

```

0014F0 3 C3802 START 5360
4 *****
5 *
6 *          *** PREREQUISITES ***
7 *
8 *          DISPLAY STATION ATTACHED
9 *          LEVEL 4 PROCESSOR
10 *
11 *****
12 *
13 *          *** MODIFICATIONS ***
14 *
15 *          1. MODIFY PAGE CONTROL ON BLANK LINE.
16 *
17 *****
18 *
19 *          *** REA'S INCORPORATED ***
20 *
21 *          NONE
22 *
23 *****
24 *
25 *          *** SPECIAL INSTRUCTIONS ***
26 *
27 *          NONE
28 *
29 *****
30 *
31 *          *** E. C. HISTORY ***
32 *
33 *          DATE 01JUL76 DATE 10JUN77 DATE 08AUG78 DATE 06NOV78
34 *          E.C. 578446 E.C. 578625 E.C. 755404 E.C. 755551
35 *
36 *****
37 *
38 *          SYSTEM EQUATES
39 *
40 *
41 *
42 *****
43 SM EQU 1 SUMMARY MASK DISABLE OR
44 *          ENABLE CODE
45 *****
46 *
47 *          EQUATED NAMES FOR SUPPORTED SVC'S
48 *
49 *****
50 OUT EQU 0 OUT SVC
51 HTOE EQU 26 HEX TO EBCDIC SVC (STRING)
52 *****
53 *
54 *          EQUATES USED BY DCP
55 *
56 *****
57 *
58 STOP EQU 6 STOP AFTER MSG OUT
59 ALTDV EQU 7 ALTERNATE OUTPUT DEV ASSIGNED
60 RTMDI EQU 11 MDI RETURN REQUESTED
61 *****
62 EBBK EQU C' ' BLANK CHAR
63 *          VALUE OF 0
64 ZERO EQU 0
65 ONE EQU 1
66 TWO EQU 2
67 THREE EQU 3
68 FOUR EQU 4
69 SEVEN EQU 7
70 EIGHT EQU 8
71 NINE EQU 9
72 TWENTY EQU 20
73 TWENTY FOUR EQU 24
74 SIXTY FOUR EQU 64
75 SIXTY SIX EQU 66
76 EGHTY EQU 80
77 *****
78 N1 EQU -1
79 N30 EQU -30
80 *****
81 *
82 *          EQUATES FOR CODED STOPS USED BY DCP
83 *          (NORMAL AND ERROR)
84 *
85 *****
86 *
87 ACNG EQU X'3801' ALTERNATE CONSOLE ERROR
88 *****
89 *
90 *          THE FOLLOWING EQUATES ARE THE DISPLACEMENTS FROM THE
91 *          START OF A QUE BLOCK OF THE VARIOUS INFORMATION.
92 *
93 *
94 *****
95 QR7 EQU 20 XR7 OF CALLING PROGRAM
96 QSVK EQU 22 SVC NUMBER OF CALLING PROGRAM
97 *****
98 *
99 *          THE FOLLOWING AREA CONTAINS THOSE CONSTANTS AND CODE
100 *          REQUIRED BY THE ALTERNATE CONSOLE ROUTINE WHICH WILL
101 *          BE READ INTO STORAGE AS OVERLAYS.
102 *
103 *
104 *****
105 *
106 *          NAME DSPLY
107 *
108 *
109 *          PURPOSE THIS ROUTINE STARTS PRINTING ON THE DISPLAY STATION
110 *          WHAT IS PASSED TO THE ALTERNATE CONSOLE.
111 *
112 *
113 *          METHOD THIS ROUTINE IS CALLED BY AN SVC. IT APPENDS THE
114 *          PROGRAM ID ON THE FRONT OF EACH MESSAGE PASSED.
115 *
116 *
117 *          CALLING SEQUENCE
118 *          XR7 POINTS TO LABEL
119 *
120 *          SVC OUT
121 *
122 *          *LABEL DC A(ADDR) START ADDR OF DATA TO PRINT
123 *
124 *          THE BYTE IMMEDIATELY PRECEDING THE LABEL IS CHECKED.
125 *          BIT 0 = 0 - PRINT HEADER.
126 *          1 - DON'T PRINT HEADER WITH THIS MESSAGE.

```

```

125 *          BIT 1 = 0 - INFORMATION MESSAGE
126 *          1 - ERROR MESSAGE
127 *
128 *          THE SVC 'OUTIN' ALSO ENTERS THIS ROUTINE.
129 *
130 *****
131 DSPLY EQU *
132 *
133 *          MVB R1,PRTSW SET PRINT BUSY
134 *          MVB R1,NLSW T/ON NEW LINE SWITCH
135 *          MVBZ ACPCS,R0 RESET MESSAGE PROCESSED SWITCH
136 *          J DS01 SET UP TO USSUE I/O
137 *****
138 *
139 *          THIS ROUTINE HANDLES INTERRUPTS FROM THE DISPLAY STATION
140 *
141 *****
142 DS00 EQU *
143 *          DISABLE INTERRUPTS
144 *          BNC THREE,DS70 BR/IP NOT DEV END INT
145 *
146 DS01 EQU *
147 *          MVB PRTSW,R1 GET ADDR QUE BLOCK
148 *          MVB RPSV,R3 GET DIAGNOSTIC PROGRAM DATA ADDR
149 *          MVBZ ACIMS,R0 READ DISPLAY IN PROGRESS AND CLEAR
150 *          BNZ DS91 BR/YES - PROCESS INPUT
151 *          MVB ACPCS,R4 MESSAGE BEEN PROCESSED
152 *          JNZ DS30 BR/YES
153 *
154 DS10 EQU *
155 *          MVB EBBK,R0 INITIAL BLANK FOR BUFPER
156 *          MVB EGHTY,R7 LENGTH OF BUFFER
157 *          MVA PRTB,R4 ADDR PRINT BUFFER
158 *          R0,R4 ZERO OUT BUFPER
159 *          MVB PRBA,R0 PRINT BLANK LINE AFTER ENTER
160 *          JNZ DS24 BR/IF YES
161 *          MVBZ NLSW,R0 NEW LINE SW ON-IF SO TURN OFF
162 *          JZ DS20 BR/IF NOT
163 *          MVB GRPT1,R0 BYPASS HEADPR PRINT
164 *          JN DS20 BR/YES-DON'T PRINT HEADER
165 *          MVA PRTB,R2 PRINT BUFFER ADDR
166 *          MVA HLTCV,R7 ADR OF CONTROL BLOCK
167 *          SVC HTOE GO CONVERT
168 *          MVA HALCV,R7 ADR OF CONTROL BLOCK
169 *          SVC HTOE GO CONVERT
170 *          MVB ACPRG*,(R2)+ MOVE IDENTIFIER
171 *          MVB FOUR,R1 BYTES TO MOVE
172 *          MVA PID,R6 ADR OF I.D.
173 *          MVBZ (R6),(R2) MOVE THE PROG NAME
174 *          MVB THNTY,R7 LENGTH OF RTN AND CK PT MSG
175 *          MVA MSG8,R6 ADDR MESSAGE
176 *          MVBZ (R6),(R2) MOVE MESSAGE INTO PRINT BUFFER
177 *          J DS22 PRINT THE HEADER
178 *
179 DS20 EQU *
180 *          MVB SIXT4,R7 SET TO MOVE 64 BYTES
181 *          MVB R7,R6 SAVE MAX NUMBER BYTES TO MOVE
182 *          MVB ZER0,R0 END OF MESSAGE CHAR
183 *          SVC SFE,R2 COMPUTE LENGTH OF MESSAGE
184 *          JNE DS21 BR/IF FOR NOT FOUND
185 *          MVA M1,R3 ADDRESS OF EOM CHARACTER
186 *
187 DS21 EQU *
188 *          SW R7,R6 GET LENGTH OF MESSAGE
189 *          JZ DS30 BR/IF DONE
190 *          SW R6,R3 GET ADDR OF MESSAGE AGAIN
191 *          MVB R6,R7 BYTES TO MOVE INTO BUFFER
192 *          MVA PRTB,R4 GET ADDR TTY BUFFER
193 *          MVBZ (R3),(R4) MOVE DATA INTO PRINT BUFFER
194 *          MVB R4,ACPCS INDICATE MESSAGE PROCESSED
195 *
196 DS22 EQU *
197 *          MVB PGCTL,R3 FULL SCREEN CONTROL SELECTED
198 *          JZ DS24 BR/NOT SELECTED-BYPASS
199 *          MVB PGLCT,R3 GET LINE COUNT
200 *          ABI ONE,R3 INCREMENT COUNT OF LINES
201 *          MVB R3,PGLCT SAVE VALUE
202 *          CBI TWENTY,R3 LINE COUNT EQUAL 24
203 *          JLLT DS24 BR/NO-LESS THAN
204 *          JE DS23 BR/YES
205 *          J DS60 PAUSE AND WAIT FOR OPERATOR
206 *
207 DS23 EQU *
208 *          MVD PAGE,PRBND MOVE PAGE MESSAGE ON THIS LINE
209 *
210 DS24 EQU *
211 *          MVA WIDCB,R6 PRINT IDCBC ADDR
212 *          BAL DS10,R7 GO ISSUE I/O AND CHECK COND
213 *          J DS60 RETURN TO SCHEDULER
214 *
215 DS30 EQU *
216 *          MVBZ DEAT,R0 SCREEN CONTROL MESSAGE
217 *          JNZ DS50 BR/YES-RETURN TO INTERRUPTED PRG
218 *          CW ENTSTW,ACSV* ENTER MESSAGE FINISHED
219 *          JE DS51 BR/IF YES
220 *          CB (R1,QSVC),OUT1 SEE IF OUTIN SVC
221 *          MVBZ DS50 BR/YES CONTINUE
222 *          MVA PRTSW,R0 RESET PRINT BUSY SWITCH
223 *          MVA ACIMS,R7 ADR OF DCP IND
224 *          TBT (STOP) IT STOP AFTER ERR MSG ON
225 *          JOFF DS40 BR/NO
226 *          MVA GRPT,R7 ADR FROM MSG INDICATORS
227 *          TBT (R7,NINE) IS THIS AN ERR MSG
228 *          JON DS60 BR/YES WAIT FOR OPERATOR
229 *
230 DS40 EQU *
231 *          B ACVSR* RETURN
232 *
233 DS50 EQU *
234 *          MVBZ NLSW,R3 RESET NEW LINE SW
235 *          MVB ACVSR*,ENTSW SET SWITCH WITH QUE BLOCK ADDR
236 *          *          TO SHOW TO KEY IN DATA AFTER
237 *          *          THIS MESSAGE HAS BEEN PRINTED
238 *          *          ADDR ENTER MSG PARA
239 *          *          PRINT MESSAGE
240 *
241 *
242 *
243 *
244 *
245 *
246 *
247 *
248 *
249 *
250 *
251 *
252 *
253 *
254 *
255 *
256 *
257 *
258 *
259 *
260 *
261 *
262 *
263 *
264 *
265 *
266 *
267 *
268 *
269 *
270 *
271 *
272 *
273 *
274 *
275 *
276 *
277 *
278 *
279 *
280 *
281 *
282 *
283 *
284 *
285 *
286 *
287 *
288 *
289 *
290 *
291 *
292 *
293 *
294 *
295 *
296 *
297 *
298 *
299 *
300 *
301 *
302 *
303 *
304 *
305 *
306 *
307 *
308 *
309 *
310 *
311 *
312 *
313 *
314 *
315 *
316 *
317 *
318 *
319 *
320 *
321 *
322 *
323 *
324 *
325 *
326 *
327 *
328 *
329 *
330 *
331 *
332 *
333 *
334 *
335 *
336 *
337 *
338 *
339 *
340 *
341 *
342 *
343 *
344 *
345 *
346 *
347 *
348 *
349 *
350 *
351 *
352 *
353 *
354 *
355 *
356 *
357 *
358 *
359 *
360 *
361 *
362 *
363 *
364 *
365 *
366 *
367 *
368 *
369 *
370 *
371 *
372 *
373 *
374 *
375 *
376 *
377 *
378 *
379 *
380 *
381 *
382 *
383 *
384 *
385 *
386 *
387 *
388 *
389 *
390 *
391 *
392 *
393 *
394 *
395 *
396 *
397 *
398 *
399 *
400 *
401 *
402 *
403 *
404 *
405 *
406 *
407 *
408 *
409 *
410 *
411 *
412 *
413 *
414 *
415 *
416 *
417 *
418 *
419 *
420 *
421 *
422 *
423 *
424 *
425 *
426 *
427 *
428 *
429 *
430 *
431 *
432 *
433 *
434 *
435 *
436 *
437 *
438 *
439 *
440 *
441 *
442 *
443 *
444 *
445 *
446 *
447 *
448 *
449 *
450 *
451 *
452 *
453 *
454 *
455 *
456 *
457 *
458 *
459 *
460 *
461 *
462 *
463 *
464 *
465 *
466 *
467 *
468 *
469 *
470 *
471 *
472 *
473 *
474 *
475 *
476 *
477 *
478 *
479 *
480 *
481 *
482 *
483 *
484 *
485 *
486 *
487 *
488 *
489 *
490 *
491 *
492 *
493 *
494 *
495 *
496 *
497 *
498 *
499 *
500 *
501 *
502 *
503 *
504 *
505 *
506 *
507 *
508 *
509 *
510 *
511 *
512 *
513 *
514 *
515 *
516 *
517 *
518 *
519 *
520 *
521 *
522 *
523 *
524 *
525 *
526 *
527 *
528 *
529 *
530 *
531 *
532 *
533 *
534 *
535 *
536 *
537 *
538 *
539 *
540 *
541 *
542 *
543 *
544 *
545 *
546 *
547 *
548 *
549 *
550 *
551 *
552 *
553 *
554 *
555 *
556 *
557 *
558 *
559 *
560 *
561 *
562 *
563 *
564 *
565 *
566 *
567 *
568 *
569 *
570 *
571 *
572 *
573 *
574 *
575 *
576 *
577 *
578 *
579 *
580 *
581 *
582 *
583 *
584 *
585 *
586 *
587 *
588 *
589 *
590 *
591 *
592 *
593 *
594 *
595 *
596 *
597 *
598 *
599 *
600 *
601 *
602 *
603 *
604 *
605 *
606 *
607 *
608 *
609 *
610 *
611 *
612 *
613 *
614 *
615 *
616 *
617 *
618 *
619 *
620 *
621 *
622 *
623 *
624 *
625 *
626 *
627 *
628 *
629 *
630 *
631 *
632 *
633 *
634 *
635 *
636 *
637 *
638 *
639 *
640 *
641 *
642 *
643 *
644 *
645 *
646 *
647 *
648 *
649 *
650 *
651 *
652 *
653 *
654 *
655 *
656 *
657 *
658 *
659 *
660 *
661 *
662 *
663 *
664 *
665 *
666 *
667 *
668 *
669 *
670 *
671 *
672 *
673 *
674 *
675 *
676 *
677 *
678 *
679 *
680 *
681 *
682 *
683 *
684 *
685 *
686 *
687 *
688 *
689 *
690 *
691 *
692 *
693 *
694 *
695 *
696 *
697 *
698 *
699 *
700 *
701 *
702 *
703 *
704 *
705 *
706 *
707 *
708 *
709 *
710 *
711 *
712 *
713 *
714 *
715 *
716 *
717 *
718 *
719 *
720 *
721 *
722 *
723 *
724 *
725 *
726 *
727 *
728 *
729 *
730 *
731 *
732 *
733 *
734 *
735 *
736 *
737 *
738 *
739 *
740 *
741 *
742 *
743 *
744 *
745 *
746 *
747 *
748 *
749 *
750 *
751 *
752 *
753 *
754 *
755 *
756 *
757 *
758 *
759 *
760 *
761 *
762 *
763 *
764 *
765 *
766 *
767 *
768 *
769 *
770 *
771 *
772 *
773 *
774 *
775 *
776 *
777 *
778 *
779 *
780 *
781 *
782 *
783 *
784 *
785 *
786 *
787 *
788 *
789 *
790 *
791 *
792 *
793 *
794 *
795 *
796 *
797 *
798 *
799 *
800 *
801 *
802 *
803 *
804 *
805 *
806 *
807 *
808 *
809 *
810 *
811 *
812 *
813 *
814 *
815 *
816 *
817 *
818 *
819 *
820 *
821 *
822 *
823 *
824 *
825 *
826 *
827 *
828 *
829 *
830 *
831 *
832 *
833 *
834 *
835 *
836 *
837 *
838 *
839 *
840 *
841 *
842 *
843 *
844 *
845 *
846 *
847 *
848 *
849 *
850 *
851 *
852 *
853 *
854 *
855 *
856 *
857 *
858 *
859 *
860 *
861 *
862 *
863 *
864 *
865 *
866 *
867 *
868 *
869 *
870 *
871 *
872 *
873 *
874 *
875 *
876 *
877 *
878 *
879 *
880 *
881 *
882 *
883 *
884 *
885 *
886 *
887 *
888 *
889 *
890 *
891 *
892 *
893 *
894 *
895 *
896 *
897 *
898 *
899 *
900 *
901 *
902 *
903 *
904 *
905 *
906 *
907 *
908 *
909 *
910 *
911 *
912 *
913 *
914 *
915 *
916 *
917 *
918 *
919 *
920 *
921 *
922 *
923 *
924 *
925 *
926 *
927 *
928 *
929 *
930 *
931 *
932 *
933 *
934 *
935 *
936 *
937 *
938 *
939 *
940 *
941 *
942 *
943 *
944 *
945 *
946 *
947 *
948 *
949 *
950 *
951 *
952 *
953 *
954 *
955 *
956 *
957 *
958 *
959 *
960 *
961 *
962 *
963 *
964 *
965 *
966 *
967 *
968 *
969 *
970 *
971 *
972 *
973 *
974 *
975 *
976 *
977 *
978 *
979 *
980 *
981 *
982 *
983 *
984 *
985 *
986 *
987 *
988 *
989 *
990 *
991 *
992 *
993 *
994 *
995 *
996 *
997 *
998 *
999 *
1000 *

```

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
0015F8 4734 1782 240 MVA ACIND*,R7 ADDR OF DCP INDICATORS
0015FC 4F8B 241 TBTR (R7,ALTDV) RESET ALTERNATE DEVICE
0015FE 18E6 242 JNZ DS40 RETURN TO SCHEDULER
001600 6812 1780 243 EQU * ACSCCH*
001604 6C05 1696 244 DS70 EQU *
001608 3742 245 BNCC FOUR,DSNG BR/INTRPT COND CODE BAD
00160A C722 16C7 246 EQU * ATTENTION INTERRUPT
00160E 1020 247 SRL EIGHT,R7 POSITION INTERRUPT INFO BLOCK (IIB)
001610 F708 248 RBTB HEXFO,R7 MASK OUT UNUSED BITS
001612 10F6 249 JZ DS90 BR/ENTER KEY-GO READ LINE
001614 F701 250 CBI EIGHT,R7 DEVICE MADE READY
001616 1809 251 JE DS60 BR/YES-IGNORE INTRPT
001618 C320 17B8 252 CBI ONE,R7 ATTENTION KEY
00161C 10D9 253 JNE DS81 BR/NO-MUST BE PROG FUN (PF)
00161E C325 17B9 254 MVB PGCTL,R3 SCREEN CONTROL SELECTED
001622 F315 255 JZ DS50 BR/NO-SET UP ENTER MSG
001624 17D5 256 MVBZ PGLCT,R3 GET LINE COUNT AND ZERO
001626 10EC 257 CBI TWEN4,R3 LINE COUNT EQUAL 24
001628 50A8 258 JLT DS50 BR/NO-SET UP ENTER MSG
259 JE DS60 BR/YES-GO TO SCHEDULER
260 J DS22 PRINT THE LINE THATS WAITING
261 *
262 *
263 *
264 * ANY PROGRAM FUNCTION KEY (PF) CONTROL FULL SCREEN
265 *
266 DS81 EQU *
267 MVBZ PGCTL,R0 SCREEN CONTROL ON
268 JZ DS82 BR/NO-TURN IT ON
269 MVB SCOFF,SCMS1 SET OFF INTO CONTROL MESSAGE
270 J DS83 GO PRINT MESSAGE
271 *
272 *
273 *
274 DS83 EQU *
275 MVA SCMSG,R3 SET SCREEN CONTROL ON
276 MVB HEXFO,DEAT SET ON INTO CONTROL MESSAGE
277 J DS52 ADDRESS OF SCREEN CONTROL MESSAGE
278 * SCREEN CONTROL MESSAGE SWITCH
279 *
280 * READ DATA JUST ENTERED
281 *
282 DS90 EQU *
283 MVBZ PGLCT,R0 ZEO LINE COUNT
284 MVA HEXFO,ACIMS SET READ IN PROGRESS SWITCH
285 JAL DSIO,R6 READ IDCBC
286 JAL DSIO,R7 GO ISSUE I/O AND CHECK COND CD
287 J DS91 WAIT FOR INTERRUPT
288 *
289 MVEI SIXT6,R7 MAXIMUM LINE COUNT EXCEPTED
290 MVA PRBND,R3 END OF USEABLE PRINT BUFFER
291 MVEI EBBK,R0 SEARCH CHARACTER - BLANK -
292 SFNED R0,(R3) SEARCH DECREMENT FOR NON-BLANK
293 ABI TWO,R3 STEP PAST NON-BLANK
294 MVBZ (R3),R0 SET EOM CHARACTER
295 MVA PRTBUR,R2 ADDRESS OF PRINT BUFFER
296 MVBZ PRTSW,R0 RESET THE PRINT SWITCH
297 B ACOPN GO TO COMMAND PROCESSING
298 *****
299 *
300 * THE FOLLOWING ROUTINE ISSUES I/O FOR THE DISPLAY STATION.
301 * THE CALLING ROUTINE PLACES THE IDCBC ADDRESS IN REG 6.
302 *
303 *****
304 DSIO EQU *
305 MVA ACPRE,IDCB IDCBC ADP
306 IO ACPRE PREPARE THE ALTERNATE
307 BNCC SEVEN,DSNG E-BAD CONDITION
308 IO R6,IDCB SAVE THE IDCBC
309 B (R6) ISSUE PASSED I/O
310 BCC SEVEN,(R7) BR/RETURN ON GOOD COND
311 *
312 * DISPLAY STATION CONSOLE NO GOOD - TAKE OFFLINE
313 *
314 DSNG EQU *
315 MVA ACIND*,R7 ADDRESS OF DCP INDICATORS
316 TBTR (R7,ALTDV) RESET ALTERNATE DEVICE
317 TBTS (R7,STOP) SET STOP ON MESSAGE
318 MVBZ PRTSW,R0 RESET THE PRINT SWITCH
319 MVA ACPRE,R0 RESET INTRPT BIT-UNPREPARE
320 JZ DSNG1 BR/ALREADY DONE ONCE
321 MVA ACRES,R6 ADDRESS OF RESET IDCBC
322 JAL DSIO,R7 GO RESET AND UNPREPARE
323 DSNG1 EQU *
324 MVA ACSTR,ACVTR* SET ALT CON VECTOR TO STRAY
325 MVA ACNGH,R7 ALTERNATE CONSOLE BAD CODE
326 SVC OUT SET CODE IN LEDS
327 MVA ACSVP*,R1 GET SVC LSB ADDRESS
328 ABI M30,R1 SET SVC LSB POINTER
329 MVS (R1,OR7),R7 SET UP R7
330 B ACCON* GO TO CONSOLE ROUTINE
331 *****
332 *
333 * DISPLAY STATION ALTERNATE CONSOLE DATA CONSTANTS
334 *
335 *****
336 EBCBK DC C' ' EBCDIC BLANK
337 HEXFO DC X'FO' MASK
338 ENTER DC C'ENTER' MESSAGE
339 DC X'00' EOM
340 *
341 *
342 *
343 PAGE DC C'PAGE' MESSAGE TO PAGE DISPLAY
344 SCOFF DC C'FF' MESSAGE OVERLAY
345 SCOM DC C'M' MESSAGE OVERLAY
346 SCMSG DC C'CNLT O' MESSAGE
347 SCHS1 DC C' '
348 DC X'00' EOM
349 DC X'00' SPARE
350 *
351 * DATA CONTROL BLOCKS FOR THE DISPLAY STATION
352 *
353 *
354 * CLEAR CRT SCREEN DCB
355 *
356 *
357 *
358 CRDCB EQU * USE FOR DCB REFERENCE ONLY

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
0016E0 001C 359 DC X'001C' CONTROL WORD
0016E2 0730 360 DC A(1840) POS CURSOR ADDRESS
0016E4 0000 361 DC A(0) PRE CURSOR ADDRESS
0016E6 0000 362 DC A(0) HIGH/LOW ADDRESS
0016E8 4000 363 DC X'4000' PKB/SHIFT COUNT
0016EA 0000 364 DC A(0) CHAIN ADDRESS
0016EC 0780 365 DC A(1920) BYTE COUNT
0016EE 0000 366 DC A(0) BUFFER ADDRESS
367 *
368 * WRITE DCB
369 *
370 WRDCB EQU * USE FOR DCB REFERENCE ONLY
371 WRCTL DC X'000F' CONTROL WORD
372 WRPOS DC A(1840) POS CURSOR ADDRESS
373 WRPRE DC A(1840) PRE CURSOR ADDRESS
374 WRHLA DC A(115) HIGH/LOW ADDRESS
375 WRSHF DC A(1) PKB/SHIFT COUNT
376 WRCHN DC A(0) CHAIN ADDRESS
377 WRBCT DC A(80) BYTE COUNT
378 WRADR DC A(PRTBU) BUFFER ADDRESS
379 *
380 * READ DCB
381 *
382 RDDCB EQU * USE FOR DCB REFERENCE ONLY
383 RDCTL DC X'200C' CONTROL WORD
384 RDPOS DC A(1840) POS CURSOR ADDRESS
385 RDPRE DC A(1840) PRE CURSOR ADDRESS
386 RDHLA DC A(0) HIGH/LOW ADDRESS
387 RDSHF DC A(0) PKB/SHIFT COUNT
388 RDCHN DC A(0) CHAIN ADDRESS
389 RDBCT DC A(80) BYTE COUNT
390 RDADR DC A(PRTBU) BUFFER ADDRESS
391 *
392 * ALTERNATE CONSOLE PATCH AREA
393 ACEND EQU *
394 ACS EQU C3802+550
395 PATCH DC (ACS-ACEND)X'00' PATCH AREA
396 ORG C3802+550
397 *****
398 *
399 * THE CONSTANTS IN THIS AREA MUST REMAIN IN THE SAME
400 * STORAGE LOCATIONS BECAUSE OF PROGRAM INTERFACES.
401 *
402 *
403 * PRINT BUFFER
404 *
405 * ALIGN WORD
406 PRTBUR DC 80C' ' 80 CHARACTER PRINT BUFFER
407 PRBND EQU PRTBUR+SIXT4
408 *****
409 *
410 * DISPLAY STATION ALTERNATE CONSOLE ROUTINE ENTRY POINTS
411 *
412 *****
413 ACMSG DC A(DS50) ADDRESS TO ENTER MESSAGE ROUTINE
414 ACENT DC A(DSPLY) DISPLAY STATION RTN
415 ACIND DC A(DS00) DISP STAT INTRPT RTN
416 *****
417 *
418 * THE FOLLOWING ARE THE IDCBC'S USED BY THE DISPLAY STATION.
419 * THE DEVICE ADDRESS WILL BE INSERTED AT INITIALIZATION TIME.
420 *
421 *
422 *
423 *****
424 *
425 * ALIGN WORD
426 WIDCB DC X'7000' DISPLAY STATION WRITE
427 CIDCB DC A(WRDCB) DISPLAY STATION CLEAR SCREEN
428 ACRES DC X'7000' DISPLAY STATION RESET
429 RIDCB DC X'0000' DISPLAY STATION READ
430 RIDCB DC X'7000' DISPLAY STATION READ
431 RIDCB DC A(RDDCB) DISPLAY STATION PREPARE-LEVEL 2
432 ACPRE DC X'6000'
433 ACPRE DC X'0005'
434 ACPRE DC X'0005'
435 ACPRE EQU ACPRE+THREE
436 ORG C3802+656
437 *****
438 *
439 * THE FOLLOWING AREA CONTAINS THOSE CONSTANTS REQUIRED
440 * FOR THE ALTERNATE CONSOLE ROUTINE AND SHARED BY DCP.
441 * THE CONSTANTS IN THIS AREA MUST REMAIN IN THE SAME
442 * STORAGE LOCATIONS BECAUSE OF PROGRAM INTERFACES.
443 *
444 *
445 *****
446 ACSCHE EQU * ADDRESS OF SCHEDULAR ROUTINE
447 ACIND EQU ACSCH+2 DCP INDICATORS
448 ACSVP EQU ACSCH+4 SVC INTRPT POINTER
449 ACSVR EQU ACSCH+6 SVC RETURN
450 ACOPC EQU ACSCH+8 OPERATOR COMMAND ROUTINE
451 ACCON EQU ACSCH+10 CONSOLE ROUTINE
452 ACSTR EQU ACSCH+12 STRAY INTRPT ROUTINE
453 ACVTR EQU ACSCH+14 ALT CON VECTOR ADDR-INIT
454 PRBA EQU ACSCH+16 NEW LINE SWITCH
455 NLSW EQU ACSCH+18 SVC OPERAND FOR OUTIN SVC
456 OUT1 EQU ACSCH+19 MESSAGE BEEN PROCESSED SWITCH
457 ACPCS EQU ACSCH+20 READ IN PROGRESS SWITCH
458 ACICNT EQU ACSCH+21 COUNT OF ACTIVE CICB'S
459 EXTR1 EQU ACSCH+22 END OF TABLE INDICATOR
460 INPRC EQU ACSCH+24 IND OUT/IN IN PROCESS
461 *
462 *
463 *
464 *
465 GRPT EQU ACSCH+25 NOT USED
466 GRPT1 EQU ACSCH+26 GROUP PRINTING SWITCH
467 PRTSW EQU ACSCH+28 DISPLAY STATION BUSY
468 ENTST EQU ACSCH+30 ENTER MESSAGE PROCESSED SWITCH
469 ACWCT EQU ACSCH+32 NOT USED BY THIS OVERLAY
470 ACWC1 EQU ACSCH+32 NOT USED BY THIS OVERLAY
471 DEAT EQU ACSCH+34 SCREEN CONTROL MESSAGE
472 HRTA EQU ACSCH+36 PRG CHK ADR FOR DIAG
473 INVT1 EQU ACSCH+38 BYTE COUNT
474 INVT2 EQU ACSCH+40 ADR OF DATA TO CONVERT
475 INVT3 EQU ACSCH+42 TARGET AREA
476 HLTVC EQU ACSCH+44 BYTE COUNT
477 *
478 *
479 *
480 *
481 *
482 HALCV EQU ACSCH+50 ADR OF DATA TO CONVERT
TARGET AREA
BYTE COUNT

LOCTR OBJECT TEXT STMT SOURCE STATEMENT

COPYRIGHT IBM CORP 1976

```

483 * EQU ACSCH+52
484 * EQU ACSCH+54
0017B8 PGCTL EQU ACSCH+56
0017B9 PGLCT EQU PGCTL+1
0017BA RPSV1 EQU ACSCH+58
0017BC RPSV EQU ACSCH+60
0017BE IDCB EQU ACSCH+62
491 * EQU ACSCH+64
493 * EQU ACSCH+66
0017C2 HSG7 EQU ACSCH+76
0017CC HSG7A EQU ACSCH+80
0017D0 HSG8 EQU ACSCH+85
0017D5 HSG8A EQU ACSCH+90
0017DA HSG9 EQU ACSCH+95
0017DF HSG9A EQU ACSCH+100
500 * EQU ACSCH+102
0017E6 PRL1 EQU ACSCH+106
0017EA ACPRG EQU ACSCH+108
0017EC ACPR5 EQU ACSCH+120
0017F8 LPD EQU ACSCH+122
509 * EQU ACSCH+124
0017FC ACNG1 EQU ACSCH+126
0017FE ACNGM EQU ACSCH+126
514 ORG C3802+784
515 PID EQU *
001800 RTNE EQU PID+10
00180A CKPT EQU PID+12
00180C EQU END
000000 EQU END
    
```

```

ADR OF DATA TO CONVERT
TARGET AREA
FULL SCREEN CONTROL SWITCH AND
LINE COUNT
NOT USED
DATA ADDRESS
ADDRESS OF LAST IDCB ISSUED BY DCP
ERROR CODE
    
```

```

EOM AND DCP MSG CNTL FLD
ADDRESS OF MESSAGE
    
```

```

ADDRESS OF MESSAGE
ERROR CODE
EOM AND DCP MSG CNTL FLD
ADDRESS OF MESSAGE
    
```

```

LOCATION OF PROGRAM ID
ROUTINE NUMBER
CHECKPOINT NUMBER
    
```

CROSS-REFERENCE LISTING

COPYRIGHT IBM CORP 1976

DECLARED	NAME	ATTRIBUTES AND REFERENCES
451	ACCON	ADDRESS. HEX LOCATION(0000178A) IN CSECT(C3802)) LENGTH(1)
393	ACEND	ADDRESS. HEX LOCATION(00001710) IN CSECT(C3802)) LENGTH(1)
459	ACFCS	ADDRESS. HEX LOCATION(00001794) IN CSECT(C3802)) LENGTH(1)
460	ACINS	ADDRESS. HEX LOCATION(00001795) IN CSECT(C3802)) LENGTH(1)
447	ACIND	ADDRESS. HEX LOCATION(00001782) IN CSECT(C3802)) LENGTH(1)
512	ACNGM	ADDRESS. HEX LOCATION(000017FE) IN CSECT(C3802)) LENGTH(1)
450	ACOPC	ADDRESS. HEX LOCATION(00001788) IN CSECT(C3802)) LENGTH(1)
433	ACPRE	ADDRESS. HEX LOCATION(0000177C) IN CSECT(C3802)) LENGTH(2)
504	ACPRG	ADDRESS. HEX LOCATION(000017EA) IN CSECT(C3802)) LENGTH(1)
435	ACPR3	ADDRESS. HEX LOCATION(0000177F) IN CSECT(C3802)) LENGTH(1)
429	ACRES	ADDRESS. HEX LOCATION(00001774) IN CSECT(C3802)) LENGTH(2)
394	ACS	ADDRESS. HEX LOCATION(00001716) IN CSECT(C3802)) LENGTH(1)
446	ACSCH	ADDRESS. HEX LOCATION(00001780) IN CSECT(C3802)) LENGTH(1)
452	ACSTR	ADDRESS. HEX LOCATION(0000178C) IN CSECT(C3802)) LENGTH(1)
448	ACSVP	ADDRESS. HEX LOCATION(00001784) IN CSECT(C3802)) LENGTH(1)
449	ACSVR	ADDRESS. HEX LOCATION(00001786) IN CSECT(C3802)) LENGTH(1)
453	ACVTR	ADDRESS. HEX LOCATION(0000178E) IN CSECT(C3802)) LENGTH(1)
469	ACWCT	ADDRESS. HEX LOCATION(000017A0) IN CSECT(C3802)) LENGTH(1)
59	ALTDV	ABSOLUTE. HEX VALUE(00000007)
358	CRDCB	ADDRESS. HEX LOCATION(000016E0) IN CSECT(C3802)) LENGTH(1)
3	C3802	CSECT. START(000014F0) LENGTH(784) ESDID(1)
471	DEAT	ADDRESS. HEX LOCATION(000017A2) IN CSECT(C3802)) LENGTH(1)
304	DSIO	ADDRESS. HEX LOCATION(0000167C) IN CSECT(C3802)) LENGTH(1)
314	DSNG	ADDRESS. HEX LOCATION(00001696) IN CSECT(C3802)) LENGTH(1)
323	DSNG1	ADDRESS. HEX LOCATION(000016AE) IN CSECT(C3802)) LENGTH(1)
131	DSPLY	ADDRESS. HEX LOCATION(000014F0) IN CSECT(C3802)) LENGTH(1)
142	DS00	ADDRESS. HEX LOCATION(000014FE) IN CSECT(C3802)) LENGTH(1)
145	DS01	ADDRESS. HEX LOCATION(00001504) IN CSECT(C3802)) LENGTH(1)
152	DS10	ADDRESS. HEX LOCATION(0000151A) IN CSECT(C3802)) LENGTH(1)
176	DS20	ADDRESS. HEX LOCATION(0000155C) IN CSECT(C3802)) LENGTH(1)
183	DS21	ADDRESS. HEX LOCATION(00001568) IN CSECT(C3802)) LENGTH(1)
191	DS22	ADDRESS. HEX LOCATION(0000157A) IN CSECT(C3802)) LENGTH(1)
201	DS23	ADDRESS. HEX LOCATION(00001592) IN CSECT(C3802)) LENGTH(1)
203	DS24	ADDRESS. HEX LOCATION(00001598) IN CSECT(C3802)) LENGTH(1)
207	DS30	ADDRESS. HEX LOCATION(000015A2) IN CSECT(C3802)) LENGTH(1)
221	DS40	ADDRESS. HEX LOCATION(000015CC) IN CSECT(C3802)) LENGTH(1)
223	DS50	ADDRESS. HEX LOCATION(000015D0) IN CSECT(C3802)) LENGTH(1)
230	DS51	ADDRESS. HEX LOCATION(000015E0) IN CSECT(C3802)) LENGTH(1)
234	DS52	ADDRESS. HEX LOCATION(000015EA) IN CSECT(C3802)) LENGTH(1)
236	DS53	ADDRESS. HEX LOCATION(000015EC) IN CSECT(C3802)) LENGTH(1)
243	DS60	ADDRESS. HEX LOCATION(00001600) IN CSECT(C3802)) LENGTH(1)
246	DS70	ADDRESS. HEX LOCATION(00001604) IN CSECT(C3802)) LENGTH(1)
266	DS81	ADDRESS. HEX LOCATION(0000162A) IN CSECT(C3802)) LENGTH(1)
271	DS82	ADDRESS. HEX LOCATION(00001638) IN CSECT(C3802)) LENGTH(1)
274	DS83	ADDRESS. HEX LOCATION(00001644) IN CSECT(C3802)) LENGTH(1)
281	DS90	ADDRESS. HEX LOCATION(00001650) IN CSECT(C3802)) LENGTH(1)
287	DS91	ADDRESS. HEX LOCATION(00001662) IN CSECT(C3802)) LENGTH(1)
62	EBBK	ABSOLUTE. HEX VALUE(00000040)
76	EGHTY	ABSOLUTE. HEX VALUE(00000050)
70	EIGHT	ABSOLUTE. HEX VALUE(00000008)
340	ENTER	ADDRESS. HEX LOCATION(000016C8) IN CSECT(C3802)) LENGTH(5)
468	ENTSW	ADDRESS. HEX LOCATION(0000179E) IN CSECT(C3802)) LENGTH(1)
68	FOUR	ABSOLUTE. HEX VALUE(00000004)
465	GRPT	ADDRESS. HEX LOCATION(0000179A) IN CSECT(C3802)) LENGTH(1)

CROSS-REFERENCE LISTING

COPYRIGHT IBM CORP 1976

DECLARED	NAME	ATTRIBUTES AND REFERENCES
466	GRPT1	218 466 ADDRESS. HEX LOCATION(0000179B) IN CSECT (C3802) LENGTH(1)
482	HALCV	161 ADDRESS. HEX LOCATION(000017B2) IN CSECT (C3802) LENGTH(1)
339	HEXFO	166 ADDRESS. HEX LOCATION(000016C7) IN CSECT (C3802) LENGTH(1)
478	HLTCV	250 272 276 283 ADDRESS. HEX LOCATION(000017AC) IN CSECT (C3802) LENGTH(1)
51	HTOE	164 ABSOLUTE. HEX VALUE(0000001A)
491	IDCB	165 167 ADDRESS. HEX LOCATION(000017BE) IN CSECT (C3802) LENGTH(1)
496	MSG8	305 308 ADDRESS. HEX LOCATION(000017D0) IN CSECT (C3802) LENGTH(1)
78	M1	173 ABSOLUTE. HEX VALUE(FFFFFFF)
79	M30	182 ABSOLUTE. HEX VALUE(FFFFFFE2)
71	NINE	328 ABSOLUTE. HEX VALUE(00000009)
456	NLSW	219 ADDRESS. HEX LOCATION(00001792) IN CSECT (C3802) LENGTH(1)
65	ONE	133 159 224 ABSOLUTE. HEX VALUE(00000001)
50	OUT	195 254 ABSOLUTE. HEX VALUE(00000000)
457	OUT1	326 ADDRESS. HEX LOCATION(00001793) IN CSECT (C3802) LENGTH(1)
344	PAGE	212 238 ADDRESS. HEX LOCATION(000016CE) IN CSECT (C3802) LENGTH(4)
486	PGCTL	202 ADDRESS. HEX LOCATION(000017B8) IN CSECT (C3802) LENGTH(1)
487	PGLCT	192 256 267 272 487 ADDRESS. HEX LOCATION(000017B9) IN CSECT (C3802) LENGTH(1)
515	PID	194 196 258 282 ADDRESS. HEX LOCATION(00001800) IN CSECT (C3802) LENGTH(1)
455	PRBA	170 516 517 ADDRESS. HEX LOCATION(00001790) IN CSECT (C3802) LENGTH(1)
407	PRBND	157 231 233 ADDRESS. HEX LOCATION(00001756) IN CSECT (C3802) LENGTH(1)
406	PRTBU	202 289 ADDRESS. HEX LOCATION(00001716) IN CSECT (C3802) LENGTH(1)
467	PRTSW	155 163 188 294 378 390 407 ADDRESS. HEX LOCATION(0000179C) IN CSECT (C3802) LENGTH(1)
95	QR7	132 146 214 295 318 ABSOLUTE. HEX VALUE(00000014)
96	QSV	329 ABSOLUTE. HEX VALUE(00000016)
382	RDDCB	212 238 ADDRESS. HEX LOCATION(00001700) IN CSECT (C3802) LENGTH(1)
431	RIDCB	432 ADDRESS. HEX LOCATION(00001778) IN CSECT (C3802) LENGTH(2)
489	RPSV	284 ADDRESS. HEX LOCATION(000017BC) IN CSECT (C3802) LENGTH(1)
60	RTMDI	147 ABSOLUTE. HEX VALUE(0000000B)
0	R0	241 REGISTER. HEX VALUE(00000000) 134 148 153 156 157 159 161 179 180 208 214 231 237 267 282 290 291 293 295 318 319
0	R1	REGISTER. HEX VALUE(00000001) 132 133 146 212 238 327 328 329
0	R2	REGISTER. HEX VALUE(00000002) 163 168 171 174 294
0	R3	REGISTER. HEX VALUE(00000003) 180 187 188 189 192 194 195 196 147 180 182 186 189 197 224 228 256 258 259 275 289 291 292 293
0	R4	REGISTER. HEX VALUE(00000004) 150 155 156 188 189 190 233
0	R6	REGISTER. HEX VALUE(00000006) 170 171 173 174 178 184 186 187 204
0	R7	REGISTER. HEX VALUE(00000007) 284 308 309 321 154 164 166 169 172 177 178 184 187 205 215 216 218 219 240 241 249 250 325 329 285 288 310 315 316 317 322
347	SCMSG	ADDRESS. HEX LOCATION(000016D6) IN CSECT (C3802) LENGTH(6)
348	SCMS1	275 ADDRESS. HEX LOCATION(000016DC) IN CSECT (C3802) LENGTH(2)
345	SCOFF	269 273 ADDRESS. HEX LOCATION(000016D2) IN CSECT (C3802) LENGTH(2)
346	SCON	269 ADDRESS. HEX LOCATION(000016D4) IN CSECT (C3802) LENGTH(2)
69	SEVEN	273 ABSOLUTE. HEX VALUE(00000007)
74	SIXT4	307 310 ABSOLUTE. HEX VALUE(00000040)
75	SIXT6	177 407 ABSOLUTE. HEX VALUE(00000042)
43	SM	288 ABSOLUTE. HEX VALUE(00000001)
58	STOP	143 ABSOLUTE. HEX VALUE(00000006)
67	THREE	216 317 ABSOLUTE. HEX VALUE(00000003)
73	TWEN4	144 435 ABSOLUTE. HEX VALUE(00000018)
72	TWNTY	197 259 ABSOLUTE. HEX VALUE(00000014)
66	TWO	172 ABSOLUTE. HEX VALUE(00000002)
425	WIDCB	292 ADDRESS. HEX LOCATION(0000176C) IN CSECT (C3802) LENGTH(2)
370	WRDCB	204 ADDRESS. HEX LOCATION(000016F0) IN CSECT (C3802) LENGTH(1)
64	ZERO	426 ABSOLUTE. HEX VALUE(00000000) 179

CROSS-REFERENCE LISTING

COPYRIGHT IBM CORP 1976

DECLARED NAME ATTRIBUTES AND REFERENCES

***** LAST PAGE *****