

Document Number		RG_TN-0016	
Title		GPS CAN Transmit to M1 via Dash	
Revision	Date	Prepared By	Change History
1	7/16/2015	Steven Bravek	Initial release

Introduction

This document will cover how to transmit GPS data over CAN to an M1 with Yamaha FX SHO January 2014 package. In order for this to work the GPS unit must be wired into one of the RS-232 RX pins on the dash.

- Setup the dash to transmit GPS data over CAN. To do these you must create three CAN transmit messages. Look at sample dash config for message structure and CAN ID's. Message one will contain GPS Speed, GPS Heading, and GPS Time. Message 2 will contain GPS Latitude and GPS Longitude. Message 3 will contain GPS Date. The CAN ID for message 1 will be 0x630, message 2 will be 0x631, and message 3 will be 0x632.

Message 1:

CAN ID 0x630

GPS Speed: Offset 0, Length 2, Multiplier 1, Divisor 1, Adder 0

GPS Heading: Offset 2, Length 2, Multiplier 1, Divisor 1, Adder 0

GPS Time: Offset 4, Length 4, Multiplier 1, Divisor 1, Adder 0

CAN Communications Setup - gps CAN transmit message 1

Parameters | Transmitted Channels

Parameters

Device : Diagnostic Channel :

Format :

Alignment :

Receive Timeout : milliseconds

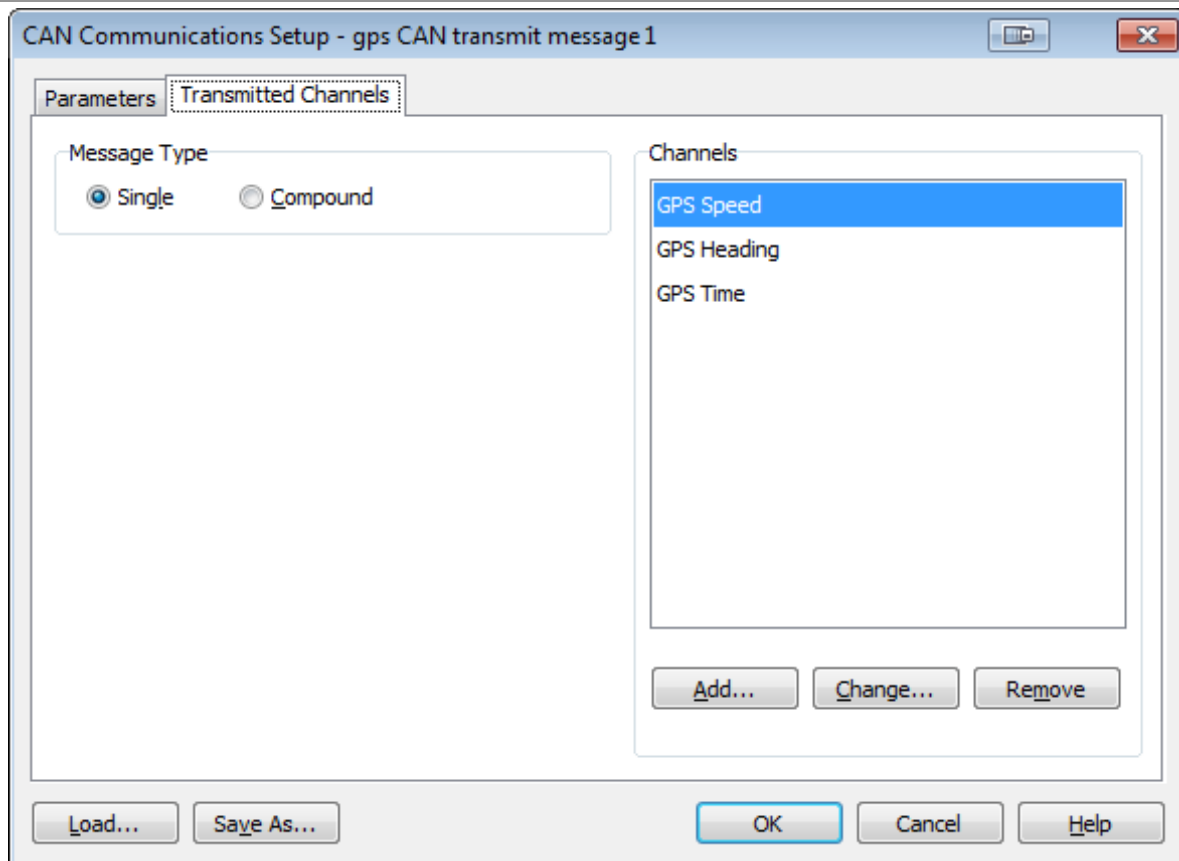
CAN Settings

Address Format :

Standard Extended Async. Device :

Base Address :

Transmit Rate : Allow Fast Receive (at Device's Transmit rate)

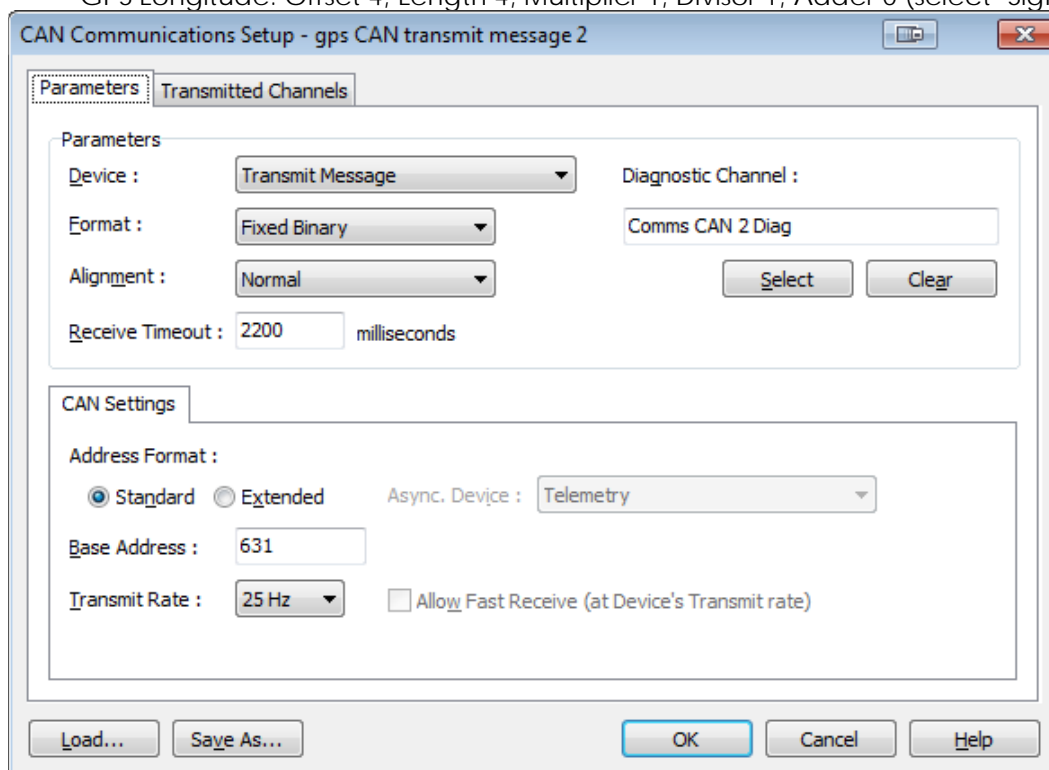


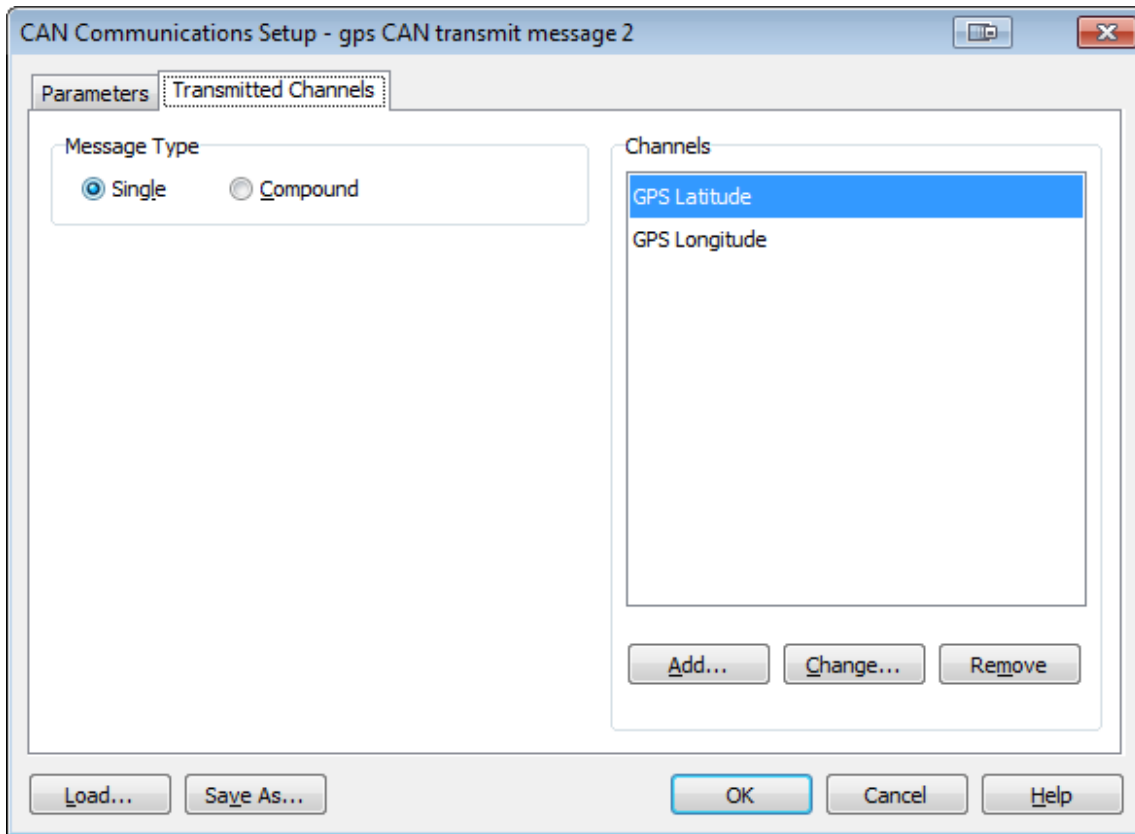
Message 2:

CAN ID: 0x631

GPS Latitude: Offset 0, Length 4, Multiplier 1, Divisor 1, Adder 0 (select 'Signed')

GPS Longitude: Offset 4, Length 4, Multiplier 1, Divisor 1, Adder 0 (select 'Signed')

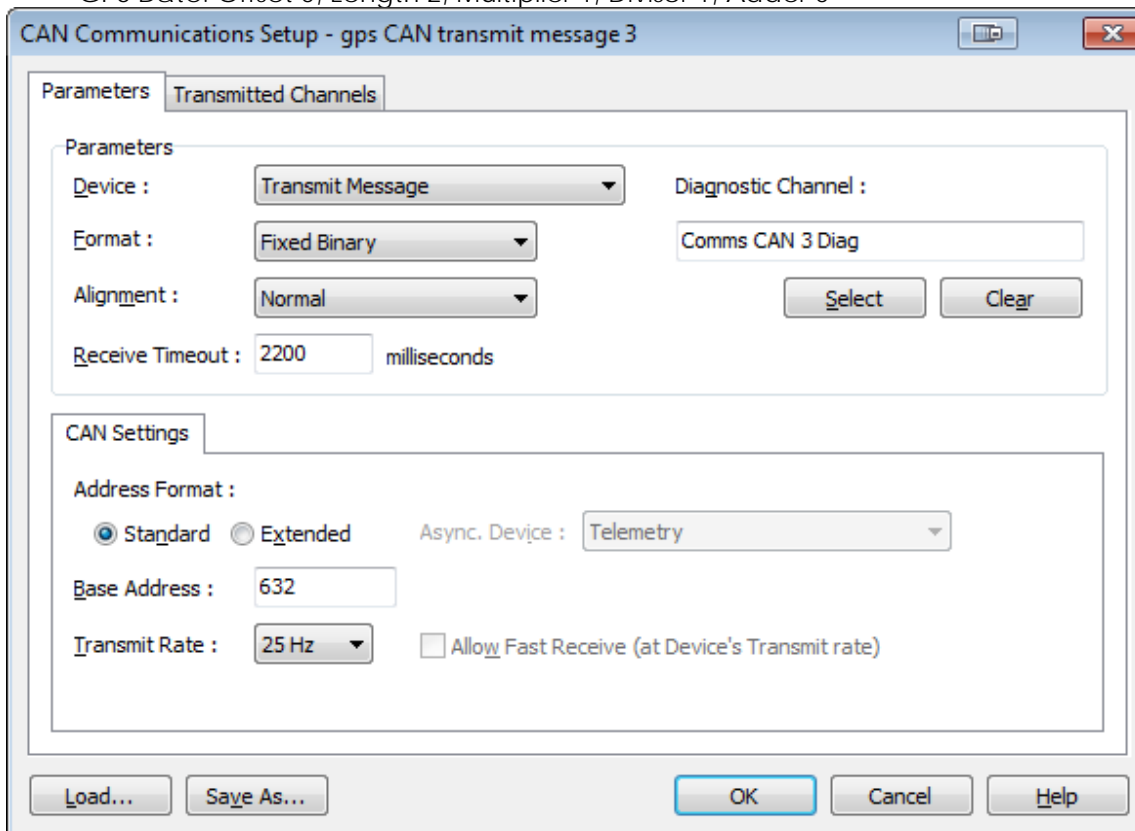


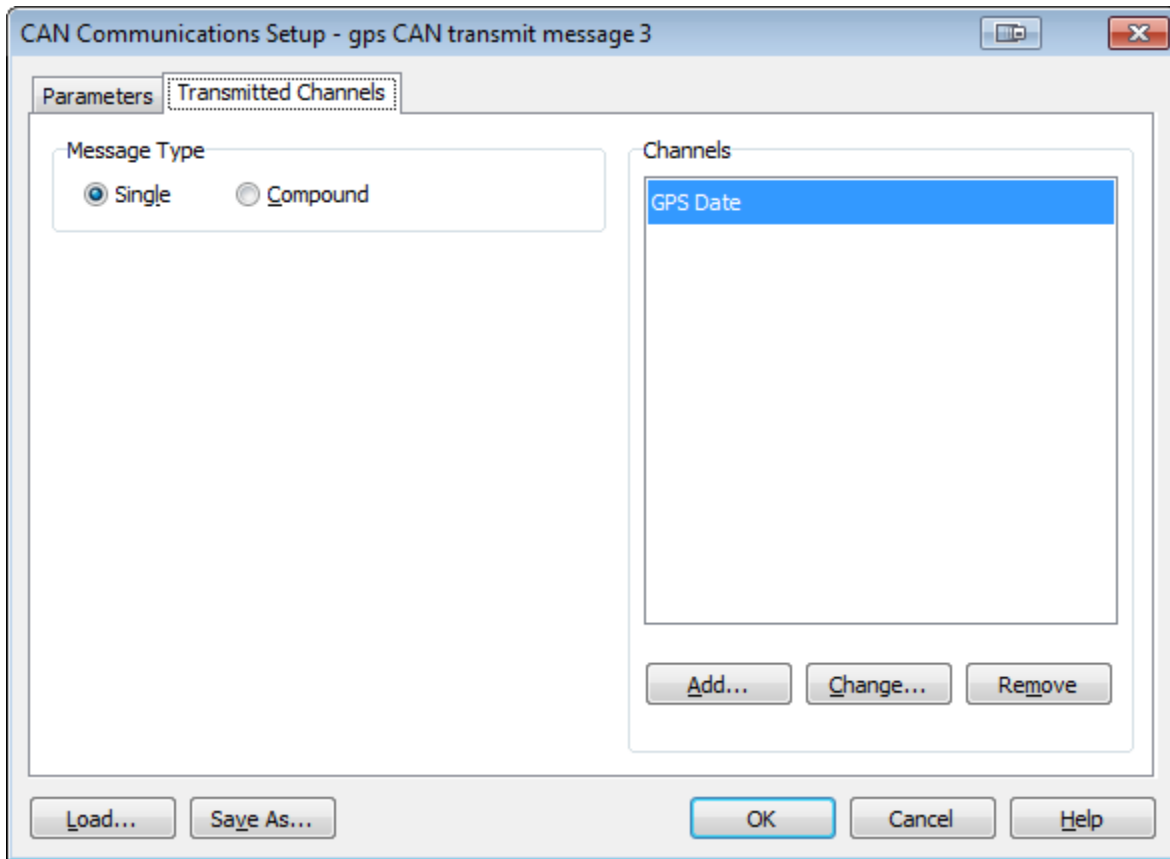


Message 3:

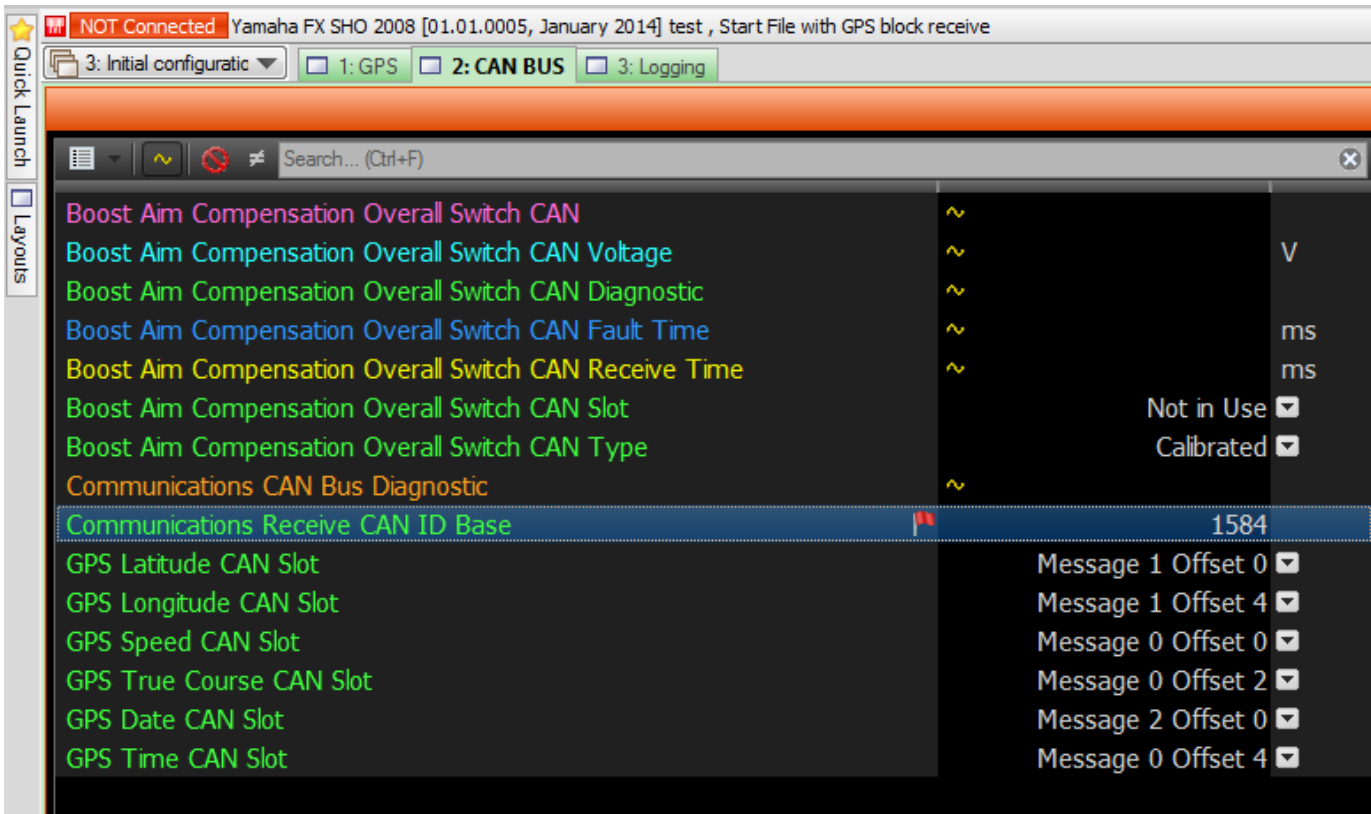
CAN ID 0x632

GPS Date: Offset 0, Length 2, Multiplier 1, Divisor 1, Adder 0





- Configure the M1 to receive the GPS data over CAN. First set Communications Receive CAN ID Base to 1584. Located under workbook Initial configuration, worksheet CAN BUS.



- Under workbook Initial configuration, worksheet GPS. Set GPS Interface to CAN Block Receive and select the following CAN receive messages for the each GPS channels.

