Bell Auto Services

FBHIC3 SMS Command Tips

If you are reading this PDF you have already managed to install the module SIM card and have made wiring connections to your car. The following SMS commands will help you use your FBHIC3.

SMS Command and Help Menu:

You can ask the FBHIC3 for help tips at any time by sending an SMS to its built-in help menu option list, send it an SMS with text **HE** , the unit will then respond with the following SMS:

Cmd:HE (Time Is Shown Here)
Help is available for:
ON OT DT OF TR TM SS TQ RT TI TE CF CO CP ML GP DI FP FS MO TZ
Use HE **xx** for tips on each section.

Below are the various options with added usage tips and info.

ON (Time Is Shown Here)
ON <start now> Default time is set by changing TI
ON r <start now, r is optional run mins>
ON hh:mm r <start at time, r is opt run mins>
Examples of SMS to send:
ON (will start now run for default run time of 30 mins)
ON 40 (will start now and run for the temporary changed time of 40 mins)
ON 08:30 (will start at the next 08:30am for default run time of TI 30 mins)
ON 08:30 40 (will start at the next 08:30am for the temporary changed time of 40 mins)
The Discovery 4 maximum run times can differ slightly depending on the car's condition.
Should you get a reply COMMS ERROR you will need to check the heater pin 2 wire connection.

OT (Time Is Shown Here)
OT <heat to default target temp which can be set by TE cmd>
Example of SMS to send:
OT (will start now run and until default temperature of TE 65C is reached)
OT 35 (will start now and run until default temperature of TE 35C is reached)
The Discovery 4 maximum run times can differ slightly depending on the car's condition.
Should you get a reply COMMS ERROR you will need to check the heater pin 2 wire connection.

DT (Time Is Shown Here)
DT m <be ready in m mins at TE temp>
DT hh:mm <be ready at given time >
DT hh:mm t<be ready at given time at target temp or t if present>

Examples of SMS to send:

DT 60   (will start and be ready to default TE temp 65C in 60 mins)

DT 08:30   (will start and be ready for you to depart at the next 08:30am to the default target 65C)

DT 08:30 50   (will start and be ready for you to depart at the next 08:30am to the new temp 50C)

The Discovery 4 maximum run times can differ slightly depending on the car's condition.

OF (Time Is Shown Here)

OF <stop FBH/cancel scheduled start>

Should you get a reply COMMS ERROR you will need to check the heater pin 2 wire connection.

TR (Time Is Shown Here)

TR z <z=0 -tracking off,

z=1 -send pos when car next started then disables itself,

z=2 -send pos each time car started/stopped,

z=3 -as TR 2 & send each x mins, x is set by TM cmd>

TM (Time Is Shown Here)

TM x <set repeat tracking message time, max 60 mins>

SS (Time Is Shown Here)

SS <show status>

TQ (Time Is Shown Here)

T2/T3 tel_number <set additional tel number, last 10 digits only>

TQ shows numbers stored.. Note: T1 is set when initial pairing is done using HE

RT (Time Is Shown Here)

RT x <set default ready mins, used by DT cmd, max 60>

TI (Time Is Shown Here)

TI x <set default runtime, max 240>

TE (Time Is Shown Here)

TE x <set default target temperature, max 85>

CF (Time Is Shown Here)

CF <clear FBH faults>

Should you get a reply COMMS ERROR you will need to check the heater pin 2 wire connection.

CO (Time Is Shown Here)

CO s <run combustion fan for s secs>

Should you get a reply COMMS ERROR you will need to check the heater pin 2 wire connection.

CP (Time Is Shown Here)

CP s <run circulation pump for s secs>

Should you get a reply COMMS ERROR you will need to check the heater pin 2 wire connection.

ML (Time Is Shown Here)

ML x<set message level, x= option level 0 to 3> 0= off Factory default is ML2

Raise the level to get more SMS feedback from the FBHIC3, lower the level to get less SMS feedback.

GP (Time Is Shown Here)

GP <send GPS position>

DI (Time Is Shown Here)

DI <send diagnostic data>

Should you get a reply COMMS ERROR you will need to check the heater pin 2 wire connection.

FP (Time Is Shown Here)

FP <perform fuel prime>

Should you get a reply COMMS ERROR you will need to check the heater pin 2 wire connection.

FS (Time Is Shown Here)

FS <perform fuel prime and then start fbh>

Should you get a reply COMMS ERROR you will need to check the heater pin 2 wire connection.

MO (Time Is Shown Here)

Setting Default Mode:

MO x <set mode, N timed/T temp/D departure>

MO N = Normal (timed heating) Default is set by TI

MO T = Temp (heat to defined target temperature) Default is set by TE

MO D = Departure, FBH will be ready at desired departure time

Departure time setting calculates its own FBH run time based upon your required temperature and departure time requirements.

TZ (Time Is Shown Here)

TZ <set timezone> Default is 0, UTC Time (TZ0 to TZ23 setting range is possible)

Adjusts time zone offset for different country time zones.

https://www.timeanddate.com/worldclock/full.html

TO RESET THE UNIT TO FACTORY SETTINGS (THE MASTER USER, T1) SEND AN SMS RF

Set tow away alerts

To set Tow Away Alerts use

TAE For Enable

TAD For Disable

This will give you a sms warning if your car moves without the ignition switched on.

Set temperature alerts

To set a low temperature alert send sms with 1234LOTEMP:x
x = temperature in C range is from -40 to 20
EG 1234LOTEMP:-5 This will then set the alert for -5 C
This uses the external temperature sensor connected on the White wire.

Additional three auxiliary outputs present on the FBHIC3 unit.

The three auxiliary outputs you have available are: AU1, AU2 & AU3.

AU1 is a GND trigger and is commonly used for switching-on an external LED should you wish to add a visual notification that your FBH is running. When the FBH is commanded to start, this trigger will become active when the FBH starts to fire-up, it will pulse 0ff for 1 second every fifteen seconds until the FBH has reached full burn when it will become solid active.

AU2 is a GND trigger and is commonly used for switching on external fan controllers and other accessories needed to be triggered when the FBH is running. This GND trigger will become active on the last ¼ of the FBH run time. Example, if the FBH run time is 30 mins the AU2 GND trigger will become active after approximately 22.5 mins and will remain active for 7.5 mins.

AU3 is a +12V trigger and can be used for a wide range of applications from external LED control to triggering an external relay or fan controller.

NOTE: ALL OUTPUT TRIGGERS ARE RATED AT A 1 AMPERE MAXIMIUM CURRENT LIMIT
The auxiliary triggers current limitation must be adhered to as overload could cause irreversible hardware damage to the FBHIC3 circuitry and is not covered under warranty.

We strongly advise if you need a higher current auxiliary trigger you use them ONLY via a separate relay, use them to energise the coil side of the relay thus allowing you to use the load/contact of the relay for higher amperage applications without causing damage to the FBHIC3 PCB.

Complete FBHIC3 main wiring loom details:

Purple = AUX 1 (GND trigger for external LED or relay).
Yellow = Temp sensor B (Purchasable separately from BAS).
Grey = SW1 (Used to externally trigger the FBH start/stop by momentarily holding to GND for 2 seconds) Can be used for external switching.
White = Temp sensor A (Fitted as standard to monitor external temperature).
Orange = AUX 2 (Active for the last ¼ of the heaters run time).
Brown = 12V, 1Amp Power out (Active for the duration of heater running).

Black with White Trace = Chassis GND
Green = **Pin 2 of FBH heater,** NOTE: if a Red wire is already present, REMOVE IT FIRST.

Red & Black trace = 12v Ignition sense (OPTIONAL USE, When connected improves engine running detection, should also be used for cars that have a battery charger attached overnight or when the car is not driving)

Blue = Head light sense (Connects to the head light LOW BEAM wire for FBH activation, trigger by making the lights come on for 5 seconds and then back off again using the Land Rover Button on the key.)

Red = **12V Main battery power (Should NOT be connected to auxiliary battery's)**

Produced and manufactured by www.bellautoservices.co.uk

Fault codes will be displayed in the sms in the following format.

EG: Faults 01 88 01   (01=1 fault) (88= Fuel pump failure) (01=seen 1x)

Fault Codes	Description
0x01	Defective control unit
0x02	No start
0x03	Flame failure
0x04	Supply voltage too high
0x05	Flame was detected prior to combustion
0x06	Heating unit overheated
0x07	Heating unit interlocked
0x08	Metering pump short circuit
0x09	Combustion air fan short circuit
0x0A	Glow plug/flame monitor short circuit
0x0B	Circulation pump short circuit
0x0C	No communication to air condition
0x0D	Green LED short circuit
0x0E	Yellow LED short circuit
0x0F	No configuration signal
0x10	Solenoid valve short circuit
0x11	ECU wrong coded
0x12	W-Bus communication failure
0x13	Vehicle fan relay short circuit
0x14	Temperature sensor short circuit
0x15	Combustion air fan blocked
0x16	Battery main switch short circuit
0x17	Invalid air flow reduction
0x19	Glow plug/electronic ignition short circuit
0x1A	Flame sensor short circuit
0x1B	Overheat short circuit

0x1D	Solenoid valve shed test short circuit
0x1E	Fuel sensor short circuit
0x1F	Nozzle stock heating short circuit
0x20	Operation indicator short circuit
0x21	Flame indicator short circuit
0x22	Reference resistance wrong
0x23	Crash interlock activated
0x24	Car is almost out of fuel
0x25	Fuel pre heating short circuit
0x26	PCB temperature sensor short circuit
0x27	Ground contact to the ECU broken
0x28	Board net energy manager low power voltage
0x29	Fuel priming still not done
0x2A	Error in the radio telegram
0x2B	Telestart still not programmed
0x2C	The pressure sensor has short circuit
0x32	No start from control idle period
0x33	Flame monitor signal invalid
0x34	Default values entered
0x35	EOL programming has not been carried out
0x36	Thermal fuse short circuit
0x45	Error relay box (short circuit/open circuit of heating relay)
0x50	User interface idle-Mode (no-communication)
0x51	User interface has communication fault
0x52	User interface send no defined operating mode
0x53	Heater fan status message negative
0x54	Heater fan status bus has short circuit to UB
0x55	Temperature water sensor failure
0x56	Temperature water sensor short circuit to UB
0x57	Overheating water temperature sensor
0x58	Overstepping water temperature sensor gradient
0x59	Overheating blow temperature sensor
0x5A	Overstepping low temperature sensor gradient
0x5B	Overheating printed circuit board temperature sensor
0x5C	Overstepping printed circuit board temp sensor gradient
0x5D	Cabin temperature sensor failure
0x5E	Flame detector gradient failure
0x5F	Emergency cooling
0x81	EOL checksum error
0x82	No start during test-run
0x83	Flame failure

0x84	Operating voltage too low
0x85	Flame was detected after combustion
0x87	Heater lock-out permanent
0x88	Fuel pump failure
0x89	Combustion air fan interruption
0x8A	Glow plug / flame monitor interruption
0x8B	Circulation pump interruption
0x8D	Green LED interruption
0x8E	Yellow LED interruption
0x90	Solenoid valve interruption
0x91	Control unit locked or coded as neutral
0x92	Command refresh failure
0x94	Temperature sensor interruption
0x95	Combustion air fan tight
0x97	Overheat sensor position wrong
0x98	Fault 152 (Power supply interruption)
0x99	Glow plug / electronic ignition unit interruption
0x9A	Flame sensor interruption
0x9B	Set point transmitter invalid
0x9C	Intelligent under voltage detection
0x9D	Solenoid valve shed test interruption
0x9E	Fuel sensor interruption
0x9F	Nozzle stock heating interruption
0xA0	Operating indicator interruption
0xA1	Flame indicator interruption
0xA5	Fuel pre heating interruption
0xA6	PCB temperature sensor interruption
0xA8	Communication board net energy manager error
0xAA	Send on W-Bus not succeed
0xAB	Overheat sensor interruption
0xAC	The pressure sensor failure
0xB6	Thermal fuse interrupted
0xFF	Unknown error code