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*
***** SPECTRUM MAIN ROM LISTING 10-11-84 BY A. ANTONIOLI *****
*Uilvno ammatornamento 5/8/85
*
XBSTATE EQU 5C00H 123552 -
LASTK EQU 5C08H 123560 -
REPDEL EQU 5C09H 123561 -
REPERR EQU 5C0AH 123562 -
DEFADD EQU 5C0BH 123563 -
KDATA EQU 5C0DH 123565 -
TVDATA EQU 5C0EH 123566 -
STRMS EQU 5C10H 123568 -
CHARG EQU 5C36H 123608 -
RASP EQU 5C38H 123608 -
PIP EQU 5C39H 123609 -
ERRNR EQU 5C3AH 123610 -
FLAGE EQU 5C3BH 123611 -
TVFLAG EQU 5C3CH 123612 -
ERROR EQU 5C3DH 123613 -
LISTEP EQU 5C3FH 123615 -
MODE EQU 5C41H 123617 -
NEWPPC EQU 5C42H 123618 -
NSPPC EQU 5C44H 123620 -
PPC EQU 5C45H 123621 -
SUSPPC EQU 5C47H 123623 -
BORDPC EQU 5C48H 123624 -
EPPC EQU 5C49H 123625 -
VARS EQU 5C4BH 123627 -
DEBT EQU 5C4DH 123628 -
CHANG EQU 5C4FH 123631 -
CURCHL EQU 5C51H 123633 -
PROG EQU 5C56H 123635 -
NXTLIN EQU 5C58H 123637 -
DATADD EQU 5C57H 123636 -
ELINE EQU 5C59H 123641 -
KOUR EQU 5C5BH 123643 -
CHADD EQU 5C5DH 123646 -
XPTR EQU 5C5FH 123647 -
WORKSP EQU 5C61H 123648 -
STKBOT EQU 5C63H 123651 -
STKEND EQU 5C65H 123653 -
BREG EQU 5C67H 123655 -
MEM EQU 5C68H 123656 -
FLAGB2 EQU 5C6AH 123658 -
DRSZ EQU 5C6BH 123659 -
STOP EQU 5C6CH 123660 -
OLDPPC EQU 5C6EH 123662 -
OSPPC EQU 5C70H 123664 -
FLAGX EQU 5C71H 123665 -
STRLEN EQU 5C72H 123666 -
TADDR EQU 5C74H 123668 -
SEED EQU 5C76H 123670 -
FRAMES EQU 5C78H 123672 -
UBB EQU 5C79H 123675 -
COORDS EQU 5C7DH 123677 -
PPOSN EQU 5C7FH 123679 -
PROC EQU 5C80H 123680 -
ECHOE EQU 5C82H 123682 -
DFCC EQU 5C84H 123684 -
DFCCL EQU 5C86H 123686 -

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SPOSN EQU 5088H ;20888 -
SPOSNL EQU 508AH ;20890 -
SERCT EQU 508CH ;20892 -
ATTRP EQU 508EH ;20894 -
MASKP EQU 508EH ;20894 -
ATTRT EQU 508FH ;20895 -
MASKT EQU 508OH ;20896 -
PFLAG EQU 5081H ;20897 -
MEMBOT EQU 5082H ;20898 -
MEM1 EQU 5087H ;20703 - 5 BYTES
MEM2 EQU 508CH ;20706 - 5 BYTES
MEM3 EQU 50A1H ;20713 - 5 BYTES
MEM4 EQU 50A6H ;20716 - 5 BYTES
MEM5 EQU 50ABH ;20723 - 5 BYTES
NMIADD EQU 50B0H ;20728 -
RAMTOP EQU 50B2H ;20730 -
PRAMT EQU 50B4H ;20732 -
;
ENDCAL EQU 38H ;F.P. END OF CALCULATION

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ORG 0

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;
0000 F3 START: DI
0001 AF XOR A
0002 11FFFF LD DE,0FFFFH
0005 C3CB11 JP A11CB STRJW
;
0008 2A5D5C ERROR1: LD HL,(CHADD)
000B 225F5C LD (XPTR),HL
000E 1843 JR A0053 ERROR2
;
0010 C3F215 PRNTA1: JP A15F2 PRNTA2
;
0013 FFFFFFFF DB OFFH,OFFH,OFFH,OFFH,OFFH
;
0018 2A5D5C GETCHR: LD HL,(CHADD)
0019 7E LD A,(HL)
001C CD7D00 GC1: CALL A007D SKPOVR
001F D0 RET NC
0020 CD7400 NXTCHR: CALL A0074
0023 18F7 JR GC1
;
0025 FFFFFFFF DB OFFH,OFFH,OFFH
;
0028 C35833 FPCALC: JP A3058 CALC
;
002B FFFFFFFF DB OFFH,OFFH,OFFH,OFFH,OFFH
;
0030 C5 BCSPCS: PUSH BC
0031 2A615C LD HL,(WORKBP)
0034 E5 PUSH HL
0035 C39E18 JP A168E RESERV
;
0038 F5 MSKINT: PUSH AF
0039 E5 PUSH HL
003A 2A785C LD HL,(FRAMES)
003D 23 INC HL
003E 22785C LD (FRAMES),HL
0041 7C LD A,H
0042 B5 OR L

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0043 2003          JR      NZ,KEYINT
0045 FD3440        INC      (IY+40H)
0048 05           KEYINT:  PUSH    BC
0049 05           PUSH    DE
004A CDBF02        CALL    AO2BF KBARD
004D 01           POP     DE
004E 01           POP     BC
004F 01           POP     HL
0050 01           POP     AF
0051 0B           EI
0052 0B           RET

;
0053 01           A0053:  POP     HL
0054 0E           LD      L,(HL)
0055 FD7500        A0055:  LD      (IY+0),L
0058 ED7B8D5C      LD      SP,(ERRBF)
005C C8C51B        JP      A16C5 SETSTK

;
0067 FFFFFFFF      DB      OFFH,OFFH,OFFH,OFFH,OFFH
0064 FFFF         DB      OFFH,OFFH

;
0065 05           PUSH   AF
0067 05           PUSH   HL
0068 ZAB05C      LD      HL,(NMIADD)
006B 7C           LD      A,H
006C 05           OR     L
006D 2001        JR      NZ,A0070 NORSET
006F 0B           JP      (HL)

;
0070 01           NORSET A0070:  POP     HL
0071 01           POP     AF
0072 ED45        RETN

;
0074 ZA5D5C      A0074:  LD      HL,(CHADD)
0077 23           A0077:  INC     HL
0078 Z25D5C      A0078:  LD      (CHADD),HL
0079 7E           LD      A,(HL)
007C 0B           RET

;
007D FE21        A007D:  CP      21H
007F 00           RET     NC
0080 FE00        CP      00H
0082 0B           RET     Z
0083 FE10        CP      10H
0085 0B           RET     C
0086 FE18        CP      18H
0088 0F           CCF
0089 0B           RET     C
008A 23           INC     HL
008B FE18        CP      18H
008D 3B01        JR      C,A0080 Skips
008F 23           INC     HL
0090 07           Skips A0090:  SCF
0091 Z25D5C      LD      (CHADD),HL
0094 0B           RET

;
0095 0F           T0095:  DB      'T'+80H,'RN', 'D'+80H,'INKEY', '$'+80H
009F 00           DB      'P', 'I'+80H,'F', 'N'+80H,'PCIN', 'T'+80H
00A8 02           DB      'SCREEN', '$'+80H,'ATT', 'R'+80H,'A', 'T'+80H
00B5 04           DB      'TA', 'B'+80H,'VAL', '$'+80H,'COD', 'E'+80H

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00C0	58	DB	'VA', 'L'+BOH, 'LE', 'N'+BOH, 'BI', 'N'+BOH
00C5	43	DB	'CC', 'S'+BOH, 'TA', 'N'+BOH, 'AS', 'N'+BOH
00D1	41	DB	'AC', 'S'+BOH, 'AT', 'N'+BOH
00DB	4C	DB	'L', 'N'+BOH, 'EX', 'P'+BOH, 'IN', 'T'+BOH
00E0	53	DB	'SS', 'R'+BOH, 'SS', 'N'+BOH, 'AB', 'S'+BOH
00E8	50	DB	'PEE', 'K'+BOH, 'I', 'N'+BOH, 'US', 'R'+BOH
00F2	53	DB	'STR', '#'+BOH, 'CHR', '#'+BOH, 'ND', 'T'+BOH
00FD	42	DB	'BI', 'N'+BOH
0100	4F	DB	'D', 'R'+BOH, 'AN', 'D'+BOH, 'K', '='+BOH
0107	3E	DB	'>', '='+BOH, '<', '>'+BOH, 'LIN', 'E'+BOH
010F	54	DB	'THE', 'N'+BOH, 'T', 'D'+BOH, 'STE', 'P'+BOH
011B	44	DB	'DEF F', 'N'+BOH, 'CA', 'T'+BOH, 'FORMA', 'T'+BOH
0128	4D	DB	'MOV', 'E'+BOH, 'ERAS', 'E'+BOH, 'OPEN', '#'+BOH
0137	45	DB	'CLOSE', '#'+BOH, 'MERG', 'E'+BOH
0143	55	DB	'VERIF', 'Y'+BOH, 'BEE', 'P'+BOH, 'CIRCL', 'E'+BOH
0152	49	DB	'IN', 'K'+BOH, 'PAPE', 'R'+BOH, 'FLAS', 'H'+BOH
0160	42	DB	'BRIGH', 'T'+BOH, 'INVERS', 'E'+BOH, 'DVE', 'R'+BOH
0171	4F	DB	'DU', 'T'+BOH, 'LPRIN', 'T'+BOH, 'LLIS', 'T'+BOH
017F	53	DB	'STD', 'P'+BOH, 'REA', 'D'+BOH, 'DAT', 'A'+BOH
018B	52	DB	'RESTOR', 'E'+BOH, 'NE', 'W'+BOH, 'BORDE', 'R'+BOH
018B	43	DB	'CONTINU', 'E'+BOH, 'DI', 'M'+BOH, 'RE', 'M'+BOH
01A5	46	DB	'FD', 'R'+BOH, 'GD T', 'D'+BOH, 'GD SU', 'B'+BOH
01B7	49	DB	'INPU', 'T'+BOH, 'LDA', 'D'+BOH, 'LIS', 'T'+BOH
01C4	4C	DB	'LE', 'T'+BOH, 'PAUS', 'E'+BOH, 'NEX', 'T'+BOH
01D0	50	DB	'POK', 'E'+BOH, 'PRIN', 'T'+BOH, 'PLD', 'T'+BOH
01DD	52	DB	'RU', 'N'+BOH, 'SAV', 'E'+BOH, 'RANDOMIZ', 'E'+BOH
01ED	49	DB	'I', 'F'+BOH, 'CL', 'S'+BOH, 'DRA', 'W'+BOH
01F3	43	DB	'CLEA', 'R'+BOH, 'RETUR', 'N'+BOH, 'CDF', 'Y'+BOH
/			
0205	42	DB	T0205: 'SHYB5TBU'
020D	4E	DB	'NJU74RFD'
0215	4D	DB	'MKI83EDK'
021D	0E	DB	12, 'L082WSZ'
0225	20	DB	' ', 13, 'PO1GA'
/			
022D	E3	DB	0E3H, 0E4H, 0E0H, 0E4H
0230	D4	DB	T0230: 0B4H, 0BCH, 0BDH, 0BBH
0234	AF	DB	0AFH, 0B0H, 0B1H, 0C0H
0238	A7	DB	0A7H, 0A6H, 0BEH, 0ADH
023C	B2	DB	0B2H, 0BAH, 0E5H, 0A5H
0240	C2	DB	0C2H, 0E1H, 0B3H, 0B3H
0244	C1	DB	0C1H, 0BBH
/			
0248	7E	DB	07EH, 0DCH, 0DAH, 05CH
024A	B7	DB	0B7H, 078H, 07DH, 0DBH
024E	BF	DB	0BFH, 0AEH, 0AAH, 0ABH
0252	DD	DB	0DDH, 0DEH, 0DFH, 07FH
0256	B5	DB	0B5H, 0B6H, 07CH, 0B5H
025A	5D	DB	05DH, 0DBH, 0B6H, 0D9H
025E	5B	DB	05BH, 0D7H
/			
0260	0C	DB	0CH, 7, 6, 4
0264	05	DB	5, 6, 0AH, 0BH
0268	09	DB	9, 0FH
/			
026A	E2	DB	0E2H, 02AH, 03FH, 0C0H
026E	08	DB	0C8H, 0CCH, 0C9H, 05EH
0272	AC	DB	0ACH, 02DH, 028H, 03DH
0276	2E	DB	02EH, 02CH, 0B8H, 022H
027A	C7	DB	0C7H, 0C3H, 0C3H, 03EH

027E	C5		DB	0C5H,02FH,0CBH,0B0H
0282	CB		DB	0CBH,0CAH
0284	D0		DB	0D0H,0CEH,0ABH,0CAH
0288	D3		DB	0D3H,0D4H,0D1H,0D2H
028C	A8		DB	0ABH,0CFH
028E	2E2F	<i>KSCAN</i> A028E:	LD	L,2FH
0290	11FFFF		LD	DE,0FFFFH
0293	01FEFE		LD	BD,0FEFEH
0296	ED7B	<i>KLINE</i> A0296:	INC	A,(C)
0298	2F		DPL	
0299	EB1F		AND	1FH
029B	Z80E		JR	Z,A02AB <i>KDONE</i>
029D	67		LB	H,A
029E	7D		LD	A,L
029F	14	<i>K3KEYS</i> A029F:	INC	B
02A0	C0		RET	NZ
02A1	D808	<i>KBITS</i> A02A1:	SUB	B
02A3	C83C		SRL	H
02A5	30FA		JR	NC,A02A1 <i>KBITS</i>
02A7	53		LD	D,E
02A8	5F		LD	E,A
02AB	Z0F4		JR	NZ,A02BF <i>K3KEYS</i>
02AB	29	<i>KDONE</i> A02AB:	DEC	L
02AC	C800		RLC	B
02AE	38EB		JR	C,A0296 <i>KLINE</i>
02B0	7A		LD	A,D
02B1	3C		INC	A
02B2	CB		RET	Z
02B3	FE2B		CP	2BH
02B5	CB		RET	Z
02B6	FE1B		CP	1BH
02B8	CB		RET	Z
02B9	7B		LD	A,E
02BA	5A		LD	E,D
02BB	57		LD	D,A
02BC	FE1B		CP	1BH
02BE	CB		RET	
02BF	CD8E02	<i>KBOARD</i> A02BF:	CALL	A02BE <i>KSCAN</i>
02C2	C0		RET	NZ
02C3	21005C		LD	HL,KSTATE
02C5	CB7E	<i>KSTLP</i> A02C5:	BIT	7,(HL)
02C8	Z007		JR	NZ,A02D1 <i>KCHSET</i>
02CA	Z3		INC	HL
02CB	35		DEC	(HL)
02CC	ZB		DEC	HL
02CD	Z002		JR	NZ,A02D1 <i>KCHSET</i>
02CF	38FF		LD	(HL),OFFH
02D1	7D	<i>KCHSET</i> A02D1:	LD	A,L
02D2	Z1045C		LD	HL,KSTATE+4
02D5	3D		CP	L
02D6	Z0EE		JR	NZ,A02C5 <i>KSTLP</i>
02D8	CD1E03		CALL	A031E <i>KTEST</i>
02DB	D0		RET	NC
02DC	Z1005C		LD	HL,KSTATE
02DF	BE		CP	(HL)
02E0	Z82E		JR	Z,A0310 <i>KREPT</i>
02E2	EB		EX	DE,HL

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02E3 21045C      LD      HL,KSTATE+4
02E6 0E          CP      (HL)
02E7 2827        JR      Z,A0310 KREPT
02E8 0B7E        BIT     7,(HL)
02EB 2004        JR      NZ,A02F1 KNEW
02ED 0B          EX      DE,HL
02EE 0B7E        BIT     7,(HL)
02F0 0B          RET     Z
02F1 5F          LD      E,A
           KNEW A02F1:
02F2 77          LD      (HL),A
02F3 23          INC     HL
02F4 3605        LD      (HL),5
02F6 23          INC     HL
02F7 3A085C      LD      A,(REPERR)
02FA 77          LD      (HL),A
02FB 23          INC     HL
02FC FD4E07      LD      D,(IY+7)
02FF FD5801      LD      D,(IY+1)
0302 05          PUSH   HL
0303 0D3303      CALL   A0333 KDCODE
0306 01          POP    HL
0307 77          LD      (HL),A
0308 32085C      LD      (LASTK),A
           KEND A0308:
030B FDC801EE    SET     5,(IY+1)
030F 0B          RET

;
0310 23          INC     HL
           KREPT A0310:
0311 3605        LD      (HL),5
0313 23          INC     HL
0314 35          DEC     (HL)
0315 00          RET     NZ
0316 3A0A5C      LD      A,(REPERR)
0319 77          LD      (HL),A
031A 23          INC     HL
031B 7E          LD      A,(HL)
031C 18EA        JR      A0308 KEND

;
031E 42          LD      B,D
           KTEST A031E:
031F 1600        LD      D,0
0321 7B          LD      A,E
0322 FE27        CP      27H
0324 00          RET     NC
0325 FE18        CP      18H
0327 2003        JR      NZ,A032C KMAIN
0328 0B7B        BIT     7,B
0329 00          RET     NZ
032C 210502      LD      HL,T0205
           KMAIN A032C:
032F 18          ADD     HL,DE
0330 7E          LD      A,(HL)
0331 37          SCF
0332 0B          RET

;
0333 7B          LD      A,E
           KDCODE A0333:
0334 FE3A        CP      3AH
0336 3B2F        JR      C,A0337 KDIFIT
0338 00          DEC     C
0339 FA4F03      JP      M,A034F KKLLEL
033C 2B03        JR      Z,A0341 KKL
033E 0B4F        ADD     A,4FH
0340 0B          RET

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0341 21E801 KELA0341: LD HL,T01E8
0344 04 INC B
0345 2B03 JR Z,A034A KKKUP
0347 210502 LD HL,T0205
034A 1800 KKKUPA034A: LD D,0
034C 19 ADD HL,DE
034D 7E LD A,(HL)
034E 08 RET

034F 212802 KKKUPA034F: LD HL,T0228
0352 0B40 BIT 0,B
0354 2BF4 JR Z,A034A KKKUP
035B 0B5A BIT 0,D
035B 2B0A JR Z,A03B4 KTKNS
035A FDCB305E BIT 0,(IY+30H)
035E C0 RET NZ
035F 04 INC B
0360 C0 RET NZ
0361 0B20 ADD A,20H
0363 08 RET

0364 0BA5 KTKNS A03B4: ADD A,A5H
0366 08 RET

0367 FE30 K016IT A03B7: CP 30H
0368 08 RET C
036A 0D DEC C
036B FA9D03 LP M,A03B8 K KLCD
036E 2018 JR NZ,A03B8 K GRAD
0370 215402 LD HL,T0254
0373 0B68 BIT 5,B
0375 2B03 JR Z,A034A KKKUP
0377 FE38 CP 38H
0379 3007 JR NC,A03B2 K849
037B 0B20 SUB 20H
037D 04 INC B
037E 08 RET Z
037F 0B08 ADD A,8
0381 08 RET

0382 0B38 K849 A03B2: SUB 38H
0384 04 INC B
0385 08 RET Z
0386 0BFE ADD A,0FEH
0388 08 RET

0389 213002 KHRAD A03B9: LD HL,T0230
038C FE38 CP 38H
038E 2B8A JR Z,A034A KKKUP
0390 FE30 CP 30H
0392 2B68 JR Z,A034A KKKUP
0394 E807 AND 7
0396 0B80 ADD A,80H
0398 04 INC B
0399 08 RET Z
039A E80F XOR 0FH
039C 08 RET

039D 04 KKKLD A039D: INC B

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038E CB RET Z
038F CB8B BIT 5,B
03A1 218002 LD HL,70230
03A4 20A4 JR NZ,A034A KLRUP
03A6 D810 SUB 10H
03A8 FE22 CP 22H
03AA 2808 JR Z,A03B2 K@CHR
03AC FE20 CP 20H
03AE C0 RET NZ
03AF 3E5F LD A,5FH
03B1 C8 RET

;
03B2 3E40 K@CHR A03B2: LD A,40H
03B4 C8 RET

;
03B5 F3 BEEPER A03B5: DI
03B6 7D LD A,L
03B7 CB8D SRL L
03B8 CB3D SRL L
03BB 2F CPL
03BC E603 AND B
03BE 4F LD C,A
03BF 0800 LD B,0
03C1 DD21D103 LD IX,A03D1
03C5 D808 ADD IX,BC
03C7 3A485C LD A,(BCDR0)
03CA E628 AND 28H
03CC 0F RRCA
03CD 0F RRCA
03CE 0F RRCA
03CF F808 OR B
03D1 00 BEIX3 A03D1: NOP
03D2 00 BEIX2 NOP
03D3 00 BEIX1 NOP
03D4 04 BEIX0 INC B
03D5 0C INC C
03D6 0D BEHLLP A03D6: DEC C
03D7 20FD JR NZ,A03D6 BEHLLP
03D8 0E3F LD C,03FH
03DB 05 DEC B
03DC C2D603 JP NZ,A03D6 BEHLLP
03DF EE10 XOR 10H
03E1 D3FE OUT (0FEH),A
03E3 44 LD B,H
03E4 4F LD C,A
03E5 CB87 BIT 4,A
03E7 2008 JR NZ,A03F2 BE AGN
03E8 7A LD A,D
03EA 83 OR E
03EB 2808 JR Z,A03FB BEEND
03ED 78 LD A,C
03EE 4D LD C,L
03EF 1B DEC DE
03F0 DDE8 JP (IX)

;
03F2 4D A03F2: LD C,L
03F3 0C INC C
03F4 DDE8 JP (IX)

;
03FB F8 A03FB: EI

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03F7 DB RET
;
03FB EF RST FPCALC
03FB 31 DB 31H
03FA 27 DB 27H
03FB 00 DB 000H
03FC 03 DB 3
03FD 34 DB 34H
03FE EC DB 0E0H
03FF 80 DB 80H
0400 99 DB 99H
0401 1F DB 1FH
0402 F5 DB 0F5H
0403 04 DB 4
0404 A1 DB 0A1H
0405 0F DB 0FH
0406 38 DB ENDCAL
;
0407 21825C LD HL, MEMBOT
0408 7E LD A, (HL)
0409 A7 AND A
040C 205D JR NZ, REPRTB
040E 23 INC HL
040F 4E LD C, (HL)
0410 23 INC HL
0411 48 LD B, (HL)
0412 78 LD A, B
0413 17 RLA
0414 9F SBC A, A
0415 88 CP C
0416 2054 JR NZ, REPRTB
0418 23 INC HL
0419 8E CP (HL)
041A 2050 JR NZ, REPRTB
041C 78 LD A, B
041D C83C ADD A, 8CH
041F F22504 JP P, 0425H BE10K
0422 E28C04 JP PB, REPRTB
0425 08FA LD B, 0FAH BE10K:
0427 04 INC B BE0CTV:
0428 D80C SUB 0CH
042A 30FB JR NC, 0427H BE0CTV
042C C80C SUB 0CH
042E C5 PUSH BC
042F 218E04 LD HL, 048EH
0432 C00534 CALL 3408H ; LOCMEM
0435 0D CALL 33B4H ; STKNUM
0438 EF RST FPCALC
0439 04 DB 4
043A 38 DB ENDCAL
;
043B F1 POP AF
043C 88 ADD A, (HL)
043D 77 LD (HL), A
043E EF RST FPCALC
043F C0 DB 000H
0440 02 DB 02H
0441 31 DB 31H
0442 38 DB ENDCAL
0443 CDS41E CALL 1E84H ; F0INT1

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0446	FE		CP	0BH	
0448	3022		JR	NC,REPRTB	
044A	EF		RST	FFDCA0	
044B	E0		DB	0E0H	
044C	04		DB	004H	
044D	E0		DB	0E0H	
044E	34		DB	004H	
044F	80		DB	0B0H	
0450	40		DB	040H	
0451	50		DB	050H	
0452	9F		DB	0BFFH	
0453	80		DB	0B0H	
0454	01		DB	001H	
0455	05		DB	005H	
0456	34		DB	004H	
0457	35		DB	005H	
0458	71		DB	071H	
0459	09		DB	009H	
045A	3B		DB	ENDCAL	
;					
045B	CD881E		CALL	1E88H	; FN:INT2,IT2
045E	05		PUSH	0C	
045F	CD881E		CALL	1E88H	FN:INT2
0462	E1		POP	HL	
0463	50		LD	D,B	
0464	58		LD	E,C	
0465	7A		LD	A,D	
0466	83		OR	E	
0467	08		RET	Z	
0468	1B		DEC	DE	
0469	CD8E03		JP	08B5H	;BEEPER
;					
048C	DF	REPRTB:	RST	ERROR1	
048D	0A		DB	0AH	; INTEGER OUT OF RANGE
;					
046E	88		DB	88H,2,0D0H,12H,88H	;C = 281.88 HZ
0473	88		DB	88H,0AH,87H,80H,75H	;C# = 277.18 HZ
0478	88		DB	88H,12H,0D5H,17H,1FH	;D = 288.88 HZ
047D	88		DB	88H,18H,80H,41H,2	;D# = 311.18 HZ
0482	88		DB	88H,24H,0D0H,53H,0CAH	;E = 320.88 HZ
0487	88		DB	88H,2EH,8DH,36,0B1H	;F = 348.28 HZ
048C	88		DB	88H,38H,0FFH,48H,3EH	;F# = 368.88 HZ
0491	88		DB	88H,48H,0FFH,5AH,78H	;G = 382 HZ
0496	88		DB	88H,4FH,0A7H,0,54H	;G# = 415.30 HZ
049B	88		DB	88H,5CH,0,0,0	;A = 440 HZ
04A0	88		DB	88H,68H,14H,0FBH,24H	;A# = 466.18 HZ
04A5	88		DB	88H,76H,0F1H,10H,5	;B = 488.88 HZ
;					
04AA	CDFB24	EXZX81:	CALL	24FBH	
04AD	3A3B5C		LD	A,(503BH)	
04B0	87		ADD	A,A	
04B1	FABA1C		JP	M,10BAH	
04B4	E1		POP	HL	
04B5	D0		RET	NC	
04B6	E5		PUSH	HL	
04B7	CDF12B		CALL	2BF1H	
04BA	82		LD	H,D	
04BB	8B		LD	L,E	
04BC	0D		DEC	C	
04BD	7B		RET	M/M	

048E	08		ADD	HL,BC
048F	CBFE		SET	7,(HL)
04C1	08		RET	
;				
04C2	210F05	A04C2:	LD	HL,A053F
04C5	15		PUSH	HL
04C6	21801F		LD	HL,1F80H
04C8	CB7F		BIT	7,A
04C9	2803		JR	Z,A04D0 SAFLAG
04CD	21880C		LD	HL,0CE8H
04D0	08	SAFLAG A04D0:	EX	AF,AF'
04D1	13		INC	DE
04D2	DD28		DEC	IX
04D4	F3		DI	
04D5	3E02		LD	A,2
04D7	47		LD	B,A
04DB	10FE	SA LEAD A04DB:	DJNZ	A04DB SA LEAD
04DA	D3FE		OUT	(OFEH),A
04DC	EE0F		XOR	0FH
04DE	0BA4		LD	B,0A4H
04E0	2D		DEC	L
04E1	20F5		JR	NZ,A04DB SA LEAD
04E3	05		DEC	B
04E4	25		DEC	H
04E5	F2DB04		JP	P,A04DB SA LEAD
04E8	0B2F		LD	B,02FH
04EA	10FE	SASYN1 A04EA:	DJNZ	A04EA SASYN1
04EC	D3FE		OUT	(OFEH),A
04EE	3E0D		LD	A,0DH
04F0	0B37	WAAAAA	LD	B,0B7H
04F2	10FE	SASYN2 A04F2:	DJNZ	A04F2 SASYN2
04F4	D3FE		OUT	(OFEH),A
04F6	010E8B		LD	BC,0B0EH ; B = 0BH, C = 0EH
04F8	08		EX	AF,AF'
04FA	BF		LD	L,A
04FB	C30705		JP	A0507 SASTRT
;				
04FE	7A	SALoop A04FE:	LD	A,D
04FF	83		OR	E
0500	280C		JR	Z,A050E SAPAR
0502	DD5E00		LD	L,(IX+0)
0505	7C	SALPP A0505:	LD	A,H
0506	AD		XOR	L
0507	87	SASTRT A0507:	LD	H,A
0508	3E01		LD	A,1
050A	37		SCF	
050B	C32505		JP	A0525 SA8BIT
;				
050E	8C	SAPAR A050E:	LD	L,H
050F	1BF4		JR	A0505 SALPP
;				
0511	75	SABIT2 A0511:	LD	A,C
0512	CB78		BIT	7,B
0514	10FE	SABIT1 A0514:	DJNZ	A0514 SABIT1
0516	3004		JR	NC,A051C SABIT
0518	0B42		LD	B,042H
051A	10FE	SASET A051A:	DJNZ	A051A SASET
051C	D3FE	SABIT A051C:	OUT	(OFEH),A
051E	0B3E		LD	B,0B3EH
0520	20EF		JR	NZ,A0511 SABIT2

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0522 05          DEC      B
0523 AF          XOR      A
0524 3C          INC      A
0525 0B15 SABBIT A0525:  RL      L
0527 021405     JP        NZ,A0514 SABITL
052A 1B          DEC      DE
052B DD20     INC      IX
052D 0B31     LD        B,31H
052F 3E7F     LD        A,7FH
0531 DBFE     IN        A,(0FEH)
0533 1F          RRA
0534 D0          RET      NC
0535 7A          LD        A,D
053B 3C          INC      A
0537 02FE04    JP        NZ,A04FE SALoop
053A 0B3B     LD        B,03BH
053C 10FE SADLY A053C:  DJNZ   A053C SADLY
053E 0B          RET

;
053F 75          SLDRET A053F:  PUSH   AF
0540 0A4B5C     LD        A,(BDRDR)
0543 EB3B     AND      0BH
0545 0F          RRCA
0546 0F          RRCA
0547 0F          RRCA
054B D3FE     OUT      (0FEH),A
054A 3E7F     LD        A,07FH
054C DBFE     IN        A,(0FEH)
054E 1F          RRA
054F 7B          EI
0550 3B02     JR        C,A0554 SLDEND
0552 0F          RST     ERROR1
0553 0C          INC      C
0554 F1          SLDEND A0554:  POP    AF
0555 0B          RET

;
055B 14          LDBYTE A055B:  INC      D
0557 0B          EX      AF,AF'
055B 15          DEC      D
055B FB          DI
055A 3E0F     LD        A,0FH
055C D3FE     OUT      (0FEH),A
055E 213F05   LD        HL,A053F SLDRET
0561 E5          PUSH   HL
0562 DBFE     IN        A,(0FEH)
0564 1F          RRA
0565 EB20     AND      020H
0567 FB02     OR      002H
056B 4F          LD        C,A
056A BF          CP      A
056B 00          LDBRK A056B:  RET      NZ
056C CDE705 LDBSTRT A056C:  CALL   A05E7 LDEDG1
056F 30FA     JR        NC,A056B LDBRK
0571 211504   LD        HL,415H
0574 10FE LDWAIT A0574:  DJNZ   A0574 LD WAIT
057B 2B          DEC      HL
0577 7C          LD        A,H
057B 35          OR      L
057B 20FB     JR        NZ,A0574 LDWAIT
057B CDE305   CALL   A05E3 LDEDG2

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374B	04	DB	04H
374C	3220	DB	02H,20H
374E	04	DB	4
374F	A2	DB	0A2H
3750	03	DB	3
3751	8C	DB	08CH
3752	11A0	DB	11H,0A0H
3754	140B	DB	14H,B
375B	5BDAAB	DB	5BH,0DAH
375C	5B00C5	DB	5BH,50H,0C5H
375D	5C80AA	DB	5CH,50H,0AAH
375F	0E70BF81	DB	8EH,70H,BFH,81H
3763	A1C3DAB5	DB	0A1H,0CBH,0DAH,50H
3767	A4318FB4	DB	0A4H,31H,BFH,0B4H
376B	E7A0FE50FC	DB	0E7H,0A0H,0FEH,50H,0FCH
3770	EA1242CA3B	DB	0EAH,12H,42H,0CAH,3BH
3775	EBA78C7E5E	DB	0EBH,0A7H,8CH,7EH,5EH
377A	F08E238080	DB	0F0H,8EH,23H,80H,80H
377F	04	DB	4
3780	0F	DB	0FH
3781	3B	DB	ENDCAL
3782	0B	RET	
3783	EF	RET	FPCALC
3784	03	DB	3DH
3785	34	DB	34H
3786	EE227F8800E	DB	0EEH,22H,0FBH,8DH,8EH
378B	04	DB	4
378C	01	DB	31H
378D	A2	DB	0A2H
378E	0F	DB	0FH
378F	27	DB	27H
3790	03	DB	3
3791	01	DB	31H
3792	0F	DB	0FH
3793	01	DB	31H
3794	0F	DB	0FH
3795	01	DB	31H
3796	2A	DB	2AH
3797	A1	DB	0A1H
3798	03	DB	3
3799	01	DB	31H
379A	37	DB	37H
379B	00	DB	0C0H
379C	00	DB	0
379D	04	DB	4H
379E	02	DB	2
379F	3B	DB	ENDCAL
37A0	0B	RET	
37A1	A1	DB	0A1H
37A2	0B	DB	3
37A3	01	DB	1
37A4	3B	DB	3BH
37A5	0002	DB	0,2
37A7	1B	DB	1BH
37A8	3B	DB	ENDCAL
37A9	0B	RET	
37AA	EF	RET	FPCALC

37A3	08	DB	08H
37A4	2A	DB	2AH
37A5	A1	DB	0A1H
37AE	03	DB	3
37AF	E0	DB	0E0H
37B0	0008	DB	0,8
37B2	18	DB	18H
37B3	3300	DB	33H,3
37B5	EF	RET	FPCALC
37B8	08	DB	08H
37B7	31	DB	31H
37B9	31	DB	31H
37BB	04	DB	4
37BA	31	DB	31H
37BB	0F	DB	0FH
37BC	A1	DB	0A1H
37BD	03	DB	3
37BE	88	DB	88H
37BF	14E8	DB	14H,0E8H
37C1	5C1F08	DB	5CH,1FH,08H
37C4	A3EFA3EE	DB	0A3H,EFH,3EH,EEH
37C8	5815838828	DB	058H,15H,83H,088H,28H
37CB	FE020DC0ED	DB	0FEH,02H,0DH,0CDH,0EDH
37D2	F1268B18EA	DB	0F1H,26H,8BH,18H,0EAH
37D7	04	DB	4
37D8	08	DB	ENDCAL
37D9	08	RET	
37DA	EF	RET	FPCALC
37DB	31	DB	31H
37DC	1F	DB	1FH
37DD	01	DB	1
37DE	20	DB	20H
37DF	05	DB	5
37E0	08	DB	ENDCAL
37E1	08	RET	
37E2	0D8732	CALL	3287H
37E5	7E	LD	A,(HL)
37E8	FE81	CF	81H
37EB	380E	JR	C,37FBH
37EA	EF	RET	FPCALC
37EB	A1	DB	0A1H
37EC	18	DB	18H
37ED	01	DB	1
37EE	05	DB	5
37EF	31	DB	31H
37F0	08	DB	08H
37F1	A3	DB	0A3H
37F2	01	DB	1
37F3	0008	DB	0,8
37F5	18	DB	18H
37F8	3303	DB	33H,3
37FB	EF	RET	FPCALC
37F9	A0	DB	0A0H
37FA	01	DB	1
37FB	31	DB	31H
37FC	31	DB	31H
37FD	04	DB	4
37FE	31	DB	31H

37FF	0F	DB	0FH
3800	A1	DB	0A1H
3801	03	DB	3
3802	8C	DB	8CH
3803	10B2	DB	10H, 0B2H
3805	130E	DB	13H, 0EH
3807	55E4ED	DB	55H, 0E4H, EDH
380A	5B3EBC	DB	5BH, 3EH, 0BCH
380D	5B5EFD	DB	5BH, 5BH, 0FDH
3810	DE003E7E	DB	DEH, 0, 3EH, 7EH
3814	A05E8E84	DB	0ACH, 05EH, 0E8H, 084H
3818	B342C4	DB	8BH, 42H, 0C4H
381B	EB550B3E8E	DB	0E5H, 0B5H, 5, 0BH, 0E8H
3820	EB3673195B	DB	0E6H, 36H, 73H, 1BH, 5BH
3825	ED5E0E8E8E	DB	0ECH, 0E8H, 0E8H, 8EH, 0E8H
382A	F051A1B30C	DB	0F0H, 51H, 0A1H, 0B3H, 0CH
382F	04	DB	4
3830	0F	DB	0FH
3831	0B	DB	ENDCAL
3832	0B	RET	
3833	EF	RBT	FPCALC
3834	31	DB	31H
3835	31	DB	31H
3836	04	DB	4
3837	A1	DB	0A1H
3838	03	DB	3
3839	1B	DB	1BH
383A	2B	DB	2BH
383B	A1	DB	0A1H
383C	0F	DB	0FH
383D	05	DB	5
383E	24	DB	24H
383F	31	DB	31H
3840	0F	DB	0FH
3841	0B	DB	ENDCAL
3842	0B	RET	
3843	EF	RBT	FPCALC
3844	22	DB	22H
3845	A3	DB	0A3H
3846	03	DB	3
3847	1B	DB	1BH
3848	0B	DB	ENDCAL
3849	0B	RET	
384A	EF	RBT	FPCALC
384B	31	DB	31H
384C	30	DB	30H
384D	001E	DB	0, 1EH
384F	A2	DB	0A2H
3850	0B	DB	ENDCAL
3851	EF	RBT	FPCALC
3852	01	DB	1
3853	31	DB	31H
3854	30	DB	30H
3855	0007	DB	0, 7
3857	2B	DB	2BH
3858	04	DB	4
3859	0B	DB	ENDCAL