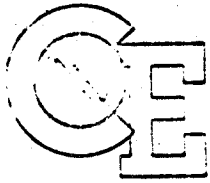


**Diagnostic Engineering Publication**

**1410/7010**

**Volume 2, 00**



Diagnostic Engineering Publication

1410/7010

IBM POUGHKEEPSIE  
December 3, 1963

Subject: Diagnostic Program CU06B - Super Scramble  
Sequence Number 055  
Replaces CU06A

- I. CU06 has been updated to be compatible with the new TC50 program.
- II. System and Two Channel Cards 3 cards 001 - 003

Enclosures: 23 Pages  
Card Deck for CARD ONLY SYSTEMS (as punched by UP51)  
8 Cards - Card Loader (1-7) and 1 Core Clear  
96 Cards No. 001 - 096 Data Cards  
1 Card Execute Card

Distribution: X 1410  
X 7010  
Other

CU06

Page 1

CU06B

SUPER SCRAMBLE 1410-7010

SUPER SCRAMBLE 1410-7010

CONTENTS OF CUO6

00.0	Test Description	Page 3
01.0	Loading Procedure	Page 5
02.0	Operating Procedure	Page 6
03.0	Operating Hints, Comments	Page 7
04.0	Program Stops (Halts) and Restarts	Page 8
05.0	Typeouts	Page 9
06.0	Flowchart	Page 10
07.0	Listings	Page 11

## SUPER SCRAMBLE 1410-7010

00.0

TEST DESCRIPTION

## 1. Modifications

This obsoletes CUO6A. Running time five minutes.

## 2. Description

This program checks the ability of the 1410 or 7010 to perform any two CPU instructions in sequence. The program depends upon internal check circuitry to detect an error. There is no additional data check.

An instruction is selected from each of two tables, and placed in a work area where they are performed in sequence. Data fields are stored before and after and may be displayed. The program selects the next table 1 instruction, moves it to the work area, performs it followed by the previous Table 2 instruction. This sequence continues until Table 1 is exhausted. The next Table 2 instruction is then moved to the work area where it will follow each selected Table 1 instruction. Thus, the program performs all combinations of instructions from the two tables.

Program is complete after six passes and types out "EOJ 6 PASSES."

A fields and B fields before and after and test instructions  
can be displayed after any stop by pressing Computer Reset  
And Start.

3. Equipment

1. 1402 Card Reader
2. 1411 CPU - 10K Memory
3. 1415 Console

4. Card Deck

Normal 7 card 1410 Loader  
Cards 001-101 Program Deck  
Card 103 Execute Card

5. EC Level of System

Not Applicable.

**01.0**     LOADING PROCEDURES

Normal 1410 or 7010 diagnostic load cards and procedure are used with this program.

Two standard tads are used:

1001 Enter 1 for loop

1001 Enter 0 for continue

1002 Not Used

1003 Enter 1 for program repeat  
Enter 0 to call next program

1004 Not Used

No other tads are used.

There is no internal tad routine in this program. Do not attempt to alter tads with the Inquiry Request Key.

02.0 OPERATING PROCEDURES

1. Program will type out "CU06B."
2. On any error. Press Reset. Set Tad 1 (Loc. 1001) to 1 for repeat loop, Computer Reset and press start to display A and B fields and test instructions. Program halts after typeout. Press start to continue. If typeout is not desired, address set to 1825.
3. "EOJ 6 PASSES" will type out at end of program. If program repeat is desired, set 1 in Tad 3 (Loc. 1003) and press Start.



**03.0**      OPERATING HINTS, COMMENTS

1.    Index 4 will contain plus and minus zeroes on alternate passes.
2.    Instructions under test are executed in WA (1788-1818).
3.    Index Reg. 1 (plus 3000) is address of Table 1 instruction to be tested.
4.    Index Reg. 2 (plus 6000) is address of Table 2 instruction to be tested.
5.    Index 10 contains the pass number.

04.0 PROGRAM STOPS AND RESTARTS

- |             |  |
|-------------|--|
| 01788-01818 | 1. Any error stop. Set Tad 1 (Loc. 1001) to one for program loop. Computer Reset and Start if typeout is desired. Address set to 1825 to continue. |
| 08240       | 2. Normal halt and branch after typeout of test instructions. Press Start to continue.   |

05.0 TYPEOUTS

1. "CU06B" - Program identification address set to 08000 to type  
out following:

2. R ABEFOR

R 123 4 5 6 7 8 9 012 \*

R BBEFOR

R 12345

R AAFTER

R 123 4 5 6 7 8 9 012 \*

R BAFTER

R 12345

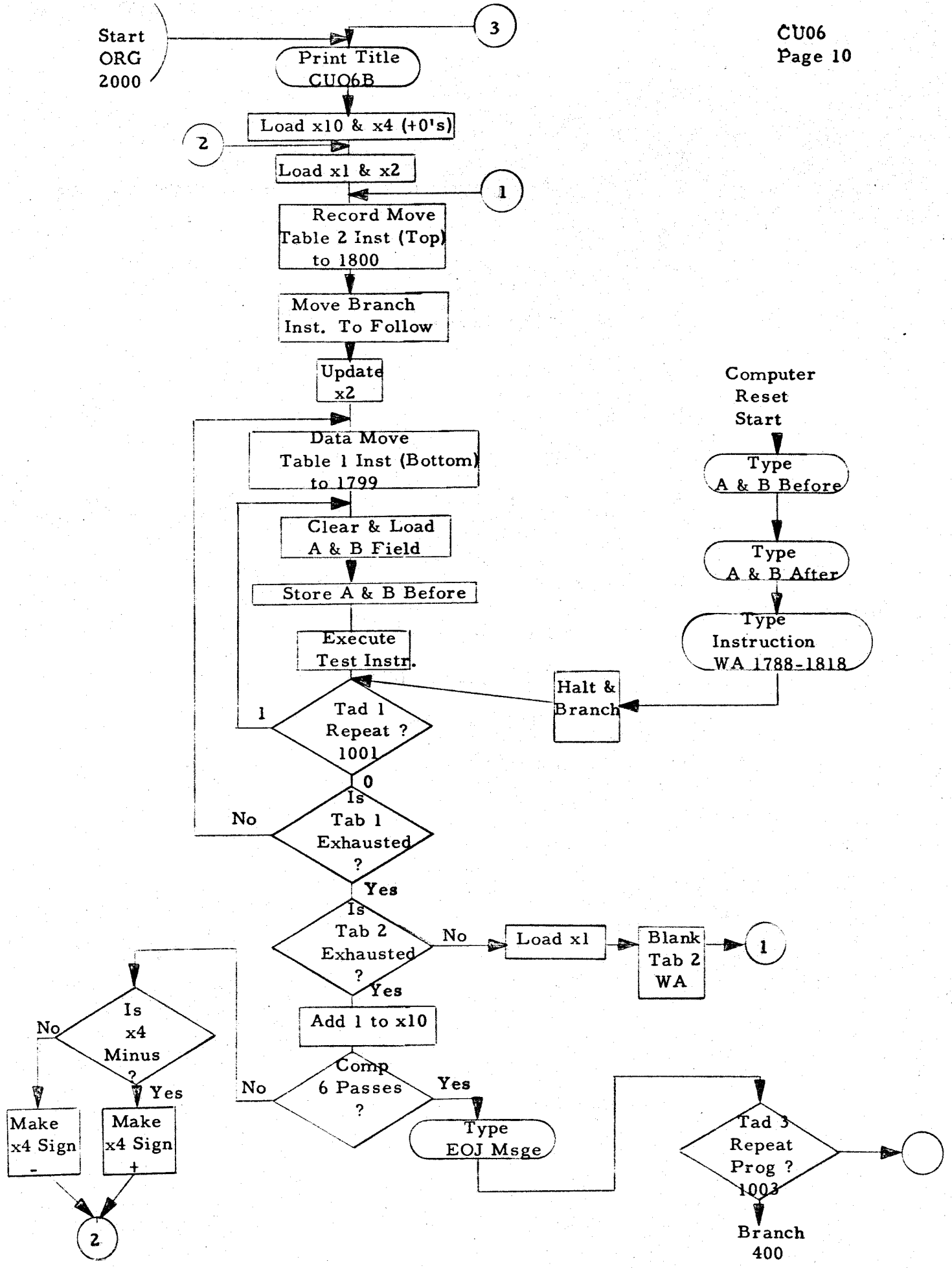
R Instruction

DC02726027R01Y258J01825

Test Instructions

3. "End of JOB 6 PASSES"

Start  
ORG  
2000



SUPER SCRAMBLE 1410

PGLIN	LABEL	OPCOD	OPERAND	CT	ADDRS	INSTRUCTION
1002\$	* SUPER SCRAMBLE	141C	701J			
1003\$	CTL	3				
1004\$	CRG	1001			01001	
1005	IAD1	@ @	1 FOR LOOP	1	01001	
1006	IAD2	@ @	NCT USED	1	01002	
1007	IAD3	@ @,G	1 FOR REPEAT PROG	1	01003	
1008	ORG	1245			01245	
1009\$	DCN	@550R@		5	01249	
1010	DC	@CU06@,G		5	01250	
1011	ORG	20C0			02000	
1012	WCP	TSTNO		10	02000	M %TO 01250 M
1013	BCB1	BEGIN		7	02010	R 02000 2
1014\$	BA1	GD		7	02017	R 02024 M
1015\$	GO	MLCWA	ZEROES,74 LOAD INDEX REG 10	12	02024	D 07219 00074 X
1016		MLCWS	BRRST-6,8 MOVE WM TO FOLLOW INST	12	02036	D 02707 00008 7
1017\$		MLCWA	BRRST,7 MOVE BR INST TO RESET LOC	12	02048	D 02713 00007 X
1018\$		MLCWA	ZEROES,44 INDEX 4	12	02060	D 07219 00044 X
1019	A	MLCWA	TABCON,29 INDEX 1	12	02072	D 07224 00029 X
1020		MLCWA	ZEROES,34 INDEX 2	12	02084	D 07219 00034 X
1021	C	MRCWM	BLANK,1800 CLEAR WA	12	02096	D 02843 01800 M
1022		MRCW	6CC0EX2,1800 REC MOVE TAB2 INST TO WA	12	02108	D 060.0 01800 M
1023		PRCW		1	02120	D
1024\$		SAR	34	7	02121	G 00034 A
1025		SBR	F@5 MOVE BRANCH TO FOLLOW TAB2 INST	7	02128	G 02163 B
1026		A	SIX,F@5	11	02135	A 02867 02163
1027\$		MLCS	R,F	12	02146	D 06284 02158 3
1028	F	SH	0	6	02158	, 00000
1029\$		SBR	*@11	7	02164	G 02181 B
1030		MLCWA	BRANCH,0	12	02171	D 02706 00002 X
1031		S	@@001,34	11	02183	S 08296 00034
1032	BB	MLCWA	30C0EX1,1799 DATA MOVE TAB1 INST TO WA	12	02194	D 030+0 01799 X
1033		SAR	29	7	02206	G 00029 A
1034		SBR	B@29	7	02213	G 02295 B
1035		A	ONE,B@29	11	02220	A 02873 02295
1036		S	@03000,29	11	02231	S 08301 00029
1037	AA	MRCWG	ALCAD,AFIELD-19 CLEAR AND LOAD AFIELD	12	02242	D 02756 02714 L

PGLIN	LABEL	OPCOD	OPERAND	SUPER SCRAMBLE	1410	CT	ADDRS	INSTRUCTION
1038		MRCWG	8LCAD,8FIELD-19 CLEAR AND LOAD 8FIELD			12	02254	D 02777 02735 L D
1039	B	MRCWG	AFIELD-19,ABEFOR-19 STORE A BEFORE			12	02266	D 02714 02798 L D
1040		MRCWG	BFIELD-19,8BEFOR-19 STORE 8BEFORE			12	02278	D 02735 02819 L D
1041		B	0			7	02290	J 00000
1042\$		NOP				1	02297	N
1043		ORG	1825				01825	
1044		BCE	AA,1C01,1 TAD 1 CN LOOP			12	01825	B 02242 01001 1
1045		C	8C010,29 IS TABLE 1 EXHAUSTED			11	01837	C 08306 00029
1046		BH	8B			7	01848	J 02194 U
1047		C	801185,34 IS TABLE 2 EXHAUSTED			11	01855	C 08311 00034
1048		BL	UPDATE			7	01866	J 01952 T
1049		A	ONE,74 TABLE 2 IS EXHAUSTED			11	01873	A 02873 00074
1050		C	8C0005,74			11	01884	C 08316 00074
1051		BH	EOJ			7	01895	J 02300 U
1052		BZN	PLUS,44,K			12	01902	V 01933 00044 K
1053		MLZS	NFG,44			12	01914	D 02841 00044 2
1054		B	A			7	01926	J 02072
1055	PLUS	MLZS	POS,44			12	01933	D 02840 00044 2
1056		B	A			7	01945	J 02072
1057	UPDATE	MLCWA	TABCON,29 LOAD INDEX 1			12	01952	D 07224 00029 X
1058		B	C			7	01964	J 02096
1059		NOP				1	01971	N
1060		CRG	23C0				02300	
1061		WCP	MSGE			10	02300	M 8T0 07194 M
1062	EOJ	BAI	*81			7	02310	R 02317 M
1063		BCE	BEGIN,10C3,1 TAD 3 ON REPEAT			12	02317	B 02000 01003 1
1064		B	40C			7	02329	J 00400
1065		NCP				1	02336	N
1066		ORG	30C0				03000	
1067		BEFI	18C08X4			7	03000	R 01Y00 8
1068\$		BEFI	18C0			7	03007	R 01800 8
1069\$		A	AFIELD8X4,8FIELD8X4 TABLE 1			11	03014	A 02X33 02X54
1070\$		A	AFIELD,8FIELD			11	03025	A 02733 02754
1071\$		S	AFIELD8X4,8FIELD8X4			11	03036	S 02X33 02X54
1072\$		S	AFIELD,8FIELD			11	03047	S 02733 02754
1073		ZA	AFIELD8X4,8FIELD8X4			11	03058	M 02X33 02X54

PGLIN	LABEL	OPCOD	OPERAND	CT	ADDRS	INSTRUCTION
1074\$		ZA	AFIELD,8FIELD	11	03069	Q M 02733 02754
1075		ZS	AFIELD&X4,8FIELD&X4	11	03080	: 02X33 02X54
1076\$		ZS	AFIELD,8FIELD	11	03091	: 02733 02754
1077		M	AFIELD-18&X4,8FIELD-13&X4	11	03102	@ 02X15 02X41
1078\$		M	AFIELD-18,8FIELD-13	11	03113	@ 02715 02741
1079		D	AFIELD-18&X4,8FIELD-15&X4	11	03124	@ 02X15 02X39
1080\$		D	AFIELD-18,8FIELD-15	11	03135	@ 02715 02739
1081		B	18C0&X4	7	03146	J 01Y00
1082\$		B	18C0	7	03153	J 01800
1083		BU	18C0&X4	7	03160	J 01Y00 /
1084\$		BU	18C0	7	03167	J 01800 /
1085		BE	18C0&X4	7	03174	J 01Y00 S
1086\$		BE	18C0	7	03181	J 01800 S
1087		BL	18C0&X4	7	03188	J 01Y00 T
1088\$		BL	18C0	7	03195	J 01800 T
1089		BF	18C0&X4	7	03202	J 01Y00 U
1090\$		BF	18C0	7	03209	J 01800 U
1091		BZ	18C0&X4	7	03216	J 01Y00 V
1092\$		BZ	18C0	7	03223	J 01800 V
1093		BCV	18C0&X4	7	03230	J 01Y00 W
1094\$		BCV	18C0	7	03237	J 01800 W
1095		BAV	18C0&X4	7	03244	J 01Y00 Z
1096\$		BAV	18C0	7	03251	J 01800 Z
1097		BNQ	18C0&X4	7	03258	J 01Y00 Q
1098\$		BNQ	18C0	7	03265	J 01800 Q
1099		BNR1	18C0&X4	7	03272	R 01Y00 1
1100\$		BNR1	18C0	7	03279	R 01800 1
1101		BCB1	18C0&X4	7	03286	R 01Y00 2
1102\$		BCB1	18C0	7	03293	R 01800 2
1103		BER1	18C0&X4	7	03300	R 01Y00 4
1104\$		BER1	18C0	7	03307	R 01800 4
1105		BEF1	18C0&X4	7	03314	R 01Y00 8
1106\$		BEF1	18C0	7	03321	R 01800 8
1107		BNT1	18C0&X4	7	03328	R 01Y00 B
1108\$		BNT1	18C0	7	03335	R 01800 B
1109		BWL1	18C0&X4	7	03342	R 01Y00 -

TABLE 1 CONT

SUPER SCRAMBLE 1410

PGLIN	LABEL	OPCOD	OPERAND	CT	ADDRS	INSTRUCTION
1110\$		BWL1	18C0	7	03349	R 01800 - G
1111		BA1	18C0EX4	7	03356	R 01Y00 M C
1112\$		BA1	18C0	7	03363	R 01800 M
1113		BCE	18C0EX4,8FIELDX4,A	12	03370	B 01Y00 02X54 A
1114\$		BCE	18C0,BFIELD,A	12	03382	B 01800 02754 A
1115		BBE	18C0EX4,8FIELDX4,B	12	03394	M 01Y00 02X54 B
1116\$		BBE	18C0,BFIELD,B	12	03406	M 01800 02754 B
1117		BW	18C0EX4,8FIELDX4	12	03418	V 01Y00 02X54 1
1118\$		BW	18C0,BFIELD	12	03430	V 01800 02754 1
1119		BZN	18C0EX4,8FIELDX4	12	03442	V 01Y00 02X54 2
1120\$		BZN	18C0,BFIELD	12	03454	V 01800 02754 2
1121		BWZ	18C0EX4,8FIELDX4	12	03466	V 01Y00 02X54 3
1122\$		BWZ	18C0,BFIELD	12	03478	V 01800 02754 3
1123		C	AFIELDX4,8FIELDX4	11	03490	C 02X33 02X54
1124\$		C	AFIELD,8FIELD	11	03501	C 02733 02754
1125		SAR	8FIELD	7	03512	G 02754 A
1126		SBR	8FIELD	7	03519	G 02754 B
1127		SAR	8FIELD	7	03526	G 02754 A
1128		SBR	8FIELD	7	03533	G 02754 B
1129		SW	SPECX4	6	03540	, 02Y42
1130\$		SW	SPEC	6	03546	, 02842
1131		CW	SPECX4	6	03552	□ 02Y42
1132\$		CW	SPEC	6	03558	□ 02842
1133		CS	1750EX4	6	03564	/ 01X50
1134\$		CS	1750	6	03570	/ 01750
1135		CS	18C0EX4,1750EX4	11	03576	/ 01Y00 01X50
1136\$		CS	18C0,1750	11	03587	/ 01800 01750
1137\$		NOP		1	03598	N
1138		SCNLS	AFIELDX4,8FIELDX4	12	03599	D 02X33 02X54
1139\$		SCNLS	AFIELD,8FIELD	12	03611	D 02733 02754
1140		MLNS	AFIELDX4,8FIELDX4	12	03623	D 02X33 02X54 1
1141\$		MLNS	AFIELD,8FIELD	12	03635	D 02733 02754 1
1142		MLCS	AFIELD,8FIELD	12	03647	D 02733 02754 3
1143\$		MLCS	AFIELDX4,8FIELDX4	12	03659	D 02X33 02X54 3
1144\$		MLZS	AFIELD,8FIELD	12	03671	D 02733 02754 2
1145\$		MLZS	AFIELDX4,8FIELDX4	12	03683	D 02X33 02X54 2

TABLE CONTINUED



PGLIN	LABEL	OPCOD	OPERAND	CT	ADDRS	INSTRUCTION
1146		MLWS	AFIELD&X4,8FIELD&X4	12	03695	D 02X33 02X54 4
1147\$		MLWS	AFIELD,8FIELD	12	03707	D 02733 02754 4
1148		MLNWS	AFIELD&X4,8FIELD&X4	12	03719	D 02X33 02X54 5
1149\$		MLNWS	AFIELD,8FIELD	12	03731	D 02733 02754 5
1150		MLZWS	AFIELD&X4,8FIELD&X4	12	03743	D 02X33 02X54 6
1151\$		MLZWS	AFIELD,8FIELD	12	03755	D 02733 02754 6
1152		MLCWS	AFIELD&X4,8FIELD&X4	12	03767	D 02X33 02X54 7
1153\$		MLCWS	AFIELD,8FIELD	12	03779	D 02733 02754 7
1154		SCNLA	AFIELD&X4,8FIELD&X4	12	03791	D 02X33 02X54 8
1155\$		SCNLA	AFIELD,8FIELD	12	03803	D 02733 02754 8
1156		MLNA	AFIELD&X4,8FIELD&X4	12	03815	D 02X33 02X54 /
1157\$		MLNA	AFIELD,8FIELD	12	03827	D 02733 02754 /
1158		MLZA	AFIELD&X4,8FIELD&X4	12	03839	D 02X33 02X54 S
1159\$		MLZA	AFIELD,8FIELD	12	03851	D 02733 02754 S
1160		MLCA	AFIELD&X4,8FIELD&X4	12	03863	D 02X33 02X54 T
1161\$		MLCA	AFIELD,8FIELD	12	03875	D 02733 02754 T
1162		MLWA	AFIELD&X4,8FIELD&X4	12	03887	D 02X33 02X54 U
1163\$		MLWA	AFIELD,8FIELD	12	03899	D 02733 02754 U
1164		MLNWA	AFIELD&X4,8FIELD&X4	12	03911	D 02X33 02X54 V
1165\$		MLNWA	AFIELD,8FIELD	12	03923	D 02733 02754 V
1166		MLZWA	AFIELD&X4,8FIELD&X4	12	03935	D 02X33 02X54 W
1167\$		MLZWA	AFIELD,8FIELD	12	03947	D 02733 02754 W
1168		MLCWA	AFIELD&X4,8FIELD&X4	12	03959	D 02X33 02X54 X
1169\$		MLCWA	AFIELD,8FIELD	12	03971	D 02733 02754 X
1170		SCNLB	AFIELD&X4,8FIELD&X4	12	03983	D 02X33 02X54 -
1171\$		SCNLB	AFIELD,8FIELD	12	03995	D 02733 02754 -
1172		MLNB	AFIELD&X4,8FIELD&X4	12	04007	D 02X33 02X54 J
1173\$		MLNB	AFIELD,8FIELD	12	04019	D 02733 02754 J
1174		MLZB	AFIELD&X4,8FIELD&X4	12	04031	D 02X33 02X54 K
1175\$		MLZB	AFIELD,8FIELD	12	04043	D 02733 02754 K
1176		MLCB	AFIELD&X4,8FIELD&X4	12	04055	D 02X33 02X54 L
1177\$		MLCB	AFIELD,8FIELD	12	04067	D 02733 02754 L
1178		MLWB	AFIELD&X4,8FIELD&X4	12	04079	D 02X33 02X54 M
1179\$		MLWB	AFIELD,8FIELD	12	04091	D 02733 02754 M
1180		MLNWB	AFIELD&X4,8FIELD&X4	12	04103	D 02X33 02X54 N
1181\$		MLNWB	AFIELD,8FIELD	12	04115	D 02733 02754 N

PGLIN	LABEL	SUPER SCRAMBLE 141C	OPCOD	OPERAND	CT	ADDRS	INSTRUCTION
1182		MLCWB	AFIELDX4,8FIELDX4		12	04127	D 02X33 02X54 P
1183\$		MLCWB	AFIELD,8FIELD		12	04139	D 02733 02754 P
1184\$		MLZWB	AFIELDX4,8FIELDX4		12	04151	D 02X33 02X54 O
1185\$		MLZWB	AFIELD,8FIELD		12	04163	D 02733 02754 O
1186		SCNL	AFIELDX4,8FIELDX4		12	04175	D 02X33 02X54 E
1187\$		SCNL	AFIELD,8FIELD		12	04187	D 02733 02754 E
1188		MLN	AFIELDX4,8FIELDX4	TABLE1 CONT	12	04199	D 02X33 02X54 A
1189\$		MLN	AFIELD,8FIELD		12	04211	D 02733 02754 A
1190		MLZ	AFIELDX4,8FIELDX4		12	04223	D 02X33 02X54 B
1191\$		MLZ	AFIELD,8FIELD		12	04235	D 02733 02754 B
1192		MLC	AFIELDX4,8FIELDX4		12	04247	D 02X33 02X54 C
1193\$		MLC	AFIELD,8FIELD		12	04259	D 02733 02754 C
1194		MLW	AFIELDX4,8FIELDX4		12	04271	D 02X33 02X54 D
1195\$		MLW	AFIELD,8FIELD		12	04283	D 02733 02754 D
1196		MLNW	AFIELDX4,8FIELDX4		12	04295	D 02X33 02X54 E
1197\$		MLNW	AFIELD,8FIELD		12	04307	D 02733 02754 E
1198		MLZW	AFIELDX4,8FIELDX4		12	04319	D 02X33 02X54 F
1199\$		MLZW	AFIELD,8FIELD		12	04331	D 02733 02754 F
1200		MLCW	AFIELDX4,8FIELDX4		12	04343	D 02X33 02X54 G
1201\$		MLCW	AFIELD,8FIELD		12	04355	D 02733 02754 G
1202		SCNR	AFIELD-19X4,8FIELD-19X4		12	04367	D 02X14 02X35 H
1203\$		SCNR	AFIELD-19,8FIELD-19		12	04379	D 02714 02735 H
1204		MRN	AFIELD-19X4,8FIELD-19X4		12	04391	D 02X14 02X35 I
1205\$		MRN	AFIELD-19,8FIELD-19		12	04403	D 02714 02735 I
1206		MRZ	AFIELD-19X4,8FIELD-19X4		12	04415	D 02X14 02X35 J
1207\$		MRZ	AFIELD-19,8FIELD-19		12	04427	D 02714 02735 J
1208		MRC	AFIELD-19X4,8FIELD-19X4		12	04439	D 02X14 02X35 K
1209\$		MRC	AFIELD-19,8FIELD-19		12	04451	D 02714 02735 K
1210		MRW	AFIELD-19X4,8FIELD-19X4		12	04463	D 02X14 02X35 L
1211\$		MRW	AFIELD-19,8FIELD-19		12	04475	D 02714 02735 L
1212		MRNW	AFIELD-19X4,8FIELD-19X4		12	04487	D 02X14 02X35 M
1213\$		MRNW	AFIELD-19,8FIELD-19		12	04499	D 02714 02735 M
1214		MRZW	AFIELD-19X4,8FIELD-19X4		12	04511	D 02X14 02X35 N
1215\$		MRZW	AFIELD-19,8FIELD-19		12	04523	D 02714 02735 N
1216		MRCW	AFIELD-19X4,8FIELD-19X4		12	04535	D 02X14 02X35 O
1217\$		MRCW	AFIELD-19,8FIELD-19		12	04547	D 02714 02735 O

SUPER SCRAMBLE 1410

PGLIN	LABEL	OPCOD	OPERANC	CT	ADDRS	INSTRUCTION
1218		SCNRR	AFIELD-19EX4,8FIELD-19EX4	12	04559	D 02X14 02X35 Y
1219\$		SCNRR	AFIELD-19,8FIELD-19	12	04571	D 02714 02735 Y
1220		MRNR	AFIELD-19EX4,8FIELD-19EX4	12	04583	D 02X14 02X35 Z
1221\$		MRNR	AFIELD-19,8FIELD-19	12	04595	D 02714 02735 Z
1222		MRZR	AFIELD-19EX4,8FIELD-19EX4	12	04607	D 02X14 02X35 #
1223\$		MRZR	AFIELD-19,8FIELD-19	12	04619	D 02714 02735 #
1224		MRCR	AFIELD-19EX4,8FIELD-19EX4	12	04631	D 02X14 02X35 ,
1225\$		MRCR	AFIELD-19,8FIELD-19	12	04643	D 02714 02735 ,
1226		MRWR	AFIELD-19EX4,8FIELD-19EX4	12	04655	D 02X14 02X35 *
1227\$		MRWR	AFIELD-19,8FIELD-19	12	04667	D 02714 02735 *
1228		MRNWR	AFIELD-19EX4,8FIELD-19EX4	12	04679	D 02X14 02X35 M
1229\$		MRNWR	AFIELD-19,8FIELD-19	12	04691	D 02714 02735 M
1230		MRZWR	AFIELD-19EX4,8FIELD-19EX4	12	04703	D 02X14 02X35 S
1231\$		MRZWR	AFIELD-19,8FIELD-19	12	04715	D 02714 02735 S
1232		MRCWR	AFIELD-19EX4,8FIELD-19EX4	12	04727	D 02X14 02X35 H
1233\$		MRCWR	AFIELD-19,8FIELD-19	12	04739	D 02714 02735 H
1234		SCNRG	AFIELD-19EX4,8FIELD-19EX4	12	04751	D 02X14 02X35 Q
1235\$		SCNRG	AFIELD-19,8FIELD-19	12	04763	D 02714 02735 Q
1236		MRNG	AFIELD-19EX4,8FIELD-19EX4	12	04775	D 02X14 02X35 R
1237\$		MRNG	AFIELD-19,8FIELD-19	12	04787	D 02714 02735 R
1238		MRZG	AFIELD-19EX4,8FIELD-19EX4	12	04799	D 02X14 02X35 ?
1239\$		MRZG	AFIELD-19,8FIELD-19	12	04811	D 02714 02735 ?
1240		MRCG	AFIELD-19EX4,8FIELD-19EX4	12	04823	D 02X14 02X35 \$
1241\$		MRCG	AFIELD-19,8FIELD-19	12	04835	D 02714 02735 \$
1242		MRWG	AFIELD-19EX4,8FIELD-19EX4	12	04847	D 02X14 02X35 *
1243\$		MRWG	AFIELD-19,8FIELD-19	12	04859	D 02714 02735 *
1244		MRNWG	AFIELD-19EX4,8FIELD-19EX4	12	04871	D 02X14 02X35 B
1245\$		MRNWG	AFIELD-19,8FIELD-19	12	04883	D 02714 02735 B
1246		PRZNG	AFIELD-19EX4,8FIELD-19EX4	12	04895	D 02X14 02X35 .
1247\$		PRZNG	AFIELD-19,8FIELD-19	12	04907	D 02714 02735 .
1248		MRCWG	AFIELD-19EX4,8FIELD-19EX4	12	04919	D 02X14 02X35 D
1249\$		MRCWG	AFIELD-19,8FIELD-19	12	04931	D 02714 02735 D
1250		SCNRH	AFIELD-19EX4,8FIELD-19EX4	12	04943	D 02X14 02X35 H
1251\$		SCNRH	AFIELD-19,8FIELD-19	12	04955	D 02714 02735 H
1252		MRNH	AFIELD-19EX4,8FIELD-19EX4	12	04967	D 02X14 02X35 I
1253\$		MRNH	AFIELD-19,8FIELD-19	12	04979	D 02714 02735 I

TABLE 1 CONT

PGLIN	LABEL	OPCOD	OPERAND	CT	ADDRS	INSTRUCTION
1254		MRZM	AFIELD-19&X4,8FIELD-19&X4	12	04991	D 02X14 02X35 Q
1255\$		MRZM	AFIELD-19,8FIELD-19	12	05003	D 02714 02735 M
1256		MRCM	AFIELD-19&X4,8FIELD-19&X4	12	05015	D 02X14 02X35 C
1257\$		MRCM	AFIELD-19,8FIELD-19	12	05027	D 02714 02735 H
1258		MRWM	AFIELD-19&X4,8FIELD-19&X4	12	05039	D 02X14 02X35 .
1259\$		MRWM	AFIELD-19,8FIELD-19	12	05051	D 02714 02735 .
1260		MRNWM	AFIELD-19&X4,8FIELD-19&X4	12	05063	D 02X14 02X35 □
1261\$		MRNWM	AFIELD-19,8FIELD-19	12	05075	D 02714 02735 □
1262		MRZWM	AFIELD-19&X4,8FIELD-19&X4	12	05087	D 02X14 02X35 L
1263\$		MRZWM	AFIELD-19,8FIELD-19	12	05099	D 02714 02735 L
1264		MRCWM	AFIELD-19&X4,8FIELD-19&X4	12	05111	D 02X14 02X35 T
1265\$		MRCWM	AFIELD-19,8FIELD-19	12	05123	D 02714 02735 T
1266		LL	AFIELD&X4,8FIELD-1&X4	12	05135	T 02X33 02X53 1
1267\$		LL	AFIELD,8FIELD-1	12	05147	T 02733 02753 1
1268		LE	AFIELD&X4,8FIELD-1&X4	12	05159	T 02X33 02X53 2
1269\$		LE	AFIELD,8FIELD-1	12	05171	T 02733 02753 2
1270		LLE	AFIELD&X4,8FIELD-1&X4	12	05183	T 02X33 02X53 3
1271\$		LLE	AFIELD,8FIELD-1	12	05195	T 02733 02753 3
1272		LH	AFIELD&X4,8FIELD-1&X4	12	05207	T 02X33 02X53 4
1273\$		LH	AFIELD,8FIELD-1	12	05219	T 02733 02753 4
1274		LLH	AFIELD&X4,8FIELD-1&X4	12	05231	T 02X33 02X53 5
1275\$		LLH	AFIELD,8FIELD-1	12	05243	T 02733 02753 5
1276		LEH	AFIELD&X4,8FIELD-1&X4	12	05255	T 02X33 02X53 6
1277\$		LEH	AFIELD,8FIELD-1	12	05267	T 02733 02753 6
1278		MCS	AFIELD&X4,8FIELD&X4	11	05279	Z 02X33 02X54
1279\$		MCS	AFIELD,8FIELD	11	05290	Z 02733 02754
1280		MCE	AFIELD&X4,8FIELD&X4	11	05301	E 02X33 02X54
1281\$		MCE	AFIELD,8FIELD	11	05312	E 02733 02754
1282		BC9	18C0&X4	7	05323	J 01Y00 9
1283		ORG	60C0		06000	
1284		A	AFIELD&X4,8FIELD&X4 TABLE 2	11	06000	A 02X33 02X54
1285		S	AFIELD&X4,8FIELD&X4	11	06011	S 02X33 02X54
1286		ZA	AFIELD&X4,8FIELD&X4	11	06022	H 02X33 02X54
1287		ZS	AFIELD&X4,8FIELD&X4	11	06033	. 02X33 02X54
1288		M	AFIELD-18&X4,8FIELD-13&X4	11	06044	@ 02X15 02X41
1289		D	AFIELD-18&X4,8FIELD-15&X4	11	06055	z 02X15 02X39

SUPER SCRAMBLE 1410

PGLIN	LABEL	CPCOD	CPERAND	CT	ADDRS	INSTRUCTION
1290		B	1825EX4	7	06066	J 01Y25
1291		BU	1825EX4	7	06073	J 01Y25 /
1292		BE	1825EX4	7	06080	J 01Y25 S
1293		BL	1825EX4	7	06087	J 01Y25 T
1294		BF	1825EX4	7	06094	J 01Y25 U
1295		BZ	1825EX4	7	06101	J 01Y25 V
1296		BCV	1825EX4	7	06108	J 01Y25 W
1297		BAV	1825EX4	7	06115	J 01Y25 Z
1298		BNQ	1825EX4	7	06122	J 01Y25 Q
1299		BNR1	1825EX4	7	06129	R 01Y25 1
1300		BCB1	1825EX4	7	06136	R 01Y25 2
1301		BER1	1825EX4	7	06143	R 01Y25 4
1302		BEF1	1825EX4	7	06150	R 01Y25 8
1303		BNT1	1825EX4	7	06157	R 01Y25 S
1304		BWL1	1825EX4	7	06164	R 01Y25 -
1305		BA1	1825EX4	7	06171	R 01Y25 M
1306		BEF1	1825EX4	7	06178	R 01Y25 8
1307		BCE	1825EX4,8FIELDEX4,A	12	06185	B 01Y25 02X54 A
1308		BBE	1825EX4,8FIELDEX4,8	12	06197	W 01Y25 02X54 B
1309		BW	1825EX4,8FIELDEX4	12	06209	V 01Y25 02X54 1
1310		BZN	1825EX4,8FIELDEX4	12	06221	V 01Y25 02X54 2
1311\$		BWZ	1825EX4,8FIELDEX4	12	06233	V 01Y25 02X54 3
1312		C	AFIELDEX4,8FIELDEX4	11	06245	C 02X33 02X54
1313		SAR	BFIELD	7	06256	G 02754 A
1314		SBR	BFIELD	7	06263	G 02754 B
1315		SAR	BFIELD	7	06270	G 02754 A
1316		SBR	BFIELD	7	06277	G 02754 B
1317	R	SW	SPEC&X4	6	06284	, 02Y42
1318		CW	SPEC&X4	6	06290	□ 02Y42
1319		CS	1750EX4	6	06296	/ 01X50
1320		CS	1825EX4,1750EX4	11	06302	/ 01Y25 01X50
1321		SCNLS	AFIELDEX4,8FIELDEX4	12	06313	D 02X33 02X54
1322		MLNS	AFIELDEX4,8FIELDEX4	12	06325	D 02X33 02X54 1
1323\$		MLZS	AFIELDEX4,8FIELDEX4	12	06337	D 02X33 02X54 2
1324		MLCS	AFIELDEX4,8FIELDEX4	12	06349	D 02X33 02X54 3
1325		MLWS	AFIELDEX4,8FIELDEX4	12	06361	D 02X33 02X54 4

TABLE 2 CONT

SUPER SCRAMBLE 141C

PGLIN	LABEL	OPCOD	OPERAND	CT	ADDRS	INSTRUCTION
1326		MLNWS	AFIELDX4,8FIELDEX4	12	06373	D 02X33 02X54 5
1327		MLZWS	AFIELDX4,8FIELDEX4	12	06385	D 02X33 02X54 6
1328		MLZWS	AFIELDX4,8FIELDEX4	12	06397	D 02X33 02X54 6
1329		MLCWS	AFIELDX4,8FIELDEX4	12	06409	D 02X33 02X54 7
1330		SCNLA	AFIELDX4,8FIELDEX4	12	06421	D 02X33 02X54 8
1331		MLNA	AFIELDX4,8FIELDEX4	12	06433	D 02X33 02X54 7
1332		MLZA	AFIELDX4,8FIELDEX4	12	06445	D 02X33 02X54 5
1333		MLCA	AFIELDX4,8FIELDEX4	12	06457	D 02X33 02X54 T
1334		MLWA	AFIELDX4,8FIELDEX4	12	06469	D 02X33 02X54 U
1335		MLNWA	AFIELDX4,8FIELDEX4	12	06481	D 02X33 02X54 V
1336		MLCWA	AFIELDX4,8FIELDEX4	12	06493	D 02X33 02X54 X
1337		MLNB	AFIELDX4,8FIELDEX4	12	06505	D 02X33 02X54 J
1338		MLZB	AFIELDX4,8FIELDEX4	12	06517	D 02X33 02X54 K
1339		MLCB	AFIELDX4,8FIELDEX4	12	06529	D 02X33 02X54 L
1340		MLWB	AFIELDX4,8FIELDEX4	12	06541	D 02X33 02X54 M
1341		MLCWB	AFIELDX4,8FIELDEX4	12	06553	D 02X33 02X54 P
1342\$		MLZWA	AFIELDX4,8FIELDEX4	12	06565	D 02X33 02X54 W
1343		SCNLB	AFIELDX4,8FIELDEX4	12	06577	D 02X33 02X54 -
1344		MLNWB	AFIELDX4,8FIELDEX4	12	06589	D 02X33 02X54 N
1345\$		MLZWB	AFIELDX4,8FIELDEX4	12	06601	D 02X33 02X54 O
1346		SCNL	AFIELDX4,8FIELDEX4	12	06613	D 02X33 02X54 &
1347		MLN	AFIELDX4,8FIELDEX4	12	06625	D 02X33 02X54 A
1348		MLZ	AFIELDX4,8FIELDEX4	12	06637	D 02X33 02X54 8
1349		MLC	AFIELDX4,8FIELDEX4	12	06649	D 02X33 02X54 C
1350		MLW	AFIELDX4,8FIELDEX4	12	06661	D 02X33 02X54 D
1351\$		MLNW	AFIELDX4,8FIELDEX4	12	06673	D 02X33 02X54 E
1352		MLZH	AFIELDX4,8FIELDEX4	12	06685	D 02X33 02X54 F
1353		MLCW	AFIELDX4,8FIELDEX4	12	06697	D 02X33 02X54 G
1354		SCNR	AFIELD-19EX4,8FIELD-19EX4	12	06709	D 02X14 02X35 8
1355		MRN	AFIELD-19EX4,8FIELD-19EX4	12	06721	D 02X14 02X35 9
1356		MRZ	AFIELD-19EX4,8FIELD-19EX4	12	06733	D 02X14 02X35 0
1357		MRC	AFIELD-19EX4,8FIELD-19EX4	12	06745	D 02X14 02X35 #
1358		MRW	AFIELD-19EX4,8FIELD-19EX4	12	06757	D 02X14 02X35 a
1359		MRNW	AFIELD-19EX4,8FIELD-19EX4	12	06769	D 02X14 02X35 .
1360		MRZW	AFIELD-19EX4,8FIELD-19EX4	12	06781	D 02X14 02X35 G
1361		MRCW	AFIELD-19EX4,8FIELD-19EX4	12	06793	D 02X14 02X35 T

TABLE 2 CONT

SUPER SCRAMBLE 141C

PGLIN	LABEL	OPCOD	OPERAND	CT	ADDRS	INSTRUCTION
1362		SCNRR	AFIELD-19EX4,8FIELD-19EX4	12	06805	D 02X14 02X35 Y
1363		MRNR	AFIELD-19EX4,8FIELD-19EX4	12	06817	D 02X14 02X35 Z
1364		MRZR	AFIELD-19EX4,8FIELD-19EX4	12	06829	D 02X14 02X35 #
1365		MRCR	AFIELD-19EX4,8FIELD-19EX4	12	06841	D 02X14 02X35 *
1366		MRWR	AFIELD-19EX4,8FIELD-19EX4	12	06853	D 02X14 02X35 x
1367		MRNWR	AFIELD-19EX4,8FIELD-19EX4	12	06865	D 02X14 02X35 W
1368		MRZWR	AFIELD-19EX4,8FIELD-19EX4	12	06877	D 02X14 02X35 S
1369		MRCWR	AFIELD-19EX4,8FIELD-19EX4	12	06889	D 02X14 02X35 B
1370		SCNRG	AFIELD-19EX4,8FIELD-19EX4	12	06901	D 02X14 02X35 S
1371		MRNG	AFIELD-19EX4,8FIELD-19EX4	12	06913	D 02X14 02X35 M
1372		MRZG	AFIELD-19EX4,8FIELD-19EX4	12	06925	D 02X14 02X35 Q
1373		MRCG	AFIELD-19EX4,8FIELD-19EX4	12	06937	D 02X14 02X35 R
1374		MRWG	AFIELD-19EX4,8FIELD-19EX4	12	06949	D 02X14 02X35 .
1375		MRNWG	AFIELD-19EX4,8FIELD-19EX4	12	06961	D 02X14 02X35 \$
1376		MRZWG	AFIELD-19EX4,8FIELD-19EX4	12	06973	D 02X14 02X35 * R
1377		MRCWG	AFIELD-19EX4,8FIELD-19EX4	12	06985	D 02X14 02X35 B .
1378\$		SCNRM	AFIELD-19EX4,8FIELD-19EX4	12	06997	D 02X14 02X35 D L
1379		MRNM	AFIELD-19EX4,8FIELD-19EX4	12	07009	D 02X14 02X35 H
1380		MRZM	AFIELD-19EX4,8FIELD-19EX4	12	07021	D 02X14 02X35 I Q
1381		MRCM	AFIELD-19EX4,8FIELD-19EX4	12	07033	D 02X14 02X35 M
1382		MRWM	AFIELD-19EX4,8FIELD-19EX4	12	07045	D 02X14 02X35 .
1383		MRNWM	AFIELD-19EX4,8FIELD-19EX4	12	07057	D 02X14 02X35 D L
1384		MRZWM	AFIELD-19EX4,8FIELD-19EX4	12	07069	D 02X14 02X35 B L
1385		MRCWM	AFIELD-19EX4,8FIELD-19EX4	12	07081	D 02X14 02X35 T G
1386		LL	AFIELDX4,8FIELD-1EX4	12	07093	T 02X33 02X53 1
1387		LE	AFIELDX4,8FIELD-1EX4	12	07105	T 02X33 02X53 2
1388		LLE	AFIELDX4,8FIELD-1EX4	12	07117	T 02X33 02X53 3
1389		LH	AFIELDX4,8FIELD-1EX4	12	07129	T 02X33 02X53 4
1390		LLH	AFIELDX4,8FIELD-1EX4	12	07141	T 02X33 02X53 5
1391		LEH	AFIELDX4,8FIELD-1EX4	12	07153	T 02X33 02X53 6
1392		MCS	AFIELDX4,8FIELDX4	11	07165	Z 02X33 02X54
1393		MCE	AFIELDX4,8FIELDX4	11	07176	E 02X33 02X54
1394		BC9	1825EX4	7	07187	J 01Y25 9
1395	MSGE	DC	END OF JOB 6 PASSESA,G	20	07194	
1396	ZEROES	DCW	00000	5	07219	
1397	TABCCN	DCW	002322	5	07224	

SUPER SCRAMBLE 141C

PGLIN	LABEL	OPCOD	OPERAND	CT	ADDRS	INSTRUCTION
1358		CRG	1788		01788	
1359	WA	DA	1X31,+G		01788	
1400		CRG	27C0		02700	
14C1\$	BRANCH	CCW	2JC125 a	7	02706	
14C2\$	BRRST	CCW	2JC8000 a	7	02713	
14C3	AFIELD	CCW	a	20	02733	
14C4	BFIELD	CCW	a	20	02754	
14C5	ALOAD	CCW	2123 4 5 6 7 8 9 012+a,G	20	02756	
14C6	BLOAD	CCW	212345	20	02777	
14C7	ABEFCRE	CCW	a	20	02817	
14C8	BBEFCRE	CCW	a	20	02838	
14C9	POS	CC	26a	1	02840	
1410	NEG	CC	2-a	1	02841	
1411	SPEC	CC	2 a	1	02842	
1412	BLANK	CC	a	18	02843	
1413\$	SIX	CCW	a CCG062	6	02867	
1414\$	CNE	CCW	a C0001a	6	02873	
1415		CRG	80C0		08000	
1416		WCP	HDR1	10	08000	M 2TO 08247 W
1417		BCBI	*-16	7	08010	R 08000 2
1418		BAI	*61	7	08017	R 08024 M
1419		WCP	ABEFCR-19	10	08024	M 2TO 02798 W
1420		BCBI	*-16	7	08034	R 08024 2
1421		BAI	*61	7	08041	R 08048 M
1422		WCP	HDR2	10	08048	M 2TO 08255 W
1423		BCBI	*-16	7	08058	R 08048 2
1424		BAI	*61	7	08065	R 08072 M
1425		WCP	8BEFCR-19	10	08072	M 2TO 02819 W
1426		BCBI	*-16	7	08082	R 08072 2
1427		BAI	*61	7	08089	R 08096 M
1428		WCP	HDR3	10	08096	M 2TO 08263 W
1429		BCBI	*-16	7	08106	R 08096 2
1430		BAI	*61	7	08113	R 08120 M
1431		WCP	AFIELD-19	10	08120	M 2TO 02714 W
1432		BCBI	*-16	7	08130	R 08120 2
1433		BAI	*61	7	08137	R 08144 M



PGLIN	LABEL	OPCOD	OPERAND	CT	ADDRS	INSTRUCTION
1434		WCP	HDR4	10	08144	M 3T0 08271 W
1435		BCB1	*-16	7	08154	R 08144 2 G
1436		BAL	*E1	7	08161	R 08168 M
1437		WCP	BFIELD-19	10	08168	M 3T0 02735 W
1438		BCB1	*-16	7	08178	R 08168 2 G
1439		BAL	*E1	7	08185	R 08192 M
1440		WCP	HDR5	10	08192	M 3T0 08279 W
1441		BCB1	*-16	7	08202	R 08192 2 G
1442		BAL	*E1	7	08209	R 08216 M
1443		WCPH	WA	10	08216	L 3T0 01788 W
1444		BCB1	*-16	7	08226	R 08216 2 G
1445		BAL	*E1	7	08233	R 08240 M
1446\$		H	1825	6	08240	. 01825
1447\$		NCP		1	08246	N
1448	HDR1	CC	@BEFOR 2,G	7	08247	
1449	HDR2	DC	@BEFOR 2,G	7	08255	
1450	HDR3	DC	@AFTER 2,G	7	08263	
1451	HDR4	DC	@AFTER 2,G	7	08271	
1452	HDR5	DC	@INSTRUCTION 2,G	12	08279	
1453\$		END	BEGIN			J02000
1453\$			E06001	5	08296	
1453\$			E03C00	5	08301	
1453\$			E0C010	5	08306	
1453\$			E01185	5	08311	
1453\$			E0C005	5	08316	

END OF ASSEMBLY

