IEEE 488

IEC 625

PM8957

4822 872 00378

880422

PROGRAMMING CARD

DEVICE SETTING

via menu structure:
- press MENU, press also AUTO SET
- press APPL under CRT
- press IEEE under CRT
- address and mode can be set
  (at delivery: device address = 8)

programmed:
SPL INTERFACE,ADDRESS XX

SPL INTERFACE,TL_MODE TO or
SPL INTERFACE,TL_MODE LO or
SPL INTERFACE,TL_MODE LT

RECORD FORMAT

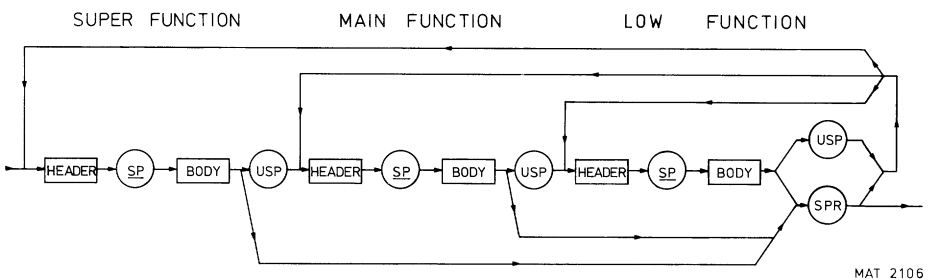


Figure 1 Programming structure

PHILIPS

PRINTED IN THE NETHERLANDS

SYSTEM FUNCTIONS

Program:

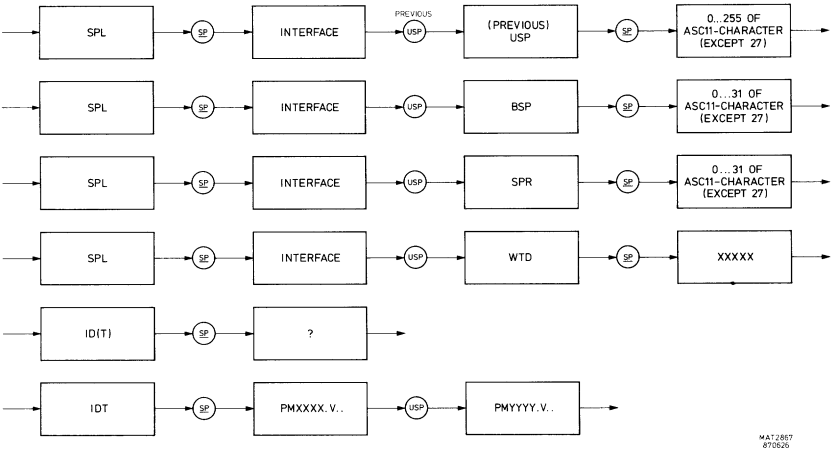


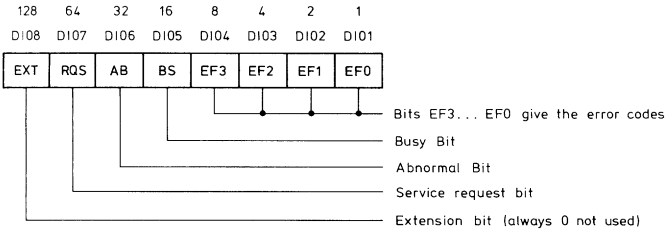
Figure 2 Syntax of system functions

Default value USP: 44 (or ASCII: ",")
Default value BSP: 10 (or ASCII: "LF")
Default value SPR: 10 (or ASCII: "LF")

Range for WTD: XXXXX= 0 ... 32767 ms or OFF

Example for identity: PM3350.V04,PM8957.V02

STATUS WORD



MAT2868
870703

Possible values of the status word + remarks:

65: Service request with CRT softkey 1 pressed or released
66: Service request with CRT softkey 2 pressed or released
67: Service request with CRT softkey 3 pressed or released
68: Service request with CRT softkey 4 pressed or released
69: Service request with CRT softkey 5 pressed or released
97: Programming error
100: Data ready to be transferred
104: Input buffer of oscilloscope full (only in case that no separator is received)

Possible multi-line messages and default settings:

- Go to Local
- Group Execute Trigger
- Selective Device Clear
- Device Clear

PROGRAMMING CODES

SUPER FUNCTIONS:

Header	Body	Answer
FRO	0 / OFF ?	FRO 0 / REG 0 / REG 1
REG	0 / 1 / OFF ?	REG 0 / REG 1 / FRO 0

MAIN FUNCTIONS FOR FRO 0:

Header	Body	
VER	A / B / ADD ?	
HOR	MTB / EXD ?	
MSC	AUX / R0 / R1 ?	
SPL	CURSOR / TEXT / SERVICE / INTERFACE ?	*

* Answer SPL INTERFACE only given when this function was selected in previous stage.

MAIN FUNCTIONS FOR REG 0 OR REG 1:

Header	Body	Answer
VER	A / B ?	
HOR	MTB ?	
MSC	TRACE ?	*
SPL	INTERFACE ?	*

* Answer only given when this function was selected in previous stage.

LOW FUNCTIONS FOR VER A OR VER B:

Header	Body		Answer
FCN	ON / OFF	?	ON / OFF
ATT	XXESYY	?	XXESYY
PRO		?	1 / 10 / 100
SET	AUT / STANDARD	?	INACTIVE
CPL	DC / AC / ZERO	?	DC / AC / ZERO
ALT	ON / OFF	?	ON / OFF
CHP	ON / OFF	?	ON / OFF
INV*	ON / OFF	?	ON / OFF
RDY		?	YES / NO
VAR	CAL / LOCAL	?	CAL / LOCAL
CAL		?	ON / OFF
POS	SXXXX / LOCAL	?	SXXXX / LOCAL

* = for channel B only
SXXX may be between -8192 and +8191
XXESYY is measuring value, XX is mantissa
E is exponent abbriviation
S is sign: + or -
YY is exponent

LOW FUNCTIONS FOR VER ADD:

Header	Body		Answer
FCN	ON / OFF	?	ON / OFF
SET	AUT / STANDARD	?	INACTIVE
ALT	ON / OFF	?	ON / OFF
CHP	ON / OFF	?	YES / NO
RDY		?	YES / NO

LOW FUNCTIONS FOR HOR MTB:

Header	Body		Answer
FCN	ON	?	ON / OFF
TIM	XXESYY	?	XXESYY
ROLL	TRIGGERED	?	TRIGGERED
TRD	SXXX	?	SXXX
SET	AUT / STANDARD	?	INACTIVE
TRG	AUT / TRI / SNG / MUL	?	AUT / TRI / SNG / MUL
RDY		?	YES / NO
TSO	A / B / COM / EXT / LINE	?	A / B / COM / EXT / LINE
TSL	POS / NEG	?	POS / NEG
CPL	PEAK / DC / TVF / TVL	?	PEAK / DC / TVF / TVL
EXT	AC / DC	?	AC / DC
MGN	ON / OFF	?	ON / OFF
VAR	CAL / LOCAL	?	CAL / LOCAL
CAL		?	ON / OFF
HLO	CAL / LOCAL	?	CAL / LOCAL
LEV_VIEW	ON / OFF	?	ON / OFF
LEV	SXXXX / LOCAL	?	SXXXX / LOCAL

SXXX may be between -10 and +250
SXXXX may be between -8192 and +8191
XXESYY is measuring value, XX is mantissa
E is exponent abbriviation
S is sign: + or -
YY is exponent

LOW FUNCTIONS FOR HOR EXD:

Header	Body		Answer
FCN	ON / OFF	?	ON / OFF
SET	AUT / STANDARD	?	INACTIVE
XCH	A / B / EXT / LINE	?	A / B / EXT / LINE
INV	ON / OFF	?	ON / OFF
EXT	AC / DC	?	AC / DC

LOW FUNCTIONS FOR MSC AUX:

Header	Body		Answer
SET	AUT / STANDARD	?	INACTIVE
RDY		?	YES / NO
MEM	ON / OFF	?	ON / OFF
LCK	ON / OFF	?	ON / OFF
CLR	ON / OFF	?	ON / OFF
PART	XX	?	XX
MGN	YY	?	YY
DOT	ON / OFF	?	ON / OFF
SCREENPLOT	ANALOG / OFF	?	ANALOG / OFF
PLOTTIME	ZZZZ	?	ZZZZ
PENUP	0 / 1	?	0 / 1
XPOS	CAL / LOCAL	?	CAL / LOCAL

XX may be between 1 and 63
YY may be: 1, 2, 4, 8, 16 or 32
ZZZZ may be: 20, 30 ... 100, 200 ... 2000 ms/dot

LOW FUNCTIONS FOR MSC R0 OR MSC R1:

Header	Body		Answer
SET	AUT / STANDARD	?	INACTIVE
RDY		?	YES / NO
SEL	A / B	?	A / B
DSP	ON / OFF	?	ON / OFF
SETTING_TEXT	ON / OFF	?	ON / OFF
SAV*	ON	?	OFF
RYPOS	SXXX	?	SXXX

* = for R1 only
SXXX may be between -255 and +255

LOW FUNCTIONS FOR MSC TRACE:

Header	Body		Answer
CHANNEL	A / B / ALL	?	A / B / ALL
PRT	REAL / ALL	?	REAL / ALL
BGN	SXXXX	?	SXXXX
END	SXXXX	?	SXXXX
CNT	SXXXX	?	SXXXX
DATA_TYPE	DECIMAL / BINARY	?	DECIMAL / BINARY
DAT*	....	?	YYYY bsp XXXX bsp XXXX ... XXXX spr Y bsp #B<H><L><D>...<D><C> spr

*: see also figure 5
SXXXX may be between 0 and +4096

LOW FUNCTIONS FOR SPL CURSOR:

Header	Body		Answer
FCN	ON / OFF	?	ON / OFF
SET	AUT / STANDARD	?	INACTIVE
RDY		?	YES / NO
FIRST	XXXX	?	XXXX
SECOND	XXXX	?	XXXX
CUR	R0 / R1	?	R0 / R1
SEL	A / B	?	A / B
DVOLT		?	XXESYY
DTIME		?	XXESYY
PEAK	ON / OFF	?	XXESYY
RISE	ON / OFF	?	XXESYY
FREQ	ON / OFF	?	XXESYY / ERROR
INV_DTIME	ON	?	XXESYY / ERROR
ACQUISITION	RESTART / RETURN	?	RESTART / RETURN

XXXX may be between 0 and 4096
XXESYY is measuring value, XX is mantissa
E is exponent abbreviation
S is sign: + or -
YY is exponent

LOW FUNCTIONS FOR SPL TEXT:

Header	Body		Answer
FCN	ON / OFF	?	ON / OFF
SET	AUT / STANDARD	?	INACTIVE
RDY		?	YES / NO
TEXT	XX		
CHAR	XXX	?	XXX
LINE	0 / 1	?	0 / 1
OWNER	OSC / USER	?	OSC / USER
COLUMN	YY	?	YY

XXX may be bet een 32 and 126 (see figure 3)
YY may be between 0 and 39

LOW FUNCTIONS FOR SPL SERVICE:

Header	Body		Answer
SET	AUT / STANDARD	?	INACTIVE
RDY		?	YES / NO
SERVICE	X.XX / UP / DOWN / OFF	?	X.XX / OFF
SOFTKEY	OSC / USER	?	OSC / USER
KEY		?	X ON / X OFF / X INACTIVE

LOW FUNCTIONS FOR SPL INTERFACE:

Header	Body		Answer
SET	AUT / STANDARD	?	INACTIVE
RDY		?	YES / NO
ADDRESS	XX	?	XX
TL_MODE	LO / TO / TL	?	TO / TL
SPR	YY	?	YY
BSP	YY	?	YY
USP	XXX	?	XXX
WTD	SXXXXX	?	SXXXXX

XX may be between 0 and 30
YY may be between 0 and 31 (except 27)
XXX may be between 0 and 255 (except 27)
SXXXXX may be between 0 and +23767

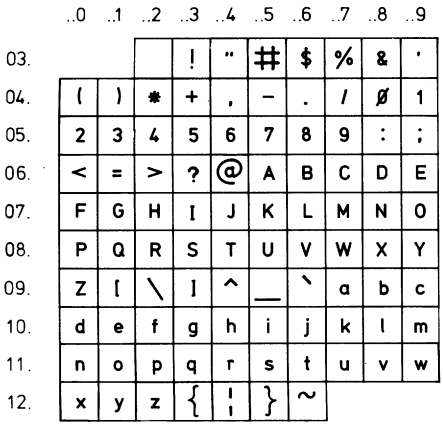
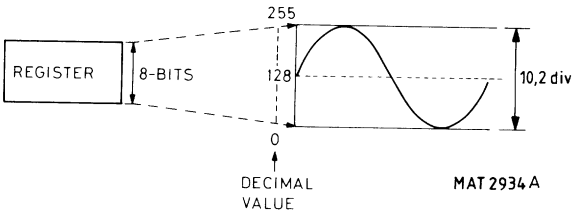


Figure 3 Possible characters

Vertical:



Horizontal:

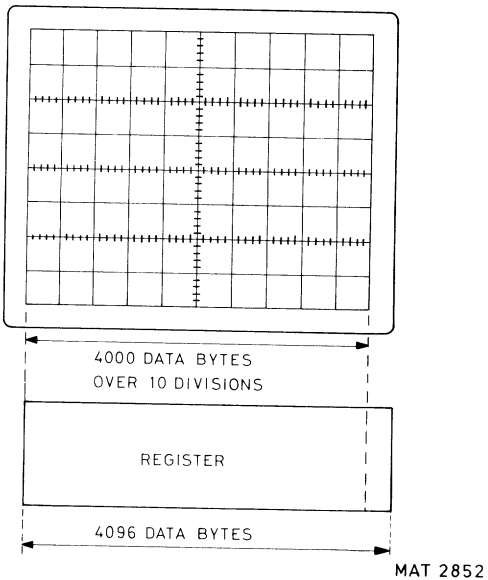


Figure 4 Register contents versus display

TIME/DIV	SINGLE CHANNEL MODE		DUAL CHANNEL MODE			
			CHANNEL ALL		CHANNEL A or B	
	PRT REAL	PRT ALL	PRT REAL	PRT ALL	PRT REAL	PRT ALL
.5 us	512	1024	1024	2048	512	1024
1 us	512	1024	1024	2048	512	1024
2 us	512	1024	1024	2048	512	1024
5 us	512	1024	1024	2048	512	1024
10 us	512	1024	1024	2048	512	1024
20 us	512	1024	1024	2048	512	1024
50 us	512	1024	1024	2048	512	1024
.1 ms	512	1024	1024	2048	512	1024
.2 ms	512	1024	1024	2048	512	1024
.5 ms	512	1024	1024	2048	512	1024
1 ms	512	1024	1024	2048	512	1024
2 ms	512	1024	1024	2048	512	1024
5 ms	4096	4096	4096	4096	2048	2048
10 ms	4096	4096	4096	4096	2048	2048
20 ms	4096	4096	4096	4096	2048	2048
50 ms	4096	4096	4096	4096	2048	2048
.1 s	4096	4096	4096	4096	2048	2048
.2 s	4096	4096	4096	4096	2048	2048
.5 s	4096	4096	4096	4096	2048	2048
1 s	4096	4096	4096	4096	2048	2048
2 s	4096	4096	4096	4096	2048	2048
5 s	4096	4096	4096	4096	2048	2048
10 s	4096	4096	4096	4096	2048	2048
20 s	4096	4096	4096	4096	2048	2048
50 s	4096	4096	4096	4096	2048	2048

Figure 5 Maximum available points for data transfer