RTT,AND BLOCKS LOADING PSW PRIORITY
ON RTI OR RTT IF USER OR SUPERVISOR MODE.

INVERTIN 0
INVERTOUT 200000000000

INPUTS 'ENAB,IR 00(1)H,IR 01(1)H,IR 02(1)H,IR 06(1)H,
IR 07(1)H,PSW 15(1)H,PSW 14(1)H,BREG 15(1)H,BREG 14(1)H'

OUTPUTS 'DIS LD PRIO H,DIS TBIT L,RESET,BL'

RADIX OCTAL

BIND '1111110000'
RTI=0200
REST=0500
RTT=0300
END

BIND '0000001100'
"CURRENT MODE"
KER=0000
SUP=0004
ILL=0010
USR=0014
END

BIND '1110110000'
RTI(T)=0200
END

EQUATIONS
RESET=REST.KER
DIS TBIT L=RTT
DIS LD PRIO H=RTI(T).USR+RTI(T).SUP
END

DEFAULTROM 0
MAKEROM
)OUT X450F1,OUT
PRINTTABS
STATISTICS
)OUT

'ZEND OF X450F1 FROM SOURCE'

PLT044.DOC PAGE 29

"I AND D SPACE PROM,#23-493A2-00,K2-8,E104,82S129 OR EQUIV"
"ALL INPUTS AND OUTPUTS ACTIVE HIGH"
"I/D SPACE ENABLED IF SR3 BIT IS SET AND PROPER CPU MODE"
"IS PRESENTLY LOADED"

INVERTIN 0
INVERTOUT 0

INPUTS 'X,X,I/D SPACE C1,EKDS H,ESDS H,EUDS H,MODE 01 H,MODE 00 H'
OUTPUTS 'BL,BL,I/D SPACE H,BL'

RADIX OCTAL

BIND '00100000'
I/D=040
END

BIND '00000011'
KERNEL=000
SUPER=001
USER=003
END

EQUATIONS

I/D SPACE H=I/D.KERNEL.EKDS H+I/D.SUPER.ESDS H+I/D.USER.EUDS H
END

DEFAULTROM 0
MAKEROM
)OUTPUT X493A2,OUT
PRINTTABS
STATISTICS
)OUT

'%END OF X493A2 FROM SOURCE'

PLT044.DOC PAGE 30

"PIRQ ENCODING PROM,#23-494A2-00,K2-10,E75,82S129 OR EQUIV"
"ALL INPUTS AND OUTPUTS ARE ACTIVE HIGH."
"NOTE THAT ORDER OF INPUTS IS NOT THE MOST LOGICAL"
"AND THAT THE OUTPUTS FORM THE OCTAL VALUE OF"
"THE HIGHEST ASSERTED PIRQ INPUT;I.E. A PIA7 OVERRIDES ALL"
"OTHER REQUESTS AND PLACES '7' ON THE OUTPUTS."

INVERTIN 0
INVERTOUT 0

INPUTS 'X,PIRQ14,PIRQ13,PIRQ12,PIRQ11,PIRQ10,PIRQ09,PIRQ15'

OUTPUTS 'OFIA0,OFIA1,OFIA2,EL'

RADIX OCTAL

"THE FOLLOWING BINDS RECOGNIZE A GIVEN REQUEST TO THE "
"EXCLUSION OF THOSE LOWER IN PRIORITY."

BIND '10000001'
PIA7=001
END
BIND '11000001'
PIA6=100
END
BIND '11100001'
PIA5=040
END
BIND '11110001'
PIA4=020
END
BIND '11111001'
PIA3=010
END
BIND '11111101'
PIA2=004
END
BIND '11111111'
PIA1=002
END

DATAPATHS
OUT=OFIA0,OFIA1,OFIA2
END
EQUATIONS
OUT\7=PIA7
OUT\3=PIA6
OUT\5=PIA5
OUT\1=PIA4
OUT\6=PIA3
OUT\2=PIA2
OUT\4=PIA1
END

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```
DEFAULTROM 0
MAKEROM
)OUTPUT X494A2,OUT
PRINTTABS
STATISTICS
)OUT
```

'%END OF X494A2 FROM SOURCE'

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```
"BMODE AND SHIFT MUX FROM,#23-568A2-00,K2-4,E43,82S129 OR EQUIV"
"ALL INPUTS ACTIVE HIGH,MODE BIT OUTPUTS ARE ACTIVE LOW,OTHERS"
"ARE ACTIVE HIGH.GENERATES SHIFT INFO WHEN AUX CONTROL IS INVOKED."
"USED IN ROTATE,SHIFT AND CALL TO SUPERVISOR INSTS."
```

```
INVERTIN 0
INVERTOUT 300000000000
```

RADIX OCTAL

```
INPUTS 'CC N H,C BIT H,BREG 00 H,IR10,IR09,IR08,IR07,IR06'
```

```
OUTPUTS 'ROT C BIT H,B MODE 00 L,B MODE 01 L,SER SHIFT H'
```

```
BIND '00011100'
'MASK INDICATES ASR,ASL,ROR, OR ROL IS BEING DECODED'
MASK=020
CSM=030
END
```

```
EQUATIONS
SER SHIFT H=MASK.-IR07.C BIT H+MASK.IR07.-IR06.CC N H
B MODE 00 L=MASK.IR06
B MODE 01 L=MASK.-IR06+CSM
ROT C BIT H=MASK.-CC N H,BREG 00 H.-IR09.-IR08.-IR06
ROT C BIT H=MASK.CC N H.-BREG 00 H.-IR09.-IR08.IR06
ROT C BIT H=MASK.CC N H,BREG 00 H.-IR09.-IR08
END
```

```
MAKEROM
DEFAULTROM 0
)OUT X568A2,OUT
PRINTTABS
STATISTICS
)OUT
```

'%END OF X568A2 FROM SOURCE'

"SR1 ENCODING FROM,#23-846A9,K2-10,E73,82S131 OR EQUIV"
"ALL INPUTS AND OUTPUTS ARE ACTIVE HIGH. THE REAL GEN REG ADRS"
"IS PASSED TO SR1-COMPENSATING FOR 3 STACK POINTERS"

INVERTIN 0
INVERTOUT 0

RADIX OCTAL

INPUTS 'SR1 C1,SR1 C0,SPA 02,SPA 01,SPA 00,IR 06,
IR 00,SPA DST SEL 1,SPA DST SEL 0'
OUTPUTS 'BL,SR1 SPA 02,SR1 SPA 01,SR1 SPA 00'

BIND '1100000000'
ZEROSR1=600
END

BIND '1000000000'
N1ZSR1=000
END

BIND '0100000000'
N2ZSR1=000
END

BIND '0000000011'
A=000
B=001
C=002
D=003
END

EQUATIONS
SR1 SPA 00=A,SPA 00,N1ZSR1+A,SPA 00,N2ZSR1+B,IR 06,N1ZSR1
SR1 SPA 00=B,IR 06,N2ZSR1
SR1 SPA 00=C,IR 00,N1ZSR1+C,IR 00,N2ZSR1
SR1 SPA 01=SPA 01,N1ZSR1+SPA 01,N2ZSR1
SR1 SPA 02=SPA 02,N1ZSR1+SPA 02,N2ZSR1
END

MAKEROM
DEFAULTROM 0
)OUT X846A9,OUT
PRINTTABS
STATISTICS
)OUT

'%END OF X846A9 FROM SOURCE'

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"INTERNAL ADDRESS DECODING PLA,#23-023C6-00,K1-10,E114,82S100"
"THIS PLA DECODES THE PARS AND PDRS,AND DOES MUX SEL FOR K1-9"
"MUXES,AS WELL AS PROVIDING INT SSYN AND INT DATI"
"ALL INPUTS ACTIVE HIGH,TRANTOMFM(L) IS TRUE LOW;ALL OUTPUTS"
"ARE ACTIVE LOW EXCEPT PAR+PDR H AND INT SSYN H"

INVERTIN 0
INVERTOUT 754000000000

RADIX OCTAL

INPUTS 'PA02,PA01,PA00,PC01,PC00,TRANTOMFM(L),CPUMSYN(1)H,PA21-PA12 &
PA10,PA11,PA09,PA08,PA07,PA06,PA05,PA04,PA03'
OUTPUTS 'LOAD PARH L,LOAD PARL L,LOAD PDRH L,LOAD PDRL L,PAR+PDR H,KT
MUX S0 L,INT DATI L,INT SSYN H'

BIND '0000001111110100'
PAR1=001024
PDR1=001020
END

BIND '0000001111111100'
PAR2=001364
PDR2=001360
END

BIND '0000001111111110'
GR=001370
END

BIND '1100001111111111'
SR0=041357
SR1=101357
SR2=141357
SR3=141051
CPU ERR=141376
PIR=041377
PSW=141377
SREG=001357
END

BIND '0011100000000000'
DATOBL=014000
DATOBH=034000
END

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```
BIND '0001100000000000'  
DATO=010000  
END
```

```
BIND '0001000000000000'  
DATI(P)=000000  
END
```

```
DATAPATHS  
*MUX CONTROL LINES*  
OUT=PAR+PDR H,KT MUX SO L  
END
```

```
EQUATIONS  
LOAD PARL L=PAR1.DATO+PAR1.DATOBL+PAR2.DATO+PAR2.DATOBL  
LOAD PARH L=PAR1.DATO+PAR1.DATOBL+PAR2.DATO+PAR2.DATOBL  
LOAD PDRH L=PDR1.DATO+PDR1.DATOBL+PDR2.DATO+PDR2.DATOBL  
LOAD PDRL L=PDR1.DATO+PDR1.DATOBL+PDR2.DATO+PDR2.DATOBL  
OUT\0=SR2  
OUT\1=SR0  
OUT\2=PAR1+PAR2  
OUT\3=PDR1+PDR2  
INT DATI L=PAR1.DATI(P)+PAR2.DATI(P)+PDR1.DATI(P)+PDR2.DATI(P)  
INT DATI L=GR.-TRANTOMFM(L).DATI(P)+SR2.DATI(P)+SR0.DATI(P)  
INT DATI L=PSW.DATI(P)  
INT SSYN H=PAR1+PAR2+PDR1+PDR2+GR.-TRANTOMFM(L)+SR0+SR1+SR2  
INT SSYN H=SR3+CFU ERR+PIR+PSW+SREG  
END
```

```
OPTIMIZE -2  
PUNCHTAPE  
)OUTPUT Y023C6,OUT  
PRINTTABS  
STATISTICS  
)OUT
```

'ZEND OF Y023C6 PLA SOURCE'

PLT044.DOC PAGE 36

"ADDRESS DECODING PLA, #23-024C6-00, K1-10, E103, 82S100"
"ALL INPUTS ACTIVE HIGH, ALL OUTPUTS ACTIVE LOW"
"DECODES INT REG ADDRESSES AND PRODUCES SOME LOAD SIGNALS"

INVERTIN 0
INVERTOUT 776000000000

INPUTS 'FA02,FA01,FA00,PC01,PC00,TRANTOMFM(H),CFUMSYN(1)H,FA21-FA12 &
FA10,FA11,FA09,FA08,FA07,FA06,FA05,FA04,FA03'

OUTPUTS 'ENAB INT REG L,LOAD SR3L L,PSW DATI L,STREG S1 L,STREG S0 L,R
EAD SR2 L,LOAD PIRH L,CLR ERROR L'

RADIX OCTAL

BIND '1100001111111111'
SR1=101357
SR2=141357
SR3=141051
CPU ERR=141376
PIR=041377
PSW=141377
END

BIND '0001000000000000'
DATI(P)=000000
END

DATAFATHS
OUT=STREG S1 L,STREG S0 L
END

EQUATIONS
LOAD SR3L L=SR3.PC01,-FA00
PSW DATI L=PSW.-PC01
READ SR2 L=SR2.-PC01
LOAD PIRH L=PIR.PC01
CLR ERROR L=CPU ERR.PC01
ENAB INT REG L=SR1.DATI(P)+CPU ERR.DATI(P)+PIR.DATI(P)+SR3.DATI(P)
OUT\0=CPU ERR
OUT\1=SR1
OUT\2=PIR
OUT\3=SR3
END

OPTIMIZE -2
PUNCHTAPE
)OUTPUT Y024C6,OUT
PRINTTABS
STATISTICS
)OUT

'%END OF Y024C6 PLA SOURCE'

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INTERNAL ADDRESS DECODING PLA,#23-025C6-00,K1-10,EB2,B2S100
ALL INPUTS ACTIVE HIGH,ALL OUTPUTS EXCEPT KT MUX H AND SP WRITE H
* ACTIVE LOW*

INVERTIN 0
INVERTOUT 374000000000

INPUTS 'PA02,PA01,PA00,PC01,PC00,TRANTOMFM(L),CPUMSYN(1)H,PA21-PA12 &
PA10,PA11,PA09,PA08,PA07,PA06,PA05,PA04,PA03'

OUTPUTS 'KT MUX H,SR SEL L,LOAD PSWH L,LOAD PSWL L,LOAD SROH L,LOAD SR
OL L,GEN REG L,SP WRITE H'

RADIX OCTAL

BIND '1100001111111111'
SRO=041357
SR2=141357
PSW=141377
SREG=001357
END

BIND '0000001111111110'
GR=001370
END

BIND '0011100000000000'
DATOBL=014000
DATOBH=034000
END

BIND '0001100000000000'
DATO=010000
END

BIND '0001000000000000'
DATI(F)=000000
END

BIND '0000001111110100'
PAR1=001024
PDR1=001020
END

BIND '0000001111111100'
PAR2=001364
PDR2=001360
END

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EQUATIONS

KT MUX H=PAR1.DATI(P)+PDR1.DATI(P)+PAR2.DATI(P)

KT MUX H=PDR2.DATI(P)+SRO.DATI(P)+SR2.DATI(P)

SR SEL L=SREG

LOAD PSWH L=PSW.DATO+PSW.DATOBH

LOAD PSWL L=PSW.DATO+PSW.DATOBL

LOAD SROH L=SRO.DATO+SRO.DATOBH

LOAD SROL L=SRO.DATO+SRO.DATOBL

GEN REG L=GR.-TRANTOMFM(L)

SP WRITE H=GR.-TRANTOMFM(L).PC01

END

OPTIMIZE -2

PUNCHTAPE

)OUTPUT Y025C6,OUT

PRINTTABS

STATISTICS

)OUT

'XEND OF Y025C6 PLA SOURCE'

CONDITION CODE FROM K1-10 23-164A2
 CREATES THE C AND V BITS FROM THE IR CATEGORIZATION LOGIC,
 THE CURRENT N BIT AND THE MSB OF THE WORD OR BYTE AS NECESSARY
 ALL INPUTS/OUTPUTS ACTIVE HIGH

INVERTIN 0
 INVERTOUT 0

INPUTS 'CC N H,SP15(1)H,SP07(1)H,ROT CBIT(1)H,CBIT(1)H,CC CODE02 H,CC
 CODE01 H,CC CODE00 H'

OUTPUTS 'CC V H,CC C H,BLANK,BLANK'

RADIX OCTAL

BIND '00000111'
 CATEGORIES BY EFFECT ON CONDITION CODES (FROM IR)
 COD0=000
 COD1=001
 COD2=002
 COD3=003
 COD4=004
 COD5=005
 COD6=006
 COD7=007
 END

EQUATIONS

CC V H=COD6.--CC N H,ROT CBIT(1)H+COD6.CC N H.--ROT CBIT(1)H
 CC V H=COD5.CC N H.--SP15(1)H.--SP07(1)H+COD5.--CC N H,SP15(1)H,SP07(1)H
 CC V H=COD4.CC N H.--SP15(1)H,SP07(1)H+COD4.--CC N H,SP15(1)H.--SP07(1)H
 CC V H=COD3.--CC N H,SP15(1)H.--SP07(1)H+COD2.CC N H.--SP15(1)H.--SP07(1)H
 CC C H=COD7,CBIT (1)H+COD6,ROT CBIT(1)H+COD5.--CC N H,SP15(1)H.--SP07(1)
 H
 CC C H=COD5.CC N H,SP15(1)H,SP07(1)H+COD5.--CC N H,SP07(1)H
 CC C H=COD4.--CC N H.--SP15(1)H,SP07(1)H+COD4.CC N H,SP15(1)H,SP07(1)H
 CC C H=COD4.CC N H.--SP15(1)H+COD4.CC N H.--SP15(1)H,SP07(1)H
 CC C H=COD3,CBIT (1)H+COD2,CBIT (1)H+COD1
 END

DEFAULTROM 0
 MAKEROM
 >OUT Y164A2,OUT
 PRINTTABS
 STATISTICS
 >OUT

'%END OF Y164A2 FROM SOURCE'

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```
"KT FAULT FROM,#23-444F1-00,K1-8,E84,82S137 OR EQUIV"  
"ALL INPUTS ACTIVE HIGH,KT FAULT L IS ACTIVE LOW-ALL OTHER"  
"OUTPUTS ACTIVE HIGH.DURING A DATA TRANSFER(BUF DAT TRAN(1)H ASSERTED)  
"  
"NR IS HIGH FOR A NON-RESIDENT KT VIOLATION.WHEN NO DATA"  
"TRANSFER OCCURS,THIS BIT IS REDEFINED AS LOW FOR A PAGE LENGTH"  
"VIOLATION. BECAUSE OF ASSEMBLER LIMITS,THE CONDITIONS USED"  
"ARE AS FOLLOWS:"  
"DURING A CIS CHECK OF A MEMORY PAGE NR IS ASSERTED HIGH IF"  
"1.A LEGAL OPERATING MODE IS USED AND"  
"2.A RW PAGE IS BEING ACCESSED AND"  
"3.NO BUS TRANSFER IS OCCURING AND"  
"4.NO EXPANSION DIRECTION FAULT HAS OCCURRED."  
"OTHERWISE SOMETHING IS WRONG AND NR IS UNASSERTED WHICH FORCES"  
"A PAGE FAULT FOR THE CIS."
```

```
INVERTIN 0  
INVERTOUT 040000000000
```

```
INPUTS 'BUF DAT TRAN(1)H,UBUS C1(1)H,UBUS CO(1)H,KT DISABLE MSYN L,MOD  
E 01H,MODE 00H,ACF2(1)H,ACF1(1)H,COMP,ED'
```

```
OUTPUTS 'NR,PL,RO,KT FAULT L'
```

```
RADIX OCTAL
```

```
BIND '1001000000'  
"DATA TRANSFER AND NOT AN ODD ADDRESS"  
EN=1100  
END
```

```
BIND '0001000000'  
"NOT AN ODD ADDRESS"  
DM=0100  
END
```

```
BIND '0000110000'  
KER=0000  
SUF=0020  
ILL=0040  
USER=0060  
END
```

```
BIND '0110000000'  
DATI=0000  
DATIF=0200  
DATO=0400  
DATOB=0600  
END
```

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```
BIND '0000001100'  
"READ ONLY ACCESS CONTROL"  
RDO=0004  
"READ-WRITE ACCESS CONTROL FIELD"  
RW=0014  
END
```

```
BIND '0000000100'  
"NON RESIDENT OR UNUSED ACF"  
ABA=0000  
END
```

```
BIND '0000000011'  
E1=0001  
E2=0002  
"NO EXPANSION DIRECTION ERRORS"  
NE1=0000  
NE2=0003  
END
```

```
EQUATIONS  
KT FAULT L=EN,ILL+EN,ABA+EN,RDO,DATIF  
KT FAULT L=EN,RDO,DATO+EN,RDO,DATOB+EN,E1+EN,E2  
KT FAULT L=EN,DATI,-ACF1(1)H,NE1+EN,DATI,-ACF1(1)H,NE2  
RO=EN,KER,RDO,DATIF+EN,KER,RDO,DATO+EN,KER,RDO,DATOB  
RO=EN,SUP,RDO,DATIF+EN,SUP,RDO,DATO+EN,SUP,RDO,DATOB  
RO=EN,USER,RDO,DATIF+EN,USER,RDO,DATO+EN,USER,RDO,DATOB  
PL=E1.EN,KER+E2.EN,KER  
PL=E1.EN,SUP+E2.EN,SUP  
PL=E1.EN,USER+E2.EN,USER  
NR=ILL.EN+-ACF1(1)H,EN  
NR=KER,RW,-BUF DAT TRAN(1)H,NE1  
NR=KER,RW,-BUF DAT TRAN(1)H,NE2  
NR=SUP,RW,-BUF DAT TRAN(1)H,NE1  
NR=SUP,RW,-BUF DAT TRAN(1)H,NE2  
NR=USER,RW,-BUF DAT TRAN(1)H,NE1  
NR=USER,RW,-BUF DAT TRAN(1)H,NE2  
END
```

```
DEFAULTROM 0  
MAKEROM  
)OUTPUT Y444F1,OUT  
PRINTTABS  
STATISTICS  
)OUT
```

```
'ZEND OF Y444F1 FROM SOURCE'
```

PLT044.DOC PAGE 42

"PRIORITY ARBITRATION FLA,#23-032C6-00,K2-2,E82,82S100"
"ARBITRATES AMONG BUS REQUESTS,PIR REQUESTS AND THE PROCESSOR"
"PRIORITY LEVEL. ALL INPUTS ACTIVE HIGH,ALL OUTPUTS ACTIVE HIGH"
"EXCEPT PIRQ."

INVERTIN 0
INVERTOUT 010000000000

INPUTS 'PIA2,PIA1,PIA0,PSW7,PSW6,PSW5,BR7,BR6,BR5,BR4,HLTRQST,PFail 1
H,PE 1 H,X,X,X'

OUTPUTS 'BG+PFail,BG7,BG6,BG5,BG4,PIRQ,PE+BG+HLT+PIRQ+PFail,BG+HLT'

RADIX OCTAL

BIND '1110000000100'
"PIRQ REQUEST LEVEL"
P7=16000
P6=14000
P5=12000
P4=10000
P3=06000
P2=04000
P1=02000
END

BIND '1000000000000'
" THESE 3 BINDS ALLOW < CONDITIONS TO BE DETECTED IN PIRQ"
" E.G.,-4 SAYS THE LEVEL IS LESS THAN THREE,4,-2"
" INDICATES THE LEVEL IS 4 OR 5,ETC."
I4=10000
END

BIND '01000000000000'
I2=04000
END

BIND '001000000000000'
I1=02000
END

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```
BIND '000100000000'  
  *DETECTS < CONDITIONS IN PSW LEVELS*  
  4=01000  
  END
```

```
BIND '0000100000000'  
  2=00400  
  END
```

```
BIND '0000010000000'  
  1=00200  
  END
```

```
BIND '0000001000100'  
  *THESE 4 BINDS DETECT PRESENCE OR ABSENCE OF BUS REQUESTS*  
  R7=00101  
  NR7=00000  
  END
```

```
BIND '0000001100100'  
  R6=00040  
  NR6=00000  
  END
```

```
BIND '0000001110100'  
  R5=00021  
  NR5=00000  
  END
```

```
BIND '0000001111100'  
  R4=00011  
  NR4=00000  
  END
```

```
BIND '0000000000100'  
  *DETECTS A HALT*  
  H=00004  
  END
```

```
BIND '0000000000010'  
  *DETECTS POWER FAIL*  
  PF=00002  
  END  
  DATAPATHS  
  OUT=BG+PFAIL,BG7,BG6,BG5,BG4,PIRQ,PE+BG+HLT+PIRQ+PFAIL,BG+HLT  
  END
```

EQUATIONS

```
OUT\303=R7.4.2,-1,I4,I2,-I1+R7.4.2,-1,I4,-I2 ; *BR7*
OUT\303=R7.4.2,-1,-I4+R7.4,-2,I4,I2,-I1+R7.4,-2,I4,-I2
OUT\303=R7.4,-2,-I4+R7,-4,I4,I2,-I1+R7,-4,I4,-I2+R7,-4,-I4
OUT\243=R6.4,-2,I4,-I2+R6.4,-2,-I4+R6,-4,I4,-I2+R6,-4,-I4 ; *BR6*
OUT\223=R5.4,-2,-1,I4,-I2,-I1+R5.4,-2,-1,-I4 ; *BR5*
OUT\223=R5,-4,I4,-I2,-I1+R5,-4,-I4
OUT\213=R4,-4,-I4 ; *BR4*
OUT\006=P7.4.2,-1+P7.4,-2+P7,-4+P6.4,-2,NR7+P6,-4,NR7 ; *PIRQ*
.
OUT\006=P5.4,-2,-1,NR6+P5,-4,NR6+P4,-4,NR5
OUT\006=P3,-4.2,-1,NR4+P3,-4,-2,NR4+P2,-4,-2,NR4+P1,-4,-2,-1,NR4
OUT\003=H ; *HALT*
.
OUT\202=PF ; *POWR*
FAIL*
PE+BG+HLT+PIRQ+PFAIL=PE 1 H ; *PARE*
RROR*
END
```

```
OPTIMIZE -2
PUNCHTAPE
)OUTPUT Z032C6,OUT
PRINTTABS
STATISTICS
)OUT
```

'XEND OF Z032C6 PLA SOURCE'

"UNIBUS ADDRESS SPACE DECODING PLA,23-033C6-00,K4-4,82S100"
"THIS DEVICE COMPARES THE UPPER 5 UNIBUS ADDRESS BITS WITH"
"BOUNDS(JUMPER SELECTED)INDICATING THE MEMORY SPACE BAND EDGES"
"FOR UNIBUS MEMORY PRESENT IN THE SYSTEM,I.E. NOT ON THE MEMORY BUS"
"TR1 IS ASSERTED (TRUE H) IF THE LOWER LIMIT IS > THE BUS ADDRESS"
"TR2 IS ASSERTED (TRUE LOW) IF THE UPPER LIMIT IS > THE BUS ADDRESS"
"THE LOW AND OF TR1 AND TR2 SOLVES THE EQUATION $LL \leq BA < UL$."
"IF THE EQUATION IS TRUE MSYN ISN'T SENT TO THE MEMORY BUS(EUB)."
"X16LT IS DETECTED EXTERNALLY AND IS TRUE LOW."

INVERTIN 0
INVERTOUT 004000000000

INPUTS 'X16LT,BA13,BA14,BA15,BA16,BA17,L1,L2,L4,L8,L16,U1,U2,U4,U8,U16'

OUTPUTS 'X1,X2,X3,X4,X5,X6,TR2,TR1'

RADIX OCTAL

"THESE BINDS XOR AN ADDRESS BIT WITH A JUMPER BIT"

BIND '00001000010000000'
X8LT=004100
X8LF=000000
END

BIND '00010000100000000'
X4LT=010200
X4LF=000000
END

BIND '00100001000000000'
X2LT=020400
X2LF=000000
END

BIND '00000100000000001'
X16UT=002001
X16UF=000000
END

BIND '00001000000000010'
X8UT=004002
X8UF=000000
END

BIND '0001000000000100'
X4UT=010004
X4UF=000000
END

BIND '0010000000001000'
X2UT=020010
X2UF=000000
END

EQUATIONS

TR1=L16.-BA17+-X16LT.L8.-BA16 ;"LOWER LIMIT > BUS ADDRESS"
TR1=-X16LT.X8LT.L4.-BA15+-X16LT.X8LF.L4.-BA15
TR1=-X16LT.X8LT.X4LT.L2.-BA14+-X16LT.X8LT.X4LF.L2.-BA14
TR1=-X16LT.X8LF.X4LT.L2.-BA14+-X16LT.X8LF.X4LF.L2.-BA14
TR1=-X16LT.X8LF.X4LF.X2LF.L1.-BA13+-X16LT.X8LF.X4LF.X2LT.L1.-BA13
TR1=-X16LT.X8LF.X4LT.X2LF.L1.-BA13+-X16LT.X8LF.X4LT.X2LT.L1.-BA13
TR1=-X16LT.X8LT.X4LF.X2LF.L1.-BA13+-X16LT.X8LT.X4LF.X2LT.L1.-BA13
TR1=-X16LT.X8LT.X4LT.X2LF.L1.-BA13+-X16LT.X8LT.X4LT.X2LT.L1.-BA13
TR2=U16.-BA17+X16UT.U8.-BA16+X16UF.U8.-BA16 ;"UPPER LIMIT > BUS ADDRESS"
TR2=X16UF.X8UF.U4.-BA15+X16UF.X8UT.U4.-BA15
TR2=X16UT.X8UF.U4.-BA15+X16UT.X8UT.U4.-BA15
TR2=X16UF.X8UF.X4UF.U2.-BA14+X16UF.X8UF.X4UT.U2.-BA14
TR2=X16UF.X8UT.X4UF.U2.-BA14+X16UF.X8UT.X4UT.U2.-BA14
TR2=X16UT.X8UF.X4UF.U2.-BA14+X16UT.X8UF.X4UT.U2.-BA14
TR2=X16UT.X8UT.X4UF.U2.-BA14+X16UT.X8UT.X4UT.U2.-BA14
TR2=X16UF.X8UF.X4UF.X2UF.U1.-BA13+X16UF.X8UF.X4UF.X2UT.U1.-BA13
TR2=X16UF.X8UF.X4UT.X2UF.U1.-BA13+X16UF.X8UF.X4UT.X2UT.U1.-BA13
TR2=X16UF.X8UT.X4UF.X2UF.U1.-BA13+X16UF.X8UT.X4UF.X2UT.U1.-BA13
TR2=X16UF.X8UT.X4UT.X2UF.U1.-BA13+X16UF.X8UT.X4UT.X2UT.U1.-BA13
TR2=X16UT.X8UF.X4UF.X2UF.U1.-BA13+X16UT.X8UF.X4UF.X2UT.U1.-BA13
TR2=X16UT.X8UT.X4UF.X2UF.U1.-BA13+X16UT.X8UT.X4UF.X2UT.U1.-BA13
TR2=X16UT.X8UT.X4UT.X2UF.U1.-BA13

END

PUNCHTAPE
)OUT Z033C6,OUT
PRINTTABS
STATISTICS
)OUT

"ZEND OF Z033C6 PLA SOURCE"

"BOOT AND MAP ADDRESS DECODING PLA,#23-034C6-00,K4-4,E45,82S100"
"ALL INPUTS ACTIVE HIGH(HOWEVER UID IS TRUE LOW)"
"ALL OUTPUTS ACTIVE LOW EXCEPT BOOT READ H"
"THIS PLA ENABLES READING AND WRITING TO THE MAP REGISTERS"
"AS WELL AS DECODING THE 9312-LIKE BOOT ADDRESSES FOR THE 5"
"ROMS LOCATED ON K4-9. THE DIAGNOSTIC SPACE START ADDRESS IS 765000."
"THE BOOT START ADDRESSES ARE 773000,773200,773400 AND 773600."
"ADDRESS 773024 IS IGNORED BY THE PLA TO ALLOW THE SWITCHES"
"TO WORK. THE LOCK INPUT ALLOWS THE BOOT TO DISABLE DIAGNOSTICS"
"BY REMOVING THE JUMPER W2 ON THE M7098."

INVERTIN 0
INVERTOUT 376000000000

RADIX OCTAL

INPUTS 'BMSYN,BC1,UID,BA01,BA02,BA03,BA04,BA05,BA06,BA07,BA08,BA09,BA10,BA11,BA12,LOCK'

OUTPUTS'BOOT READ H,MAP READ L,MAP WRITE L,DIAG L,BOOT4 L,BOOT3 L,BOOT2 L,BOOT1 L'

BIND '1010000001111110'
"BOOT ROM ADDRESSES"
BT1=100032
BT2=100132
BT3=100072
BT4=100172
END

"THESE 5 BINDS DECODE ALL BOOT1 ADDRESSES EXCEPT 773024"
BIND '1010001111111110'
BT1U=100032
END

BIND '1010111111111110'
BT1V=101032
END

BIND '1011111111111110'
BT1W=115032
END

BIND '1010011111111110'
BT1X=103032
END

BIND '1010000111111110'
BT1Y=100432
END

BIND '1010000011111110'
BT1Z=100232
END

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BIND '1010000000011111'
DIAG=100024
END

BIND '1010000001111110'
MAP REG=100102
END

EQUATIONS
ROOT READ H=-BC1.BT1+-BC1.BT2+-BC1.BT3+-BC1.BT4+-BC1.DIAG
MAP READ L=-BC1.MAP REG
MAP WRITE L=BC1.MAP REG
DIAG L=DIAG
ROOT4 L=BT4
ROOT3 L=BT3
ROOT2 L=BT2
ROOT1 L=BT1U+BT1V+BT1W+BT1X+BT1Y+BT1Z
END

OPTIMIZE -2
PUNCHTAPE
)OUT Z034C6,OUT
PRINTTABS
STATISTICS
)OUT

'ZEND OF Z034C6 PLA SOURCE'

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"PRIORITY ARBITRATOR FROM TYPE A1-07,E95,K3-7"
"MFM MODULE M7096"

INVERTIN 0
INVERTOUT 776000000000

INPUTS 'NEWREQ,TU58REC,TU58XMIT,TERMREC,TERMXMIT'

OUTPUTS 'NEWGRNT,ANYREC,ANYTERM,RECTU58,XMITTU58,RECTERM,XMITTERM,ANYI
NT'

RADIX OCTAL

BIND '10000'
PRIOR0=20
END

BIND '11000'
PRIOR1=10
END

BIND '11100'
PRIOR2=04
END

BIND '11110'
PRIOR3=02
END

BIND '11111'
PRIOR4=01
END

DATAPATHS
OUT=NEWGRNT,ANYREC,ANYTERM,RECTU58,XMITTU58,RECTERM,XMITTERM,ANYINT
END

EQUATIONS
OUT\201=PRIOR0
OUT\121=PRIOR1
OUT\011=PRIOR2
OUT\145=PRIOR3
OUT\043=PRIOR4
END

DEFAULTROM 0
MAKEROM
>OUT A261A1,OUT
PRINTTABS
STATISTICS
>OUT

'%END OF A261A1 FROM SOURCE'

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CONSOLE ADDRESS DECODER FROM TYPE A9-01, E126, K3-2

INVERTIN 0
INVERTOUT 040000000000

INPUTS 'IO/MBAR,CAD15H,CAD14H,CAD13H,CAD12H,CAD11H,
CAD10H,CAD09H,CAD08H'

OUTPUTS 'UPPER 2K H,LOWER 2K H,RAM ENAB H,I/O ENAB L'

RADIX HEX

BIND '111111000'
UPPER 2K=008
LOWER 2K=000
END

BIND '111111111'
RAM EN=010
END

BIND '111100001'
I/O ENAB=100
END

EQUATIONS
UPPER 2K H=UPPER 2K
LOWER 2K H=LOWER 2K
RAM ENAB H=RAM EN
I/O ENAB L=I/O ENAB
END

DEFAULTROM 0
MAKEROM
)OUT A847A9,OUT
PRINTTABS
STATISTICS
)OUT

'END OF A847A9 FROM SOURCE'

FAX ADDRESS DECODER FROM TYPE A9-01, E91, K3-5
INVERTIN 0
INVERTOUT 0
INPUTS 'FXC1H,NOTTU58,NOT13T021,NOTTMORLTC,NOTLTC,NOTTERM,FXA02H,FXA01
H,NOTCOANDAO'
OUTPUTS 'XBUFREADH,LTCWRITEH,ENABSSYNH,TMORTU58H'
RADIX OCTAL

BIND '111111110'
READTERMXB=226
END

BIND '111000110'
READTU58XB=006
END

BIND '111111111'
DATOLTC=617
END

BIND '011000000'
TU58=000
END

BIND '011111000'
TERM=220
END

BIND '011111110'
LTC=216
END

BIND '111000111'
RCDATOTU58=401
END

BIND '111000101'
XDATOTU58=405
END

BIND '111000110'
RBDATITU58=002
END

BIND '111111111'
RCDATOTERM=621
END

BIND '111111101'
XDATOTERM=625
END

BIND '111111110'
RBDATITERM=222
END

EQUATIONS

XBUFREADH=READTERMXB+READTU58XB

LTCWRITEH=DATOLTC

ENABSSYNH=TU58+TERM+LTC

TMORTU58H=RCDATOTU58+XDATOTU58+RBDATITU58+RCDATOTERM+XDATOTERM+RBDATIT

ERM

END

DEFAULTROM 0

MAKEROM

)OUT A848A9,OUT

PRINTTABS

STATISTICS

)OUT

'%END OF PROM SOURCE'

RUN NAME	FIN NAME
+12	A01R1
+12	A09R1
+12	A10R1
+12	A11R1
+12	A12R1
+12	
+12VB	J00111
+12VB	J00112
+12VB	J00113
+12VB	J00114
+12VB	J00115
+12VB	
+15	C14U1
+15	C13U1
+15	C12U1
+15	C06U1
+15	B01C2
+15	J00128
+15	J00126
+15	
+5	A14A2
+5	A13A2
+5	A12A2
+5	A11A2
+5	A10A2
+5	A09A2
+5	A08A2
+5	A07A2
+5	A06A2
+5	A05A2
+5	A04A2
+5	A03A2
+5	A02A2
+5	A01A2
+5	A05V1
+5	A04V1
+5	A03V1
+5	A02V1
+5	A01V1
+5	B01A2
+5	B02A2
+5	B03A2
+5	B04A2
+5	B05A2
+5	B06A2
+5	A06V1
+5	A07V1
+5	A08V1
+5	B07A2
+5	B08A2
+5	B09A2
+5	B10A2
+5	B11A2

RUN NAME	FIN NAME
+5	B12A2
+5	B13A2
+5	B14A2
+5	C14A2
+5	C13A2
+5	C12A2
+5	C11A2
+5	C10A2
+5	C09A2
+5	C08A2
+5	C07A2
+5	C06A2
+5	C05A2
+5	C04A2
+5	C03A2
+5	C02A2
+5	C01A2
+5	C01V1
+5	C02V1
+5	C03V1
+5	C04V1
+5	C05V1
+5	C06V1
+5	C07V1
+5	C08V1
+5	J00201
+5	J00124

RUN NAME	PIN NAME
+5-1	D14A2
+5-1	D13A2
+5-1	D12A2
+5-1	D11A2
+5-1	D10A2
+5-1	D09A2
+5-1	D08A2
+5-1	D07A2
+5-1	D06A2
+5-1	D05A2
+5-1	D04A2
+5-1	D03A2
+5-1	D02A2
+5-1	D01A2
+5-1	D02V1
+5-1	D01V1
+5-1	E01A2
+5-1	E02A2
+5-1	E03A2
+5-1	D03V1
+5-1	D04V1
+5-1	E04A2
+5-1	E05A2
+5-1	D05V1
+5-1	D06V1
+5-1	E06A2
+5-1	E07A2
+5-1	D07V1
+5-1	D08V1
+5-1	E08A2
+5-1	E09A2
+5-1	E10A2
+5-1	E11A2
+5-1	E12A2
+5-1	E13A2
+5-1	E14A2
+5-1	F14A2
+5-1	F13A2
+5-1	F12A2
+5-1	F11A2
+5-1	F10A2
+5-1	F09A2
+5-1	F08A2
+5-1	F07A2
+5-1	F06A2
+5-1	F05A2
+5-1	F04A2
+5-1	F03A2
+5-1	F02A2
+5-1	F01A2
+5-1	F01V1
+5-1	F02V1
+5-1	F03V1
+5-1	F04V1
+5-1	F05V1
+5-1	F06V1

RUN NAME	PIN NAME
+5-1	F07V1
+5-1	F08V1
+5-1	
+5B	R01R1
+5B	R09D1
+5B	R09B1
+5B	R10B1
+5B	R10D1
+5B	R11D1
+5B	R11B1
+5B	R12B1
+5B	R12D1
+5B	
+5VB	J00101
+5VB	J00102
+5VB	J00103
+5VB	J00104
+5VB	J00105
+5VB	J00106
+5VB	J00107
+5VB	J00108
+5VB	J00109
+5VB	J00110
+5VB	
-12	A01S1
-12	A09S1
-12	A10S1
-12	A11S1
-12	A12S1
-12	
-12VB	J00117
-12VB	J00118
-12VB	
-15	F12B2
-15	F13B2
-15	F14B2
-15	E14B2
-15	E13B2
-15	E12B2
-15	D12B2
-15	D13B2
-15	D14B2
-15	C14B2
-15	C13B2
-15	C12B2
-15	B01T1
-15	J00127
-15	J00125
-15	

RUN NAME

FIN
NAME

8-15=0 L	A04K1
8-15=0 L	A05K1
8-15=0 L	
ABORT H	B08F1
ABORT H	B05J1
ABORT H	C01F2
ABORT H	
ALLOW MSYN H	C05P2
ALLOW MSYN H	C08J2
ALLOW MSYN H	
ALU C OUT H	E04U2
ALU C OUT H	E05U2
ALU C OUT H	
ALU CIN L	B04S2
ALU CIN L	B05S2
ALU CIN L	
ALU MODE H	B04T2
ALU MODE H	B05T2
ALU MODE H	
ALU S0 H	B04R2
ALU S0 H	B05R2
ALU S0 H	
ALU S1 H	B04P2
ALU S1 H	B05P2
ALU S1 H	
ALU S2 H	B04N2
ALU S2 H	B05N2
ALU S2 H	
ALU S3 H	B04M2
ALU S3 H	B05M2
ALU S3 H	
AMUX 00 H	B02V2
AMUX 00 H	B03V2
AMUX 00 H	B04V2
AMUX 00 H	
AMUX 01 H	B02U1
AMUX 01 H	B03U1
AMUX 01 H	B04U1
AMUX 01 H	
AMUX 02 H	B02S1
AMUX 02 H	B03S1
AMUX 02 H	B04S1
AMUX 02 H	

RUN NAME

FIN
NAME

AMUX 03 H	B02R1
AMUX 03 H	B03R1
AMUX 03 H	B04R1
AMUX 03 H	
AMUX 04 H	B02F1
AMUX 04 H	B03F1
AMUX 04 H	B04F1
AMUX 04 H	
AMUX 05 H	B02B2
AMUX 05 H	B03B2
AMUX 05 H	B04B2
AMUX 05 H	
AMUX 06 H	B02E1
AMUX 06 H	B03E1
AMUX 06 H	B04E1
AMUX 06 H	
AMUX 07 H	B02J1
AMUX 07 H	B03J1
AMUX 07 H	B04J1
AMUX 07 H	
AMUX 08 H	B02P1
AMUX 08 H	B03P1
AMUX 08 H	B04P1
AMUX 08 H	
AMUX 09 H	B02N1
AMUX 09 H	B03N1
AMUX 09 H	B04N1
AMUX 09 H	
AMUX 10 H	B02M1
AMUX 10 H	B03M1
AMUX 10 H	B04M1
AMUX 10 H	
AMUX 11 H	B02H1
AMUX 11 H	B03H1
AMUX 11 H	B04H1
AMUX 11 H	
AMUX 12 H	B02L1
AMUX 12 H	B03L1
AMUX 12 H	B04L1
AMUX 12 H	
AMUX 13 H	B02K1
AMUX 13 H	B03K1
AMUX 13 H	B04K1
AMUX 13 H	

RUN NAME	PIN NAME
AMUX 14 H	E02D2
AMUX 14 H	E03D2
AMUX 14 H	E04D2
AMUX 14 H	
AMUX 15 H	E02U2
AMUX 15 H	E03U2
AMUX 15 H	E04U2
AMUX 15 H	
AMUX S0 (1) L	A04M1
AMUX S0 (1) L	A05M1
AMUX S0 (1) L	
AMUX S1 (1) L	A04N2
AMUX S1 (1) L	A05N2
AMUX S1 (1) L	
AUX CONTROL L	D04N2
AUX CONTROL L	D05N2
AUX CONTROL L	
B LEG 00 H	B04V1
B LEG 00 H	B05V1
B LEG 00 H	
B LEG 01 H	C04C1
B LEG 01 H	C05C1
B LEG 01 H	
B MODE 00 L	A04E2
B MODE 00 L	A05E2
B MODE 00 L	
B MODE 01 L	A04F2
B MODE 01 L	A05F2
B MODE 01 L	
B REG 00 (1) H	D04T2
B REG 00 (1) H	D05T2
B REG 00 (1) H	
BA17 H	F05H2
BA17 H	F08H2
BA17 H	
BE (1) H	E05L2
BE (1) H	E08L2
BE (1) H	
BG+PIRQ+HLT+PFFAIL H	E05S1
BG+PIRQ+HLT+PFFAIL H	E08S1
BG+PIRQ+HLT+PFFAIL H	

RUN NAME	PIN NAME
BOOT ENAB L	A12B2
BOOT ENAB L	A11B2
BOOT ENAB L	A10B2
BOOT ENAB L	A09B2
BOOT ENAB L	A05V2
BOOT ENAB L	J00121
BOOT ENAB L	
BOOT H	B01U2
BOOT H	B05U2
BOOT H	
BREG 14 (1) H	E04L1
BREG 14 (1) H	E05L1
BREG 14 (1) H	
BREG 15 (1) H	E04K1
BREG 15 (1) H	E05K1
BREG 15 (1) H	
BUF C0 (1) H	F05E1
BUF C0 (1) H	F08E1
BUF C0 (1) H	
BUF C1 (1) H	F05D2
BUF C1 (1) H	F07D2
BUF C1 (1) H	F08D2
BUF C1 (1) H	
BUF DATA TRAN (1) H	F04L1
BUF DATA TRAN (1) H	F05L1
BUF DATA TRAN (1) H	F08L1
BUF DATA TRAN (1) H	
BUS A00 L	B14H2
BUS A00 L	E14H2
BUS A00 L	E13H2
BUS A00 L	E12H2
BUS A00 L	E08H2
BUS A00 L	
BUS A01 L	B14H1
BUS A01 L	E14H1
BUS A01 L	E13H1
BUS A01 L	E12H1
BUS A01 L	E08H1
BUS A01 L	
BUS A02 L	B14J2
BUS A02 L	E14F1
BUS A02 L	E13F1
BUS A02 L	E12F1
BUS A02 L	E08F1
BUS A02 L	

RUN NAME	PIN NAME
BUS A03 L	B14J1
BUS A03 L	E14V2
BUS A03 L	E13V2
BUS A03 L	E12V2
BUS A03 L	E08V2
BUS A03 L	
BUS A04 L	B14K2
BUS A04 L	E14U2
BUS A04 L	E13U2
BUS A04 L	E12U2
BUS A04 L	E08U2
BUS A04 L	
BUS A05 L	B14K1
BUS A05 L	E14V1
BUS A05 L	E13V1
BUS A05 L	E12V1
BUS A05 L	E08V1
BUS A05 L	
BUS A06 L	B14L2
BUS A06 L	E14U1
BUS A06 L	E13U1
BUS A06 L	E12U1
BUS A06 L	E08U1
BUS A06 L	
BUS A07 L	B14L1
BUS A07 L	E14P2
BUS A07 L	E13P2
BUS A07 L	E12P2
BUS A07 L	E08P2
BUS A07 L	
BUS A08 L	B14M2
BUS A08 L	E14N2
BUS A08 L	E13N2
BUS A08 L	E12N2
BUS A08 L	E08N2
BUS A08 L	
BUS A09 L	B14M1
BUS A09 L	E14R1
BUS A09 L	E13R1
BUS A09 L	E12R1
BUS A09 L	E08R1
BUS A09 L	
BUS A10 L	B14N2
BUS A10 L	E14P1
BUS A10 L	E13P1
BUS A10 L	E12P1
BUS A10 L	E08P1
BUS A10 L	

RUN NAME	PIN NAME
BUS A11 L	B14N1
BUS A11 L	E14L1
BUS A11 L	E13L1
BUS A11 L	E12L1
BUS A11 L	E08L1
BUS A11 L	
BUS A12 L	B14P2
BUS A12 L	E14C1
BUS A12 L	E13C1
BUS A12 L	E12C1
BUS A12 L	E08C1
BUS A12 L	
BUS A13 L	B14P1
BUS A13 L	E14K2
BUS A13 L	E13K2
BUS A13 L	E12K2
BUS A13 L	E08K2
BUS A13 L	
BUS A14 L	B14R2
BUS A14 L	E14K1
BUS A14 L	E13K1
BUS A14 L	E12K1
BUS A14 L	E08K1
BUS A14 L	
BUS A15 L	B14R1
BUS A15 L	E14D2
BUS A15 L	E13D2
BUS A15 L	E12D2
BUS A15 L	E08D2
BUS A15 L	
BUS A16 L	B14S2
BUS A16 L	E14E2
BUS A16 L	E13E2
BUS A16 L	E12E2
BUS A16 L	E08E2
BUS A16 L	
BUS A17 L	B14S1
BUS A17 L	E14D1
BUS A17 L	E13D1
BUS A17 L	E12D1
BUS A17 L	E08D1
BUS A17 L	

RUN NAME	PIN NAME
BUS ACLO L	C12V1
BUS ACLO L	C13V1
BUS ACLO L	C14V1
BUS ACLO L	B14F1
BUS ACLO L	B13F1
BUS ACLO L	B12F1
BUS ACLO L	B11F1
BUS ACLO L	B10F1
BUS ACLO L	B09F1
BUS ACLO L	B06F1
BUS ACLO L	B05F1
BUS ACLO L	J00120
BUS ACLO L	
BUS BBSY	A14P2
BUS BBSY	F14D1
BUS BBSY	F13D1
BUS BBSY	F12D1
BUS BBSY	F08D1
BUS BBSY	
BUS BG4 H	B14E2
BUS BG4 H	D14T2
BUS BG4 H	
BUS BG4A H	D13T2
BUS BG4A H	D14S2
BUS BG4A H	
BUS BG5 H	B14B1
BUS BG5 H	D14R2
BUS BG5 H	
BUS BG5A H	D13R2
BUS BG5A H	D14P2
BUS BG5A H	
BUS BG6 H	B14A1
BUS BG6 H	D14N2
BUS BG6 H	
BUS BG6A H	D13N2
BUS BG6A H	D14M2
BUS BG6A H	
BUS BG7 H	A14V1
BUS BG7 H	D14L2
BUS BG7 H	
BUS BG7A H	D13L2
BUS BG7A H	D14K2
BUS BG7A H	

RUN NAME	PIN NAME
BUS BR4 L	B14D2
BUS BR4 L	D14H2
BUS BR4 L	D13H2
BUS BR4 L	D12H2
BUS BR4 L	D11H2
BUS BR4 L	D08H2
BUS BR4 L	D06H2
BUS BR4 L	
BUS BR5 L	B14C1
BUS BR5 L	D14F2
BUS BR5 L	D13F2
BUS BR5 L	D12F2
BUS BR5 L	D11F2
BUS BR5 L	D08F2
BUS BR5 L	
BUS BR6 L	A14U2
BUS BR6 L	D14E2
BUS BR6 L	D13E2
BUS BR6 L	D12E2
BUS BR6 L	D11E2
BUS BR6 L	D08E2
BUS BR6 L	D06E2
BUS BR6 L	
BUS BR7 L	A14T2
BUS BR7 L	D14D2
BUS BR7 L	D13D2
BUS BR7 L	D12D2
BUS BR7 L	D11D2
BUS BR7 L	D08D2
BUS BR7 L	
BUS C0 L	B14U2
BUS C0 L	E14J2
BUS C0 L	E13J2
BUS C0 L	E12J2
BUS C0 L	E08J2
BUS C0 L	
BUS C1 L	B14T2
BUS C1 L	E14F2
BUS C1 L	E13F2
BUS C1 L	E12F2
BUS C1 L	E08F2
BUS C1 L	

RUN NAME	PIN NAME
BUS D00 L	A08C1
BUS D00 L	A09C1
BUS D00 L	A10C1
BUS D00 L	A11C1
BUS D00 L	A12C1
BUS D00 L	A13C1
BUS D00 L	A14C1
BUS D00 L	C14S2
BUS D00 L	C13S2
BUS D00 L	C12S2
BUS D00 L	C09S2
BUS D00 L	
BUS D01 L	A08D2
BUS D01 L	A09D2
BUS D01 L	A10D2
BUS D01 L	A11D2
BUS D01 L	A12D2
BUS D01 L	A13D2
BUS D01 L	A14D2
BUS D01 L	C14R2
BUS D01 L	C13R2
BUS D01 L	C12R2
BUS D01 L	C09R2
BUS D01 L	
BUS D02 L	A14D1
BUS D02 L	A13D1
BUS D02 L	A12D1
BUS D02 L	A11D1
BUS D02 L	A10D1
BUS D02 L	A09D1
BUS D02 L	A08D1
BUS D02 L	C09U2
BUS D02 L	C12U2
BUS D02 L	C13U2
BUS D02 L	C14U2
BUS D02 L	F14E2
BUS D02 L	F13E2
BUS D02 L	
BUS D03 L	A14E2
BUS D03 L	A13E2
BUS D03 L	A12E2
BUS D03 L	A11E2
BUS D03 L	A10E2
BUS D03 L	A09E2
BUS D03 L	A08E2
BUS D03 L	C09T2
BUS D03 L	C12T2
BUS D03 L	C13T2
BUS D03 L	C14T2
BUS D03 L	F14L1
BUS D03 L	F13L1
BUS D03 L	

RUN NAME	PIN NAME
BUS D04 L	A14E1
BUS D04 L	A13E1
BUS D04 L	A12E1
BUS D04 L	A11E1
BUS D04 L	A10E1
BUS D04 L	A09E1
BUS D04 L	A08E1
BUS D04 L	C09N2
BUS D04 L	C12N2
BUS D04 L	C13N2
BUS D04 L	C14N2
BUS D04 L	F14N2
BUS D04 L	F13N2
BUS D04 L	
BUS D05 L	A14F2
BUS D05 L	A13F2
BUS D05 L	A12F2
BUS D05 L	A11F2
BUS D05 L	A10F2
BUS D05 L	A09F2
BUS D05 L	A08F2
BUS D05 L	C09F2
BUS D05 L	C12F2
BUS D05 L	C13F2
BUS D05 L	C14F2
BUS D05 L	F14F1
BUS D05 L	F13F1
BUS D05 L	
BUS D06 L	A14F1
BUS D06 L	A13F1
BUS D06 L	A12F1
BUS D06 L	A11F1
BUS D06 L	A10F1
BUS D06 L	A09F1
BUS D06 L	A08F1
BUS D06 L	C10V2
BUS D06 L	C12V2
BUS D06 L	C13V2
BUS D06 L	C14V2
BUS D06 L	F14F2
BUS D06 L	F13F2
BUS D06 L	

RUN NAME	FIN NAME
BUS D07 L	A14H2
BUS D07 L	A13H2
BUS D07 L	A12H2
BUS D07 L	A11H2
BUS D07 L	A10H2
BUS D07 L	A09H2
BUS D07 L	A08H2
BUS D07 L	C09M2
BUS D07 L	C12M2
BUS D07 L	C13M2
BUS D07 L	C14M2
BUS D07 L	F14H1
BUS D07 L	F13H1
BUS D07 L	
BUS D08 L	A14H1
BUS D08 L	A13H1
BUS D08 L	A12H1
BUS D08 L	A11H1
BUS D08 L	A10H1
BUS D08 L	A09H1
BUS D08 L	A08H1
BUS D08 L	C09L2
BUS D08 L	C12L2
BUS D08 L	C13L2
BUS D08 L	C14L2
BUS D08 L	F14K1
BUS D08 L	F13K1
BUS D08 L	
BUS D09 L	A08J2
BUS D09 L	A09J2
BUS D09 L	A10J2
BUS D09 L	A11J2
BUS D09 L	A12J2
BUS D09 L	A13J2
BUS D09 L	A14J2
BUS D09 L	C14K2
BUS D09 L	C13K2
BUS D09 L	C12K2
BUS D09 L	C09K2
BUS D09 L	
BUS D10 L	A08J1
BUS D10 L	A09J1
BUS D10 L	A10J1
BUS D10 L	A11J1
BUS D10 L	A12J1
BUS D10 L	A13J1
BUS D10 L	A14J1
BUS D10 L	C14J2
BUS D10 L	C13J2
BUS D10 L	C12J2
BUS D10 L	C09J2
BUS D10 L	

RUN NAME	FIN NAME
BUS D11 L	A08K2
BUS D11 L	A09K2
BUS D11 L	A10K2
BUS D11 L	A11K2
BUS D11 L	A12K2
BUS D11 L	A13K2
BUS D11 L	A14K2
BUS D11 L	C14H1
BUS D11 L	C13H1
BUS D11 L	C12H1
BUS D11 L	C09H1
BUS D11 L	
BUS D12 L	A08K1
BUS D12 L	A09K1
BUS D12 L	A10K1
BUS D12 L	A11K1
BUS D12 L	A12K1
BUS D12 L	A13K1
BUS D12 L	A14K1
BUS D12 L	C14H2
BUS D12 L	C13H2
BUS D12 L	C12H2
BUS D12 L	C09H2
BUS D12 L	
BUS D13 L	A08L2
BUS D13 L	A09L2
BUS D13 L	A10L2
BUS D13 L	A11L2
BUS D13 L	A12L2
BUS D13 L	A13L2
BUS D13 L	A14L2
BUS D13 L	C14F2
BUS D13 L	C13F2
BUS D13 L	C12F2
BUS D13 L	C09F2
BUS D13 L	
BUS D14 L	A08L1
BUS D14 L	A09L1
BUS D14 L	A10L1
BUS D14 L	A11L1
BUS D14 L	A12L1
BUS D14 L	A13L1
BUS D14 L	A14L1
BUS D14 L	C14E2
BUS D14 L	C13E2
BUS D14 L	C12E2
BUS D14 L	C09E2
BUS D14 L	

RUN NAME	PIN NAME
BUS D15 L	A08M2
BUS D15 L	A09M2
BUS D15 L	A10M2
BUS D15 L	A11M2
BUS D15 L	A12M2
BUS D15 L	A13M2
BUS D15 L	A14M2
BUS D15 L	C14D2
BUS D15 L	C13D2
BUS D15 L	C12D2
BUS D15 L	C09D2
BUS D15 L	
BUS DCLO L	C12N1
BUS DCLO L	C13N1
BUS DCLO L	C14N1
BUS DCLO L	B14F2
BUS DCLO L	B13F2
BUS DCLO L	B12F2
BUS DCLO L	B11F2
BUS DCLO L	B10F2
BUS DCLO L	B09F2
BUS DCLO L	B06E2
BUS DCLO L	B05F2
BUS DCLO L	J00122
BUS DCLO L	
BUS INIT L	A14A1
BUS INIT L	D14L1
BUS INIT L	D13L1
BUS INIT L	D12L1
BUS INIT L	D11L1
BUS INIT L	D06L1
BUS INIT L	D05L1
BUS INIT L	
BUS INTR L	A14B1
BUS INTR L	F14M1
BUS INTR L	F13M1
BUS INTR L	F12M1
BUS INTR L	F08M1
BUS INTR L	
BUS MSYN L	B14V1
BUS MSYN L	E14E1
BUS MSYN L	E13E1
BUS MSYN L	E12E1
BUS MSYN L	E08E1
BUS MSYN L	

RUN NAME	PIN NAME
BUS NFG H	A14U1
BUS NFG H	C14B1
BUS NFG H	C14A1
BUS NFG H	C13B1
BUS NFG H	C13A1
BUS NFG H	C12B1
BUS NFG H	C12A1
BUS NFG H	C08B2
BUS NFG H	
BUS NFR L	A14S2
BUS NFR L	F14J1
BUS NFR L	F13J1
BUS NFR L	F12J1
BUS NFR L	F08J1
BUS NFR L	F06J1
BUS NFR L	
BUS PA L	A14M1
BUS PA L	C14C1
BUS PA L	C13C1
BUS PA L	C12C1
BUS PA L	C08C1
BUS PA L	
BUS PB L	A07N2
BUS PB L	A08N2
BUS PB L	A09N2
BUS PB L	A10N2
BUS PB L	A11N2
BUS PB L	A12N2
BUS PB L	A13N2
BUS PB L	A14N2
BUS PB L	C14S1
BUS PB L	C13S1
BUS PB L	C12S1
BUS PB L	C11S1
BUS PB L	
BUS SACK L	A14R2
BUS SACK L	F14T2
BUS SACK L	F13T2
BUS SACK L	F12T2
BUS SACK L	F08T2
BUS SACK L	F06T2
BUS SACK L	
BUS SSYN L	B14U1
BUS SSYN L	E12J1
BUS SSYN L	E13J1
BUS SSYN L	E14J1
BUS SSYN L	F14C1
BUS SSYN L	F13C1
BUS SSYN L	F08C1
BUS SSYN L	

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RUN NAME	PIN NAME
BUS STATUS ENB L	F05K2
BUS STATUS ENB L	F06K2
BUS STATUS ENB L	F08K2
BUS STATUS ENB L	
BUT SERVICE (1) H	D05P1
BUT SERVICE (1) H	F06K1
BUT SERVICE (1) H	F08K1
BUT SERVICE (1) H	
BUT Z BIT H	D05P2
BUT Z BIT H	E04T2
BUT Z BIT H	
BX MODE 00 L	A04H2
BX MODE 00 L	A05H2
BX MODE 00 L	
BX MODE 01 L	B04F2
BX MODE 01 L	B05D2
BX MODE 01 L	
BX REG 00 (1) H	D04S2
BX REG 00 (1) H	D05S2
BX REG 00 (1) H	
BX REG 01 (1) H	D04R2
BX REG 01 (1) H	D05R2
BX REG 01 (1) H	
BYTE H	F05L2
BYTE H	F08L2
BYTE H	
BYTE L	E04J1
BYTE L	E05B2
BYTE L	
C BIT (1) H	C04E2
C BIT (1) H	C05E2
C BIT (1) H	
C1 H	E04D2
C1 H	E05D2
C1 H	
C2 H	C04B1
C2 H	C05K2
C2 H	
C3 H	C04S1
C3 H	C05U2
C3 H	

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RUN NAME	PIN NAME
C4 H	E04H2
C4 H	E05H2
C4 H	
C5*C7 H	E04J2
C5*C7 H	E05J2
C5*C7 H	
C6 H	E04K2
C6 H	E05K2
C6 H	
CACHE BYPASS L	A04L1
CACHE BYPASS L	A05L1
CACHE BYPASS L	A07L1
CACHE BYPASS L	
CACHE GATE H	A07B1
CACHE GATE H	A08B1
CACHE GATE H	
CACHE GR TP1	C07H2
CACHE GR TP2	C07F2
CACHE GR TP2	
CACHE MATCH TP L	D07D2
CACHE PE INTR L	A07A1
CACHE PE INTR L	A08A1
CACHE PE INTR L	
CACHE RESTART L	A08S2
CACHE RESTART L	A07S2
CACHE RESTART L	B05L1
CACHE RESTART L	
CC CODE 00 H	E04R1
CC CODE 00 H	E05R1
CC CODE 00 H	
CC CODE 01 H	E04P2
CC CODE 01 H	E05P2
CC CODE 01 H	
CC CODE 02 H	E04P1
CC CODE 02 H	E05P1
CC CODE 02 H	
CC N H	E04D1
CC N H	E05D1
CC N H	
CIS A0 H	C01R2
CIS A0 H	C02R2
CIS A0 H	

RUN NAME	PIN NAME
CIS A1 H	C01S1
CIS A1 H	C02S1
CIS A1 H	
CIS A2 H	C01T2
CIS A2 H	C02T2
CIS A2 H	
CIS A3 H	D01S1
CIS A3 H	D02S1
CIS A3 H	
CIS ALU CIN H	D01L1
CIS ALU CIN H	D02L1
CIS ALU CIN H	
CIS B0 H	C01E1
CIS B0 H	C02E1
CIS B0 H	
CIS B1 H	C01E2
CIS B1 H	C02E2
CIS B1 H	
CIS B2 H	C01D1
CIS B2 H	C02D1
CIS B2 H	
CIS B3 H	C01D2
CIS B3 H	C02D2
CIS B3 H	
CIS BCD MUX S0 H	C01S2
CIS BCD MUX S0 H	C02S2
CIS BCD MUX S0 H	
CIS BCD MUX S1 H	C01M2
CIS BCD MUX S1 H	C02M2
CIS BCD MUX S1 H	
CIS BCD MUX S2 H	C01L1
CIS BCD MUX S2 H	C02L1
CIS BCD MUX S2 H	
CIS BCD MUX S3 H	D01A1
CIS BCD MUX S3 H	D02A1
CIS BCD MUX S3 H	
CIS BMUX S0 H	D01K1
CIS BMUX S0 H	D02K1
CIS BMUX S0 H	
CIS BMUX S1 H	C01R1
CIS BMUX S1 H	C02R1
CIS BMUX S1 H	

RUN NAME	PIN NAME
CIS BT 00 H	F01H2
CIS BT 00 H	F02H2
CIS BT 00 H	
CIS BT 01 H	F01T2
CIS BT 01 H	F02T2
CIS BT 01 H	
CIS BT 02 H	F01F1
CIS BT 02 H	F02F1
CIS BT 02 H	
CIS BT 03 H	F01K2
CIS BT 03 H	F02K2
CIS BT 03 H	
CIS BT 04 H	F01U2
CIS BT 04 H	F02U2
CIS BT 04 H	
CIS CLK L	D01L2
CIS CLK L	D02L2
CIS CLK L	
CIS CLR NONZERO H	F01J1
CIS CLR NONZERO H	F02J1
CIS CLR NONZERO H	
CIS COND BR 00 H	E01P2
CIS COND BR 00 H	E02P2
CIS COND BR 00 H	
CIS COND BR 01 H	E01P1
CIS COND BR 01 H	E02P1
CIS COND BR 01 H	
CIS COND BR 02 H	E01R2
CIS COND BR 02 H	E02R2
CIS COND BR 02 H	
CIS COND BR 03 H	E01S2
CIS COND BR 03 H	E02S2
CIS COND BR 03 H	
CIS COND BR 04 H	E01B1
CIS COND BR 04 H	E02B1
CIS COND BR 04 H	
CIS COND BR 05 H	E01C1
CIS COND BR 05 H	E02C1
CIS COND BR 05 H	
CIS COND BR 06 H	E01D2
CIS COND BR 06 H	E02D2
CIS COND BR 06 H	

RUN NAME	PIN NAME
CIS COND BR 07 H	E01D1
CIS COND BR 07 H	E02D1
CIS COND BR 07 H	
CIS CONST SEL S0 H	D01C1
CIS CONST SEL S0 H	D02C1
CIS CONST SEL S0 H	
CIS CONST SEL S1 H	C01M1
CIS CONST SEL S1 H	C02M1
CIS CONST SEL S1 H	
CIS CONST SEL S2 H	C01F1
CIS CONST SEL S2 H	C02F1
CIS CONST SEL S2 H	
CIS CPC 00 L	E01L1
CIS CPC 00 L	E02L1
CIS CPC 00 L	
CIS CPC 01 L	E01L2
CIS CPC 01 L	E02L2
CIS CPC 01 L	
CIS CPC 02 L	E01J1
CIS CPC 02 L	E02J1
CIS CPC 02 L	
CIS CPC 03 L	E01J2
CIS CPC 03 L	E02J2
CIS CPC 03 L	
CIS CPC 04 L	E01K1
CIS CPC 04 L	E02K1
CIS CPC 04 L	
CIS CPC 05 L	E01K2
CIS CPC 05 L	E02K2
CIS CPC 05 L	
CIS CPC 06 L	E01M1
CIS CPC 06 L	E02M1
CIS CPC 06 L	
CIS CPC 07 L	E01N1
CIS CPC 07 L	E02N1
CIS CPC 07 L	
CIS CPC 08 L	D01B1
CIS CPC 08 L	D02B1
CIS CPC 08 L	
CIS CPC 09 L	D01J2
CIS CPC 09 L	D02J2
CIS CPC 09 L	

RUN NAME	PIN NAME
CIS CPC 10 L	D01H2
CIS CPC 10 L	D02H2
CIS CPC 10 L	
CIS CPC 11 L	C01B1
CIS CPC 11 L	C02B1
CIS CPC 11 L	
CIS DISAB IBUF H	D01M2
CIS DISAB IBUF H	D02M2
CIS DISAB IBUF H	
CIS DST TRAN H	D01H1
CIS DST TRAN H	D02H1
CIS DST TRAN H	
CIS ENAB CB H	F01L2
CIS ENAB CB H	F02L2
CIS ENAB CB H	
CIS ENAB CIS H	D01N2
CIS ENAB CIS H	D02N2
CIS ENAB CIS H	
CIS ENAB CISS L	E01U2
CIS ENAB CISS L	E02U2
CIS ENAB CISS L	
CIS ENAB CONST L	C01V2
CIS ENAB CONST L	C02V2
CIS ENAB CONST L	
CIS ENAB CPC L	D01F2
CIS ENAB CPC L	D02F2
CIS ENAB CPC L	
CIS ENAB DST ADR H	F01B1
CIS ENAB DST ADR H	F02B1
CIS ENAB DST ADR H	
CIS ENAB L	B02V1
CIS ENAB L	B05V2
CIS ENAB L	B08V2
CIS ENAB L	
CIS ENAB NONZERO A H	F01M1
CIS ENAB NONZERO A H	F02M1
CIS ENAB NONZERO A H	
CIS ENAB NONZERO B H	F01L1
CIS ENAB NONZERO B H	F02L1
CIS ENAB NONZERO B H	
CIS ENAB NONZERO C H	F01V2
CIS ENAB NONZERO C H	F02V2
CIS ENAB NONZERO C H	

RUN NAME	PIN NAME
CIS ENAB OBUF H	E01V2
CIS ENAB OBUF H	E02V2
CIS ENAB OBUF H	
CIS ENAB SCR 1 ADR H	F01B2
CIS ENAB SCR 1 ADR H	F02B2
CIS ENAB SCR 1 ADR H	
CIS ENAB SCR 2 ADR H	F01E2
CIS ENAB SCR 2 ADR H	F02E2
CIS ENAB SCR 2 ADR H	
CIS ENAB SIGN 1 H	F01D1
CIS ENAB SIGN 1 H	F02D1
CIS ENAB SIGN 1 H	
CIS ENAB SIGN 2 H	F01H1
CIS ENAB SIGN 2 H	F02H1
CIS ENAB SIGN 2 H	
CIS ENAB SIGN TRAN H	C01U2
CIS ENAB SIGN TRAN H	C02U2
CIS ENAB SIGN TRAN H	
CIS FORCE CB H	F01K1
CIS FORCE CB H	F02K1
CIS FORCE CB H	
CIS I0 H	C01K2
CIS I0 H	C02K2
CIS I0 H	
CIS I1 H	C01J2
CIS I1 H	C02J2
CIS I1 H	
CIS I2 H	C01H2
CIS I2 H	C02H2
CIS I2 H	
CIS I3 H	C01H1
CIS I3 H	C02H1
CIS I3 H	
CIS I4 H	C01K1
CIS I4 H	C02K1
CIS I4 H	
CIS I5 H	C01J1
CIS I5 H	C02J1
CIS I5 H	
CIS I6 H	C01F2
CIS I6 H	C02F2
CIS I6 H	

RUN NAME	PIN NAME
CIS I7 H	C01N1
CIS I7 H	C02N1
CIS I7 H	
CIS I8 H	C01N2
CIS I8 H	C02N2
CIS I8 H	
CIS INIT H	D01R1
CIS INIT H	D02R1
CIS INIT H	
CIS INPUT ENAB H	C01L2
CIS INPUT ENAB H	C02L2
CIS INPUT ENAB H	
CIS INPUT SEL L	D01D1
CIS INPUT SEL L	D02D1
CIS INPUT SEL L	
CIS LNIB SEL H	E01F1
CIS LNIB SEL H	E02F1
CIS LNIB SEL H	
CIS LOAD AREG H	C01F1
CIS LOAD AREG H	C02F1
CIS LOAD AREG H	
CIS LOAD BREG H	E01E1
CIS LOAD BREG H	E02E1
CIS LOAD BREG H	
CIS LOAD CC H	C01C1
CIS LOAD CC H	C02C1
CIS LOAD CC H	
CIS LOAD CONST H	D01J1
CIS LOAD CONST H	D02J1
CIS LOAD CONST H	
CIS LOAD CPC H	D01D2
CIS LOAD CPC H	D02D2
CIS LOAD CPC H	
CIS LOW BYTE H	D01E2
CIS LOW BYTE H	D02E2
CIS LOW BYTE H	
CIS OP 00 H	D01U1
CIS OP 00 H	D02U1
CIS OP 00 H	
CIS OP 01 H	D01S2
CIS OP 01 H	D02S2
CIS OP 01 H	

RUN NAME	FIN NAME
CIS SEL ALU IN H	D01N1
CIS SEL ALU IN H	D02N1
CIS SEL ALU IN H	
CIS SEL CISS L	E01V1
CIS SEL CISS L	E02V1
CIS SEL CISS L	
CIS SEL CONST L	C01A1
CIS SEL CONST L	C02A1
CIS SEL CONST L	
CIS SEL CPC L	C01B2
CIS SEL CPC L	C02B2
CIS SEL CPC L	
CIS SERIAL SHIFT H	D01B2
CIS SERIAL SHIFT H	D02B2
CIS SERIAL SHIFT H	
CIS SET BE L	F05J2
CIS SET BE L	F08J2
CIS SET BE L	
CIS SEX H	A04S2
CIS SEX H	A05S2
CIS SEX H	
CIS SHFT S0 H	D01T2
CIS SHFT S0 H	D02T2
CIS SHFT S0 H	
CIS SHFT S1 H	D01U2
CIS SHFT S1 H	D02U2
CIS SHFT S1 H	
CIS SP HIGH WRITE H	D01E1
CIS SP HIGH WRITE H	D02E1
CIS SP HIGH WRITE H	
CIS SP WRITE H	D01F1
CIS SP WRITE H	D02F1
CIS SP WRITE H	
CIS SWAP S0 H	D01V2
CIS SWAP S0 H	D02V2
CIS SWAP S0 H	
CIS SWAP S1 H	D01R2
CIS SWAP S1 H	D02R2
CIS SWAP S1 H	

RUN NAME	FIN NAME
CLEAR ERROR L	B01V2
CLEAR ERROR L	D05J1
CLEAR ERROR L	E04N1
CLEAR ERROR L	
CLR MPC L	D03M1
CLR MPC L	D05M1
CLR MPC L	D08L1
CLR MPC L	
CPU DATO L	A04F1
CPU DATO L	A06F1
CPU DATO L	E08B2
CPU DATO L	
CPU HALT (1) H	E05J1
CPU HALT (1) H	E08J1
CPU HALT (1) H	
CPU HLT RQST L	C05B1
CPU HLT RQST L	C06B1
CPU HLT RQST L	C07B1
CPU HLT RQST L	C08B1
CPU HLT RQST L	
CPU MSYN (1) H	F04F2
CPU MSYN (1) H	F06F2
CPU MSYN (1) H	F08F2
CPU MSYN (1) H	
D SPACE H	E04U1
D SPACE H	E05U1
D SPACE H	
DC LO H	B05H1
DC LO H	B06H1
DC LO H	
DISABLE LOAD PSW H	D04E2
DISABLE LOAD PSW H	D05E2
DISABLE LOAD PSW H	
DISABLE MSYN L	F05B2
DISABLE MSYN L	F08B2
DISABLE MSYN L	
DISABLE WBIT L	F04U1
DISABLE WBIT L	F08U1
DISABLE WBIT L	
DP BLEG 00 H	A04J2
DP BLEG 00 H	A05J2
DP BLEG 00 H	

RUN NAME	PIN NAME
DP BLEG 01 H	A04M2
DP BLEG 01 H	A05M2
DP BLEG 01 H	
DP BLEG 02 H	A04K2
DP BLEG 02 H	A05K2
DP BLEG 02 H	
DP BLEG 03 H	A04L2
DP BLEG 03 H	A05L2
DP BLEG 03 H	
E22 BITS H	E04N2
E22 BITS H	E05N2
E22 BITS H	
EMAF H	D05K2
EMAF H	F08F2
EMAF H	
ENAB ADRS H	A06M1
ENAB ADRS H	A07M1
ENAB ADRS H	A08M1
ENAB ADRS H	
ENAB GRANTS H	F05B1
ENAB GRANTS H	F08B1
ENAB GRANTS H	
ENAB INT REG L	D05J2
ENAB INT REG L	E04R2
ENAB INT REG L	
ENAB MAINT (1) H	F04T2
ENAB MAINT (1) H	F05T2
ENAB MAINT (1) H	F07T2
ENAB MAINT (1) H	
ENAB QVX L	A04U1
ENAB QVX L	B05E1
ENAB QVX L	
END TRAN TO MFM L	E04B1
END TRAN TO MFM L	E05B1
END TRAN TO MFM L	E06B1
END TRAN TO MFM L	E08B1
END TRAN TO MFM L	
ERROR H	A04H1
ERROR H	A05H1
ERROR H	

RUN NAME	PIN NAME
EUB A00 L	B07H2
EUB A00 L	B08H2
EUB A00 L	B09H2
EUB A00 L	B10H2
EUB A00 L	B11H2
EUB A00 L	B12H2
EUB A00 L	B13H2
EUB A00 L	
EUB A01 L	B07H1
EUB A01 L	B08H1
EUB A01 L	B09H1
EUB A01 L	B10H1
EUB A01 L	B11H1
EUB A01 L	B12H1
EUB A01 L	B13H1
EUB A01 L	
EUB A02 L	B07J2
EUB A02 L	B08J2
EUB A02 L	B09J2
EUB A02 L	B10J2
EUB A02 L	B11J2
EUB A02 L	B12J2
EUB A02 L	B13J2
EUB A02 L	
EUB A03 L	B07J1
EUB A03 L	B08J1
EUB A03 L	B09J1
EUB A03 L	B10J1
EUB A03 L	B11J1
EUB A03 L	B12J1
EUB A03 L	B13J1
EUB A03 L	
EUB A04 L	B07K2
EUB A04 L	B08K2
EUB A04 L	B09K2
EUB A04 L	B10K2
EUB A04 L	B11K2
EUB A04 L	B12K2
EUB A04 L	B13K2
EUB A04 L	
EUB A05 L	B07K1
EUB A05 L	B08K1
EUB A05 L	B09K1
EUB A05 L	B10K1
EUB A05 L	B11K1
EUB A05 L	B12K1
EUB A05 L	B13K1
EUB A05 L	

RUN NAME	PIN NAME
EUB A06 L	B07L2
EUB A06 L	B08L2
EUB A06 L	B09L2
EUB A06 L	B10L2
EUB A06 L	B11L2
EUB A06 L	B12L2
EUB A06 L	B13L2
EUB A06 L	
EUB A07 L	B07L1
EUB A07 L	B08L1
EUB A07 L	B09L1
EUB A07 L	B10L1
EUB A07 L	B11L1
EUB A07 L	B12L1
EUB A07 L	B13L1
EUB A07 L	
EUB A08 L	B07M2
EUB A08 L	B08M2
EUB A08 L	B09M2
EUB A08 L	B10M2
EUB A08 L	B11M2
EUB A08 L	B12M2
EUB A08 L	B13M2
EUB A08 L	
EUB A09 L	B07M1
EUB A09 L	B08M1
EUB A09 L	B09M1
EUB A09 L	B10M1
EUB A09 L	B11M1
EUB A09 L	B12M1
EUB A09 L	B13M1
EUB A09 L	
EUB A10 L	B07N2
EUB A10 L	B08N2
EUB A10 L	B09N2
EUB A10 L	B10N2
EUB A10 L	B11N2
EUB A10 L	B12N2
EUB A10 L	B13N2
EUB A10 L	
EUB A11 L	B07N1
EUB A11 L	B08N1
EUB A11 L	B09N1
EUB A11 L	B10N1
EUB A11 L	B11N1
EUB A11 L	B12N1
EUB A11 L	B13N1
EUB A11 L	

RUN NAME	PIN NAME
EUB A12 L	B07P2
EUB A12 L	B08P2
EUB A12 L	B09P2
EUB A12 L	B10P2
EUB A12 L	B11P2
EUB A12 L	B12P2
EUB A12 L	B13P2
EUB A12 L	
EUB A13 L	B07P1
EUB A13 L	B08P1
EUB A13 L	B09P1
EUB A13 L	B10P1
EUB A13 L	B11P1
EUB A13 L	B12P1
EUB A13 L	B13P1
EUB A13 L	
EUB A14 L	B07R2
EUB A14 L	B08R2
EUB A14 L	B09R2
EUB A14 L	B10R2
EUB A14 L	B11R2
EUB A14 L	B12R2
EUB A14 L	B13R2
EUB A14 L	
EUB A15 L	B07R1
EUB A15 L	B08R1
EUB A15 L	B09R1
EUB A15 L	B10R1
EUB A15 L	B11R1
EUB A15 L	B12R1
EUB A15 L	B13R1
EUB A15 L	
EUB A16 L	B07S2
EUB A16 L	B08S2
EUB A16 L	B09S2
EUB A16 L	B10S2
EUB A16 L	B11S2
EUB A16 L	B12S2
EUB A16 L	B13S2
EUB A16 L	
EUB A17 L	B07S1
EUB A17 L	B08S1
EUB A17 L	B09S1
EUB A17 L	B10S1
EUB A17 L	B11S1
EUB A17 L	B12S1
EUB A17 L	B13S1
EUB A17 L	

RUN NAME	PIN NAME
EUB A18 L	B07E2
EUB A18 L	B08E2
EUB A18 L	B09E2
EUB A18 L	B10E2
EUB A18 L	B11E2
EUB A18 L	B12E2
EUB A18 L	B13E2
EUB A18 L	
EUB A19 L	B07E1
EUB A19 L	B08E1
EUB A19 L	B09E1
EUB A19 L	B10E1
EUB A19 L	B11E1
EUB A19 L	B12E1
EUB A19 L	B13E1
EUB A19 L	
EUB A20 L	A07F1
EUB A20 L	A08F1
EUB A20 L	A09F1
EUB A20 L	A10F1
EUB A20 L	A11F1
EUB A20 L	A12F1
EUB A20 L	A13F1
EUB A20 L	
EUB A21 L	A07N1
EUB A21 L	A08N1
EUB A21 L	A09N1
EUB A21 L	A10N1
EUB A21 L	A11N1
EUB A21 L	A12N1
EUB A21 L	A13N1
EUB A21 L	
EUB C0 L	B07U2
EUB C0 L	B08U2
EUB C0 L	B09U2
EUB C0 L	B10U2
EUB C0 L	B11U2
EUB C0 L	B12U2
EUB C0 L	B13U2
EUB C0 L	
EUB C1 L	B07T2
EUB C1 L	B08T2
EUB C1 L	B09T2
EUB C1 L	B10T2
EUB C1 L	B11T2
EUB C1 L	B12T2
EUB C1 L	B13T2
EUB C1 L	

RUN NAME	PIN NAME
EUB INIT L	A05A1
EUB INIT L	A09A1
EUB INIT L	A10A1
EUB INIT L	A11A1
EUB INIT L	A12A1
EUB INIT L	A13A1
EUB INIT L	
EUB MSYN L	B07V1
EUB MSYN L	B08V1
EUB MSYN L	B09V1
EUB MSYN L	B10V1
EUB MSYN L	B11V1
EUB MSYN L	B12V1
EUB MSYN L	B13V1
EUB MSYN L	
EUB SSYN L	B07U1
EUB SSYN L	B08U1
EUB SSYN L	B09U1
EUB SSYN L	B10U1
EUB SSYN L	B11U1
EUB SSYN L	B12U1
EUB SSYN L	B13U1
EUB SSYN L	
EXIT CONSOLE L	B05M1
EXIT CONSOLE L	B06M1
EXIT CONSOLE L	
EXT CLK A L	A02B1
EXT CLK A L	A03B1
EXT CLK A L	A05B1
EXT CLK A L	
EXT CLK B L	A04B2
EXT CLK B L	A05B2
EXT CLK B L	
EXT CLK C L	A05J1
EXT CLK C L	B06B2
EXT CLK C L	B07B2
EXT CLK C L	B08B2
EXT CLK C L	
EXT TAP 30 H	B04C1
EXT TAP 30 H	B05C1
EXT TAP 30 H	B06C1
EXT TAP 30 H	B08C1
EXT TAP 30 H	
EXT TAP 90 L	A03V2
EXT TAP 90 L	B05E2
EXT TAP 90 L	

RUN NAME	PIN NAME
F13L2	F13L2
F13L2	F13R1
F13L2	
F13M2	F13M2
F13M2	F13S1
F13M2	
F13N1	F13D2
F13N1	F13N1
F13N1	F13R2
F13N1	
F13P2	F13P2
F13P2	F13S2
F13P2	
F13V2	F13E1
F13V2	F13V2
F13V2	
F14L2	F14L2
F14L2	F14R1
F14L2	
F14M2	F14M2
F14M2	F14S1
F14M2	
F14N1	F14D2
F14N1	F14N1
F14N1	F14R2
F14N1	
F14P2	F14P2
F14P2	F14S2
F14P2	
F14V2	F14E1
F14V2	F14V2
F14V2	
FAULT H	D07S2
FAULT H	D08S2
FAULT H	
FORCE BUS DATA L	F06P1
FORCE BUS DATA L	F08P1
FORCE BUS DATA L	
FORCE CACHE DATA L	A06B2
FORCE CACHE DATA L	A07B2
FORCE CACHE DATA L	

RUN NAME	PIN NAME
FORCE CIS DATA L	A02U2
FORCE CIS DATA L	A06U2
FORCE CIS DATA L	
FORCE CPC L	A02V2
FORCE CPC L	A06V2
FORCE CPC L	
FORCE CPU DATA L	F04R1
FORCE CPU DATA L	F06R1
FORCE CPU DATA L	
FORCE CPU MPC L	C06P2
FORCE CPU MPC L	D05S1
FORCE CPU MPC L	
FORCE FPP DATA L	F03K2
FORCE FPP DATA L	F06J2
FORCE FPP DATA L	
FORCE KERNEL (1) H	F04D1
FORCE KERNEL (1) H	F05D1
FORCE KERNEL (1) H	
FORCE SS DATA L	F04M1
FORCE SS DATA L	F06M1
FORCE SS DATA L	
FP11-F ATTACHED L	F03F2
FP11-F ATTACHED L	F05F2
FP11-F ATTACHED L	
FREE BUS H	F02M2
FREE BUS H	F03M2
FREE BUS H	F04M2
FREE BUS H	F05M2
FREE BUS H	F06M2
FREE BUS H	F07M2
FREE BUS H	F08M2
FREE BUS H	
GND 01	F01T1
GND 01	F01C2
GND 01	E01T1
GND 01	E01C2
GND 01	D01T1
GND 01	D01C2
GND 01	C01T1
GND 01	C01C2
GND 01	B01T2
GND 01	B01C1
GND 01	A01T1
GND 01	A01C2
GND 01	J00123
GND 01	

RUN NAME	PIN NAME
GND 02	A02C2
GND 02	A02T1
GND 02	B02C2
GND 02	B02T1
GND 02	C02C2
GND 02	C02T1
GND 02	D02C2
GND 02	D02T1
GND 02	E02C2
GND 02	E02T1
GND 02	F02C2
GND 02	F02T1
GND 02	
GND 03	F03T1
GND 03	F03C2
GND 03	E03T1
GND 03	E03C2
GND 03	D03T1
GND 03	D03C2
GND 03	C03T1
GND 03	C03C2
GND 03	B03T1
GND 03	B03C2
GND 03	A03T1
GND 03	A03C2
GND 03	J00301
GND 03	
GND 04	A04C2
GND 04	A04T1
GND 04	B04C2
GND 04	B04T1
GND 04	C04C2
GND 04	C04T1
GND 04	D04C2
GND 04	D04T1
GND 04	E04C2
GND 04	E04T1
GND 04	F04C2
GND 04	F04T1
GND 04	
GND 05	A05C2
GND 05	A05T1
GND 05	B05C2
GND 05	B05T1
GND 05	C05C2
GND 05	C05T1
GND 05	D05C2
GND 05	D05T1
GND 05	E05C2
GND 05	E05T1
GND 05	F05C2
GND 05	F05T1
GND 05	

RUN NAME	PIN NAME
GND 06	A06C2
GND 06	A06T1
GND 06	B06C2
GND 06	B06T1
GND 06	C06C2
GND 06	C06T1
GND 06	D06C2
GND 06	D06T1
GND 06	E06C2
GND 06	E06T1
GND 06	F06C2
GND 06	F06T1
GND 06	
GND 07	A07C2
GND 07	A07T1
GND 07	B07C2
GND 07	B07T1
GND 07	C07C2
GND 07	C07T1
GND 07	D07C2
GND 07	D07T1
GND 07	E07C2
GND 07	E07T1
GND 07	F07C2
GND 07	F07T1
GND 07	
GND 08	A08C2
GND 08	A08T1
GND 08	B08C2
GND 08	B08T1
GND 08	C08C2
GND 08	C08T1
GND 08	D08C2
GND 08	D08T1
GND 08	E08C2
GND 08	E08T1
GND 08	F08C2
GND 08	F08T1
GND 08	
GND 09	A09C2
GND 09	A09T1
GND 09	B09C2
GND 09	B09T1
GND 09	C09C2
GND 09	C09T1
GND 09	D09C2
GND 09	D09T1
GND 09	E09C2
GND 09	E09T1
GND 09	F09C2
GND 09	F09T1
GND 09	

PIN
 NAME

GND 10	A10C2
GND 10	A10T1
GND 10	B10C2
GND 10	B10T1
GND 10	C10C2
GND 10	C10T1
GND 10	D10C2
GND 10	D10T1
GND 10	E10C2
GND 10	E10T1
GND 10	F10C2
GND 10	F10T1
GND 10	
GND 11	A11C2
GND 11	A11T1
GND 11	B11C2
GND 11	B11T1
GND 11	C11C2
GND 11	C11T1
GND 11	D11C2
GND 11	D11T1
GND 11	E11C2
GND 11	E11T1
GND 11	F11C2
GND 11	F11T1
GND 11	
GND 12	A12C2
GND 12	A12T1
GND 12	B12C2
GND 12	B12T1
GND 12	C12C2
GND 12	C12T1
GND 12	D12C2
GND 12	D12T1
GND 12	E12C2
GND 12	E12T1
GND 12	F12C2
GND 12	F12T1
GND 12	

PIN
 NAME

GND 13	E13A1
GND 13	E13C2
GND 13	A13C2
GND 13	A13T1
GND 13	B13C2
GND 13	B13T1
GND 13	C13C2
GND 13	C13T1
GND 13	D13C2
GND 13	D13T1
GND 13	E13T1
GND 13	F13C2
GND 13	F13T1
GND 13	F13J2
GND 13	
GND 14	E14A1
GND 14	E14C2
GND 14	A14B2
GND 14	A14C2
GND 14	A14N1
GND 14	A14F1
GND 14	A14R1
GND 14	A14S1
GND 14	A14T1
GND 14	A14V2
GND 14	B14B2
GND 14	B14C2
GND 14	B14D1
GND 14	B14E1
GND 14	B14T1
GND 14	B14V2
GND 14	C14C2
GND 14	C14T1
GND 14	D14C2
GND 14	D14T1
GND 14	E14T1
GND 14	F14C2
GND 14	F14T1
GND 14	F14J2
GND 14	
HALT H	B01F2
HALT H	B06F2
HALT H	
HEX A BG IN	D13U2
HEX A BG IN	F13B1
HEX A BG IN	
HEX A BG OUT	D13V2
HEX A BG OUT	F13A1
HEX A BG OUT	

RUN NAME	PIN NAME
HEX A BR OUT	D13J2
HEX A BR OUT	F13P1
HEX A BR OUT	F13U2
HEX A BR OUT	
HEX A IN	D13H1
HEX A IN	E13M1
HEX A IN	
HEX A INT A	D13N1
HEX A INT A	F13U1
HEX A INT A	
HEX A INT B	C13J1
HEX A INT B	F13K2
HEX A INT B	
HEX A INT ENB A	D13M1
HEX A INT ENB A	F13V1
HEX A INT ENB A	
HEX A INT ENB B	C13L1
HEX A INT ENB B	F13H2
HEX A INT ENB B	
HEX A OUT H	D13K1
HEX A OUT H	E13M2
HEX A OUT H	
HEX A OUT LOW	D13D1
HEX A OUT LOW	E13N1
HEX A OUT LOW	
HEX A SSYN IN H	D13V1
HEX A SSYN IN H	E13R1
HEX A SSYN IN H	
HEX SEL 0	D13F1
HEX SEL 0	E13S2
HEX SEL 0	
HEX SEL 2	D13J1
HEX SEL 2	E13T2
HEX SEL 2	
HEX SEL 4	D13E1
HEX SEL 4	E13R2
HEX SEL 4	
HEX SEL 6	D13C1
HEX SEL 6	E13S1
HEX SEL 6	
HLT GRANT H	E06S2
HLT GRANT H	E08S2
HLT GRANT H	

RUN NAME	PIN NAME
INH L	C05S1
INH L	C08S1
INH L	
INHIBIT CONSOLE L	B01P2
INHIBIT CONSOLE L	B06P2
INHIBIT CONSOLE L	
INT VECTOR L	E04M1
INT VECTOR L	E05A1
INT VECTOR L	
INTR H	D05V2
INTR H	E04S1
INTR H	
K2-4 SERIAL SHIFT H	A04F1
K2-4 SERIAL SHIFT H	A05F1
K2-4 SERIAL SHIFT H	
KT DISABLE MSYN L	F04J1
KT DISABLE MSYN L	F05J1
KT DISABLE MSYN L	
KT FAULT L	F04S1
KT FAULT L	F08S1
KT FAULT L	
KTE (1) H	E05M2
KTE (1) H	E08M2
KTE (1) H	
LOAD BAR H	A04E1
LOAD BAR H	A05E1
LOAD BAR H	
LOAD CC L	D04H2
LOAD CC L	D05H2
LOAD CC L	
LOAD IR L	A02D2
LOAD IR L	A03D2
LOAD IR L	A04D2
LOAD IR L	A05D2
LOAD IR L	
LOAD PIR H L	D05H1
LOAD PIR H L	E04M2
LOAD PIR H L	
LOAD PSW L	D04F2
LOAD PSW L	D05F2
LOAD PSW L	

RUN NAME	FIN NAME
LOAD SR 3L L	D05F1
LOAD SR 3L L	E04L2
LOAD SR 3L L	
LOAD VBA H	A04N1
LOAD VBA H	A05N1
LOAD VBA H	
LTC	C14D1
LTC	C13D1
LTC	C12D1
LTC	C06C1
LTC	J00119
LTC	
MAN CLK ENAB L	F05C1
MAN CLK ENAB L	F06C1
MAN CLK ENAB L	F07C1
MAN CLK ENAB L	
MAN CLK L	D05M2
MAN CLK L	D06L2
MAN CLK L	
MFM BG4 OUT H	D06S2
MFM BG4 OUT H	D09S2
MFM BG4 OUT H	D12S2
MFM BG4 OUT H	D12T2
MFM BG4 OUT H	D13S2
MFM BG4 OUT H	
MFM BG6 OUT H	D06N2
MFM BG6 OUT H	D09N2
MFM BG6 OUT H	D12M2
MFM BG6 OUT H	D12N2
MFM BG6 OUT H	D13M2
MFM BG6 OUT H	
MFM CLK INH L	F06N2
MFM CLK INH L	F08N2
MFM CLK INH L	
MFM HLT RQST L	F06N1
MFM HLT RQST L	F08N1
MFM HLT RQST L	
MFM LOAD MPC L	C06N2
MFM LOAD MPC L	D05R1
MFM LOAD MPC L	
MFM SER IN H	B01J2
MFM SER IN H	B06J2
MFM SER IN H	

RUN NAME	FIN NAME
MFM SER OUT H	B01K2
MFM SER OUT H	B06K2
MFM SER OUT H	
MODE 00 H	E04V2
MODE 00 H	E05V2
MODE 00 H	
MODE 01 H	E04V1
MODE 01 H	E05V1
MODE 01 H	
MPC 00	F02N1
MPC 00	F03N1
MPC 00	F05N1
MPC 00	
MPC 01	F02N2
MPC 01	F03N2
MPC 01	F04N2
MPC 01	F05N2
MPC 01	
MPC 02	F02P1
MPC 02	F03P1
MPC 02	F05P1
MPC 02	
MPC 03	F02P2
MPC 03	F03P2
MPC 03	F05P2
MPC 03	
MPC 04	F02R1
MPC 04	F03R1
MPC 04	F05R1
MPC 04	
MPC 05	F02R2
MPC 05	F03R2
MPC 05	F05R2
MPC 05	
MPC 06	F02S1
MPC 06	F03S1
MPC 06	F05S1
MPC 06	
MPC 07	F02S2
MPC 07	F03S2
MPC 07	F05S2
MPC 07	

RUN NAME	PIN NAME
MPC 08	F02U1
MPC 08	F03U1
MPC 08	F05U1
MPC 08	
MPC 09	F03U2
MPC 09	F05U2
MPC 09	
MPC 10	F03V2
MPC 10	F05V2
MPC 10	
N BIT (1) H	C04J2
N BIT (1) H	C05J2
N BIT (1) H	
P FAIL (1) H	E05N1
P FAIL (1) H	E08N1
P FAIL (1) H	
P FAIL H	C05N2
P FAIL H	C08H2
P FAIL H	
P,C USER H	D04D2
P,C USER H	D05D2
P,C USER H	
PAGE FAULT H	F02F2
PAGE FAULT H	F04F2
PAGE FAULT H	
PAX A00 H	D04A1
PAX A00 H	D05A1
PAX A00 H	D06A1
PAX A00 H	D07A1
PAX A00 H	D08A1
PAX A00 H	
PAX A01 H	D04B1
PAX A01 H	D05B1
PAX A01 H	D06B1
PAX A01 H	D07B1
PAX A01 H	D08B1
PAX A01 H	
PAX A02 H	D04C1
PAX A02 H	D05C1
PAX A02 H	D06C1
PAX A02 H	D07C1
PAX A02 H	D08C1
PAX A02 H	

RUN NAME	PIN NAME
PAX A03 H	D04D1
PAX A03 H	D05D1
PAX A03 H	D06D1
PAX A03 H	D07D1
PAX A03 H	D08D1
PAX A03 H	
PAX A04 H	D04E1
PAX A04 H	D06E1
PAX A04 H	D07E1
PAX A04 H	D08E1
PAX A04 H	
PAX A05 H	D04F1
PAX A05 H	D06F1
PAX A05 H	D07F1
PAX A05 H	D08F1
PAX A05 H	
PAX A06 H	D04H1
PAX A06 H	D06H1
PAX A06 H	D07H1
PAX A06 H	D08H1
PAX A06 H	
PAX A07 H	D04J1
PAX A07 H	D06J1
PAX A07 H	D07J1
PAX A07 H	D08J1
PAX A07 H	
PAX A08 H	D04K1
PAX A08 H	D06K1
PAX A08 H	D07K1
PAX A08 H	D08K1
PAX A08 H	
PAX A09 H	D04K2
PAX A09 H	D06K2
PAX A09 H	D07K2
PAX A09 H	D08K2
PAX A09 H	
PAX A10 H	D04J2
PAX A10 H	D06J2
PAX A10 H	D07J2
PAX A10 H	D08J2
PAX A10 H	
PAX A11 H	D04M1
PAX A11 H	D06M1
PAX A11 H	D07M1
PAX A11 H	D08M1
PAX A11 H	

RUN NAME	PIN NAME
PAX A12 H	D04M2
PAX A12 H	D06M2
PAX A12 H	D07M2
PAX A12 H	D08M2
PAX A12 H	
PAX A13 H	D04P2
PAX A13 H	D06P2
PAX A13 H	D07P2
PAX A13 H	D08P2
PAX A13 H	
PAX A14 H	D04V2
PAX A14 H	D06V2
PAX A14 H	D07V2
PAX A14 H	D08V2
PAX A14 H	
PAX A15 H	D04U2
PAX A15 H	D06U2
PAX A15 H	D07U2
PAX A15 H	D08U2
PAX A15 H	
PAX A16 H	D04N1
PAX A16 H	D06N1
PAX A16 H	D07N1
PAX A16 H	D08N1
PAX A16 H	
PAX A17 H	D04F1
PAX A17 H	D06F1
PAX A17 H	D07F1
PAX A17 H	D08F1
PAX A17 H	
PAX A18 H	D04R1
PAX A18 H	D06R1
PAX A18 H	D07R1
PAX A18 H	D08R1
PAX A18 H	
PAX A19 H	D04S1
PAX A19 H	D06S1
PAX A19 H	D07S1
PAX A19 H	D08S1
PAX A19 H	
PAX A20 H	D04U1
PAX A20 H	D06U1
PAX A20 H	D07U1
PAX A20 H	D08U1
PAX A20 H	

RUN NAME	PIN NAME
PAX A21 H	E04A1
PAX A21 H	E06A1
PAX A21 H	E07A1
PAX A21 H	E08A1
PAX A21 H	
PAX C0 H	C04U2
PAX C0 H	C06U2
PAX C0 H	C07U2
PAX C0 H	C08U2
PAX C0 H	
PAX C1 H	C04V2
PAX C1 H	C06V2
PAX C1 H	C07V2
PAX C1 H	C08V2
PAX C1 H	
PAX D00 H	C04T2
PAX D00 H	C05T2
PAX D00 H	C06T2
PAX D00 H	C07T2
PAX D00 H	C08T2
PAX D00 H	
PAX D01 H	C04S2
PAX D01 H	C05S2
PAX D01 H	C06S2
PAX D01 H	C07S2
PAX D01 H	C08S2
PAX D01 H	
PAX D02 H	C04R2
PAX D02 H	C05R2
PAX D02 H	C06R2
PAX D02 H	C07R2
PAX D02 H	C08R2
PAX D02 H	
PAX D03 H	C04R1
PAX D03 H	C05R1
PAX D03 H	C06R1
PAX D03 H	C07R1
PAX D03 H	C08R1
PAX D03 H	
PAX D04 H	C04A1
PAX D04 H	C05A1
PAX D04 H	C06A1
PAX D04 H	C07A1
PAX D04 H	C08A1
PAX D04 H	

RUN NAME	PIN NAME
PAX D05 H	C04D1
PAX D05 H	C05D1
PAX D05 H	C06D1
PAX D05 H	C07D1
PAX D05 H	C08D1
PAX D05 H	
PAX D06 H	C04E1
PAX D06 H	C05E1
PAX D06 H	C06E1
PAX D06 H	C07E1
PAX D06 H	C08E1
PAX D06 H	
PAX D07 H	C04D2
PAX D07 H	C05D2
PAX D07 H	C06D2
PAX D07 H	C07D2
PAX D07 H	C08D2
PAX D07 H	
PAX D08 H	C04F1
PAX D08 H	C05F1
PAX D08 H	C06F1
PAX D08 H	C07F1
PAX D08 H	C08F1
PAX D08 H	
PAX D09 H	C04N1
PAX D09 H	C05N1
PAX D09 H	C06N1
PAX D09 H	C07N1
PAX D09 H	C08N1
PAX D09 H	
PAX D10 H	C04M1
PAX D10 H	C05M1
PAX D10 H	C06M1
PAX D10 H	C07M1
PAX D10 H	C08M1
PAX D10 H	
PAX D11 H	C04L1
PAX D11 H	C05L1
PAX D11 H	C06L1
PAX D11 H	C07L1
PAX D11 H	C08L1
PAX D11 H	
PAX D12 H	C04K1
PAX D12 H	C05K1
PAX D12 H	C06K1
PAX D12 H	C07K1
PAX D12 H	C08K1
PAX D12 H	

RUN NAME	PIN NAME
PAX D13 H	C04J1
PAX D13 H	C05J1
PAX D13 H	C06J1
PAX D13 H	C07J1
PAX D13 H	C08J1
PAX D13 H	
PAX D14 H	C04H1
PAX D14 H	C05H1
PAX D14 H	C06H1
PAX D14 H	C07H1
PAX D14 H	C08H1
PAX D14 H	
PAX D15 H	C04F1
PAX D15 H	C05F1
PAX D15 H	C06F1
PAX D15 H	C07F1
PAX D15 H	C08F1
PAX D15 H	
PAX INTR L	B05A1
PAX INTR L	B06A1
PAX INTR L	B08A1
PAX INTR L	
PAX SSYN L	F04A1
PAX SSYN L	F06A1
PAX SSYN L	F07A1
PAX SSYN L	F08A1
PAX SSYN L	
PE (1) H	E05M1
PE (1) H	E08M1
PE (1) H	
PFail BR PEND H	B02F2
PFail BR PEND H	B03F2
PFail BR PEND H	B08F2
PFail BR PEND H	
PIA 0 H	C05V2
PIA 0 H	F08R2
PIA 0 H	
PIA 1 H	C05L2
PIA 1 H	C08E2
PIA 1 H	
PIA 2 H	C05M2
PIA 2 H	C08F2
PIA 2 H	
PIRQ GRANT L	E05R2
PIRQ GRANT L	E08R2
PIRQ GRANT L	

RUN NAME	PIN NAME
PLUS ONE H	D04L2
PLUS ONE H	D05L2
PLUS ONE H	
POWER FAILURE H	B01U1
POWER FAILURE H	B05U1
POWER FAILURE H	
PREVIOUS MODE (1) L	F04B2
PREVIOUS MODE (1) L	F05A1
PREVIOUS MODE (1) L	
PROC INIT L	A01P2
PROC INIT L	A02P2
PROC INIT L	A03P2
PROC INIT L	A04P2
PROC INIT L	A08P2
PROC INIT L	A07P2
PROC INIT L	A05P2
PROC INIT L	A06N1
PROC INIT L	
PSW 05 (1) H	C04K2
PSW 05 (1) H	C08K2
PSW 05 (1) H	
PSW 06 (1) H	C04L2
PSW 06 (1) H	C08L2
PSW 06 (1) H	
PSW 07 (1) H	C04M2
PSW 07 (1) H	C08M2
PSW 07 (1) H	
PSW 14 (1) H	E04H1
PSW 14 (1) H	E05H1
PSW 14 (1) H	
PSW 15 (1) H	E04F1
PSW 15 (1) H	E05F1
PSW 15 (1) H	
QUAD A BG IN	D14U2
QUAD A BG IN	F14B1
QUAD A BG IN	
QUAD A BG OUT	D14V2
QUAD A BG OUT	F14A1
QUAD A BG OUT	
QUAD A BR OUT	D14J2
QUAD A BR OUT	F14P1
QUAD A BR OUT	F14U2
QUAD A BR OUT	

RUN NAME	PIN NAME
QUAD A IN	D14H1
QUAD A IN	E14M1
QUAD A IN	
QUAD A INT A	D14N1
QUAD A INT A	F14U1
QUAD A INT A	
QUAD A INT B	C14J1
QUAD A INT B	F14K2
QUAD A INT B	
QUAD A INT ENB A	D14M1
QUAD A INT ENB A	F14V1
QUAD A INT ENB A	
QUAD A INT ENB B	C14L1
QUAD A INT ENB B	F14H2
QUAD A INT ENB B	
QUAD A OUT H	D14K1
QUAD A OUT H	E14M2
QUAD A OUT H	
QUAD A OUT LOW	D14D1
QUAD A OUT LOW	E14N1
QUAD A OUT LOW	
QUAD A SSYN IN H	D14V1
QUAD A SSYN IN H	E14B1
QUAD A SSYN IN H	
QUAD SEL 0	D14F1
QUAD SEL 0	E14S2
QUAD SEL 0	
QUAD SEL 2	D14J1
QUAD SEL 2	E14T2
QUAD SEL 2	
QUAD SEL 4	D14E1
QUAD SEL 4	E14R2
QUAD SEL 4	
QUAD SEL 6	D14C1
QUAD SEL 6	E14S1
QUAD SEL 6	
RCD INIT L	A04U2
RCD INIT L	A05U2
RCD INIT L	A08U2
RCD INIT L	
RELOCATE H	D05U2
RELOCATE H	E04S2
RELOCATE H	

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 RUN NAME PIN
 NAME

REMOTE H	B01R2
REMOTE H	B06R2
REMOTE H	
RESET (1) H	A05U1
RESET (1) H	A08U1
RESET (1) H	
RESET INST (1) H	A05C1
RESET INST (1) H	A08B2
RESET INST (1) H	
ROT CBIT (1) H	F04K2
ROT CBIT (1) H	F05K1
ROT CBIT (1) H	
RUN H	B01N2
RUN H	B06N2
RUN H	
SHIFT MUX 00 L	A04C1
SHIFT MUX 00 L	A05P1
SHIFT MUX 00 L	
SHIFT MUX 01 L	A04J1
SHIFT MUX 01 L	B05K1
SHIFT MUX 01 L	
SF WRITE H	B04E2
SF WRITE H	B05B2
SF WRITE H	
SPA 00 H	B04H2
SPA 00 H	B05H2
SPA 00 H	
SPA 01 H	B04J2
SPA 01 H	B05J2
SPA 01 H	
SPA 02 H	B04K2
SPA 02 H	B05K2
SPA 02 H	
SPA 03 H	B04L2
SPA 03 H	B05L2
SPA 03 H	
SR SEL L	E04B2
SR SEL L	E06B2
SR SEL L	
START RESET H	F05E2
START RESET H	F08E2
START RESET H	

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 RUN NAME PIN
 NAME

START TRAN H	D05N1
START TRAN H	F08R1
START TRAN H	
START TRAN L	A04V2
START TRAN L	A07V2
START TRAN L	A08V2
START TRAN L	
STATUS REG S0 L	E04F2
STATUS REG S0 L	E05F2
STATUS REG S0 L	
STATUS REG S1 L	E04E2
STATUS REG S1 L	E05E2
STATUS REG S1 L	
STROBE CACHE H	A07R2
STROBE CACHE H	A08R2
STROBE CACHE H	
SWAP H	A04R2
SWAP H	A05R2
SWAP H	
TAKE BUS H	F05F1
TAKE BUS H	F08F1
TAKE BUS H	
TBIT (1) H	C04B2
TBIT (1) H	C05B2
TBIT (1) H	
TO (1) L	F05H1
TO (1) L	F08H1
TO (1) L	
TRAN TO MFM L	E04C1
TRAN TO MFM L	E05C1
TRAN TO MFM L	E06C1
TRAN TO MFM L	
TRI STATE AMUX L	B02A1
TRI STATE AMUX L	B03A1
TRI STATE AMUX L	B04A1
TRI STATE AMUX L	
TU58 SER IN H	B01L2
TU58 SER IN H	B06L2
TU58 SER IN H	
TU58 SER OUT H	B01M2
TU58 SER OUT H	B06M2
TU58 SER OUT H	

RUN NAME	PIN NAME
U BUS C0 (1) H	C04N2
U BUS C0 (1) H	C08N2
U BUS C0 (1) H	
U BUS C1 (1) H	C04F2
U BUS C1 (1) H	C08F2
U BUS C1 (1) H	
UBA B64 OUT H	D06T2
UBA B64 OUT H	D08T2
UBA B64 OUT H	
UBA B65 OUT H	D08R2
UBA B65 OUT H	D12F2
UBA B65 OUT H	D12R2
UBA B65 OUT H	D13F2
UBA B65 OUT H	
UBA B66 OUT H	D06R2
UBA B66 OUT H	D08N2
UBA B66 OUT H	
UBA B67 OUT H	D08L2
UBA B67 OUT H	D12K2
UBA B67 OUT H	D12L2
UBA B67 OUT H	D13K2
UBA B67 OUT H	
UPPER 128K L	A04T2
UPPER 128K L	A05T2
UPPER 128K L	A07T2
UPPER 128K L	A08T2
UPPER 128K L	
UPPER BYTE L	A04D1
UPPER BYTE L	A05D1
UPPER BYTE L	
V BIT (1) H	C04F2
V BIT (1) H	C05F2
V BIT (1) H	
VBA 00 (1) H	D04L1
VBA 00 (1) H	D05K1
VBA 00 (1) H	
Z BIT (1) H	C04H2
Z BIT (1) H	C05H2
Z BIT (1) H	

