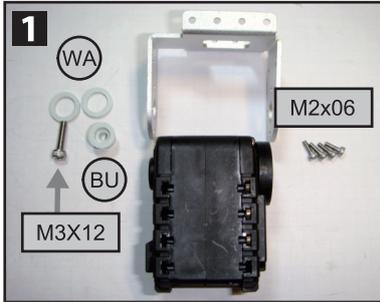


BIOLOID GP

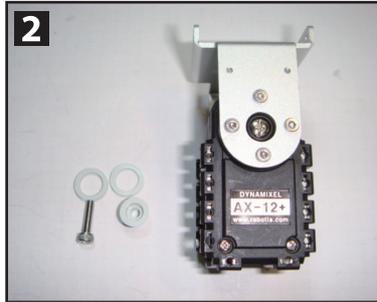




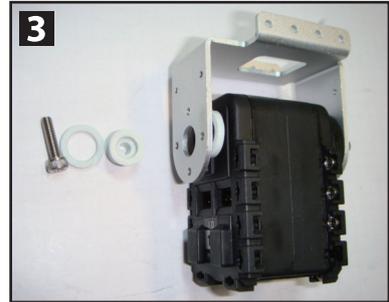
조립 팁 ① 다이나믹셀 AX 시리즈와 힌지 프레임의 체결 방법



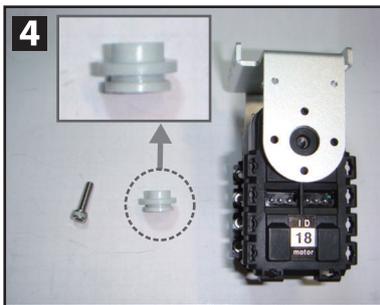
1. 부품 준비



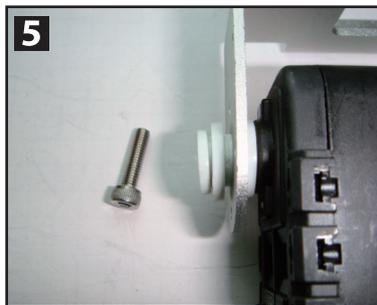
2. 힌지에 스크류 체결 (WB M2X06)



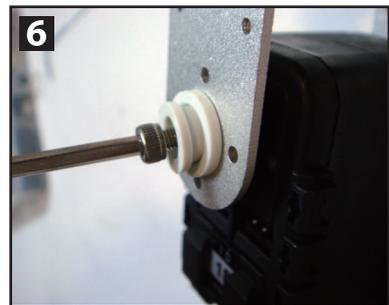
3. 프레임과 모터 사이에 WA 삽입



4. BU에 WA 삽입



5. 모터의 뒷면에 체결



6. 스크류 체결 (WB M3X12)



다이나믹셀(AX 시리즈)과 힌지 프레임의 체결



조립 팁 ② 록타이트(나사고정제)를 이용하여 체결하면, 견고한 스크류 체결이 가능



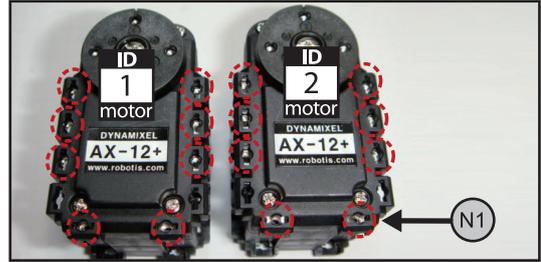


바이올로이드 GP 조립시작

STEP 1

AX-12+ ID1과 ID2에 너트를 삽입한다.

N1 × 16



STEP 2

AX-12+ ID1과 ID2에 CABLE-10을 연결하고 가슴프레임(FR04-E120)와 체결한 후, 가슴프레임B(FR04-E150)와 체결한다. (⚠ 혼 위치에 주의)

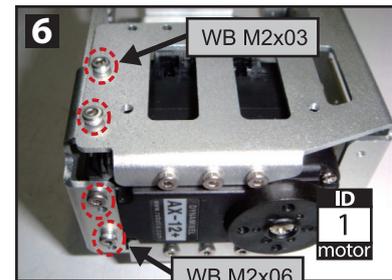
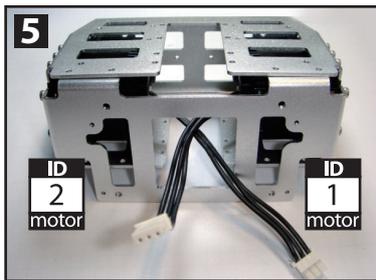
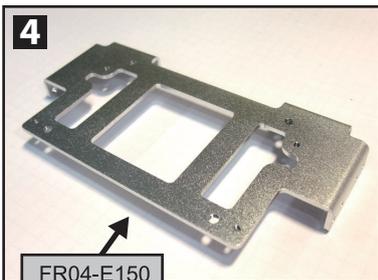
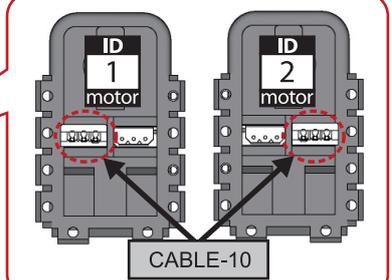
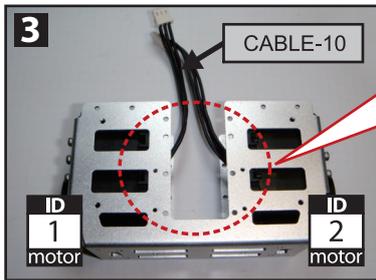
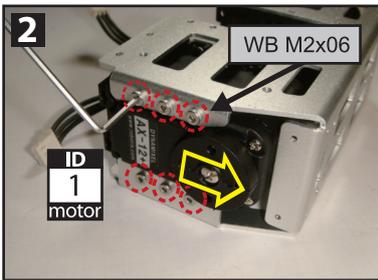
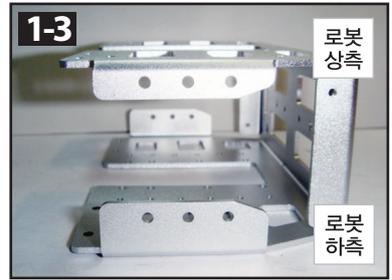
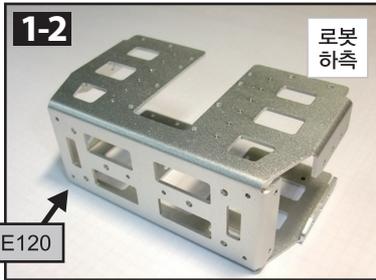
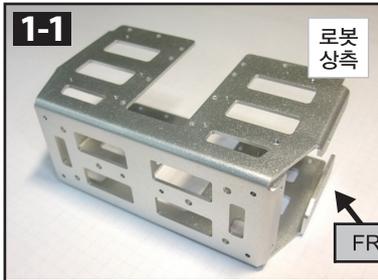
FR04-E120 × 1

FR04-E150 × 2

CABLE-10 × 2

WB M2x03 × 4

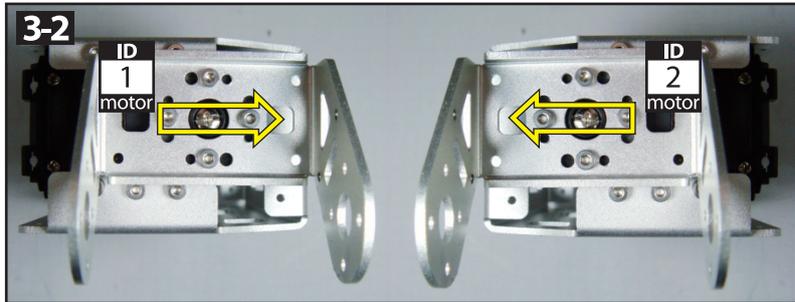
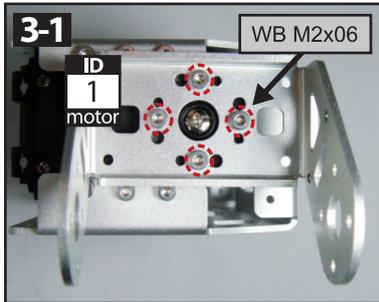
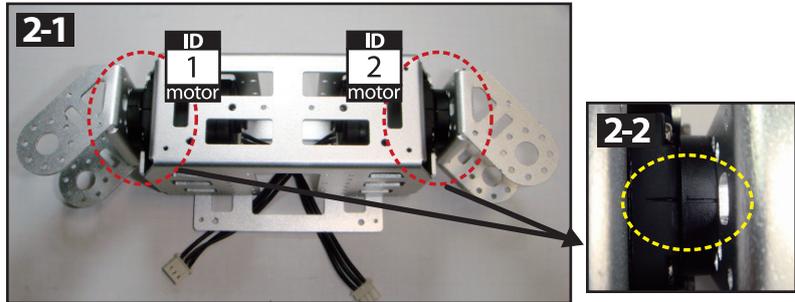
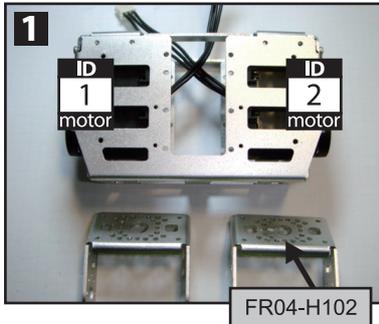
WB M2x06 × 16



STEP 3

가슴프레임 F와 FR04-H102 프레임을 체결한다. (⚠ 혼의 위치에 주의)

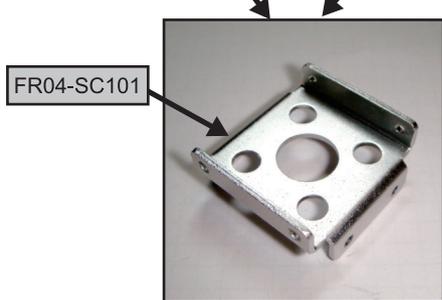
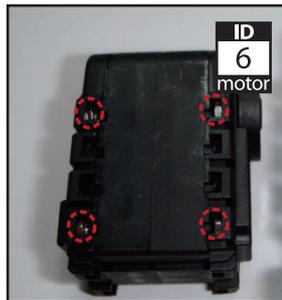
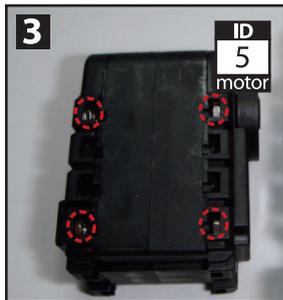
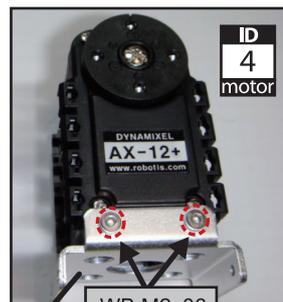
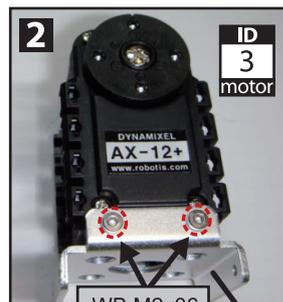
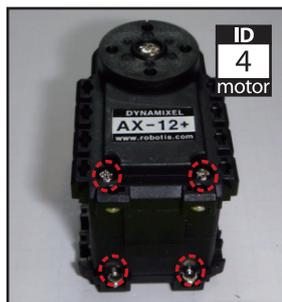
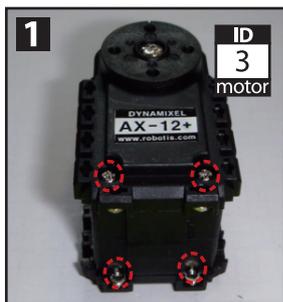
FR04-H102 ×2 WB M2x06 ×8



STEP 4

AX-12+ ID3과 ID4에 너트를 삽입하고, FR04-SC101프레임과 체결한다.
AX-12+ ID5와 ID6에 너트를 삽입한다.

FR04-SC101 ×2 WB M2x06 ×8 N1 ×16

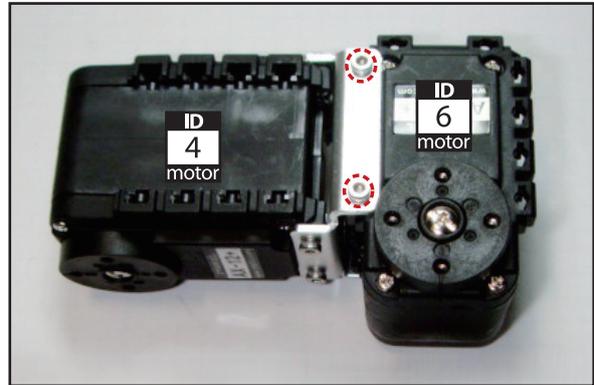
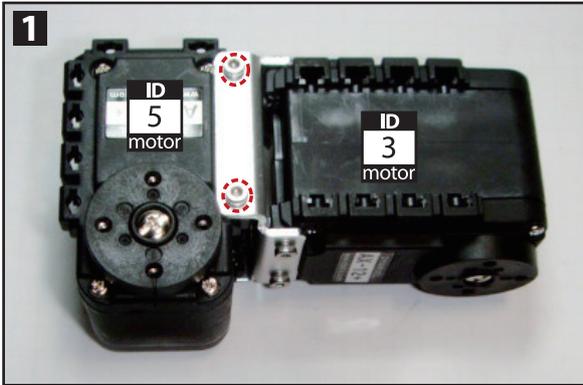


STEP 5

AX-12+ ID3과 ID5, ID4와 ID6을 체결한다.

WB M2x06 ×8

1



STEP 6

손 프레임(FR04-E180)을 스크류로 체결하고, 힌지프레임(FR04-H102)과 체결한다.

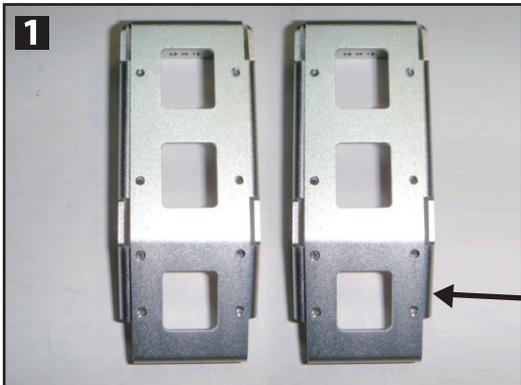
FR04-E180 ×2

FR04-H102 ×2

WB M2x03 ×16

WB M2.5x04 ×8

1



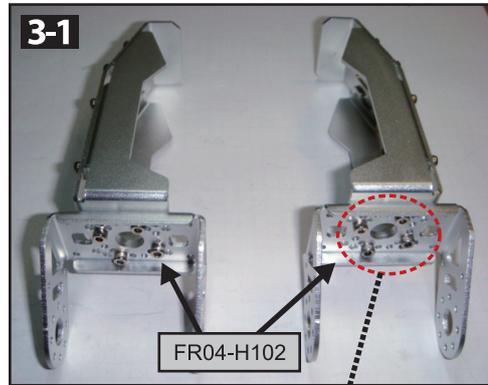
FR04-E180

2



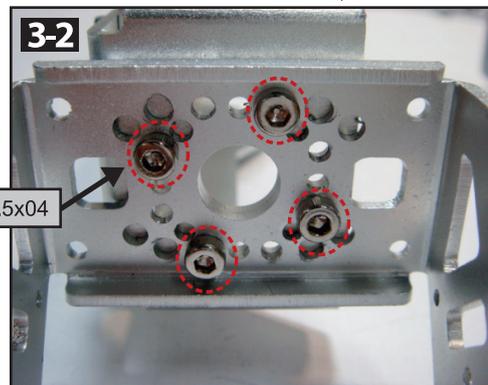
WB M2x03

3-1



FR04-H102

3-2

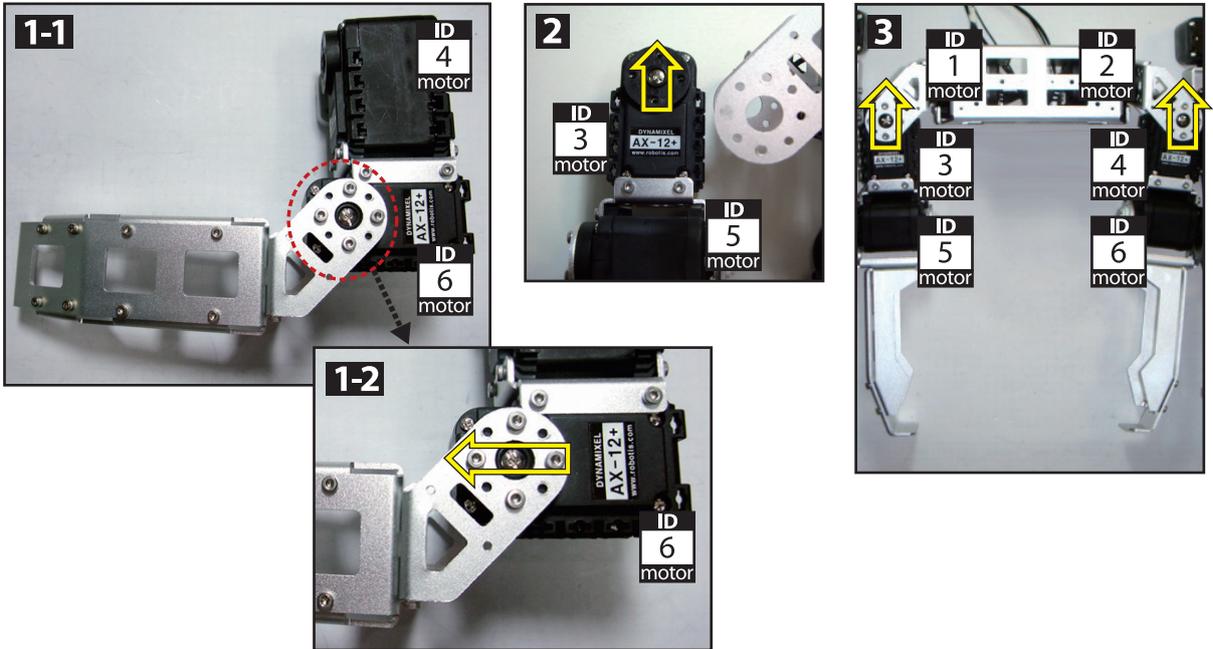


WB M2.5x04

STEP 7

팔 부분에 손을 체결하고, 몸통 프레임과 체결한다. (📖 조립 팁 1 참조)

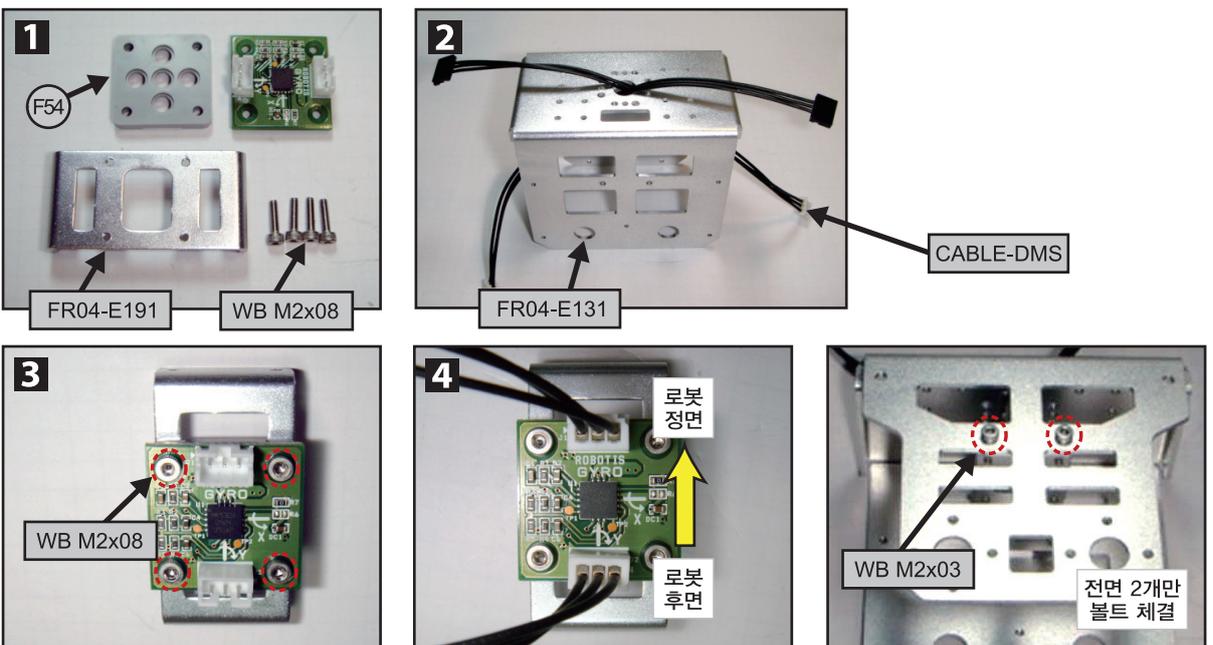
WB M2x06 x16 WB M3x12 x4 BU x4 WA x8



STEP 8

자이로센서와 브라켓(FR04-E191), 허리프레임(FR0-E131)을 체결한다.

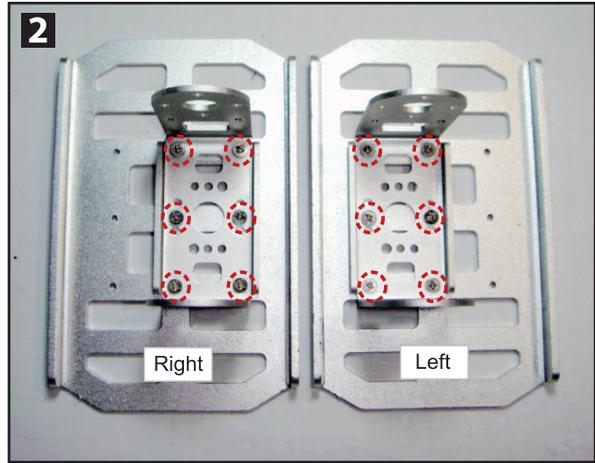
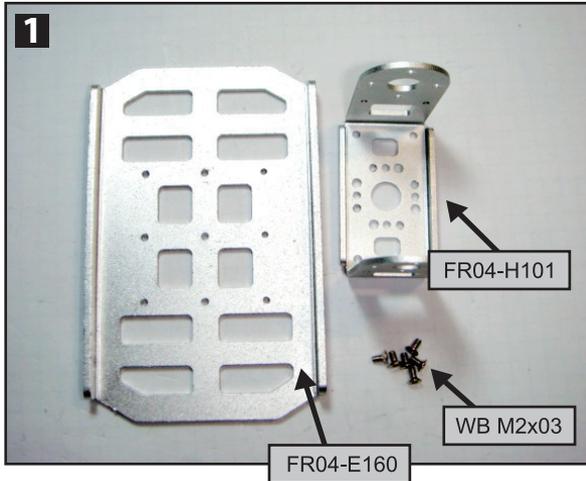
Gyro x1 FR04-E131 x1 FR04-E191 x2 F54 x2 CABLE-DMS x2 WB M2x03 x2 WB M2x08 x4



STEP 9

발바닥 프레임과 힌지 프레임(FR04-H101)을 체결한다.

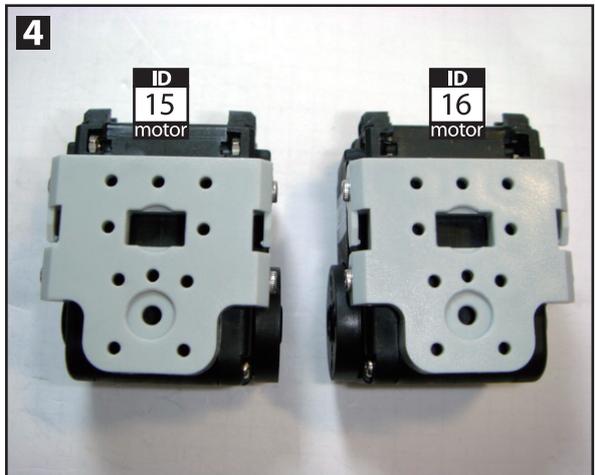
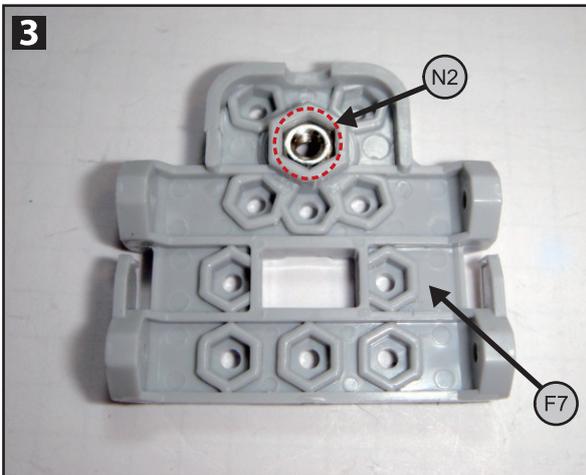
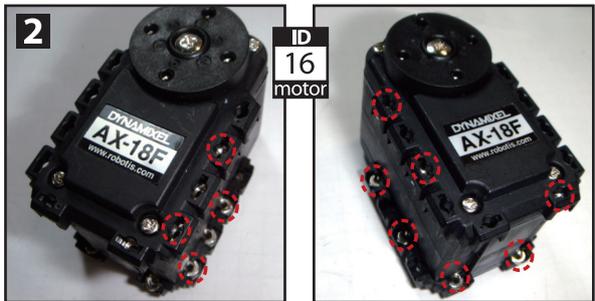
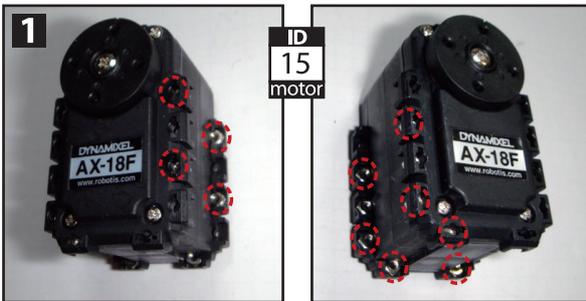
FR04-E160 ×2 FR04-H101 ×2 WB M2x03 ×12



STEP 10

AX-18F ID15와 ID16에 너트를 삽입하고, F7에 N2 너트를 삽입한 후, 다이내믹셀과 체결한다.

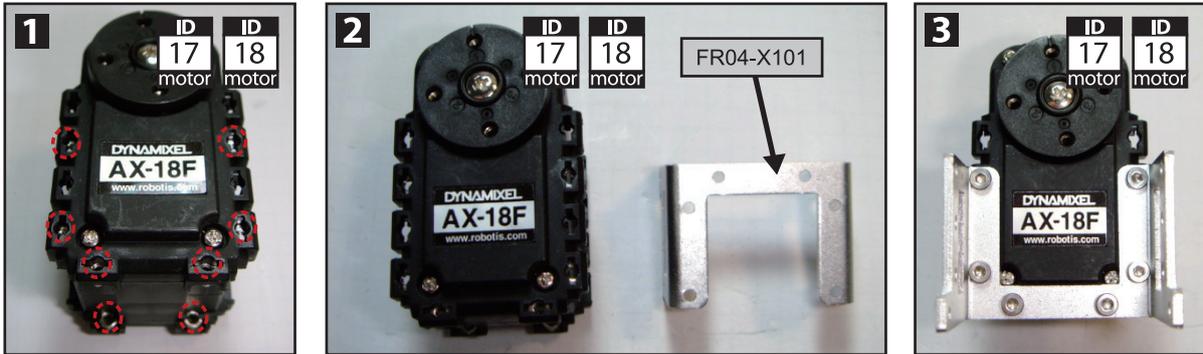
F7 ×2 WB M2x06 ×8 N1 ×22 N2 ×2



STEP 11

AX-18F ID17과 ID18에 너트를 삽입하고, 크로스 프레임(FR04-X101)과 체결한다.

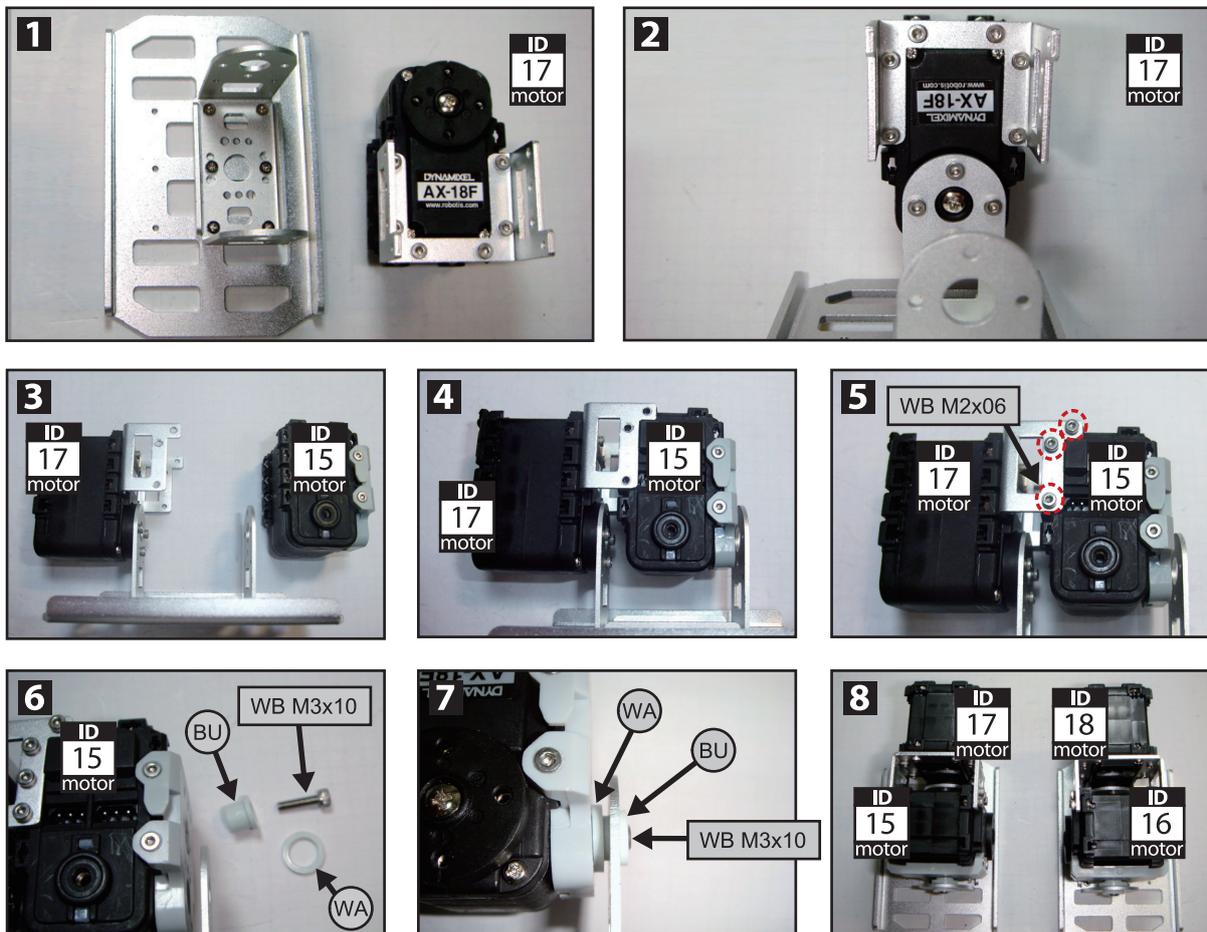
FR04-X101 ×2 WB M2x06 ×12 (N1) ×16



STEP 12

발바닥과 다이내믹셀을 체결하여 발목 부분 조립을 한다.

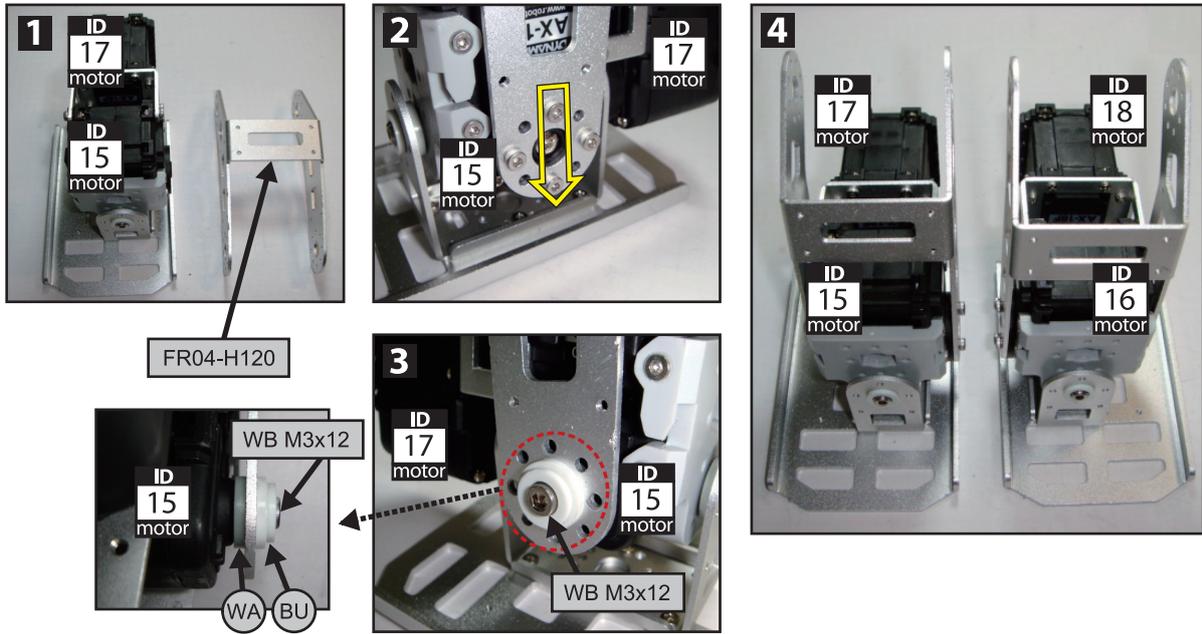
WB M2x06 ×22 WB M3x10 ×2 (BU) ×2 (WA) ×2



STEP 13

발목 부분과 다리프레임(FR04-H120)을 체결한다. (📖 조립 팁 1 참조)

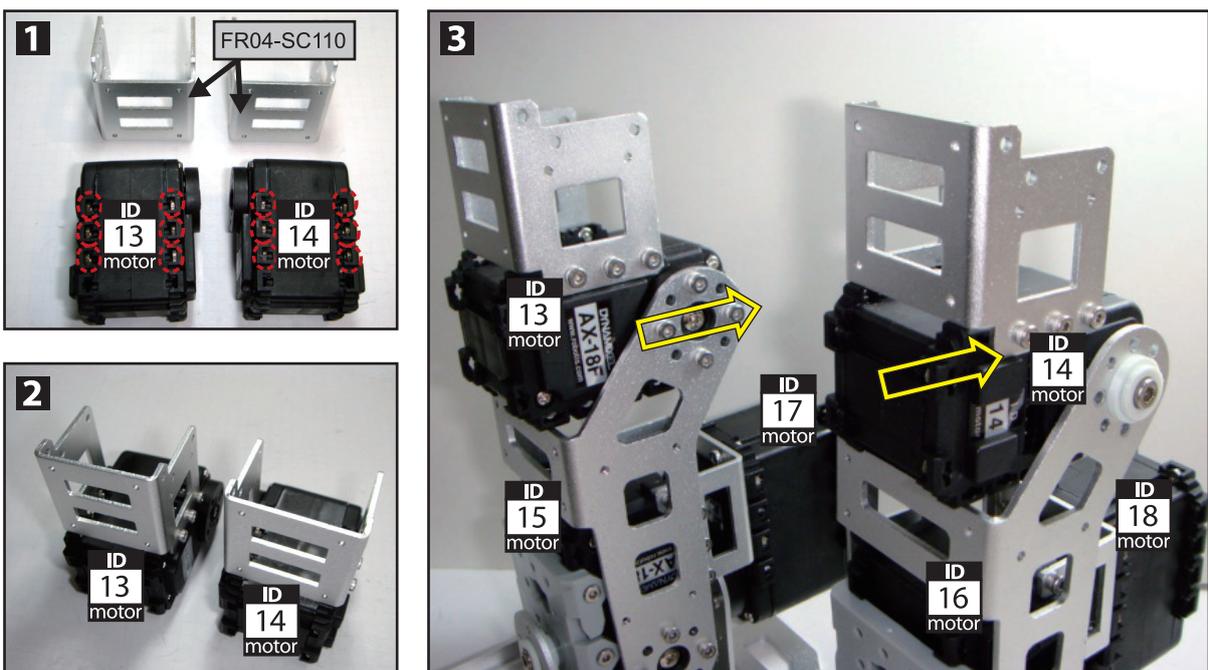
FR04-H120 ×2 WB M2x06 ×8 WB M3x12 ×2 BU ×2 WA ×4



STEP 14

AX-18F ID13과 ID14에 FR04-SC110 프레임을 체결한다.

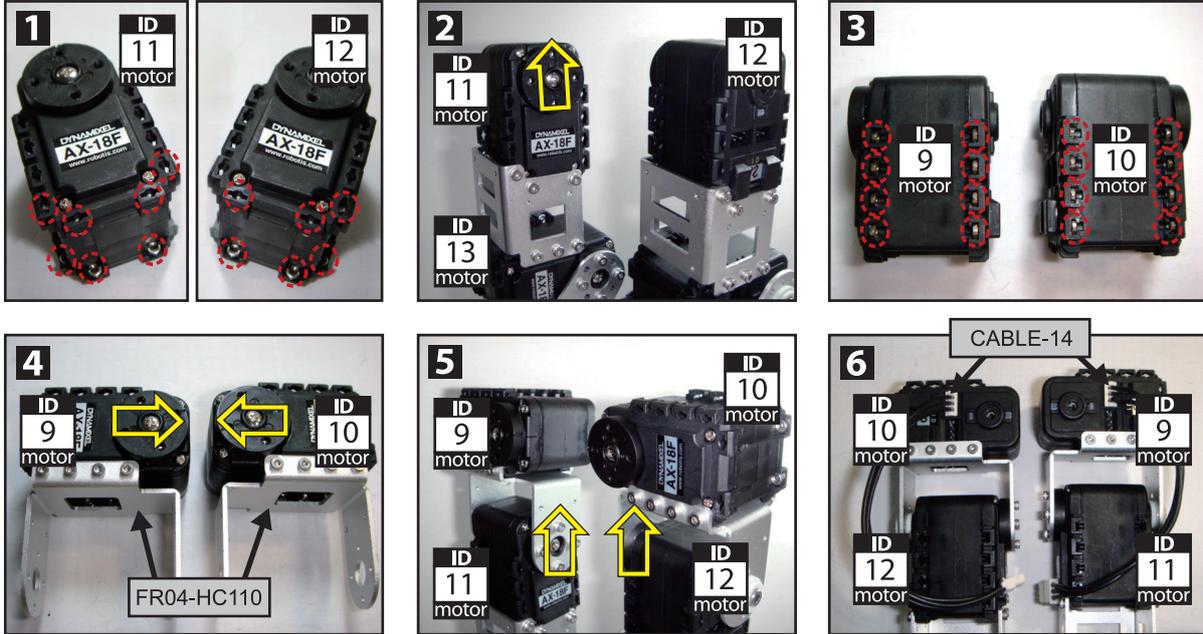
FR04-SC110 ×2 WB M2x06 ×20 WB M3x12 ×2 BU ×2 WA ×4 N1 ×12



STEP 15

AX-18F ID11, ID12와 다리부를 체결한 후, AX-18F ID9, ID10을 FR04-HC110과 체결한다. ID9와 ID10에 CABLE-14를 그림과 같이 연결한다. (조립 팁 1 참조)

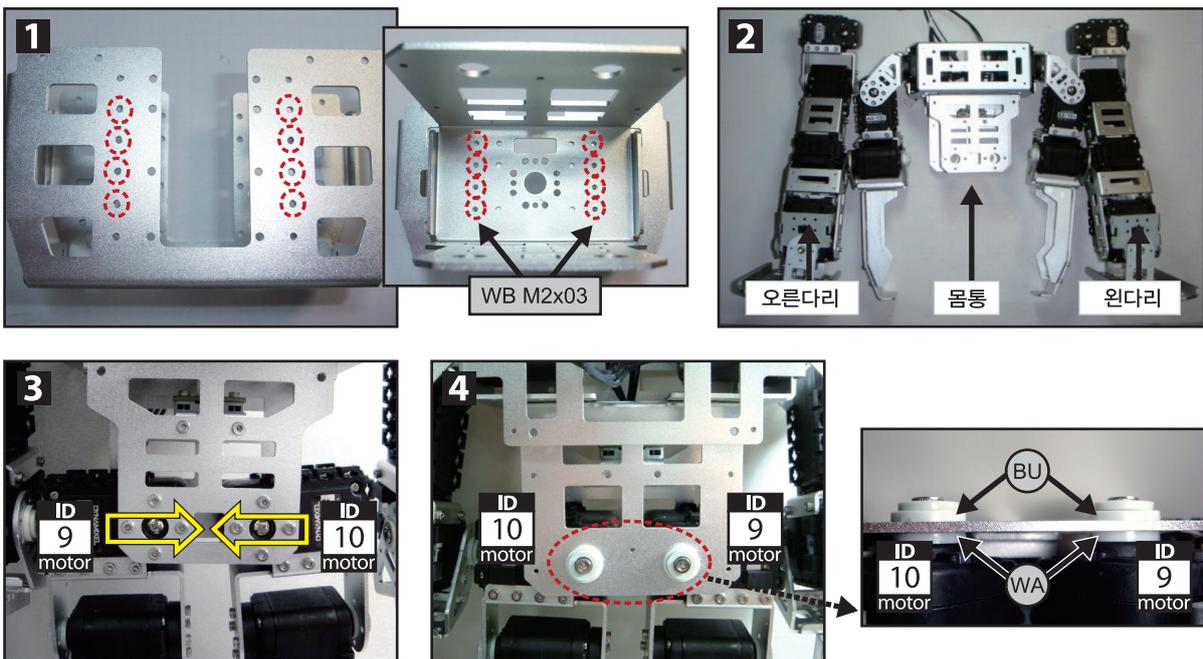
FR04-HC110 ×2 CABLE-14 ×2 WB M2x06 ×28 N1 ×28



STEP 16

몸통부분과 다리부분을 체결한다. (조립 팁 1 참조)

WB M2x03 ×8 WB M2x06 ×8 M3x12 ×2 BU ×2 WA ×4



STEP 17

몸통 뒷면에 PR10-SPACER-01과 BATTERY COVER-B(F60)을 체결한다.

PR10-SPACER-01 ×2 F60 ×2 S2 ×5 S3 ×2

1 PR10-SPACER-01 F60

2 ID 10 motor ID 9 motor

3 S3 S2 ID 10 motor ID 9 motor

STEP 18

CM-510을 로봇 뒷면의 가슴프레임(FR04-E150)에 체결하고, CABLE-DMS를 CM-510에 연결한다. (X축 : CM-510 3번 포트 / Y축 : CM-510 4번 포트)

CM-510 ×2 WB M2x06 ×4

1-1 ID 2 motor ID 1 motor FR04-E150

1-2 CM-510

2 WB M2x06 ID 4 motor ID 3 motor ID 6 motor ID 5 motor FRONT BACK

3-1 PORT 3 (III) X축 케이블 로봇 전면 케이블 PORT 4 (IIII) Y축 케이블 로봇 후면 케이블

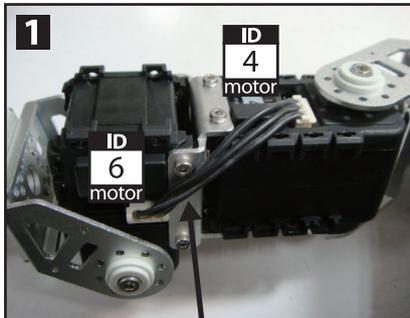
3-2 X축 Y축

STEP 19

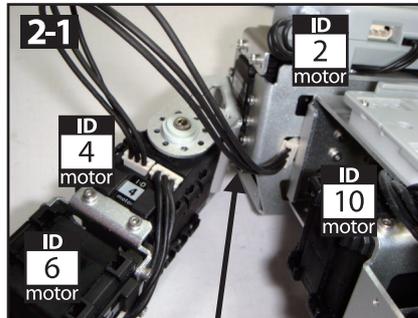
CABLE-10을 이용하여 ID4와 ID6, ID3과 ID5를 연결하고
CABLE-18을 이용하여 ID2와 ID4, ID1과 ID3을 연결한다.

CABLE-10 ×2

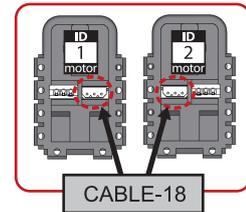
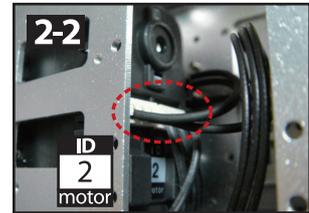
CABLE-18 ×2



CABLE-10



CABLE-18



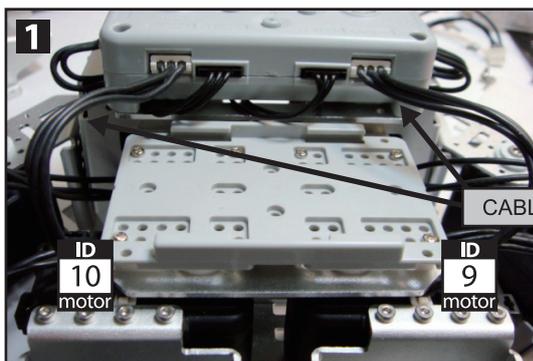
CABLE-18

1. CABLE-10을 이용하여 CM-510과 ID9, CM-510과 ID10을 연결한다.
2. CABLE-14를 이용하여 ID9와 ID11, ID10과 ID12를 연결한다.
3. CABLE-14를 이용하여 ID11과 ID13, ID12와 ID14를 연결한다.
4. CABLE-18을 이용하여 ID13과 ID15, ID14와 ID16을 연결한다.
5. CABLE-14를 이용하여 ID15와 ID17, ID16과 ID18을 연결한다.

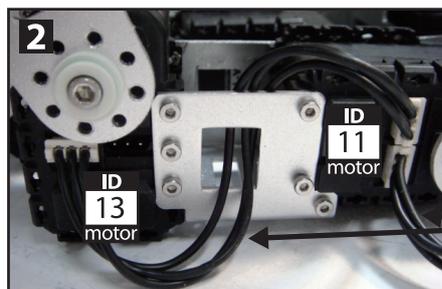
CABLE-10 ×2

CABLE-14 ×6

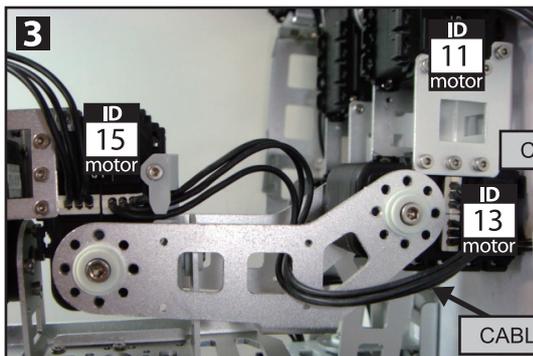
CABLE-18 ×2



CABLE-10

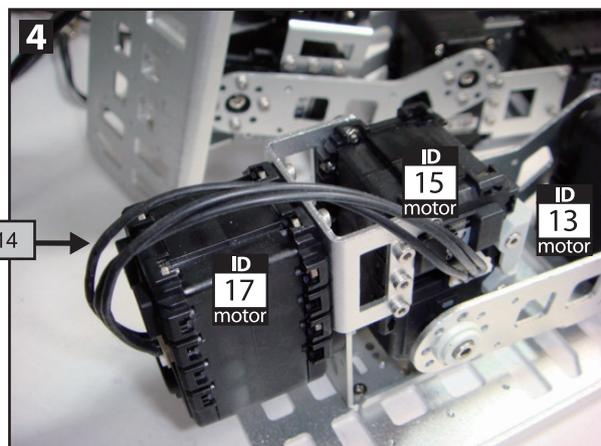


CABLE-14



CABLE-14

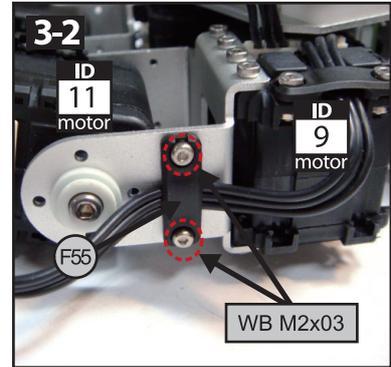
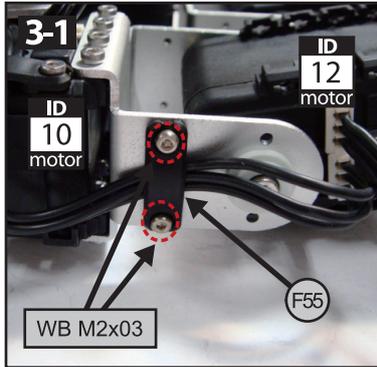
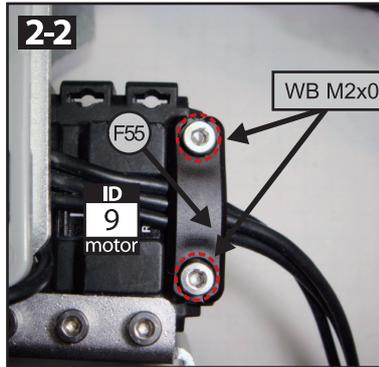
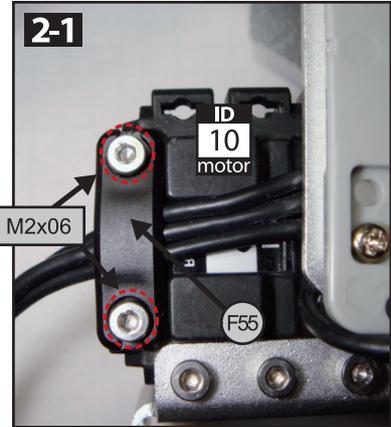
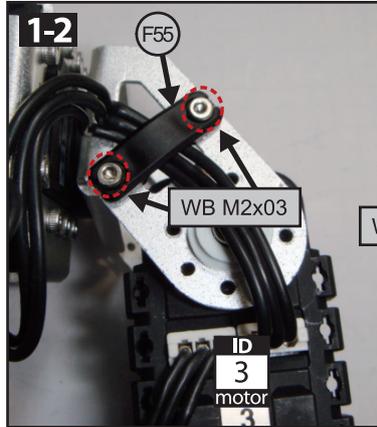
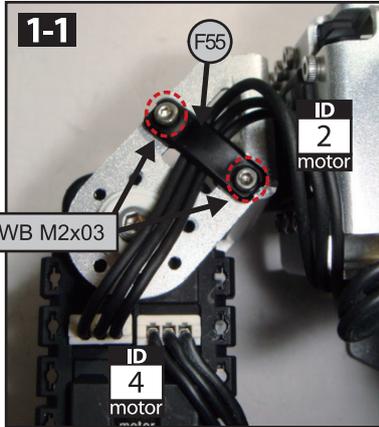
CABLE-18



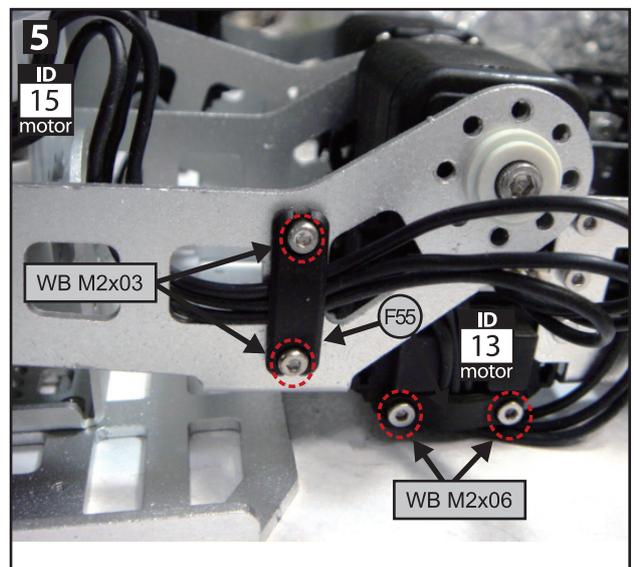
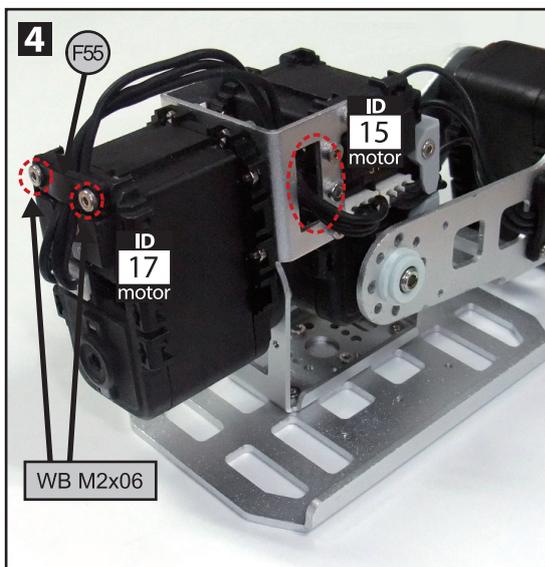
STEP 20

아래 그림과 같이 케이블홀더(F55)를 이용하여 배선을 정리한다.

WB M2x03 ×8 WB M2x06 ×4 F55 ×6



WB M2x03 ×4 WB M2x06 ×8 F55 ×6



STEP 21

머리프레임과 LED BOARD를 체결한다. (⚠ 5P 케이블 방향에 주의)
 머리프레임과 가슴프레임을 체결하고, 5P CABLE을 CM-510 5번 포트와 연결한다.

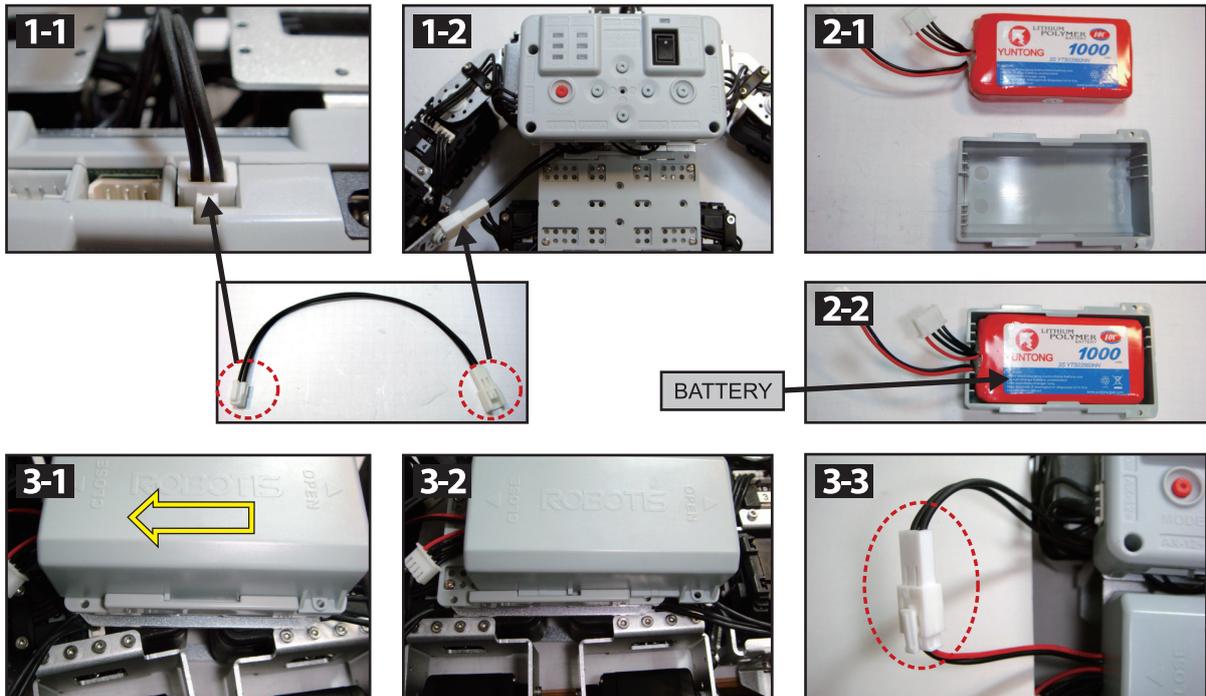
5P-CABLE-15 ×6 FR04-E175 ×6 LED BOARD ×6 SP1 ×4 WB M2x03 ×4 WB M2x08 ×2



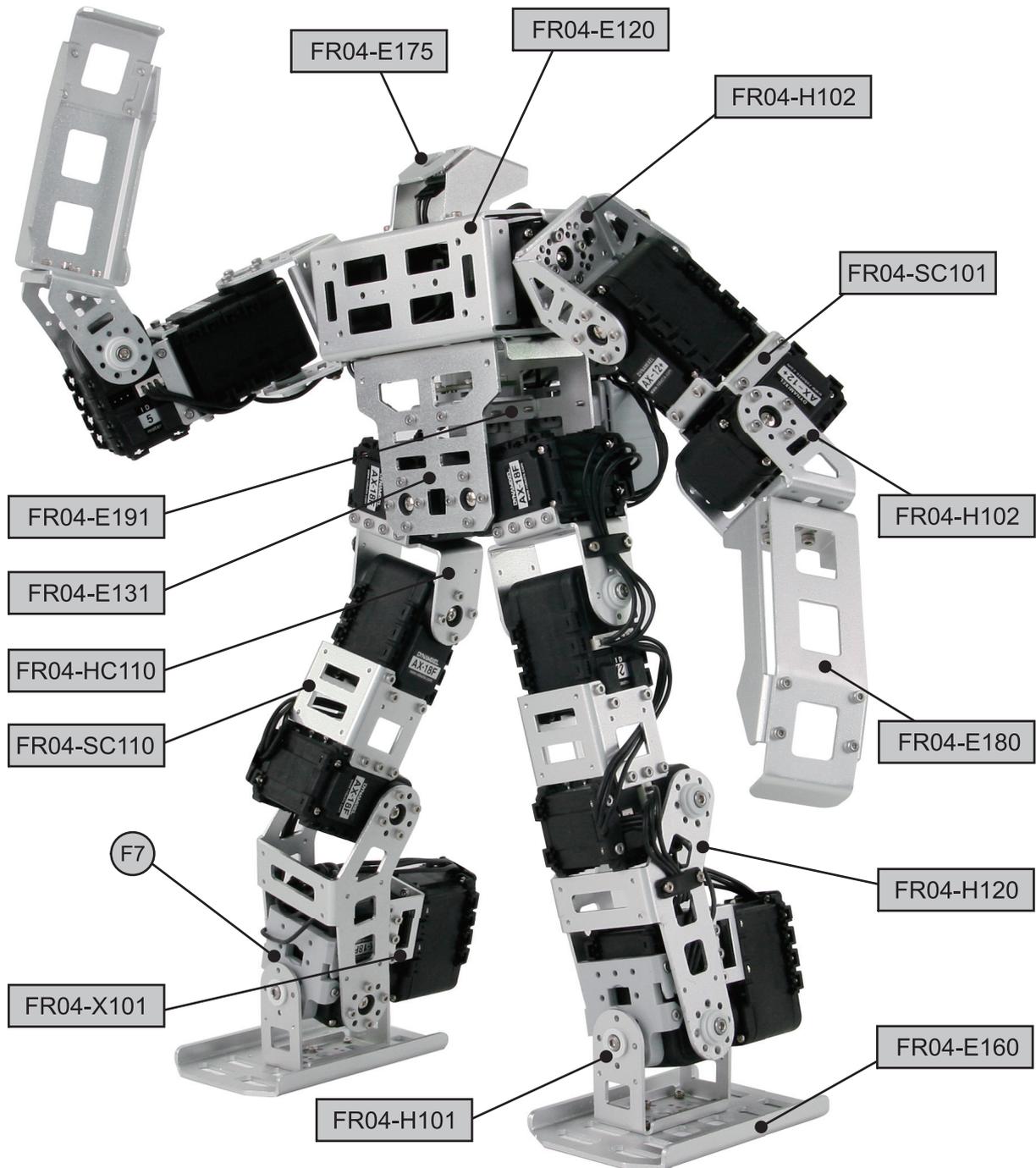
STEP 22

배터리 케이블(CABLE-BAT)을 CM-510에 연결하고, 배터리를 연결할 수 있도록 배치한다.
 (배터리 케이블을 몸통 안쪽으로 통과시켜 연결하면, 깔끔한 배선이 가능함)
 배터리를 장착하고, CABLE-BAT와 배터리를 연결한다.

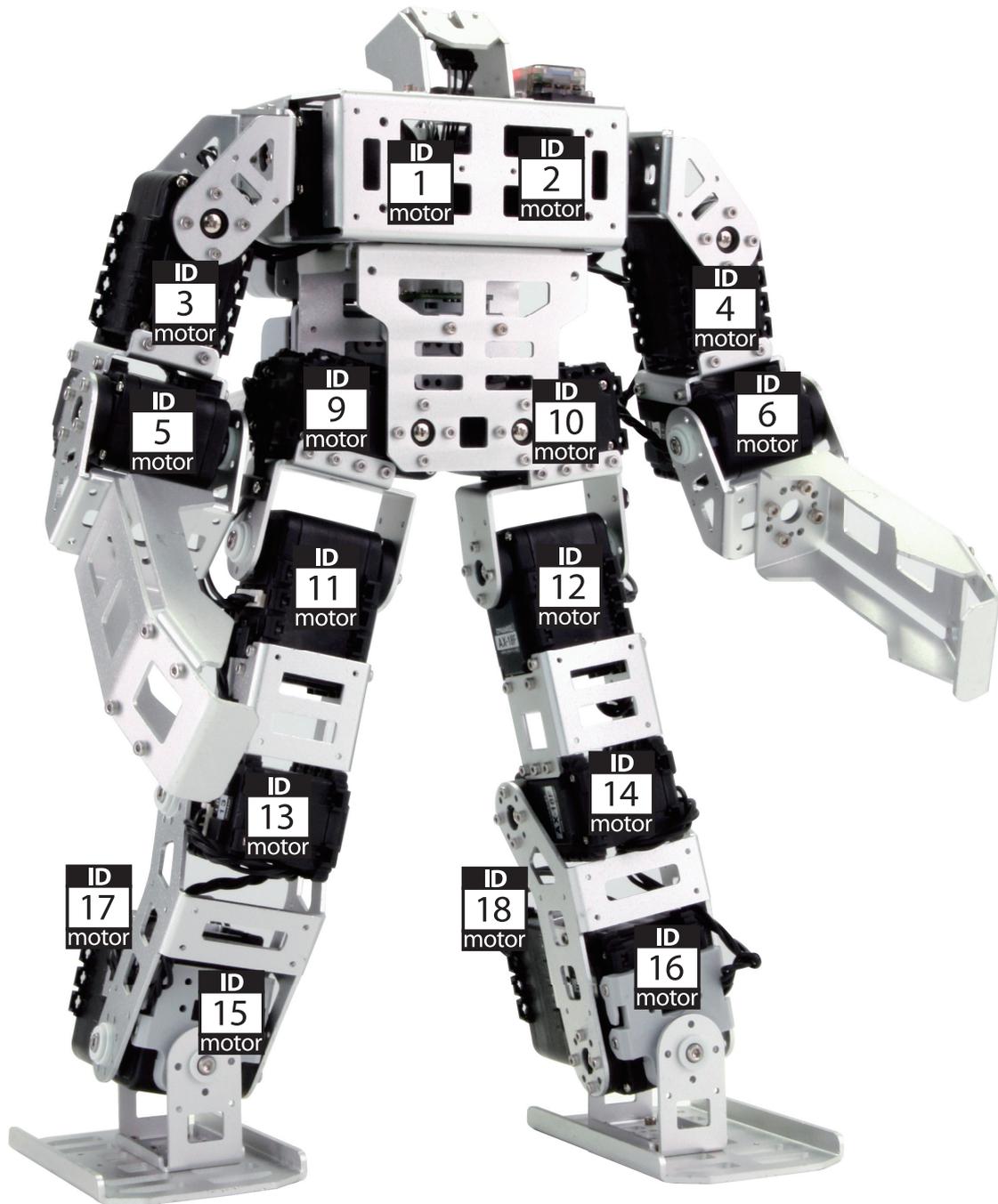
CABLE-BAT ×1 BATTERY ×1



FRAME ARRANGEMENT



ID MAP



OPTION(GRIPPER)

[그리퍼 장착] 아래 그림과 같이 AX-12+ ID7을 이용하여 오른쪽 그리퍼를 조립하고, AX-12+ ID8을 이용하여 왼쪽 그리퍼도 동일하게 조립한다. (📖 조립팁1 참조)

- (N1) × 24
- WB M2x06 × 32
- FR04-E170 × 2
- FR04-E171 × 2
- FR04-S101 × 2
- FR04-H102 × 2
- WB M3x12 × 2
- (BU) × 2
- (WA) × 4

