

## Application Note: Authorised Driver Implementation

### Scope

AT110, AT210, AT220, AT240

### Overview

The iButton immobilisation mode (IBTN 5) uses a digital output to immobilise a vehicle until an authorised iButton is presented. A set of commands sent from the host is used to approve or decline iButtons. The device will maintain a list of approved iButtons in order to determine which ones will allow the vehicle to be started.

### Related Documents

The following documents are recommended reading to accompany this document:

- AT110, AT210, AT220 & AT240 User Guides
- AT110, AT210, AT220 & AT240 Installation Guides

These documents can be obtained from:

<http://www.gps-telematics.co.uk/downloads.htm>

### Operation

The device will store a list of up to 10 authorised iButtons (family code + serial number).

Each time a 'new' iButton is read (i.e. not currently in the list), the device will query the host server for approval to accept the new iButton. This process should take approximately 10 seconds.

iButtons approved by the host will be added to the list and when presented again in the future they will be immediately authorised by the device.

iButtons that are declined will not be added to the device list and will not allow the vehicle to be started. Declined iButtons send a query to the host so that if they are changed to approved in future they will be added to the approved list.

iButtons previously approved can be removed from the list by the host, using the appropriate command (see below).

If there are no communications with the host server, approved iButtons will allow the vehicle to be started and declined iButtons will not allow the vehicle to be started. Unknown iButtons will be temporarily allowed to start the vehicle and approval will be requested as soon as communications resume. If declined at that point, the vehicle will be immobilised.

If the device list becomes full and a new iButton is presented and authorised, the oldest iButton will be removed from the list to make room for the new one. The oldest iButton is based on the last time that the iButtons were presented, so regularly used iButtons should never be removed from the list.

The device can re-request authorisation from the server of all iButtons in the list periodically.

## Command Descriptions

### Request iButton authorisation from host

Direction: device to host

\$DRID,<model>,CHECK,<imei>,<family-code>,<serial-number>

Where <family-code> and <serial-number> are formatted as follows:

Argument	Format
<family-code>	iButton family code, fixed length, 2 hexadecimal digits (leading zeros), e.g. 01
<serial-number>	iButton serial number, fixed length, 12 hexadecimal digits (leading zeros), e.g. 0000125408C9

For example:

\$DRID,AT110,CHECK,351777042187300,01,0000125408C9

### Host approval of iButton

Direction: host to device

\$DRID,APPROVE,<family-code>,<serial-number>

### Host declines iButton (unknown)

Direction: host to device

\$DRID,DECLINE,<family-code>,<serial-number>

### Host request to add iButton to device list

Direction: host to device

\$DRID,ADD,<family-code>,<serial-number>

### Host request to remove iButton from device list

Direction: host to device

\$DRID,REMOVE,<family-code>,<serial-number>

### Host request to delete entire device lists

Direction: host to device

\$DRID,CLEAR

Also clear just the approved or declined iButtons with

\$DRID,CLEAR,WHITE

\$DRID,CLEAR,BLACK

**Host request to add iButton to declined list**

Direction: host to device

\$DRID,BLOCK,<family-code>,<serial-number>

**Host request to set the approved list verification period**

Direction: host to device

\$DRID,VERIFY,<hours>

The default period is 24 hours. It can be set using this command from 1-65535 hours. If it is set to 0 then the device will not verify the approved list with the host.