



**DATA GENERAL  
CORPORATION**

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PROGRAM

Power Shut Down Test

TAPES

Binary: 095-000013

ABSTRACT

Power Shut Down Test is a maintenance routine designed to test retention of memory data upon loss of power. The routine also tests the Power Monitor Autorestart Option.

POWER SHUT DOWN TEST

11. ABSTRACT:

POWER SHUT DOWN TEST IS A MAINTENANCE PROGRAM DESIGNED TO TEST THE POWER MONITOR AND AUTORESTART OPTION. THE PROGRAM ALSO TEST FOR MEMORY RETENTION UPON POWER SHUT DOWN. IT IS TO BE USED WITH OR WITHOUT THE POWER MONITOR OPTION.

12. MACHINE REQUIREMENTS

- 12.1 STANDRED NOVA PROCESSOR
- 12.2 4K READ/WRITE MEMORY. (SEE 7. FOR 1-2K )
- 12.3 OPTIONAL EQUIPMENT
- 13.3.1 POWER MONITOR AUTORESTART OPTION

13. SWITCH SETTINGS

- 13.1 STARTING ADDRESS =000002
- 13.2 RESTART ADDRESS =000040

14. OPERATING PROCEEDURE/OPERATOR INPUT

- 14.1 LOAD THE PROGRAM VIA THE BINARY LOADER.
- 14.2 SET THE SWITCHES TO 000002
- 14.3 PRESS START
- 14.4 OPERATION WITHOUT THE POWER MONITOR.
  - 14.4.1 THE PROGRAM WILL REQUEST THE OPERATOR TO TURN THE COMPUTER OFF,ON,AND TO RESTART IT.
  - 14.4.2 UPON RESTART THE PROGRAM WILL TYPE: "NO INTERRUPT DETECTED ON POWER SHUT DOWN." THIS IS A NORMAL MESSAGE WITHOUT A POWER MONITOR. THIS MESSAGE IS TYPED ONCE, SUBSEQUENT RESTARTS WILL NOT GIVE THE MESSAGE.
  - 14.4.3 THE OPERATOR SHOULD REPEATLY PERFORM THE POWER OFF-RESTART SEQUENCE. AFTER EACH RESTART ALLOW 2-3 SECONDS FOR A POSSIABLE ERROR MESSAGE.
- 14.5 OPERATION WITH THE POWER MONITOR OPTION.
  - 14.5.1 THE PROGRAM WILL REQUEST THE OPERATOR TO TURN THE COMPUTER OFF,ON,AND TO RESTART IT.
  - 14.5.2 UPON RESTART THE PROGRAM WILL REQUEST THE OPERATOR TO LOCK THE CONSOLE AND REMOVE THE POWER.
  - 14.5.3 WHEN COMPUTER POWER IS RESTORED THE PROGRAM WILL BE RESTARTED WITHOUT OPERATOR INTERVENTION. NO ERROR MESSAGES SHOULD BE TYPED.
  - 14.5.4 THE OPERATOR SHOULD REPEATLY REMOVE AND RESTORE POWER. AT EACH RESTORATION OF POWER ALLOW 2-3 SECONDS FOR POSSIABLE ERROR MESSAGES.

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15.      PROGRAM OUTPUT/ERROR DISCRIPTION
15.1     MESSAGE: " THE PROCESSOR DID NOT RUN FOR
;         2 MS AFTER THE POWER FAIL FLAG" AFTER THE
;         POWER FAIL FLAG IS SET A MEMORY LOCATION
;         IS COUNTED TO ZERO. IF THE PROCESSOR STOP-
;         PED EFORE THE COUNT REACHED ZERO, THE
;         PROCESSOR DID NOT RUN THE REQUIRED 2 MS.
15.2     MESSAGE: "NO INTERRUPT DETECTED ON POWER
;         SHUT DOWN" WHEN POWER WAS REMOVED THE
;         POWER FAIL FLAG DID NOT SET, OR IT DIDNOT
;         CAUSE A INTERRUPT. THIS IS A NORMAL MESSAGE
;         ON MACHINES WITHOUT THE POWER MONITOR
;         OPTION. THIS MESSAGE OCCURES ONLY ONCE FOR
;         EACH TIME THE PROGRAM IS STARTED AT LOC 2.
15.3     MESSAGE: " COMPUTER WAS RESTARTED WITHOUT
;         A POWER FAIL INTERRUPT" THIS MESSAGE WILL
;         OCCURE ANYTIME THE PROCESSOR IS  STARTED
;         AT LOCATION 0 WITHOUT FIRST BEING PROCEEDED
;         BY A POWER FAIL INTERRUPT.
15.4     MESSAGE: "PROGRAM SUM CHECK. EXAMINE THE
;         CHECK ROUTINE" THE PROGRAM HAS BEEN MODIFIED
;         BY THE POWER UP-DOWN SEQUENCE. EXAMINE
;         LOCATION CHECK AND THE NEXT 20 INSTRUCTIONS.
;         MANUALLY CORRECT THE PROGRAM. CHECK MEM-OK
;         AND +5 OK.
15.5     IF LOCATIONS IN THE MEMORY ADDRESS PATTERN
;         ARE MODIFIED THE PROGRAM WILL TYPE:
;         C(ADDRESS)=XXXXX. THIS MESSAGE INDICATES
;         MEMORY DATA IS BEING LOST ON POWER SHUT DOWN

16.      PROGRAM DISCRIPTION/THEORY OF OPERATION
;         THE CONTENTS OF MEMORY IS FILLED WITH A
;         ADDRESS PATTERN. THIS PATTERN IS CONTIN-
;         UALLY CHECKED DURING THE POWER UP-DOWN
;         SEQUENCE PERFORMED BY THE OPERATOR. ANY
;         LOSS OF DATA IS DETECTED AND PRINTED AS
;         A ERROR. THE ADDRESS PATTERN IS NOT RE-
;         WRITTEN UNLESS A ERROR  IS DETECTED.

17.      LIMITATIONS/MISC
;         THE FINAL LOCATION USED BY THE ADDRESS
;         PATTERN MAY BE MODIFIED BY CHANGING LOC-
;         ATION "FADR".

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000001 .LOC 1
00001 000115 INTR
00002 000150 JMP STEP1
000040 .LOC 40
00040 034315 REST: LDA 3,CKSUM ;PERFORM A SUM CHECK
00041 030316 LDA 2,CKWC ;ON THE PROGRAM.
00042 020317 LDA 0,SUM
00043 025400 LDA 1,0,3
00044 123000 ADD 1,0
00045 151404 INC 2,2,SZR
00046 000043 JMP --3
00047 101004 MOV 0,0,SZR
00050 000066 JMP SUMER ;ERROR
00051 010320 ISZ NDF
00052 102401 SUB 0,0,SKP
00053 000321 JMP NODN ;NO DONE FLAG
00054 040320 STA 0,NDF
00055 020213 LDA 0,IFLAG ;RESTART HERE
00056 101005 MOV 0,0,SNR
00057 000073 JMP REST1
00060 010230 ISZ SUPTYP ;THIS MESSAGE ONLY ONCE.
00061 000165 JMP STEP2
00062 006214 JSR 0,ICRLF ;MESSAGE NO INTERRUPT.
00063 006215 JSR 0,IMESS ;PRINTER
00064 000513 NOINT
00065 000165 JMP STEP2
00066 006214 SUMER: JSR 0,ICRLF
00067 006215 JSR 0,IMESS
00070 000575 MSUM
00071 063077 HALT ;PROGRAM SUM CHECK
00072 000071 JMP --1

00073 020216 REST1: LDA 0,COUNT
00074 101005 MOV 0,0,SNR
00075 000101 JMP REST2
00076 006214 JSR 0,ICRLF ;DIDNOT RUN FOR 2MS
00077 006215 JSR 0,IMESS
00100 000455 MILLI

00101 020217 REST2: LDA 0,CNG ;SET LOC 0
00102 040000 STA 0,0 ;TO POINT AT ERROR.
00103 102000 ADC 0,0
00104 062077 MSKO 0
00105 020220 LDA 0,SAVC
00106 101100 MOVL 0,0
00107 020224 LDA 0,SAV0 ;RESTORE MACHINE STATE
00110 024221 LDA 1,SAV1
00111 030222 LDA 2,SAV2
00112 034223 LDA 3,SAV3
00113 060177 INTEN
00114 000225 JMP 0,SAVPC ;EXIT

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00115 063677 INTR:  SKPDN CPU           ;A INTERRUPT!
00116 000140          JMP INTO          ;BUT NOT POWER FAIL
00117 040224          STA 0,SAV0
00120 044221          STA 1,SAV1
00121 050222          STA 2,SAV2
00122 054223          STA 3,SAV3
00123 101200          MOVR 0,0
00124 040220          STA 0,SAVC
00125 020000          LDA 0,0
00126 040225          STA 0,SAVPC

00127 102400 INTR1:  SUB 0,0           ;SET A FLAG
00130 040213          STA 0,IFLAG      ;TO INDICATE INTERRUPTS.
00131 020226          LDA 0,CREST
00132 040000          STA 0,0         ;SETUP 0 FOR AUTO RESTART.
00133 020227          LDA 0,CONST
00134 040216          STA 0,COUNT
00135 010216          ISZ COUNT      ;COUNT FOR 2 MS.
00136 000135          JMP -1
00137 063077          HALT
00140 063611 INTQ:  SKPDN TTO           ;CHECK IF INTERRUPT IS
00141 063710          SKPDZ TTI          ;TTO OR TTI
00142 000202          JMP INTC
00143 102000          ADC 0,0
00144 040320          STA 0,NDF
00145 061477          INTA 0
00146 063077          HALT
00147 000146          JMP -1
00150 020217 STEP1: LDA 0,CNG           ;START HERE
00151 040000          STA 0,0         ;SETUP FOR PHONEY RESTART
00152 040320          STA 0,NDF
00153 062677          IORST
00154 060177          INTEN
00155 102000          ADC 0,0
00156 062077          MSKO 0
00157 040230          STA 0,SUPTYP
00160 040213          STA 0,IFLAG      ;SET INTERRUPTED FLAG
00161 004251          JSR FILL
00162 006214          JSR 0,ICRLF
00163 006215          JSR 0,IMESS
00164 000412          ONOFF

00165 004232 STEP2:  JSR CHECK           ;CHECK THE ADDRESS PATTERN
00166 004251          JSR FILL           ;RETURN+2 IF NO ERROR
00167 020213          LDA 0,IFLAG
00170 024231          LDA 1,I2FLAG
00171 040231          STA 0,I2FLAG
00172 107014          ADD# 0,1,SER
00173 000165          JMP STEP2

00174 006214 STEP3:  JSR 0,ICRLF        ;REMOVE FROM WALL POWER.
00175 006215          JSR 0,IMESS
00176 000353          UNPLUG
00177 004232          JSR CHECK
00200 004251          JSR FILL
00201 000177          JMP -2

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00202 060211 INTC:  NIOC TTO           ;IF INTERRUPT FROM
00203 060210         NIOC TTI           ;TTI/TTO FORGET IT.
00204 060177         INTEN
00205 002000         JMP 00

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00206 006214 NG:    JSR 0ICRLF         ;A RESTART OCCURED
00207 006215         JSR 0IMESS        ;WITHOUT A INTERRUPT.
00210 000540         FUNNE
00211 063077         HALT
00212 000211         JMP .-1

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00213 000000 IFLAG: 0
00214 000753 ICRLF: CRLF
00215 000624 IMESS: MESS
00216 000000 COUNT: 0
00217 000206 CNG:   JMP NG
00220 000000 SAVC:  0
00221 000000 SAV1:  0
00222 000000 SAV2:  0
00223 000000 SAV3:  0
00224 000000 SAV0:  0
00225 000000 SAVPC: 0
00226 000040 CREST: REST
00227 177400 CONST: 177400
00230 000000 SUPTYP: 0
00231 000000 I2FLAG: 0

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00232 020303 CHECK: LDA 0,FADR         ;CHECK CONTENTS OF MEMORY.
00233 030304         LDA 2,IADR
00234 054305         STA 3,CKRET
00235 126520         SUBZL 1,1
00236 044306         STA 1,ESWT
00237 025000 CK1:   LDA 1,0,2         ;WORD FROM MEMORY
00240 132414         SUB# 1,2,SZR
00241 004260         JSR CKEXX        ;ERROR
00242 151400         INC 2,2
00243 142414         SUB# 2,0,SZR
00244 000237         JMP CK1
00245 030306         LDA 2,ESWT        ;RETURN+2 IF NO ERR
00246 034305         LDA 3,CKRET
00247 157000         ADD 2,3
00250 001400         JMP 0,3

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00251 020303 FILL:  LDA 0,FADR         ;WRITE THE ADDRESS PATTERN.
00252 030304         LDA 2,IADR
00253 051000         STA 2,0,2
00254 151400         INC 2,2
00255 112414         SUB# 0,2,SZR
00256 000253         JMP FILL+2
00257 001400         JMP 0,3

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00260 040311 CKEXX: STA 0,ER0      ;ERROR PRINTER
00261 044312          STA 1,ER1
00262 050313          STA 2,ER2
00263 054314          STA 3,ER3
00264 006214          JSR @ICRLF
00265 006215          JSR @IMESS    ;MESSAGE" C( "
00266 000406          CC
00267 024313          LDA 1,ER2    ;MEMORY ADDRESS
00270 006307          JSR @IZOCT
00271 006215          JSR @IMESS
00272 000410          CCX
00273 024312          LDA 1,ER1    ;MESSAGE " )= "
00274 006310          JSR @IPOCT   ;MEMORY VALUE
00275 126400          SUB 1,1
00276 044306          STA 1,ESWT
00277 020311          LDA 0,ER0
00300 024312          LDA 1,ER1
00301 030313          LDA 2,ER2
00302 002314          JMP @ER3

00303 007600 FADR:    7600
00304 001000 IADR:    1000
00305 000000 CKRET:   0
00306 000000 ESWT:    0
00307 000641 IZOCT:   ZOCT
00310 000643 IPOCT:   POCT
00311 000000 ER0:     0
00312 000000 ER1:     0
00313 000000 ER2:     0
00314 000000 ER3:     0
00315 000232 CKSUM:   CHECK
00316 177761 CKWC:    -17
00317 012223 SUM:     12223
00320 000000 NDF:     0

00321 006214 NODN:    JSR @ICRLF
00322 006215          JSR @IMESS
00323 000326          NODONE
00324 063077          HALT
00325 000324          JMP -1

00326 020101 NODONE:  .TXT !A
00327 047111 IN
00330 042524 TE
00331 051122 RR
00332 050125 UP
00333 020124 T
00334 052502 BU
00335 020124 T
00336 047516 NO
00337 050040 P
00340 053517 OW
00341 051105 ER
00342 043040 F
00343 044501 AI
00344 020114 L
00345 047504 DO
00346 042516 NE
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00347 043040 F  
00350 040514 LA  
00351 020107 G  
00352 000000 I

00353 047514 UNPLUG: .TXT !LO  
00354 045503 CK  
00355 041440 C  
00356 047117 ON  
00357 047523 SO  
00360 042514 LE  
00361 040440 A  
00362 042116 ND  
00363 050040 P  
00364 046125 UL  
00365 020114 L  
00366 044124 TH  
00367 020105 E  
00370 046120 PL  
00371 043525 UG  
00372 020054 ,  
00373 044124 TH  
00374 047105 EN  
00375 051040 R  
00376 051505 ES  
00377 047524 TO  
00400 042522 RE  
00401 050040 P  
00402 053517 OW  
00403 051105 ER  
00404 020056 .  
00405 000000 I

00406 041440 CC: .TXT ! C  
00407 000050 (!

00410 036451 CCX: .TXT !)=  
00411 000040 !

00412 052524 ONOFF: .TXT !TU  
00413 047122 RN  
00414 052040 T  
00415 042510 HE  
00416 020040  
00417 047503 CO  
00420 050115 MP  
00421 052125 UT  
00422 051105 ER  
00423 047440 O  
00424 043106 FF  
00425 020056 .  
00426 052524 TU  
00427 047122 RN  
00430 052040 T  
00431 042510 HE  
00432 041440 C  
00433 046517 OM  
00434 052520 PU  
00435 042524 TE



00436 020122 R  
00437 047117 ON  
00440 040440 A  
00441 042116 ND  
00442 051440 S  
00443 040524 TA  
00444 052122 RT  
00445 040440 A  
00446 020124 T  
00447 047514 LO  
00450 040503 CA  
00451 044524 TI  
00452 047117 ON  
00453 032040 4  
00454 000060 01

00455 044124 MILLI: .TXT !TH  
00456 020105 E  
00457 051120 PR  
00460 041517 OC  
00461 051505 ES  
00462 047523 SO  
00463 020122 R  
00464 044504 DI  
00465 020104 D  
00466 047516 NO  
00467 020124 T  
00470 052522 RU  
00471 020116 N  
00472 047506 FO  
00473 020122 R  
00474 046462 2M  
00475 020123 S  
00476 043101 AF  
00477 042524 TE  
00500 020122 R  
00501 044124 TH  
00502 020105 E  
00503 047520 PO  
00504 042527 WE  
00505 020122 R  
00506 040506 FA  
00507 046111 IL  
00510 043040 F  
00511 040514 LA  
00512 000107 GI

00513 047516 NOINT: .TXT !NO  
00514 044440 I  
00515 052116 NT  
00516 051105 ER  
00517 052522 RU  
00520 052120 PT  
00521 042040 D  
00522 052105 ET  
00523 041505 EC  
00524 042524 TE  
00525 020104 D  
00526 047117 ON  
00527 050040 P

00530 053517 OW  
00531 051105 ER  
00532 051440 S  
00533 052510 HU  
00534 020124 T  
00535 047504 DO  
00536 047127 WN  
00537 000000 I

00540 044124 FUNNE: .TXT !TH  
00541 020105 E  
00542 040515 MA  
00543 044103 CH  
00544 047111 IN  
00545 020105 E  
00546 040527 WA  
00547 020123 S  
00550 042522 RE  
00551 052123 ST  
00552 051101 AR  
00553 042524 TE  
00554 020104 D  
00555 044527 WI  
00556 044124 TH  
00557 052517 OU  
00560 020124 T  
00561 020101 A  
00562 047520 PO  
00563 042527 WE  
00564 020122 R  
00565 040506 FA  
00566 046111 IL  
00567 044440 I  
00570 052116 NT  
00571 051105 ER  
00572 052522 RU  
00573 052120 PT  
00574 000056 .I

00575 051120 MSUM: .TXT IPR  
00576 043517 OG  
00577 040522 RA  
00600 020115 M  
00601 052523 SU  
00602 020115 M  
00603 044103 CH  
00604 041505 EC  
00605 027113 K.  
00606 042440 E  
00607 040530 XA  
00610 044515 MI  
00611 042516 NE  
00612 052040 T  
00613 042510 HE  
00614 041440 C  
00615 042510 HE  
00616 045503 CK  
00617 051040 R  
00620 052517 OU  
00621 044524 TI

ITTO NON INTERRUPT PACKAGE

;"MESS" PRINTS ASCII MESSAGES AS SPECIFIED BY ASSEMBLR  
 ;"CHAR" PRINTS ASCII CHARACTER, C(0)R,C(0)L MUST BE 0  
 ;WILL RETURN +2 IF C(0)R=0,CORRECTS THE PARITY,33 SIMUL  
 ;"TYPE" PRINTS C(0)R. MUST HAVE PROPER PARITY. RETURN IS  
 ;TO CALL+1.REPLACE THIS ROUTINE WITH INTERRUPT TYPE IF  
 ;"CRLF" PRINTS A CARRIAGE RETURN  
 ;"POCT" PRINTS C(1) IN OCTAL FOLLE\OWED BY A TAB  
 ;"PDEC" PRINTS C(1) IN DECIMAL,LEAD\NG ZEROS SUPPRESSED,  
 ;FOLLOWED BY A TAB.

00624	054552	MESS:	STA 3,MESSR	;PRINT A TEXT MESSAGE
00625	010551		ISZ MESSR	
00626	031400		LDA 2,0,3	;C(2) POINTS TO MESSAGE
00627	024546		LDA 1,C377	;A 8 BIT MASK
00630	021000		LDA 0,0,2	;C(2)=DATA WORD
00631	125112		MOVL# 1,1,SEC	
00632	123701		ANDS 1,0,SKP	
00633	123401		AND 1,0,SKP	;C(0)=DATA CHARACTER RIGHT
00634	151400		INC 2,2	;IN0 TO NEZT WORD
00635	124000		COM 1,1	;FLIP MASK
00636	004461		JSR CHAR	;PRINT
00637	000771		JMP MESS+4	;ANOTHER
00640	002536		JMP 0MESSR	;LAST
00641	020534	ZOCT:	LDA 0,C377	
00642	101001		MOV 0,0,SKP	
00643	020531	POCT:	LDA 0,C60	
00644	030432		LDA 2,OCTAB	;PRINT C(1) IN OCTAL
00645	000403		JMP .+3	
00646	030440	PDEC:	LDA 2,DECTB	;PRINT C(1) IN DECIMAL
00647	020523		LDA 0,CH240	;SUPPRESS LEADING ZEROS
00650	054446		STA 3,RADRET	;BOTH ENTRYS PRINT NUMBER
00651	040444		STA 0,ZSUPP	;THEN TAB TO NEXT POSITION
00652	050401		STA 2,+.1	
00653	000000	DECOCT:	0	;A"LDA 2,TABLE" INSTRUCTION
00654	010777		ISZ .-1	
00655	034441		LDA 3,RADRET	;SETUP "TAB" AT END
00656	151005		MOV 2,2,SNR	;IF TABLE ENTRY=0
00657	001400		JMP 0,3	;EXIT WITH TAB
00660	034435		LDA 3,ZSUPP	;ZEROS SUPPRESS STUF
00661	102400		SUB 0,0	
00662	146512	DECOT:	SUBL# 2,1,SEC	
00663	000405		JMP DECP	
00664	146400		SUB 2,1	;FORM THE DIGIT
00665	034507		LDA 3,C60	
00666	101400		INC 0,0	
00667	000773		JMP DECOT	
00670	151235	DECP:	MOVZR# 2,2,SNR	
00671	034503		LDA 3,C60	
00672	054423		STA 3,ZSUPP	;C(0)=DIGIT
00673	163000		ADD 3,0	;MAKE ASCII
00674	004423		JSR CHAR	;PRINT
00675	000756		JMP DECOCT	;GET NEXT DIGIT

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00676 030424 OCTAB: LDA 2, +1+.-DECOCT
00677 100000          100000
00700 010000          10000
00701 001000          1000
00702 000100          100
00703 000010          10
00704 000001          1
00705 000000          0

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00706 030434 DECTB: LDA 2, +1+.-DECOCT
          000012 .RDX 10
00707 023420          10000
00710 001750          1000
00711 000144          100
00712 000012          10
00713 000001          1
00714 000000          0
          000010 .RDX 8

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00715 000000 ZSUPP: 0
00716 000000 RADRET: 0

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00717 054447 CHAR: STA 3,CHRET          ;PRINT C(0) RIGHT
00720 101325          MOVZS 0,0,SNR          ;RETURN +2 IF NULL
00721 001401          JMP 1,3
00722 040445          STA 0,CHSAV
00723 176000          ADC 3,3          ;COMPUTE THE PARITY
00724 117000          ADD 0,3
00725 163404          AND 3,0,SZR
00726 000775          JMP .-3
00727 176660          SUBCR 3,3          ;COMBIND PARITY WITH CHAR
00730 020437          LDA 0,CHSAV
00731 163300          ADDS 3,0

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00732 034433 CHAR1: LDA 3,CHTAB          ;IS THIS A TAB
00733 116405          SUB 0,3,SNR
00734 000403          JMP .+3          ;YES
00735 004411          JSR TYPE          ;NO PRINT IT
00736 002430          JMP 0,CHRET          ;EXIT

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00737 020431          LDA 0,CHORZ          ;SIMULATE A TAB
00740 034431          LDA 3,CHAR7          ;VIA 1 TO 8 SPACES
00741 117405          AND 0,3,SNR
00742 002424          JMP 0,CHRET
00743 020427          LDA 0,CH240
00744 004402          JSR TYPE
00745 000772          JMP .-6

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00746 010422 TYPE:   ISZ CHORZ           ;INC HORIZONTAL POSITION
00747 063511         SKPBZ TTO          ;TAIT IF TTO BUSY
00750 000777         JMP  -1
00751 061111         DOAS 0,TTO        ;SEND CHAR
00752 001400         JMP 0,3           ;EXIT

00753 054420 CRLF:   STA 3,CRLFR       ;SAVE RETURN
00754 020410         LDA 0,C215
00755 004742         JSR CHAR          ;PRINT CARRIAGE AND LF
00756 020405         LDA 0,C212
00757 004740         JSR CHAR
00760 102400         SUB 0,0
00761 040407         STA 0,CHORZ      ;CLEAR HORZ POSITION
00762 002411         JMP 0,CRLFR      ;EXIT

00763 000212 C212:   212
00764 000215 C215:   215
00765 000011 CHTAB:  11
00766 000000 CHRET:  0
00767 000000 CHSAV:  0
00770 000000 CHORZ:  0
00771 000007 CHAR7:  7
00772 000240 CH240: 240
00773 000000 CRLFR:  0
00774 000060 C60:    60

00775 000377 C377:   377
00776 000000 MESSR:  0

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.END