CCB SERIES   VER 001

CCB SERVICE MANUAL

CAS

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1. Calibration & Gravity Compensation

1.1. Calibration

When the power is off, press ⏻(ON/OFF) while pressing (kg/lb).

When 'G-CAL' is displayed, and then press ✳.

Then this calibration mode is started.

No.	TITLE	DISPLAY	KEYBOARD & DESCRIPTION
1	How to enter	⌐-CAL	⏻(ON/OFF) (kg/lb) ☞ ✳
2	Program version	t= 100	Move to a next step in automatic
3	Maximum capacity	CAPA 5000	(▸0◂ ZERO) Initialized value (kg/lb) numeric increase (▸T◂ TARE) scale increase / ✳ save
4	Minimum division	d iu 2	(kg/lb) decrease / (▸T◂ TARE) increase ✳ save
5	Setting weight	SEt-F 5000	(▸0◂ ZERO) Initialized value (kg/lb) numeric increase (▸T◂ TARE) scale increase / ✳ save
NB : Setting weight shall be within the range of 10 %~100 % of max. capacity			
6	Zero calibration	2Ero -----	Unload the tray and press ✳
7	Span calibration	LoAd -----	Load the weight which was set in step 5 and press ✳
8	Finish	End	Unload the tray and press ✳

1.2. Gravity compensation

When the power is off, press ⓪ while pressing ⓚ.

When 'G-CAL' is displayed, and then press ⓚ again.

Then this gravity compensation mode is started.

No.	TITLE	DISPLAY	KEYBOARD & DESCRIPTION
1	How to enter	G-CAL	⓪ ⓚ ☞ ⓚ
2	Program version	$t=100$	Move to a next step in automatic
3	Calibration location	$GrAu1$ 9799 (9.799m/s^2)	⓪(ZERO) Initialized value ⓚ numeric increase (TARE) scale increase / ✳ save
4	Using location.	$GrAu2$ 9799 (9.799m/s^2)	⓪(ZERO) Initialized value ⓚ numeric increase (TARE) scale increase / ✳ save
5	Finish	End	Unload the tray and press ✳

❶ If the $GrAu1$ value is same with $GrAu2$, it doesn't need to compensation set.

1.3. Check message

Code	Description
$Ch\ 03$	The resolution is set to be exceeded the limit 1/50,000. Check the resolution.
$Ch\ 04$	The balance weight for span calibration is lower than 10%, or greater than 100% of the maximum capacity of the scale. The weight for span calibration should be within 10%~100% of the maximum capacity of the scale.
$Ch\ 05$	Load cell output is too small or large at span calibration. Check the weight unit and load cell or calibrate with lower resolution.

2. Wireless Pairing

| Step	Operation & Description
1	***How to enter the pairing mode*** **1) CCB crane scale** When the display is off, press ON/OFF key while pressing * key. When "$t=401$"(Firmware version) is displayed, press KG/LB key. Then, "$rFSEt$" is displayed. **2) CRD-F wireless display** Press the ON/OFF key to power on and immediately press KG/LB key. And press the KG/LB key again. Then, "$rFSEt$" is displayed. **3) CRC-100 controller** When the display is off, press ON/OFF key while pressing ENTER key. When "$t=601$"(Firmware version) is displayed, press3 key. Then, "$rFSEt$" is displayed. **4) CRC-200 wireless dongle** Press the SET KEY for the 5 seconds with the power on that connected. Then, the green light is blinking.
2	***Pairing*** When "$rFSEt$" is displayed at both products, if you press * key of CCB crane scale, pairing will finish. ⚠ Please check "End" message at both products. (CRC-200: green light will be turn on) If ending message is not appear, please repeat the pairing.

3. Exploded view
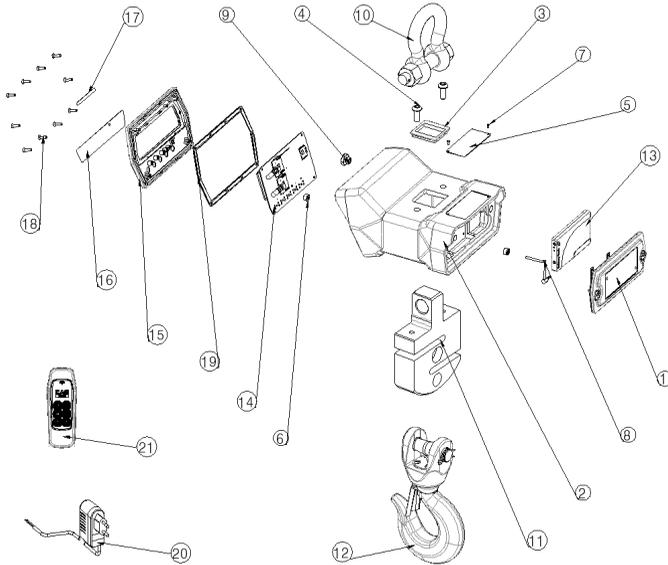
No	NAME	SPEC				Q'TY
		1ton	3ton	5ton	10ton	
1	battery-cover assy					1
2	body-tb_new-2	215x220x135(5T)			10T	1
3	LC-COVER-5T	1T	3T	5T	10T	1
4	Round Head Wrench Bolt	WBRH-M10 x 25				2
5	SPEC-PLATE	95 x 40				1
6	code-stopper	M12 x 8				3
7	RIVET	BLIND 2.5				2
8	power-cable	ϕ2.5x400				1
9	code-stopper					1
10	SHACKLE-5T	1T	3T	5T	10T	1
11	LOADCELL	CSS1T	CSS3T	CSS5T	CSS10T	1
12	hook assy crosby	1T	3T	5T	10T	1
13	BATTERY-PACK ASSY	CBP-100				1
14	CCB_PCB_LCD	CCB_PCB_LCD				1
15	FRONT PANEL	201x121x20				1
16	keypad_tbs	169x29				1
17	capa decal	64.5x6				1
18	screw	FH-M4x16				10
19	TCB GASKET	200x120x3.5				1

4. Firmware Update

1. Install the 'MPLABX'

2. Run 'MPLAB X IDE'

3. Connect the PICkit3 to PC

4. Connect as shown in the picture below.

   Aligned the RED wire and arrow mark of PCB, and then combines them.
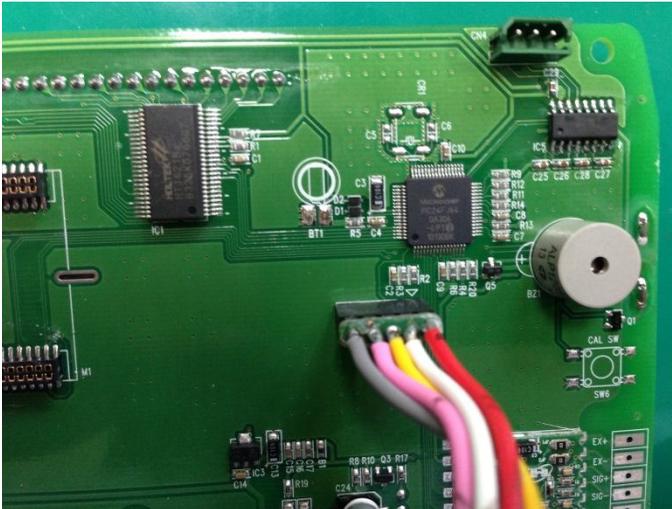
5. Select the HEX file (File – Import – Hex/ELF… (Prebuilt) File)

   SEE ATTACHED VIDEO

   1) Prebuilt Filename: Bring up the HEX file

   2) Family: 16-bit MCUs (PIC24)

   3) Device: PIC24FJ64GA306

   4) Supported Debug Header: None

   5) Hardware Tool: PICkit3

   6) After the above setting, click NEXT ☞ NEXT ☞ Finish.

6. Set the Project Properties (File – Project Properties) *SEE ATTACHED VIDEO*

   1) Click PICkit3 in Categories

   2) Option categories: Memories to Program

   3) Preserve Program Memory: Select

   4) Preserve Program Memory Start (hex): 0x0800

   5) Preserve Program Memory End (hex): 0x1FFF

   6) After the above setting, click Apply.

   7) Option categories: Power

   8) Power target circuit from PICkit3: Select

   9) After the above setting, click Apply ☞ OK.

7. Upgrade firmware *SEE ATTACHED VIDEO*

   1) Click the Make and Program Device icon.

   2) Confirm the complete message.