Timy

ALGE-TIMING

Terminal

TIMY Terminal

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Timy terminal

1 Implementing and Keypad

Please use Timy manual GENERAL

1.1 Menu

Several standard menu-adjustments are described in the general manual for Timy. The special functions of Timy Terminal will be described in this manual.

2 Program Terminal

The program Terminal was developed in order to create an ideal input device for judges. The program Terminal is downward compatible to program Terminal-Computer of Comet. The new instruction set of Timy is however much more comprehensive and is described on the following sides.
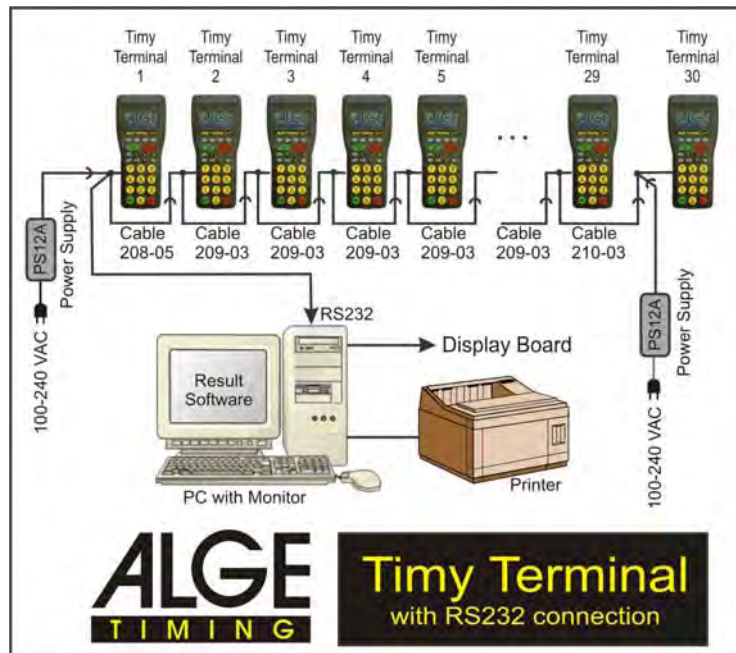
Depending on PC-Software, the user interface and operation of the Timy can be very different during the usage. Please get information of the producer of the software for the operation during an event.
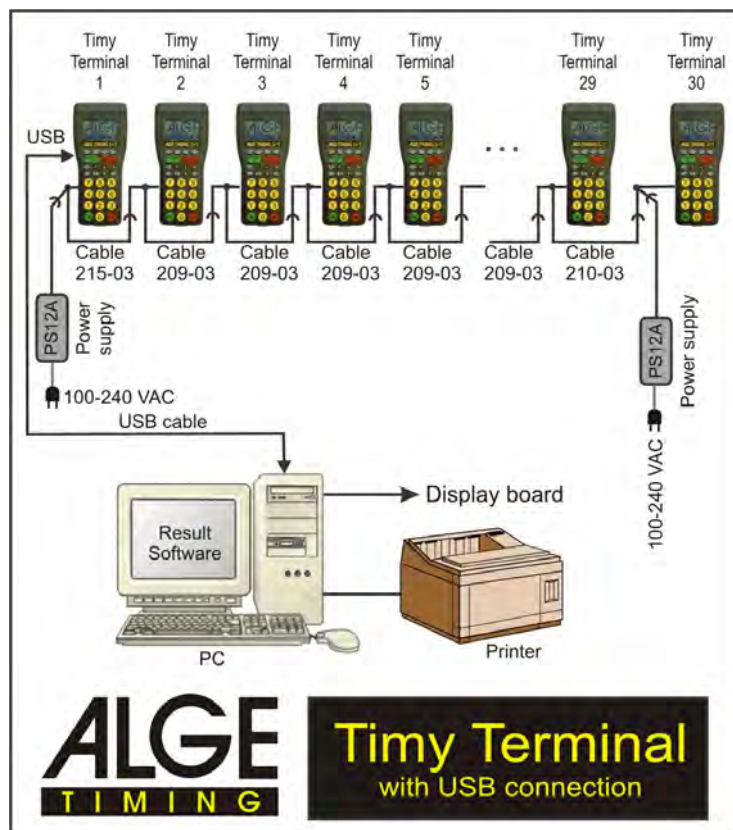
2.1 General

In one stream are at most 35 TIMYS possible.
There is always 1 MASTER-TIMY and up to 34 SLAVE-TIMYS.

2.2 Timy Terminal RS232

2.3 Timy Terminal USB

2.4 Operation of program Terminal:

After switching-on the Timy, every Timy is basically SLAVE.
The display shows "SHALL I BE THE MASTER ? OK=YES"

Now you have to define which Timy is MASTER and which are the SLAVES.
You can define this in two ways, first the type is described, so that you can configure all TIMYS manually.

You can adjust the number of the Timy with „MENU"->"TERMINAL"->"ADDRESS".
You can also indicate, how many SLAVES will be available in the stream with
„MENU"->"TERMINAL"->"ANZ. SLAVES"
If this value is unequal zero, then this TIMY will be defined as MASTER. If this value is equal to zero, then this TIMY is defined as SLAVE.

For example: Data-stream with 5 TIMYS:

```
MASTER-TIMY:        ->ADRESS = 01
                            ->ANZ. SLAVES = 04

SLAVE:              ->ADRESS = 02
                            ->ANZ. SLAVES = 0

SLAVE:              ->ADRESS = 03
                            ->ANZ. SLAVES = 0

SLAVE:              ->ADRESS = 04
                            ->ANZ. SLAVES = 0

SLAVE:              ->ADRESS = 05
                            ->ANZ. SLAVES = 0
```

You can also configure the data-stream on another way:
Therefore you have to adjust all TIMYS as follows:
```
                    ->ADRESSE = 0
                            ->ANZ. SLAVES = 0
```

Now you can define the MASTER by pressing the OK-button at one TIMY.
Normally is every TIMY, which is connected to a PC, the MASTER.

You can also define MASTER, if the PC sends the command „TERLIST<cr>" to the MASTER-TIMY.

Thereupon the MASTER-TIMY will start with the numbering.
(TERLIST, TER=TERMINAL, LIST=GET LIST)

If the MASTER-TIMY retrieved all SLAVES, the numbering starts. You must one time manually assign to every SLAVE one number. The MASTER sends to all TIMYS e.b. "ARE YOU NUMBER 04 ?" You have to press the OK-button at the Timy which is spoken to.
Go on like that until all TIMYS (including MASTER) are numbered.

Reconnection (= next implementing) :

If the data-stream was correctly configured once, the MASTER-TIMY will start automatically with the buildup of the data-stream and can receive commands of the PC immediately.

2.5 RS232 communication with PC

The MASTER-TIMY is the link between PC and the other TIMYS. There are 2 instruction sets, one of the is backward compatible to the COMET-protocol, so that even existing PC-programs can work with the TIMY data-stream. The TIMY replaces the COMET.

The new instruction set is more comprehensive but easier to use. If more than 10 TIMYS are on the data-stream, it will automatically switch to the instruction set.

Old instruction set:
> See instruction set for COMET data-stream
> Response of data-stream: „A   123456<cr>" data of TIMY 1
> After the „A" will be 2 blanks.

New instruction set:
> Response of data-stream „01   123456<cr>" data of TIMY 1
> After the „01" will be 2 blanks.

All commands begin with „TER", enclosed is the 2-digit address of the TIMYS which will be spoken to. „FF" responds to all TIMYS.

The real command:
> e.g. „TERFFER<cr>" reset all TIMYS
> e.g. „TER04ER<cr>" reset TIMY 04 (simplification compared to the old instruction set).
> e.g. „TERLIST<cr>" sole exception: With this command you can get the data of the data-stream of the MASTER

If the data-stream is not configured yet, you can also give commands to the MASTER-TIMY, which will build the data-stream. Afterwards the MASTER-TIMY will send the information to the PC.

Example:

The MASTER-TIMY has always the index „0". In the square bracket is the index (internal numbering), afterwards stands the outward visible number, following 1, if the TIMY is still in the stream, otherwise 0 if he was removed. At the end you can find the 12-digits hardware-serial number

```
TERMINAL[00]=01=1=000000003449
TERMINAL[01]=02=1=00000009a848
TERMINAL[02]=03=1=00000005e330
TERMINAL[03]=04=1=0000000990f6
TERMINAL[04]=05=1=0000000993db
TERMINAL[05]=06=1=000000099fcd
TERMINAL[06]=07=1=000000098990
TERMINAL[07]=08=1=00000008e399
```

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Commands from the pc to the Master-Timy   Version V 1.4   from V 0971

Important: When the pc has sent a command to the Timy,
the pc has to wait for the exactly response of the sent command of the Timy
before it sends the next command.
Despite the Master-Timy may have sent some Datas in the meanwhile, the pc has still wait for
the response of the same command, which was sent before.

These commands are from an older pc-program. Addresses from 1 to 10

M	R	C	<cr>				Clear
M	A	C	<cr>				

M	R	S	<cr>				Stop
M	C	S	<cr>				

M	R	I	<2 blanks>	Hello Infotext<cr>			Info
M	D	I	<2 blanks>	wrong Input<cr>			

M	R	T	1	A	<max. 16 characters><cr>		Text
M	E	T	2	I	<max. 16 characters><cr>		

M	R	E	R	<cr>			Reset
M	B	E	R	<cr>			

M	R	E	I	3	<cr>		Init
M	C	E	I	3	<cr>		

M	R	E	C	3	<cr>		Clear
M	C	E	C	3	<cr>		

M	R	E	S	1	"	111 22 22 22<cr>"	Set
M	C	E	S	2	"	111 22 22 22<cr>"	Set

M	R	B	<cr>				Beep for 0,1 s
M	A	B	<cr>				Beep for 0,1s to Timy A

The blue commands are from a new pc-program. Addresses from 1 to 99
By using this syntax it is possible to control up to 99 SLAVES.

TER is the new command
    Address is FF for all Timys or an 2 digit address

TER	FF	C	<cr>	Clear	blocks are set to zero
TER	01	C	<cr>		messages from the pc are cleared
					data insertion is possible
TER	FF	S	<cr>	Stop	
TER	03	S	<cr>		data insertion locked, no sending to pc allowed
TER	FF	I	<2 blanks> Hallo Infotext<cr>	Info. In the uppermost line is the info-text.	
TER	04	I	<2 blanks> falsche Eingabe<cr>	In the lowest line is "GO ON WITH *"	
TER	FF	T1A	<max. 16 Zeichen><cr>	Text to line (COMET: 1 or 2)	
TER	05	T2I	<max. 16 Zeichen><cr>	(TIMY: 1 to 8 depends to the font)	

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TER	FF	ER	<cr>			RESET	alle Blöcke und Texte löschen
TER	02	ER	<cr>				

TER	FF	EI	3	<cr>		INIT	Blocks to 0. BLANK and 0 means all blocks
TER	03	EI	3	<cr>			Blocks to 0. 1 to 5 means block 1 to 5

TER	FF	EC	3	<cr>		CLEAR	blocks to BLANK, the rest is like INIT
TER	03	EC	3	<cr>			blocks to BLANK, the rest is like INIT

TER	FF	ES	1	" 111 22 22 22<cr>"	SET	Line 1 or 2
TER	03	ES	2	" 111 22 22 22<cr>"		

TER FF	F			**choose the FONT**	
TER FF	F	"OEM6_8<cr>"	6 Pixel width small letters allowed max 8 lines possible	8 Pixel height **All characters not same width**	
TER FF	F	"TIMES13<cr>"	8 Pixel width small letters allowed max 4 lines possible	13 Pixel height **All characters not same width**	
TER FF	F	"TI8_10<cr>"	8 Pixel width No small letters max 6 lines possible	10 Pixel height **All characters not same width**	
TER FF	F	"OEM8_16<cr>"	8 Pixel width small letters allowed max 4 lines possible	16 Pixel height **All characters same width**	

TER FF	FLUGSCHANZE557<cr>	a special input mask will be defined like this:

Fl	La	Ou		Fl=Flight, La=Landing, Ou=Out
0,0	0,0	0,0		max. 5,0 5,0 7,0
			20,0	20,0 max points
BIB	Send=OK			BIB 3 digits possible

after the komma only 0 or 5 allowed

TERLIST<cr> With this command the pc starts the Timy to build up the data chain.
Also a list will be sent ti the pc.
It can look like:

TERMINAL[00]=01=1=00000005f74e   TERMINAL[00] is always the MASTER.
TERMINAL[01]=02=1=00000008e978
TERMINAL[02]=03=1=00000009e300
TERMINAL[03]=04=1=00000009963f
TERMINAL[04]=05=1=00000005f968   each line is terminated with <cr>
TERMINAL[05]=06=1=00000008ef81
TERMINAL[06]=07=1=00000008eefe
TERMINAL[07]=08=1=00000005eb89

TERMINAL[internal number]=NUMBER=present=Hardware-ID

internal number	The internal number is without interest for the user.
NUMBER	This number can be entered in the menu on the Timy.
present	1 = present, 0 = absent
Hardware-ID	12-digits also visible in the info-menu

TER	**WRITE-NUM:<2-digit NUMBER><cr>**		You can configure a Timy as a SLAVE and give it a NUMBER.	
TER	**FF**	**B**	**<cr>**	**Beep for 0,1 s**
TER		**1 B**	**<cr>**	**Beep for 0,1 s to Timy 1**
TER	**FF**	**X1**	**<cr>**	**Message "Transmitting.." appears after the OK-button was pressed.**
TER	**FF X0**	**X0**	**<cr>**	**default: After OK-button was pressed, the screen remains unchanged After an Timy-Update this feature is set to "X0".**
DENUM<cr>	With this command the data chain will be completely rebuilt NOT yet defined			

With the new command set the data chain can consist of up to 99 Timys.
With the old command set the data chain can consist of up to 10 Timys.

With the new command set datas from eg. Timy 02 can be received.
If you want to control Timy 02 you can do it with TER02<command><cr>.

With the old command set it was much more complicate and depended from the length
of the data chain.

Answer from the data chain, when datas are sent.

TERMINAL	3	C 123456	03 123456	syntax of the new format
	4	<D>	04 123456	
	17	<Q>	17 123456	**only 1 to 9 with the**
	32	< ' >	32 123456	**old format senceful**
	99	<special charactor of the ASCII set>		
	any	<"A" - 1 + any>		

If a SLAVE of the running chain is missed, the this message is sent from the master to the pc: **TIMY<2 blanks><2digits NUMBER of the missed SLAVE><missing><cr>** **Eg. "TIMY 04 missing<cr>"**
If the missed SLAVE is reconnected or a further SLAVE is added, then the MASTER sends this message to the pc: **TIMY<2 blanks><2digits NUMBER of the missed SLAVE><present><cr>** **Eg. "TIMY 04 present<cr>"**

2.5.1 Interface data

RS 232 Interface
Standard 9600 Baud
8 Data Bit, no Parity Bit, 1 Stop Bit
ASCII signs

2.5.2 RS 232 instruction set

Command set Timy — V2.9 — takes effect from V 09B3 — 19.11.2009 — green=already built in

Column headers (checkmark matrix, right to left): Backup, PC-Timer, Stopwatch, Tracktimer, Training Light, Training Ref, Laptimer, Cyclestart, Commander, Speed, Windspeed, Terminal, Dualtimer

meaning	syntax	parameter	example	syntax description
enter bib	#	4 digits	#1234	enters a bib over serial port or usb
enter bib	#	1234<b,l,r>	#1234b #1234l	bib for blue/left parcour
enter bib	#	1234<b,l,r>	#1234r	bib for red/right parcour
enter bib	#	1234C<0 or 1>	#1234C0 #1234C1	bib for start (C0) or finish (C1)
only for gsm-modem	+	Only the gsm-modem can send this to the Timy, and then some further commands are following.		
automatic time min	AZN	HH:Mi:SS	AZN12:00:00 AZN?	request, set
automatic time max	AZX	HH:Mi:SS	AZX12:00:00 AZX?	request, set
beep	BE	0 or 1	BE0 BE1BE?	request, on off
User-Prog-Update	BWF		BWF	than update-file
User-Prog-Update	USB-Timy-BWFllll		USB-TIMY-BWFllll	than update-file
Classement memorytime	CALMT		CALMT	Classement memorytime
Classement runtime	CALRT		CALRT	Classement runtime
Classement totaltime	CALTT		CALTT	Classement totaltime
display delaytime1	DIT1	00 to 99	DIT103 DIT1?	request, set
display delaytime2	DIT2	00 to 99	DIT299 DIT2?	request, set
delaytime finish and intermediate	DTF	00.01 to 59.99	DTF00.03 DTF?	request, set
delaytime start	DTS	00.01 to 59.99	DTS09.99 DTS?	request, set
builds up a Timy2Timy connection	DIRECT	Only if 2 Timys are connected over a serial cable, Timy1 sends this to Timy 2 to build up a connection		
Disconnect the Timy2Timy connection.	DIS	Only if 2 Timys are connected over a serial cable, Timy1 sends this to Timy 2 to disconnect.		
controls the prog. Football	FOOTBALL			
defines the channel pattern for Timy2Timy connection.	KAMU	Only for a Timy2Timy connection, can define which channels Timy can enable which channels		
KEYBOARD_LOCK ???	KL	0 or 1	KL0 KL1 KL?	request, on off
Laptimer gaz mode	LA	T or R	LAT LAR LA?	request, T=totaltime, R=laptime
Subset of Timy-data-chain	M		MRER	
version of user-prog	NSF		NSF?	sends NSFV03B2
ONLY the MODEM sends this	CARRIER		CARRIER	timy changes to binary mode
ONLY the MODEM sends this	CONNECT 9600		CONNECT 38400	timy changes to binary mode
MODEM sends without CR	+++		+++	timy changes to command mode
ONLY the MODEM sends this	NO CARRIER		NO CARRIER	disconnected
ONLY the MODEM sends this	NO DIALTONE		NO DIALTONE	modem sends the error-message
ONLY the MODEM sends this	CPIN		CPIN	
ONLY the MODEM sends this	OK		OK	modem confirmed the last command
ONLY the MODEM sends this	ERROR		ERROR	modem didn't confirm the last command
ONLY the MODEM sends this	ATH		ATH	
ONLY the MODEM sends this	ATVx5cQ3		ATVx5cQ3	modem has set to rts/cts-handshake
ONLY the MODEM sends this	REVISION		REVISION	modem is present
ONLY the MODEM sends this	NPL-1		NPL-1	modem is present
ONLY the MODEM sends this	RING		RING	timy answers with ATA<CR>
ONLY the GPS-Device sends this	GPRMC	only the gps-device can send this data-string in order to synchronize the timy to the exactly daytime		
ONLY the GPS-Device sends this	PGRMF	only the gps-device can send this data-string in order to synchronize the timy to the exactly daytime		
precision	PRE	0,1,2,3 oder 4	PRE0 PRE?	0=Sec, 1=Tenth... 4=TenThousandth
PRINTER-AUTO-LF	PRI_AF	0 to 9	PRI_AF3	Printer AutoLineFeed 0 to 9
PRINTER	PRINTER	0 or 1	PRINTER0,PRINTER1	request, on off
PRI	PRI	0 or 1	PRI0 PRI1 PRI?	request, on off
print a linefeed	PRILF		PRILF	set
print the logo	PRILO		PRILO	set
print memory	PRIM		PRIM	print memory
ignore timing impulses to print	PRIIGN	0 or 1	PRIIGN0,PRIIGN1,PRIIGN?	set off, set on, request
print start	PS	0 or 1	PS0 PS1 PS?	request, on off
name of the current active program	PROG	?	PROG?	what's the current program ?
		answer:PROG: Name<cr>		The name of the active program may differ.
		answer:PROG: —<cr>		No program was chosen yet.
		answer:PROG: COMMANDER.SUB.SubName<cr>		COMMANDER has many sub programs
rounding	RR	0,1 or 2	RR0 RR1 RR2 RR?	request, 0=Cut, 1=Up, 2=Round
rs232 baudrate	RSBD	24,48,96,19 or 38	RSBD96 RSBD?	request, set
send memory to rs232	RSM		RSM	send memory to rs232
runtime at rs232	RSRT	0 or 1	RSRT1, RSRT0	

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Description	Command	Parameter	Example	Notes
running tenth	RT	0 or 1	RT0 RT1 RT?	request, on off
stn automatic for finish	SAF	0,1 or 2	SAF0 SAF1 SAF2	request, 0 = off,1=start,2=finish
stn automatic for start	SAS	0,1 or 2	SAS0 SAS1 SAS2	request 0 = off,1=Up,2=Down
START_LOGO	SL	0 or 1	SL0 SL1 SL?	request, on off
second mode	SM	0 or 1	SM0 SM1 SM?	request, set
Speed distance in meters	SPDI	0000.1 to 9999.9 or 0001 to 9999 or ?	SPDI0100<cr> SPDI0100.5<cr>	request, set
Speed direction	SPDR	0,1 or 2	SPDR0,SPDR1	request,0=both,1=C0->C1, 2=C1->C0
Speed Unit	SPU	0,1 or 2	SPU0, SPU1, SPU2	request,0=km/h, 1=m/h, 2=m/s
Speed minimum	SPMI	0000.1 to 9999.9 or 0001 to 9999 or ?	SPMI0000.1	set, request = SPMI0000.1 always XXXX.X
Speed maximum	SPMX	0001.0 to 9999.9 or 0001 to 9999 or ?	SPMX0200.0	set, request = SPMX0200.0 always XXXX.X
Speed Print Times	SPTI	0 or 1	SPTI1, SPTI0	request, set
Only for the communication with the OPTIC-device.	SP2			Only for the communication between the OPTIC and the Timy.
Advanced subset of data-chain	TER		TERFFER	
initialize the timy, gets HW-ID	TIMYINIT		TIMYINIT	gets the hardware-id of the Timy
Delaytime for a specific channel	DTC	? Or #12,34 (while # = 0 to 8)	DTC401.78	request, set
Direct transmission to printer	DTP	max. 24 characters	DTPHelloWorld	LOOK FURTHER BELOW
cleares the memory	CLR		CLR	
enables or disables the checksum	CHK	7,0 or 1	CHK7,CHK1,CHK0	request, set
send time every s or thenths or not	EMU	?,0,1 or 2	EMU7,EMU0,EMU2	request, set
send memory from pos a to b	RSP	aaaabbbb	RSP00001000500	gets the memory from pos 10 to 500
send memory from STN a to b	RSS	aaaabbbb	RSS0002000020	gets the memory form stn 20 to 20)
Send memory universal A	RSUA	Caaaabbbb	RSUA100109999	C=0..9 or A,aaaa=stnfrom,bbbb=stn_end
				All times, having channel 1 and stn >= 10 and stn <=9999 are sent.
				All times having stn <= 20 are sent.
			RSUAA00000020	daytime_from until daytime_end
Send memory universal B	RSUB	Caaaaaaaabbbbbbbbbb	RSUBA0000000002300000000	All times, having daytime <= 23:00:00.0000 are sent
Special command	SPEC		SPEC?	SPEC:STOPWATCH:$A0$B0$C0
This command should be sent over usb		Timy to Timy connection over RS232	SPEC:STOPWATCH:$A1	start-bib will be sent to rs232/usb: "s1234<cr>"
This command should be sent over usb		Timy to Timy connection over RS232	SPEC:STOPWATCH:$A0	start-bib will not be sent, default after an update
This command should be sent over usb		Timy to Timy connection over RS232	SPEC:STOPWATCH:$B0	0 == default:not bib is accepted over an TIMY2TIMY-connection
This command should be sent over usb		Timy to Timy connection over RS232	SPEC:STOPWATCH:$B1	1 == START-BIB is accepted, in the format "#1234C0v"
This command should be sent over usb		Timy to Timy connection over RS232	SPEC:STOPWATCH:$B2	2 == FINISH-BIB is accepted, in the format "#1234C1v"
This command should be sent over usb		Timy to Timy connection over RS232	SPEC:STOPWATCH:$B3	3 == START+FINISH BIB both are accepted
This command should be sent over usb		Timy to Timy connection over RS232	SPEC:STOPWATCH:$C0	0 == default:no bib will be sent
This command should be sent over usb		Timy to Timy connection over RS232	SPEC:STOPWATCH:$C1	1 == START-BIB will be sent
This command should be sent over usb		Timy to Timy connection over RS232	SPEC:STOPWATCH:$C2	2 == FINISH-BIB will be sent
This command should be sent over usb		Timy to Timy connection over RS232	SPEC:STOPWATCH:$C3	3 == START+FINISH BIB both will be sent
		But the start-bib will only be sent, if the command was sent to the Timy once in advance "SPEC:STOPWATCH:$A1<cr>"		
synchronize the Timy	SYNA	hh:mm:ss.zhtZ	SYNA12:00:00.0000	automatically sync
	SYNM	hh:mm:ss.zhtZ	SYNM00:30:00.0000	manually sync, waits for sync-impulse
	SYND	YY:MM:DD	SYND04-10-31	enter the sync date, takes only effect when SYNM is followed
Send start time	SST	NNNN C0 hh:mm:ss.zhtZ RR	SST 1234 C0 12:34:56.7890 00	NNNN=Startnumber, hh=hour,mm=minutes ss=seconds, zhtZ=4 digits of second's fraction RR = always 00
Direct transmission to printer	DTP	max. 100 characters	DTPHelloWorld	
Show the list of the commands	HELP		HELP	Timy shows the list of the supported comm
	HELP	If the StatusValue is 0 or 0x0000 then the command is currently not supported		

standard baudrate	9600 baud
syntax for command and parameter	ASCII
Hardware-Handshake	not built in, later possible (RTS/CTS)
Software-Handshake	not built in, later possible (XON/XOFF)
command not supported	send back NOT
command understood	send back the command without parameter
command with ?	send back the command with parameter
command not understood	send back nothing
command with unvalid parameters	send back nothing

safe communication

If the pc has sent a command to the Timy, the pc has to wait for the acknowledge, before sending the next command.
Acknowledge means that the sent command must be returned from the Timy.

Each command can be sent by rs232 or USB.
For programming the usb-interface, use only the Alge-OCX-File.

Note: If you see <cr> at an example, please be aware that this is only one character not 4 characters.

TIMY Terminal