

XSUB LOADS BELOW CCP, AND FEEDS COMMAND LINES TO
PROGRAMS WHICH READ BUFFERED INPUT

```
0000 = BIAS EQU 0000H ;BIAS FOR RELOCATION
FFFF = BASE EQU OFFFHH ;NO INTERCEPTS BELOW HERE
0000 = WBOOT EQU 0000H
0005 = BDOS EQU 0005H
0006 = BDOSL EQU BDOS+1
0080 = DBUFF EQU 0080H
```

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;
000D = CR EQU 0DH ;CARRIAGE RETURN
000A = LF EQU 0AH ;LINE FEED
000E = MODNUM EQU 14 ;MODULE NUMBER POSITION
0009 = PBUFF EQU 9 ;PRINT BUFFER
000A = RBUFF EQU 10 ;READ BUFFER
000F = OPENF EQU 15 ;OPEN FILE
0010 = CLOSEF EQU 16 ;CLOSE FILE
0013 = DELF EQU 19 ;DELETE FILE
0014 = DREADF EQU 20 ;DISK READ
001A = DMAF EQU 26 ;SET DMA FUNCTION
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```
;
0000 ORG 0000H+BIAS
; INITIALIZE Jumps TO INCLUDE XSUB MODULE
0000 C30D00 JMP START
0003 DS 3
```

```
TRAPJMP:
0006 C35D00 JMP TRAP
0009 78737562 DB 'xsub'
```

```
START:
000D 2A0100 LHL D WBOOT+1
0010 222D00 SHL D SAVBOOT
0013 212F00 LXI H,WSTART
0016 220100 SHL D WBOOT+1
0019 2A0600 LHL D BDOSL
001C 222B00 SHL D RBDOS+1 ;REAL BDOS ENTRY
001F 210600 LXI H,TRAPJMP ;ADDRESS TO FILL
0022 220600 SHL D BDOSL ;JMP @0005 LEADS TO TRAP
0025 E1 POP H ;CCP RETURN ADDRESS
0026 22BC01 SHL D CCPRET
0029 E9 PCHL ;BACK TO CCP
```

```
;
002A C30000 RBDOS: JMP 0000H ;FILLED IN AT INITIALIZATION
SAVBOOT:
002D DS 2 ;WARM BOOT SAVED AND RESTORED AT END
; ;OF SUBMIT FILE
```

```
;
WSTART:
002F 31DE01 LXI SP,STACK
0032 0E09 MVI C,PBUFF ;PRINT MESSAGE
0034 114D00 LXI D,ACTMSG
0037 CD2A00 CALL RBDOS
```

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003A 218000      LXI      H,DBUFF ;RESTORE DEFAULT BUFFER
003D 22BA01      SHLD     UDMA
0040 CD8100      CALL     RSETDMA
0043 210600      LXI      H,TRAPJMP
0046 220600      SHLD     BDOSL ;FIXUP LOW JUMP ADDRESS
0049 2ABC01      LHL      CCPRET ;BACK TO CCP
004C E9          PCHL
004D 0D0A287873ACTMSG: DB      CR,LF,'(xsub active)$'
;
TRAP: ;ARRIVE HERE AT EACH BDOS CALL
005D E1          POP      H ;RETURN ADDRESS
005E E5          PUSH     H ;BACK TO STACK
005F 7C          MOV      A,H ;HIGH ADDRESS
0060 FEFF        CPI      BASE SHR 8
0062 D22A00      JNC      RBDOS ;SKIP CALLS ON BDOS ABOVE HERE
0065 79          MOV      A,C ;FUNCTION NUMBER
0066 FE0A        CPI      RBUFF
0068 CAA500      JZ       RNBUFF ;READ NEXT BUFFER
006B FE 1        CPI      DMAF ;SET DMA ADDRESS?
006D C22A00      JNZ      RBDOS ;SKIP IF NOT
0070 EB          XCHG     ;DMA TO HL
0071 22BA01      SHLD     UDMA ;SAVE IT
0074 EB          XCHG
0075 C32A00      JMP      RBDOS
;
SETDMA:
0078 0E1A        MVI      C,DMAF
007A 113701      LXI      D,COMBUF
007D CD2A00      CALL     RBDOS
0080 C9          RET
;
RSETDMA:
0081 0E1A        MVI      C,DMAF
0083 2ABA01      LHL      UDMA
0086 EB          XCHG
0087 CD2A00      CALL     RBDOS
008A C9          RET
;
FBDOS:
008B C5          PUSH     B
008C D5          PUSH     D
008D CD7800      CALL     SETDMA
0090 D1          POP      D
0091 C1          POP      B
0092 CD2A00      CALL     RBDOS
0095 F5          PUSH     PSW
0096 CD8100      CALL     RSETDMA
0099 F1          POP      PSW
009A C9          RET
;
CKSUB: ;CHECK FOR SUB FILE PRESENT
009B 0EOF        MVI      C,OPENF
009D 111601      LXI      D,SUBFCB
00A0 CD8B00      CALL     FBDOS ;SUBMIT FILE PRESENT?
00A3 3C          INR      A ;00 IF NOT PRESENT
00A4 C9          RET

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```

;
RNBUFF:
00A5 D5          PUSH      D          ;COMMAND ADDRESS
00A6 CD9B00      CALL      CKSUB      ;SUB FILE PRESENT?
00A9 D1          POP       D
00AA 0E0A        MVI       C,RBUFF
00AC CA0D01      JZ        RESTOR     ;NO SUB FILE

;

00AF D5          PUSH      D
00B0 3A2501      LDA       SUBRC      ;LENGTH OF FILE
00B3 B7          ORA       A          ;ZERO?
00B4 CA2A00      JZ        RBDOS      ;SKIP IF SO
00B7 3D          DCR       A          ;LENGTH - 1
00B8 323601      STA       SUBCR      ;NEXT TO READ
00BB 0E14        MVI       C,DREADF
00BD 111601      LXI       D,SUBFCB
00C0 CD8B00      CALL      FBDOS      ;READ RECORD
;
NOW PRINT THE BUFFER WITH CR,LF
00C3 213701      LXI       H,COMBUF
00C6 5E          MOV       E,M        ;LENGTH
00C7 1600        MVI       D,0        ;HIGH ORDER 00
00C9 19          DAD       D          ;TO LAST CHARACTER POSITION
00CA 23          INX       H
00CB 360D        MVI       M,CR
00CD 23          INX       H
00CE 360A        MVI       M,LF
00D0 23          INX       H
00D1 3624        MVI       M,'$'
00D3 0E09        MVI       C,PBUFF
00D5 113801      LXI       D,COMBUF+1
00D8 CD2A00      CALL      RBDOS      ;TO PRINT IT
00DB E1          POP       H          ;.MAX LENGTH
00DC 113701      LXI       D,COMBUF
00DF 1A          LDAX      D          ;HOW LONG?
00E0 BE          CMP       M          ;CY IF OK
00E1 DAE600      JC        MOVLIN
00E4 7E          MOV       A,M        ;MAX LENGTH
00E5 12          STAX      D          ;TRUNCATE LENGTH

MOVLIN:
00E6 4F          MOV       C,A        ;LENGTH TO C
00E7 0C          INR       C          ;+1
00E8 23          INX       H          ;TO LENGTH OF LINE

RDLOOP:
00E9 1A          LDAX      D          ;NEXT CHAR
00EA 77          MOV       M,A
00EB 23          INX       H
00EC 13          INX       D
00ED 0D          DCR       C
00EE C2E900      JNZ       RDLOOP     ;LOOP TIL COPIED
00F1 0E10        MVI       C,CLOSEF
00F3 111601      LXI       D,SUBFCB
00F6 210E00      LXI       H,MODNUM
00F9 19          DAD       D          ;HL=FCB(MODNUM)
00FA 3600        MVI       M,0        ;=0 SO ACTS AS IF WRITTEN
00FC 3A3601      LDA       SUBCR      ;LENGTH OF FILE
00FF 3D          DCR       A          ;INCREMENTED BY READ OP

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0100 322501	STA	SUBRC	;DECREASE FILE LENGTH
0103 B7	ORA	A	;AT ZERO?
0104 C20901	JNZ	FILEOP	
0107 0E13	MVI	C,DELE	;DELETE IF AT END
0109 CD8B00	FILEOP: CALL	FBDOS	
010C C9	RET		
	RESTOR:		
010D 2A2D00	LHLD	SAVBOOT	
0110 220100	SHLD	WBOOT+1	
0113 C32A00	JMP	RBDOS	
	; SUBFCB:		
0116 01	DB	1	;A:
0117 2424242020	DB	'\$\$\$	'
011F 535542	DB	'SUB'	
0122 000000	DB	0,0,0	
	SUBRC:		
0125	DS	1	
0126	DS	16	;MAP
0136	SUBCR: DS	1	
	; COMBUF: DS	131	
0137	UDMA: DW	DBUFF	
01BA 8000	CCPRET: DS	2	;CCP RETURN ADDRESS
01BC	DS	32	;16 LEVEL STACK
01BE	STACK:		
01DE	END		

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004D ACTMSG	FFFF BASE	0005 BDOS	0006 BDOSL	0000 BIAS
01BC CCPRET	009B CKSUB	0010 CLOSEF	0137 COMBUF	000D CR
0080 DBUFF	0013 DELF	001A DMAF	0014 DREADF	008B FBDOS
0109 FILEOP	000A LF	000E MODNUM	00E6 MOVLIN	000F OPENF
0009 PBUFF	002A RBDOS	000A RBUFF	00E9 RDLOOP	010D RESTOR
00A5 RNBUFF	0081 RSETDMA	002D SAVBOOT	0078 SETDMA	01DE STACK
000D START	0136 SUBCR	0116 SUBFCB	0125 SUBRC	0006 TRAPJMP
005D TRAP	01BA UDMA	0000 WBOOT	002F WSTART	

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