

RCSL: 43-GL1153
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OP003

; KEYWORD: MUS, DRIVER, OCP, LISTING.
; ABSTRACT: DRIVER OPERATOR DEVICE OCP.
; ASCII PAPER TAPE: RC SL 43-GL1154
; REL. BINARY PAPER TAPE: RC SL 43-GL1155

.TITL OP003

.NREL ;
000012 .RDX 10 ;
000001 .TXTM 1 ;

D04: ;

PROGRAM:

00000'140001 1B0+1B1+1 ;
00001'000022' D010 ;
00002'000000 0 ;
00003'000412 D00=D04 ;

SPEC ;
START ;
CHAIN ;
SIZE ;

.TXT .QCP<0><0>.

00004'047503
00005'050000
00006'000000

000117 DOTP1=.2 ;
000116 DOTP2=.4 ;
000117 DOTP3=.2 ;

TIMERPERIOD 1 ;
TIMERPERIOD 2 ;
TIMERPERIOD 3 ;

00007'000020".PTXT: .+1*2 ;
.TXT .<10>POWER. ;

00010'005120
00011'047527
00012'042522
00013'000000

00014'000015'.SNAME: .+1 ;
.TXT .S<0><0><0>.

00015'051400
00016'000000
00017'000000

00020'000274'.D020: D0220 ;
00021'000276'.D022: D022 ;

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D010: ; START ADDRESS:
00022'024765 LDA 1 .PTXT ;
00023'101113 MOVL# 0,0 SNC ; IF BREAK=>0 THEN
00024'102520 SUBZL 0,0 ; TYPETEXT('10') ELSE
00025'006773 JSR# .D020 ; TYPETEXT(POWER);
00026'025031 LDA 1 DODEVICE,2;
00027'006170 SETINTERRUPT ;
00030'030764 LDA 2 .SNAME ;
00031'024054 LDA 1 PROCESS ;
00032'006010 SEARCHITEM ; SEARCHITEM(PROCESS,SNAME);
00033'051440 STA 2 SBUF,3 ; SBUF.CUR:=ITEM;
00034'171000 MOV 3,2 ;
00035'126400 SUB 1,1 ;
00036'045041 STA 1 SMODE,2 ;
00037'005065 JSR D061,2 ; CLEAR;
00040'102400 D012: SUB 0,0 ; WAITBUFZ:
00041'041025 STA 0 BUF,2 ;

D013: ; WAITBUF:
00042'020117 LDA 0 DOTP3 ;
00043'126400 SUB 1,1 ;
00044'006167 WAITOPERATION ; WAITOPERATION(TP3,0,CUR);
00045'000424 JMP D016 ; +0: TIMER
00046'000772 JMP D012 ; +1: IRR
00047'000771 JMP D012 ; +2: IRR
00050'000411 JMP D011 ; +3: CONTROL-GOTO DONE;
00051'000413 JMP D015 ; +4: GOTO TYPEIN;
; +5: OUTPUT;
00052'006747 JSR# .D022 ; TYPETEXT;
00053'126400 D0111: SUB 1,1 ; CLEAR:
00054'045041 STA 1 SMODE,2 ; SMODE:=0;
00055'126220 ADCZR 1,1 ; FLAGS:=LOAD;
00056'005065 D0110: JSR D061,2 ; DONEZ:
00057'126400 SUB 1,1 ; CLEAR(FLAGS);
00060'045034 STA 1 BUTFL,2 ; BUTTONFLAG:=0;
00061'102400 D011: SUB 0,0 ; DONE:
00062'006165 RETURNANSWER ; RETURNANSWER(0,UNDEF,BUF);
00063'000755 JMP D012 ; GOTO WAITBUFZ;

00064'024124 D015: LDA 1 .7 ; TYPEIN:
00065'045407 STA 1 MESS1,3 ; MESS1.BUF:=COUNT:=7;
00066'021034 LDA 0 BUTFL,2 ; IF BUTTONFLAG<>0 THEN
00067'101004 MOV 0,0 SZR ; GOTO FUNCTION BUTTONS;
00070'000404 JMP D0160 ;

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00071'005072	D016:	JSR	D040,2	;	TIMER;
00072'000750		JMP	D013	;	SENSE;
00073'000505		JMP	D050	;	+0: NO INPUT
	D0160:			;	+1: INPUT KEYBOARD
				;	+2: INPUT FUNC BUTTONS;
00074'101113		MOVL#	0,0 SNC	;	IF INPUT=LOAD THEN
00075'000406		JMP	D0161	;	BEGIN
00076'041041		STA	0 SMODE,2	;	SMODE:=INPUT;
00077'004442		JSR	D080	;	OPTIONALINIT;
00100'005060		JSR	D060,2	;	INDICATE(LOAD);
00101'004561		JSR	D0210	;	TYPENL;
00102'000740		JMP	D013	;	GOTO WAITBUF; END;
00103'004436	D0161:	JSR	D080	;	OPTIONALINIT;
00104'034434	D0510:	LDA	3 .D0999	;	FIND NAME;
00105'024121		LDA	1 .3	;	ITEM:=NAMEBASE;
00106'031026		LDA	2 ADDRESS,2	;	
00107'151621		INCZR	2,2 SKP	;	WHILE SHIFT(WORD)=0 DO
00110'137000		ADD	1,3	;	ITEM:=ITEM+3;
00111'101143		MOVQL	0,0 SNC	;	
00112'000776		JMP	.-2	;	
00113'021400		LDA	0 +0,3	;	
00114'041000		STA	0 +0,2	;	
00115'021401		LDA	0 +1,3	;	BUF(ADDRESS/2(0:2)):=ITEM(0:2);
00116'041001		STA	0 +1,2	;	
00117'021402		LDA	0 +2,3	;	
00120'041002		STA	0 +2,2	;	
00121'030040		LDA	2 CUR	;	
00122'024124		LDA	1 .7	;	
00123'107405		AND	0,1 SNR	;	IF COUNT AND 7=0 THEN
00124'024122		LDA	1 .5	;	COUNT:=5;
00125'021041		LDA	0 SMODE,2	;	
00126'101004		MOV	0,0 SZR	;	IF SMODE = 0 THEN
00127'000405		JMP	D0511	;	
00130'021026		LDA	0 ADDRESS,2	;	
00131'107000		ADD	0,1	;	
00132'045026		STA	1 ADDRESS,2	;	ADDRESS.CUR:=ADDRESS.CUR+COUNT;
00133'000403		JMP	.+3	;	ELSE
00134'121400	D0511:	INC	1,0	;	
00135'004540		JSR	D0221	;	WRITETEXT(ADDRESS.CUR);
00136'024441		LDA	1 .15B3	;	FLAGS:=ALARM;
00137'000717		JMP	D0110	;	GOTO DONEZ;

140'000373'.D0999:D0999

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↑ 0005 OP003
00141'041035 D080: STA 0 DOSAVE,2 ; OPTIONALINIT;
00142'055024 STA 3 SAVE,2 ;
00143'035007 LDA 3 EVENT,2 ;
00144'035401 LDA 3 PREV,3 ;
00145'055033 STA 3 DOLINK,2 ; HEAD:=EVENT.CUR;
00146'035400 D081: LDA 3 NEXT,3 ; FINDBUF;
00147'025033 LDA 1 DOLINK,2 ;
00150'166404 SUB 3,1 SZR ; IF NEXT.HEAD=HEAD THEN
00151'000403 JMP .+3 ; BEGIN
00152'045041 STA 1 SMODE,2 ; SMODE.CUR:=0;
00153'000667 JMP DO13 ; GOTO WAITBUF;
00154'021040 LDA 0 SBUF,2 ; END;
00155'025404 LDA 1 SENDER,3 ;
00156'106400 SUB 0,1 ;
00157'021041 LDA 0 SMODE,2 ;
00160'101004 MOV 0,0 SZR ; IF SMODE<>0 AND
00161'125005 MOV 1,1 SNR ; SENDER<>SBUF OR
00162'107005 ADD 0,1 SNR ; SMODE=0 AND SENDER=SBUF THEN
00163'000763 JMP D081 ; GOTO FINDBUF;
00164'025406 LDA 1 MESS0,3 ;
00165'125200 MOVR 1,1 ;
00166'125202 MOVR 1,1 SZC ; IF OUTPUT-MESSAGE THEN
00167'000757 JMP D081 ; GOTO FINDBUF;
00170'055025 STA 3 BUF,2 ; BUF.CUR:=INBUF;
00171'025407 LDA 1 MESS1,3 ;
00172'045027 STA 1 COUNT,2 ;
00173'025410 LDA 1 MESS2,3 ;
00174'045026 STA 1 ADDRESS,2 ;
00175'021035 LDA 0 DOSAVE,2 ;
00176'003024 JMP@ SAVE,2 ; RETURN; AC0: UNCHANGED;
; AC2: CUR;
; AC3: BUF.CUR;
;

00177'170000 .15B3: 15B3

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↑ 0006 0P003
00200'004741 D050: JSR          D080          ; INKEYBOARD:
00201'024460          LDA          1  .11          ; OPTIONALINIT;
00202'004546          JSR          D0300         ; CANCEL(11);
00203'021035          LDA          0  D0SAVE,2       ;
00204'000422          JMP          D053          ; GOTO KEYBOARD;
00205'126400 D0521: SUB          1,1          ; WAITINPUT:
00206'030117          LDA          2  DOTP1          ;
00207'006003          WAITINTERRUPT ; WAITINTERRUPT(0,TP1,CUR);
00210'005072          JSR          D040,2       ; SENSE;
00211'000774          JMP          D0521         ; +0: NO INPUT
00212'000414          JMP          D053          ; +1: KEYBOARD
                                ; +2: FUNCTIONBUTTONS:
00213'101112          MOVL#       0,0 SZC          ; IF LOADBUTTON THEN
00214'000660          JMP          D0160         ; GOTO ATTENTION;
00215'041034          STA          0  BUTFL,2    ; BUTTONFLAG:=INPUT;
00216'020126 D0523: LDA          0  .10          ; PUTNL;
00217'025026          LDA          1  ADDRESS,2  ;
00220'011026          ISZ          ADDRESS,2    ;
00221'006175          PUTBYTE                    ; PUTBYTE(NL,ADDRESS.CUR);
00222'025041 D0524: LDA          1  SMODE,2    ;
00223'125005          MOV          1,1 SNR          ; IF SMODE = 0 THEN
00224'000635          JMP          D011          ; GOTO DONE;
00225'000626          JMP          D0111         ; GOTO CLEARS;

D053:                                ; KEYBOARD:
00226'024422          LDA          1  D0531         ; TAB:=BASE;
00227'125400          INC          1,1          ; REPEAT TAB:=TAB+1;
00230'101103          MOVL        0,0 SNC          ; WORD:=WORD SHIFT 1
00231'000776          JMP          .-2          ; UNTIL CARRY;
00232'006174          GETBYTE                    ; GETBYTE(TAB,VALUE);
00233'101005          MOV          0,0 SNR          ; IF VALUE=0 THEN
00234'000533          JMP          D030          ; GOTO INIT CANCEL;
00235'105225          MOVZR       0,1 SNR          ; IF VALUE=1 THEN
00236'000747          JMP          D0521         ; GOTO IGNORE;
00237'125225          MOVZR       1,1 SNR          ; IF VALUE<4 THEN
00240'000756          JMP          D0523         ; GOTO NL;
00241'025026          LDA          1  ADDRESS,2  ;
00242'006175          PUTBYTE                    ; PUTBYTE(I,ADDRESS.CUR);
00243'011026          ISZ          ADDRESS,2    ;
00244'004421          JSR          D021          ; TYPECHAR;
00245'015027          DSZ          COUNT,2     ;
00246'000737          JMP          D0521         ; GOTO WAITINPUT;
00247'000753          JMP          D0524         ; GOTO DONE;

00250'000521 "D0531:.*2+1          ; TAB:
00251'030061          48*256+49          ; 0  1
00252'031063          50*256+51          ; 2  3
00253'032065          52*256+53          ; 4  5
00254'033067          54*256+55          ; 6  7
00255'034071          56*256+57          ; 8  9
00256'025455          43*256+45          ; +  -
00257'001001          2*256+01          ; NL SP
00260'000000          0                  ; CAN ?

00261'000013 .11: 11

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↑ 0007 0P003
00262'025043 D0210:LDA      1  INTTXT,2  ; TYPENL:
00263'045042          STA      1  CNTTXT,2  ; COUNTTEXT:=INTEXT;
00264'020126 D0211:LDA      0  .10          ;OUTNL:
00265'055033 D021:  STA      3  DOLINK,2  ; TYPECHAR:
00266'005110          JSR      DOAS29,2  ; DOAS29(CHAR);
00267'025031          LDA      1  DODEVICE,2;
00270'030116          LDA      2  DOTP2      ;
00271'006003          WAITINTERRUPT ; WAITINTERRUPT(0,DOTP2,CUR);
00272'006170          SETINTERRUPT  ;
00273'003033          JMP@     DOLINK,2  ;
00274'045026 D0220:STA      1  ADDRESS,2 ;
00275'041027 D0221:STA      0  COUNT,2   ;
00276'055024 D022:  STA      3  SAVE,2    ; TYPETEXT:
00277'025026 D0222:LDA      1  ADDRESS,2 ; GETBYTE:
00300'006174          GETBYTE      ; GETBYTE(ADDRESS,BYTE);
00301'024114          LDA      1  .16      ;
00302'106032          ADCZ#    0,1  SZC      ; IF BYTE<16 THEN
00303'000413          JMP      D023      ; GOTO TESTBYTE;
00304'025042          LDA      1  CNTTXT,2  ;
00305'011042          ISZ      CNTTXT,2  ;
00306'035054          LDA      3  TXTTOP,2  ;
00307'136422          SUBZ     1,3  SZC      ; IF CNTTXT<=TXTTOP THEN
00310'006175          PUTBYTE     ; PUTBYTE(CHAR,CNTTXT.CUR);
00311'004754          JSR      D021      ; TYPECHAR(CHAR);
00312'011026 D0224:ISZ      ADDRESS,2 ; INIT:
00313'015027          DSZ      COUNT,2   ; IF DECR COUNT > 0 THEN
00314'000763          JMP      D0222  ; GOTO GETBYTE;
00315'003024          JMP@     SAVE,2    ; RETURN;
00316'024421 D023:  LDA      1  D025      ; TESTBYTE:
00317'107000          ADD      0,1  ;
00320'006174          GETBYTE     ; VALUE:=TABLE(CHAR);
00321'101005          MOV      0,0  SNR      ; IF VALUE#0 THEN
00322'003024          JMP@     SAVE,2  ; RETURN;
00323'105224          MOVZR   0,1  SZR      ; IF VALUE#1 THEN
00324'000403          JMP      D024      ; BEGIN
00325'004735          JSR      D0210     ; TYPENL; GOTO INIT;
00326'000764          JMP      D0224     ; END;
00327'101300 D024:  MOVS     0,0  ; VALUE:=VALUE SHIFT 8;
00330'101133          MOVZL# 0,0  SNC      ; IF VALUE(0) THEN
00331'000404          JMP      D0241     ; BEGIN
00332'105000          MOV      0,1  ; CLEARLAMPS(VALUE);
00333'005065          JSR      D061,2  ; GOTO INIT
00334'000756          JMP      D0224     ; END;
00335'005060 D0241:JSR      D060,2  ; LIGHTLAMPS(VALUE);
00336'000754          JMP      D0224     ; GOTO INIT;
00337'000700" D025:  .+1*2      ; TABLE:
00340'000000          0          ; RETURN RETURN
00341'000200          0*256+128 ; RETURN CLEAR ALL
00342'040040          64*256+32  ; S START S CONT
00343'010010          16*256+8   ; S STOP S HORN
00344'167767          255-16*256+255-8 ; C STOP C HORN
00345'000777          1*256+255  ; NL IGNORE
00346'177777          -1          ; IGNORE IGNORE
00347'137737          255-64*256+255-32; C START C CONT

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↑ 0008 0P003
00350'055024 D0300:STA 3 SAVE,2 ; CANCEL:
00351'045036 STA 1 DOSV2,2 ;
00352'025043 LDA 1 INTTXT,2 ;
00353'045037 STA 1 DOSV3,2 ;
00354'004710 JSR DO211 ; OUTNL;
00355'025037 D031: LDA 1 DOSV3,2 ;
00356'035042 LDA 3 CNTTXT,2 ;
00357'020113 LDA 0 .32 ;
00360'136032 ADCZ# 1,3 SZC ; IF ADDRESS.CUR >= CNTTXT.CUR THEN
00361'006174 GETBYTE ; CHAR:= SP;
00362'004703 JSR DO21 TYPECHAR(CHAR);
00363'011037 ISZ DOSV3,2 ;
00364'015036 DSZ DOSV2,2 ;
00365'000770 JMP DO31 ;
00366'003024 JMP# SAVE,2 ; RETURN;

D030: ; INITCANCEL:
00367'024114 LDA 1 .16 ;
00370'004760 JSR DO300 ; CANCEL(16);
00371'002401 JMP# .D066 ; GOTO TIMER;
00372'000071'.D066:DO16 ;
D0999:TXT .LOAD <4>START CONT <4>STOP <4>INT <0><3>.

00373'046117
00374'040504
00375'020004
00376'051524
00377'040522
00400'052040
00401'041517
00402'047124
00403'020004
00404'051524
00405'047520
00406'020004
00407'044516
00410'052040
00411'000003
00412'000000
000412' .LOC .-1

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Address	Data	Field Name	Description
00412'	000000	DO0:	0
00413'	000000		0
00414'	000000		0
00415'	000112		DO2=DO0
00416'	047503	.TXT	.OCP<0><0>.
00417'	050000		
00420'	000000		
00421'	000421'		DO0+EVENT
00422'	000421'		DO0+EVENT
00423'	000000		0
00424'	000000'		DO4
00425'	000000		0
00426'	000000		0
00427'	140002		1B0+1B1+2
00430'	000022'		DO10
00431'	000412'		DO0
00432'	000000		0
00433'	000412'		DO0
00434'	000000		0
00435'	000044"		DO10*2
00436'	000000		0
00437'	000000		0
00440'	000000		0
00441'	000000		0
00442'	000000		0
000031		DODEVICE=.	-DO0
00443'	000035		29
00444'	100166		CLEAR
000033		DOLINK=.	-DO0
00445'	000000		0
000034		BUTFL=.	-DO0
00446'	000000		0
000035		DOSAVE=.	-DO0
00447'	000000		0
000036		DOSV2=.	-DO0
00450'	000000		0
000037		DOSV3=.	-DO0
00451'	000000		0
000040		SBUF=.	-DO0
00452'	000000		0
000041		SMODE=.	-DO0
00453'	000000		0
000042		CNTTXT=.	-DO0
00454'	001134"		.+2*2
000043		INTTXT=.	-DO0
00455'	001134"		.+1*2
000010			.BLK 8
000054		TXTTOP=.	-DO0
00466'	001153"		.*2-1

PROCESS DESCRIPTOR:
 ; NEXT
 ; PREV
 ; CHAIN
 ; SIZE
 ; FIRST EVENT
 ; LAST EVENT
 ; BUFFER
 ; PROGRAM
 ; STATE
 ; TIMER COUNT
 ; PRIORITY
 ; BREAK ADDRESS
 ; AC0
 ; AC1
 ; AC2
 ; AC3
 ; PSW
 ; SAVE
 ; OPTIONAL
 ; BUF
 ; ADDR
 ; COUNT
 ; RESERVER

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↑ 0010 0P003
    000055 D026=-,D00 ;
00467'000000 0 ;
    000056 D027=-,D00 ;
00470'000000 0 ;
    000057 D028=-,D00 ;
00471'000000 0 ;
    000060 D060=-,D00 ;
00472'025055 LDA 1 D026,2 ;
00473'107414 AND# 0,1 SZR ;
00474'102400 SUB 0,0 ;
00475'123000 ADD 1,0 ;
00476'001067 JMP D062,2 ;
    000065 D061=-,D00 ;
00477'021055 LDA 0 D026,2 ;
00500'123400 AND 1,0 ;
    000067 D062=-,D00 ;
00501'041055 STA 0 D026,2 ;
    000070 DOA26=-,D00 ;
00502'061032 DOA 0 26 ;
00503'001400 JMP +0,3 ;
    000072 D040=-,D00 ;
00504'025057 LDA 1 D028,2 ;
00505'060434 DIA 0 28 ;
    506'041057 STA 0 D028,2 ;
00507'101004 MOV 0,0 SZR ;
00510'106405 SUB 0,1 SNR ;
00511'000402 JMP .+2 ;
00512'001401 JMP +1,3 ;
00513'025056 LDA 1 D027,2 ;
00514'060433 DIA 0 27 ;
00515'041056 STA 0 D027,2 ;
00516'101004 MOV 0,0 SZR ;
00517'106405 SUB 0,1 SNR ;
00520'001400 JMP +0,3 ;
00521'001402 JMP +2,3 ;
    000110 DOAS29=-,D00 ;
00522'061135 DOAS 0 29 ;
00523'001400 JMP +0,3 ;

D02: ; TOP OF PROCESS DESCRIPTOR:

; ***** END OF OPERATOR CONTROL PANEL DRIVER *****

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000371 .LOC 249
00371 000412'D00
    000412'.END D00

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