PeakTech
Prüf- und Messtechnik

PeakTech 3440

Communication protocol

Connection settings:

USB	
Supported:	**No** *(uses virtual COM port)*
Vendor ID:	---
Product ID:	---
Mode:	---
Frame size:	---
Comments:	---

RS232	
Supported:	**Yes**
Baud:	19230
Parity:	None
Data / Stop:	8 / 1
Frame size:	variable
Comments:	There are 2 revisions of the device. The BT3 version requires a established BT connection using Windows, the BT4 version requires that you interact with the Texas Instruments CC2540 chip by yourself to get to the data of the real device.

Receiving frame content:

Byte 0	Byte 1	Byte 2..n	Byte n+1, n+2	Byte n+3
Start Byte (0xA0)	Content Identifier	Content data (variable width)	Checksum	End byte (0xA1)

Content identifier:

Value	Description
0x80	Default measurement display
0x81	Maximum Minimum display
0x82	Relative measurement display
0x83	Peak to peak measurement display
0x84	DC+AC measurement display
0x86	Frequency measurement display

Content data:

The content data differs between the content identifier set before.

ID 0x80 - Default measurement

Byte	Description
2	Measurement type. See below.
3	Display flags. Bit 0 = Hold, Bit 1 = Range
4-7	Current value (as float / single)
8-11	OL value as float / single
12-15	Current value unit (as 4 byte ASCII string)
16	Decimal position
17-22	Time (in BCD)
23	Time format. Bit 0 = PM, Bit 1 = Format Month/Day/Year

ID 0x81 - Maximum Minimum display

Byte	Description
2	Measurement type. See below.
3	Display flags. Bit 0 = Hold, Bit 1 = Range, Bit 3 = LO (?)
4-7	Current value (as float / single)
8-11	Maximum value (as float / single)
12-15	Minimum value (as float / single)
16-19	Average value (as float / single)
20-23	OL value (as float / single)
24	Decimal position
25-28	Current value unit (as ASCII)
29-32	Maximum unit (as ASCII)
33-36	Minimum unit (as ASCII)
37-40	Average unit (as ASCII)
41-43	Maximum time appears (minute, second, in BCD)
44-46	Minimum time appears (minute, second, in BCD)
47-49	Average of measured time (minute, second, in BCD)
50-55	Start of measurement (minute, second, in BCD)

ID 0x82 - Relative measurement

Byte	Description
2	Measurement type. See below.
3	Display flags. Bit 0 = Hold, Bit 1 = Range
4-7	Current value (as float / single)
8-11	Reference (as float / single)
12-15	Relative value (as float / single)
16-19	OL value (as float / single)
20-23	Value unit (as ASCII)
24	Decimal position
25-30	Time (in BCD)
31	Time format. Bit 0 = PM, Bit 1 = Format Month/Day/Year

ID 0x83 - Peak to peak

Byte	Description
2	Measurement type. See below.
3	Display flags. Bit 0 = Hold, Bit 1 = Range
4-7	Current value (as float / single)
8-11	Maximum peak (as float / single)
12-15	Minimum peak (as float / single)
16-19	Average (as float / single)
20-23	OL value (as float / single)
24-27	Value unit (as ASCII)
28	Decimal position
29-31	Maximum time appears (minutes, seconds, in BCD)
32-34	Minimum time appears (minutes, seconds, in BCD)
35-37	Average of measured time (minutes, seconds, in BCD)
38-43	Start time of measuring (minutes, seconds, in BCD)

0x84 - DC + AC

Byte	Description
2	Measurement type. See below.
3	Display flags. Bit 0 = Hold, Bit 1 = Range
4-7	DC component (as float / single)
8-11	AC component (as float / single)
12-15	DC+AC total (as float / single)
16-19	Value unit (as ASCII)
20-23	OL value (as float / single)
24	Decimal position
25	Type (unsure, "total amount of components full display")
26-31	Time (in BCD)
32	Time format. Bit 0 = PM, Bit 1 = Format Month/Day/Year

ID 0x86 - Frequency measurement

Byte	Description
2	Measurement type. See below.
3	Display flags. Bit 0=Hold, 1=Range, 2=Trig+, 3=Trig-, 4=only Hz, 5=MS%
4-7	Frequency value (as float / single)
8-11	Duty cycle (as float / single, 0..1)
12-15	Measurements (as float / single)
16-19	Measurement unit (as ASCII)
20-25	Time (in BCD)
26	Time format. Bit 0 = PM, Bit 1 = Format Month/Day/Year

Measurement types

Value	Description
1	AC voltage (V)
2	DC voltage (V)
3	DC voltage (mV)
4	Resistance
5	Capacitance
6	Temperature (°C)
7	DC current (A)
8	DC current (mA)
9	DC current (µA)
10	Current percent (4-20mA)
11	AC voltage (mV)
12	AC current (A)

Value	Description
13	AC current (mA)
14	AC current (µA)
15	Diode test (V)
16	Frequency (HZ%)
17	AC voltage (with low pass filter)
18	Short circuit test (beeper)
21	DC + AC voltage (V)
22	Unused (DC+AC mV)
23	Unused (DC+AC A)
24	Unused (DC+AC mA)
25	Unused (DC+AC µA)
31	Frequency (HZ)