

DRC Head Board Information

BNO : 0x22(34)

1. Set and Request Board Information (0x01)

- Send Data

ID	BNO	SRBI	CANR					
0x01	0x22	0x01	5 or 10					

- Receive Data

ID	CANR	return	BTY	Version	Version	Version	Version	
0x190 + BNO	5 or 10	1	3	1	0	0	0	

2. Motor Speed Change (0xA0)

- Send Data

ID	BNO	MSC	SPD1a	SPD1b	SPD2a	SPD2b	SPD3a	SPD3b
0x01	0x22	0xA0	var	var	var	var	var	var

goalspd1 = SPD1a | (SPD1b<<8)
goalspd2 = SPD2a | (SPD2b<<8)
goalspd3 = SPD3a | (SPD3b<<8)
goalspd range : 0 ~ 1023(0x3FF)
the higher number, the faster (but 0 means max speed)

- Receive Data

None

3. Motor Encoder Request (0x03)

- Send Data

ID	BNO	ENC						
0x01	0x22	0x03						

- Receive Data

ID	ENC1a	ENC1b	ENC2a	ENC2b	ENC3a	ENC3b		
0x60 + BNO	var	var	var	var	var	Var		

encoder1 = ENC1a | (ENC1b<<8)
encoder2 = ENC2a | (ENC2b<<8)
encoder3 = ENC3a | (ENC3b<<8)
encoder range : 0 ~ 4095(0xFFF), 2048(0x800) is 180 degree point

4. Motor Position Control

- Send Data

ID	POS1a	POS1b	POS1a	POS1b	POS1a	POS1b		
0x10 + BNO	var	var	var	var	var	var		

goalpos1 = POS1a | (POS1b<<8)

goalpos2 = POS2a | (POS2b<<8)

goalpos3 = POS3a | (POS3b<<8)

goalpos range : 0 ~ 4095(0xFFF), 2048(0x800) is 180 degree point

- Receive Data

None

5. Motor Enable / Disable (0xB0)

- Send Data

ID	BNO	ENABLE	ON/OFF	ON/OFF	ON/OFF			
0x01	0x22	0xB0	0 or 1	0 or 1	0 or 1			

0: Enable

1: Disable

order is motor1, motor2, motor3

- Receive Data

None

6. Motor Torque Limit Set (0xC0)

- Send Data

ID	BNO	ENABLE	TQ1a	TQ1b	TQ2a	TQ2b	TQ3a	TQ3b
0x01	0x22	0xC0	var	var	var	var	var	Var

torque1 = TQ1a | (TQ1b<<8)

torque2 = TQ2a | (TQ2b<<8)

torque3 = TQ3a | (TQ3b<<8)

torque range : 0 ~ 1023(0x3FF), about 0.1% unit

when the alarm shutdown is triggered, dynamixel makes the torque limit as 0

so, you should change non 0 value to operate motor.

- Receive Data

None