IKE

From HackTheIBus

IKE is an abbrevation for the german term "Instrumenten-Kombi-Electronik" which means Instrument cluster electronics. It displays the speed indicator, odometer, mileage, fuel level, state of the doors, lights and service interval. There are two different cluster types: The Low Cluster which indicates events with lighting symbols and the High Cluster which has an alphanumeric display line.

For the complete frame layout check out IBus Message Syntax

Following a list of interesting IKE messages:

Code	Meaning
0x11	ignition status message
0x17	odometer status message (total km)
0x18	speed message, vehicle speed and rpm
0x19	temperature sensors, current value

(will move into its own page "Ignition status")

0x11 Ignition status

Single data byte. DB1 is bit mapped as follows:

7... ...0

xxxx xxx1 = KL_R

xxxx xx1x = KL_15

xxxx x1xx = KL_50

All other bits are unused.

If no bits are set, ignition is off.

Bit	7	6	5	4	3	2	1	0	Meaning
	x	x	x	x	x	x	x	1	KL_R
	x	x	x	x	x	x	1	x	KL_15
	x	x	x	x	x	1	x	x	KL_50
	x	x	x	x	x	0	0	0	IGN OFF

Example

IKE informs about the ignition state "Acc_1" via GLO.

TX	LL	RX	MM	Byte 0	CS
0x80	0x04	0xBF	0x11	0x01	0x2B

0x17 odometer status

A 32 Bit value of the total kilometres, little endian formatted

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	meaning
least significant byte	Byte 1	Byte 2	most significant byte	(unknown)	(unknown)	(unknown)	total kilometres of this vehicle

Example

IKE informs about the total driven distance of 100.000km via GLO.

TX	LL	RX	MM	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	CS
0x80	0x0A	0xBF	0x17	0xA0	0x86	0x01	0x00	0x1C	0x32	0xCC	xor

0x19 Temperature

80 06 BF **19** ot ct 00 xor

ot = Outside temperature

ct = coolant temperature
See Temperature for more details