



CAN RECEIVE MESSAGE BLOCKS

▶ INTRODUCTION

Receive Message Blocks are used to configure up to 16 received addresses in a single Dash CAN template. This document specifies how to configure them correctly and describes the various features.

▶ PARAMETERS TAB

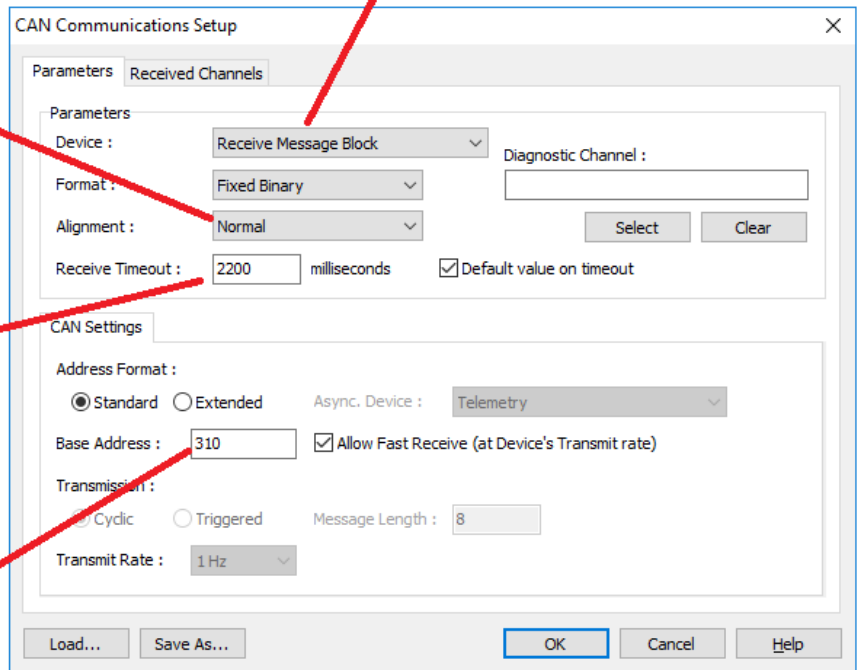
This is configured in the same way as standard receive or transmit messages. All of the settings are the same as a receive template except for the base address.

Select the byte order:
 Normal = Motorola/Big Endian
 Word Swap = Intel/Little Endian

Select a timeout and whether the default value is used on timeout

Select the base address. Putting any number from 0x310 to 0x31F will set the base address as 0x310

Select Receive Message Block from the drop down menu



▶ BASE ADDRESS

The Receive Message Block is a single block of 16 addresses which is designated from the base address. The base address must be divisible by 0x10; setting it outside of this will not change the block address range. For example, if the base address is set to 0x303, the range will be 0x300 to 0x30F. The same as if the base address is set to 0x300 or any other address in that range.

Base Address	Start Address	End Address
0x300	0x300	0x30F
0x303	0x300	0x30F
0x310	0x310	0x31F

In the case that a block of addresses cover this boundary, it is necessary to use two Receive Message Blocks. For example, receiving addresses 0x309, 0x30A, 0x30F, 0x312 and 0x314 will require one message block to receive 0x309, 0x30A and 0x30F and another to receive 0x312 and 0x314.

	Message Address	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
Message Block 1	0x309								
	0x30A								
	0x30F								
Message Block 2	0x312								
	0x314								

Channel Information

Extended ID addresses can also be used, but, depending on what type of messages are being received, it may not be ideal to use Receive Message Blocks and standard Receive Messages should be used instead. This is true for J1939 messages where the last 8 bits are the source address and will be the same for all of the messages coming from a single device. The Receive Message Block cannot be used in this case.

► **BYTE ORDER**

Only a single byte order can be selected for all messages within the block. If some messages are sent in a different byte order then another template is required.

► **RECEIVED CHANNELS TAB**

The Received Channels tab must be configured as shown below:

Must be set to Compound

Offset is always 8 and the ID Mask is always 0xFFFF

The ID is set to the various CAN addresses that are to be received

Channels are added for each of the addresses in the same way as a standard receive message

The message type is set to compound and then each of the addresses that are to be used are entered in the LHS table. The offset is always 8 and the ID Mask is always 0xFFFF no matter what the address is. The ID is the CAN address of the message that is being received.

For each of the rows in the table, the required channels are configured on the right hand side in the same way as a standard receive message.

▶ NOTES

Only 16 channels can be added for each of the addresses for a total of 256 channels (16 addresses, 16 channels per address) in a single Receive Message Block.

Once a Receive Message Block is set, a standard Receive Message template cannot be used to read a message in the range of the Receive Message Block. This can cause issues when addresses within a block use both Intel and Motorola formats. For example, if messages 0x301, 0x302...0x309 are all Motorola format but message 0x30C is Intel, a Receive Message Block cannot be used for 0x301 to 0x309 - a standard receive message cannot be configured for address 0x30C as it is within the 16 address range of the Receive Message Block.