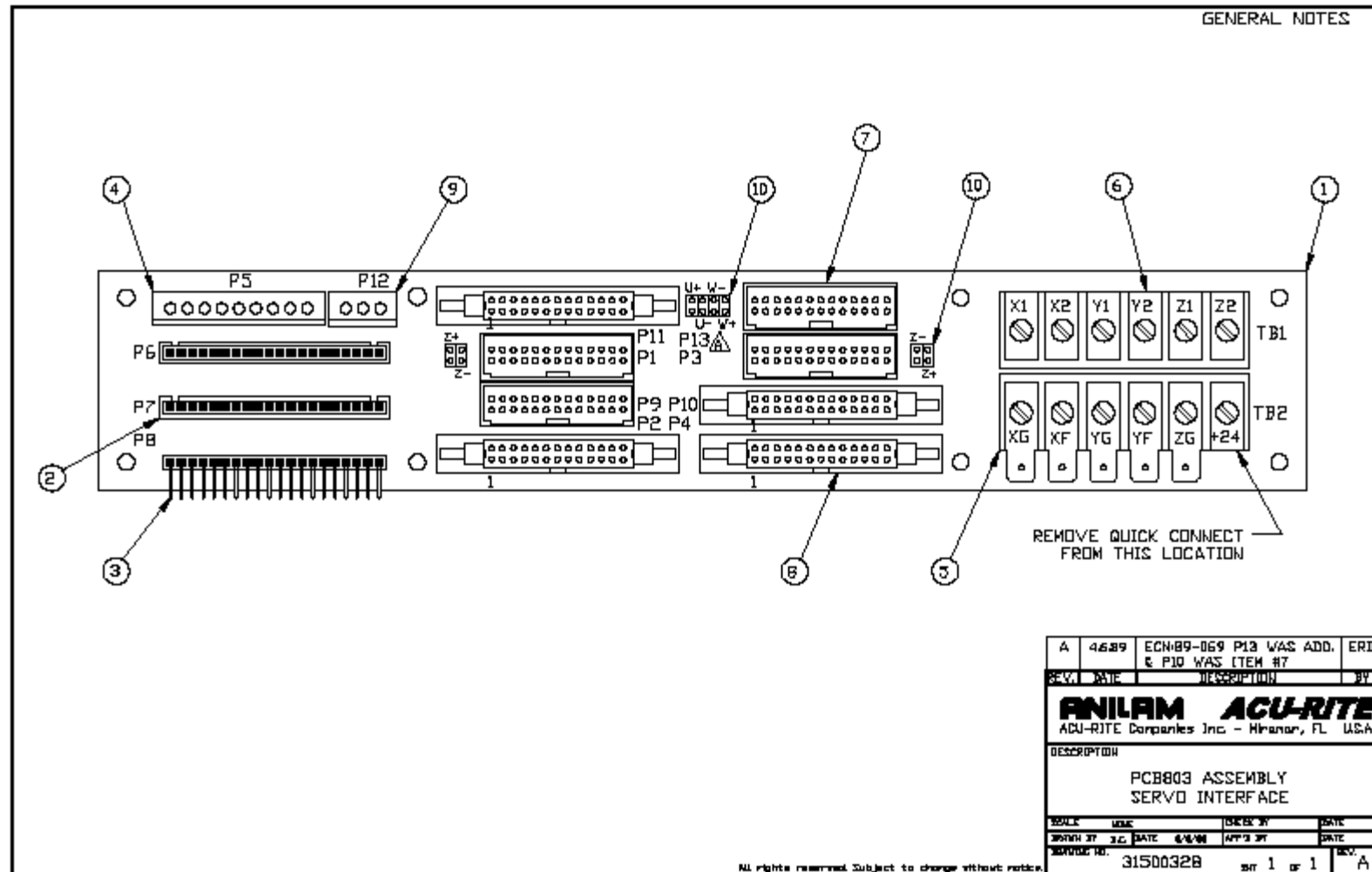


## Balance M or G

- 1) Turn off the 110 VAC to the control
- 2) Open the door to the servo box
- 3) On the door there is a rack of boards with different colored tabs, find the board with the Black tabs.
- 4) On this board there are 3 cables labeled X, Y, and Z. Mark these cables and then unplug them.
- 5) Get out your volt meter and put it on DC millivolts.
- 6) In the servo box we have 2 versions click on prints to see which version you have. **30100125 (terminal strip type)** or **30100154 (PC board type)**
- 7) For version **30100125 (terminal strip type)** do the following:
  - A) For the X axis adjustment connect your meter leads on terminal 9 and 10 of TB1.
  - B) Turn on the 110 VAC to the CNC.
  - C) Pull out the Emergency stop button and press the reset button.
  - D) Look at your volt meter we want 0 mv DC.
  - E) If you don't have 0 mv DC then on the door find the board with the red tabs.
  - F) On this board there are pairs of potentiometers. **1 of the pair is sealed don't touch!** See figure 2 at the bottom of the page.
  - G) Take a small flat blade screw driver and turn the X axis potentiometer until your meter says 0.
  - H) Now push in the Emergency stop button.
  - I) Remove your meter leads from TB1.
  - J) Next on the top edge of the Westamp drive card there is a connector labeled J1.  
Move the meter leads to pin 3 and 4 of connector J1 of servo board for X
  - J) See **Figure 1** at the bottom of the page, for connection purposes.
  - K) Turn the servos back on, Emergency stop button out and servo reset.
  - L) On the X drive board turn the potentiometer Bal until you see 0 on the meter.
  - M) When X axis is at 0 look at the handle it should no longer be turning! If this is true then X axis is done correctly!
  - N) Repeat above steps 7A – 7M. NOTE: (Y axis = 7 and 8 on TB1), and (Z axis = 4 and 6 on TB1).

**NOTE: Make sure when you get to step 7J that you remember to move over to either Y or Z drive board!**

- 8) For version 30100154 (PC board type) do the following:
  - A) For the X axis adjustment connect your meter leads on **PC 803 PCB** terminals P8 pins 1 and 2. See print # **31500328**.



- B) Turn on the 110 VAC to the CNC.
- C) Pull out the Emergency stop button and press the reset button.
- D) Look at your volt meter we want 0 mv DC.
- E) If you don't have 0 mv DC then on the door find the board with the red tabs.
- F) On this board there are pairs of potentiometers. **1 of the pair is sealed don't touch!** See [figure 2](#) at the bottom of the page.
- G) Take a small flat blade screw driver and turn the X axis potentiometer until your meter says 0.
- H) Now push in the Emergency stop button.
- I) Remove your meter leads from P8 pins 1 and 2.

- J) Next on the top edge of the Westamp drive card there is a connector labeled J1.  
Move the meter leads to pin 3 and 4 of connector J1 of servo board for X
- K) See **Figure 1** at the bottom of the page, for connection purposes.
- L) Turn the servos back on, Emergency stop button out and servo reset.
- M) On the X drive board turn the potentiometer Bal until you see 0 on the meter.
- N) When X axis is at 0 look at the handle it should no longer be turning! If this is true then X axis is done correctly!
- O) Repeat above steps 8A – 8M. NOTE: (Y axis = 3 and 4 on TB1), and (Z axis = 5 and 6 on TB1).

**NOTE: Make sure when you get to step 7J that you remember to move over to either Y or Z drive board!**

**Figure 1**

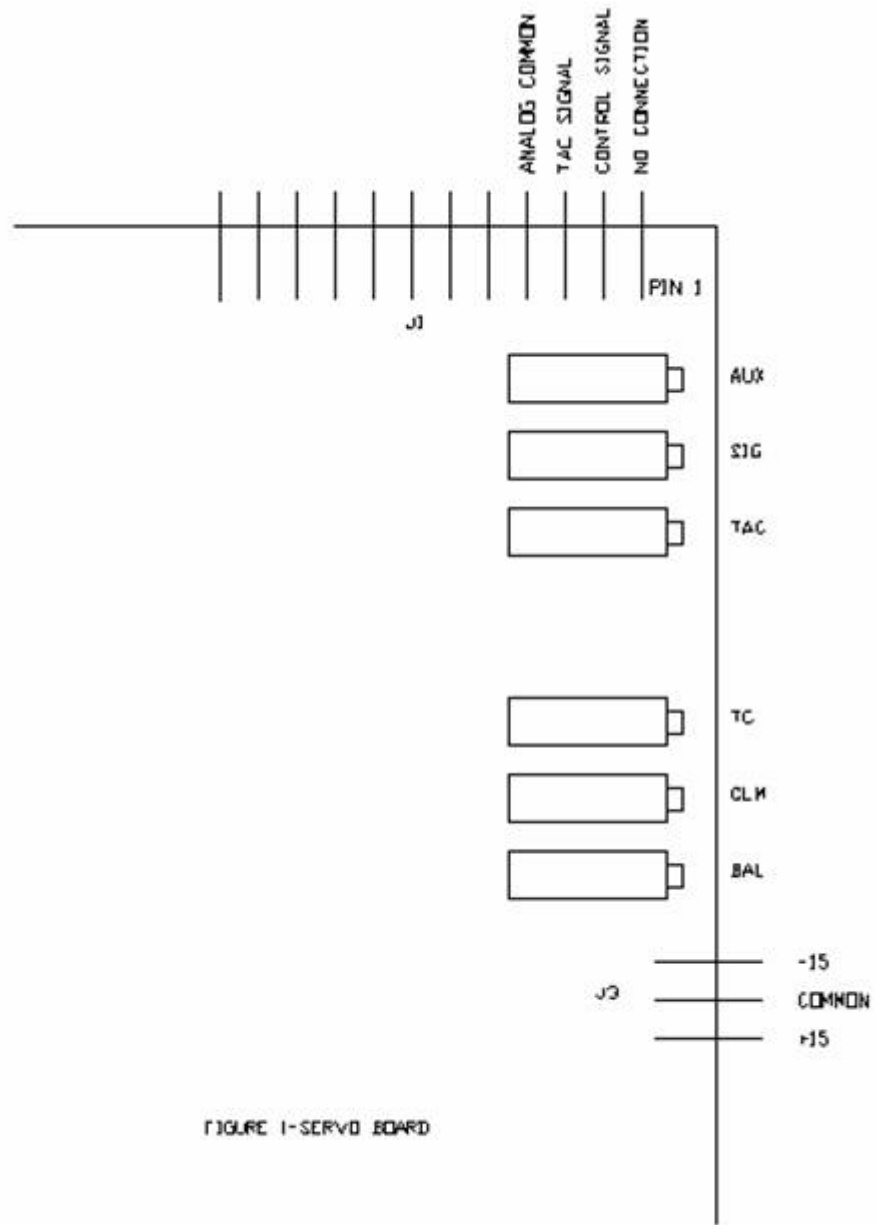


FIGURE 1-SERVO BOARD

Figure 2

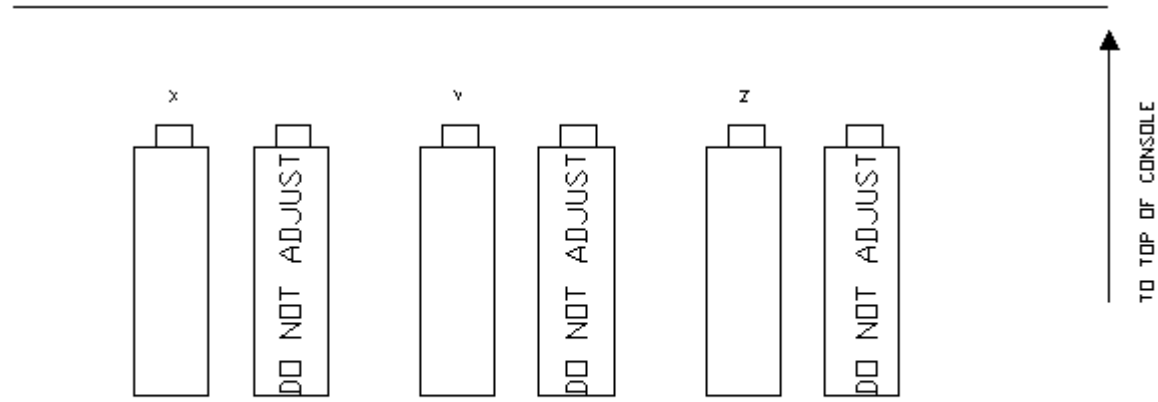


FIGURE 2-Crusader 11 D/A