

MBC 정밀측위장치의 CAN Message 입력을 위한 설정 예시

CAN message의 기본정보

- CAN bitrate: 500 kbps
- CAN message ID: 0x123
- DLC: 8
- Cycle time: 0 ms

CAN message 데이터 형식

- Speed 정보 형식 - 4가지
- Wheel Tick 정보 형식 - 2가지

MBC 기본 설정값

- Single Speed 형식, **B.2.2**

1. Speed 정보 데이터 형식(4가지)

B.2.1 Two rear wheels and direction

This configuration uses speed from two rear wheels and a separate direction signal. The configuration entries are described in the tables below.

Startbit	Length	Byte order	Value type	Factor	Offset	Min	Max	Unit	Source
52	12	big-endian	unsigned	0.1	0	0	409.6	km/h	RR
56	12	big-endian	unsigned	0.1	0	0	409.6	km/h	RL
8	2	big-endian	unsigned	1	0	0	3	direction	direction

byte/bit	7	6	5	4	3	2	1	0
0								
1							msb	lsb
2								
3								
4								
5	msb							
6				lsb	msb			
7								lsb

B.2.2 Single speed

This configuration uses a single-speed signal and a separate direction signal. The configuration entries are described in the tables below.

Startbit	Length	Byte order	Value type	Factor	Offset	Min	Max	Unit	Source
24	8	little-endian	unsigned	1	0	0	255	mph	combined
8	2	little-endian	unsigned	1	0	0	3	direction	direction

byte/bit	7	6	5	4	3	2	1	0
0								
1							msb	lsb
2								
3	msb							lsb
4								
5								
6								
7								

1. Speed 정보 데이터 형식(4가지)

B.2.3 Signed speed

This configuration uses a signed speed signal from both rear wheels. The configuration entries are described in the tables below.

Startbit	Length	Byte order	Value type	Factor	Offset	Min	Max	Unit	Source
36	16	big-endian	signed	0.01	0	-327.68	327.67	km/h	RR
52	16	big-endian	signed	0.01	0	-327.68	327.67	km/h	RL

byte/bit	7	6	5	4	3	2	1	0
0								
1								
2					msb			
3								
4				lsb	msb			
5								
6				lsb				
7								

B.2.4 Offset speed

This configuration uses an offset speed signal from both rear wheels. The configuration entries are described in the tables below.

Startbit	Length	Byte order	Value type	Factor	Offset	Min	Max	Unit	Source
16	16	little-endian	unsigned	0.01	50	-50	605.35	mph	RR
32	16	little-endian	unsigned	0.01	50	-50	605.35	mph	RL

byte/bit	7	6	5	4	3	2	1	0
0								
1								
2								lsb
3	msb							
4								lsb
5	msb							
6								
7								

2. Wheel Tick 정보 데이터 형식(2가지)

B.1.1 Two rear-wheel ticks and direction

This configuration uses wheel ticks from two rear wheels and a separate direction signal. The configuration entries are described in the tables below.

Startbit	Length	Byte order	Value type	Factor	Offset	Min	Max	Unit	Source
40	16	big-endian	unsigned	1	0	0	65535	tick	RR
56	16	big-endian	unsigned	1	0	0	65535	tick	RL
8	2	big-endian	unsigned	1	0	0	3	direction	direction

byte/bit	7	6	5	4	3	2	1	0
0								
1							msb	lsb
2								
3								
4	msb							
5								lsb
6	msb							
7								lsb

B.1.2 Single tick and direction

This configuration uses single-tick data and a separate direction signal. The configuration entries are described in the tables below.

Startbit	Length	Byte order	Value type	Factor	Offset	Min	Max	Unit	Source
32	16	big-endian	unsigned	1	0	0	65535	tick	combined
8	2	big-endian	unsigned	1	0	0	3	direction	direction

byte/bit	7	6	5	4	3	2	1	0
0								
1							msb	lsb
2								
3	msb							
4								lsb
5								
6								
7								

3. MBC 기본 설정값 (default config)

CAN bitrate : 500 kbps
CAN message ID : 0x123
DLC : 2 bytes
Cycle time : 0

startbit	length	byte order	value type	factor	offset	min	max	unit	source
0	14	little-endian	unsigned	0.031	0	0	507.873	kph	combined
14	2	little-endian	unsigned	1	0	0	1	direction	direction

direction min=forward, max=backward
중간값은 forward로 간주함

byte/bit	7	6	5	4	3	2	1	0
0	(08)	(07)	(06)	(05)	(04)	(03)	(02)	lsb (01)
1	msb	lsb	msb (14)	(13)	(12)	(11)	(10)	(09)

msb = most significant bit, lsb=least significant bit

웹기반 CAN설정 메시지 generator

C100 MSG v1.0

CAN bitrate500 kbps

CAN message ID0x123

Data length code8

Cycle time0ms

Unit

Source

Startbit0

Length8

EndiannessLittle-endian

SignUnsigned

Factor1

Offset0

Min0

Max255

CONFIG SET

CONFIG CLEAR

CONFIG GET

FW GET

Generated message

Decode

MBC 기본 설정값 예시

CAN bitrate500 kbps

CAN message ID0x123

Data length code2

Cycle time0ms

Unitkm/h

SourceCombined

Startbit0

Length14

EndiannessLittle-endian

SignUnsigned

Factor0.031

Offset0

Min0

Max507.873

CAN bitrate500 kbps

CAN message ID0x123

Data length code2

Cycle time0ms

UnitDirection

SourceDirection

Startbit14

Length2

EndiannessLittle-endian

SignUnsigned

Factor1

Offset0

Forward0

Backward1

cycle time은 0으로 입력
(입력되는 속도를 자동인식)

장치의 설정 변경 방법 : Realterm 프로그램을 통해 설정, 별도 안내