

## Contents

1. Introduction .....	1
2. Data .....	1
3. Checksum.....	1
4. Handshake .....	2
5. Messages from GO Device .....	2
5.1 Msg Type 1: Handshake Request .....	2
5.2 Msg Type 2: Third Party Data Ack.....	2
5.3 Message from External Device.....	2

## 1. Introduction

External devices can communicate with our device through our revised Third Party Data protocol. An initial handshake will need to be successfully negotiated in order for the GO device to accept third party data. Data can only be sent in a predefined format and will be saved as a Generic Data Record:

### Generic Data Record (45)

RECORD TYPE 45 Generic Record	Bytes
Record Type	1
Date / Time	4
Sub Second Counter	1
Data Identifier	2
Data Length	1
Data (specific to data identifier)	Up to 6

## 2. Data

All values must be sent least significant byte first.

## 3. Checksum

Each message will contain a 2 byte Fletchers Checksum calculated across all the bytes of the message up to, but not including, the checksum.

```

ChkA = 0;
ChkB = 0;
for (i = 0; i < n; i++)
{
    ChkA = ChkA + Buffer[i];
    ChkB = ChkB + ChkA;
}
    
```

ChkA precedes ChkB in the message.

## 4. Handshake

The GO device will listen for the Handshake Sync from the external device at the time it starts to detect whether a device is present and to auto-detect the external device BAUD rate. This sync character needs to be sent at least once per second by the external device. The GO device will then reply with a Handshake Request message to which the external device must reply with a Handshake Confirmation message. From this time the external device no longer needs to send the Handshake Initialisation message and can start sending third party data when required. The external device must still respond to the Handshake Request message with a Handshake Confirmation message at any time. If the external device does not receive an Acknowledge message from the GO device when sending third party data it must start streaming the Handshake Sync again. (See Figure on the last page)

## 5. Messages from GO Device

### 5.1 Msg Type 1: Handshake Request

Issued by GO device on receipt of the Handshake Initialisation message and periodically to confirm device is still attached.

	Bytes	Position
STX (0x02)	1	0
Message Type = 1	1	1
Message Body Length = 0	1	2
Checksum	2	3
ETX (0x03)	1	5

Reply: Handshake Confirmation

### 5.2 Msg Type 2: Third Party Data Ack

Issued by GO device on receipt of Third Party Data from the external device.

	Bytes	Position
STX (0x02)	1	0
Message Type = 2	1	1
Message Body Length = 0	1	2
Checksum	2	3
ETX (0x03)	1	5

### 5.3 Message from External Device

#### *Handshake Sync (Auto-BAUD detect)*

Issued by external device every second until the handshake is complete

	Bytes	Position
Sync Char (0x55)	1	0

Reply: Handshake Request

***Msg Type 0x81: Handshake Confirmation***

Issued by external device when it receives the Handshake Request.

	Bytes	Position
STX (0x02)	1	0
Message Type = 0x81	1	1
Message Body Length = 4	1	2
External Device ID (assigned by Geotab)	4	3
Checksum	2	7
ETX (0x03)	1	9

***Msg Type 0x80: Third Party Data***

Issued by external device whenever it wants Third Party Data saved in the log data.

	Bytes	Position
STX (0x02)	1	0
Message Type = 0x80	1	1
Message Body Length = 6	1	2
Data ID (assigned by Geotab)	2	3
Data	4	5
Checksum	2	9
ETX (0x03)	1	11

Reply: Third Party Data Ack

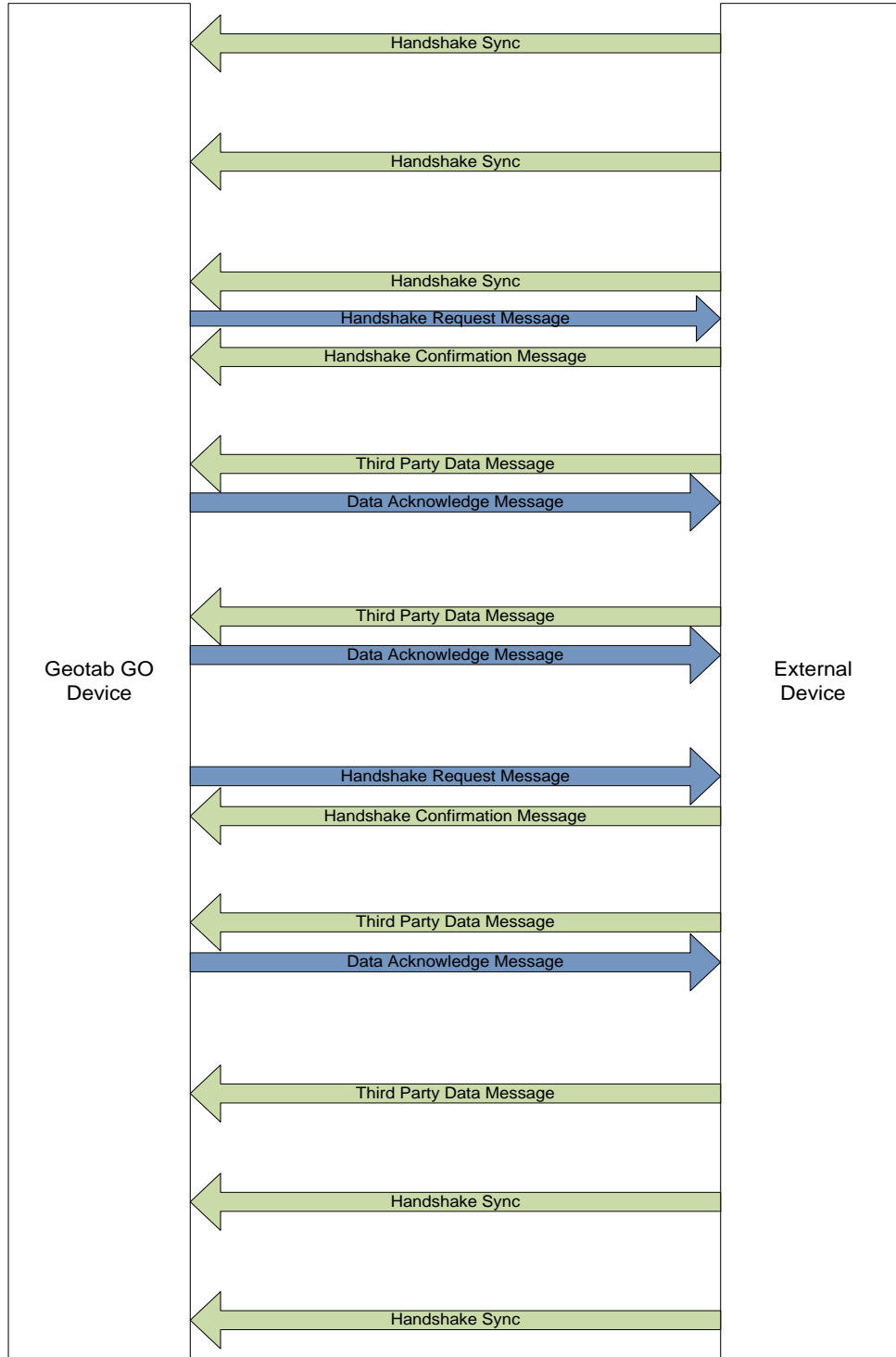


Fig 9.1 Example of External Device Message Flow