

Correction to Inyo FBV polarities - Rev. 1.13 boards only

Circuit boards Rev. 1.13 6-22-09				Correct connections for Rev. 1.13 boards			
Feedback Loop		Output Amplifier		Feedback Loop		Output Amplifier	
Ground moves	up			Ground moves	up		
Boom moves	down			Boom moves	down		
Cb to P3-2 via J3-2, Bottom sensor plate	decreases			Cb to P3-2 via J3-3, Top sensor plate	increases		
U1A-3	-			U1A-3	+		
U1A-1	-			U1A-1	+		
U4B-7	+	U2A-1	+	U4B-7	-	U2A-1	-
P1-1	+	U3A-1	-	P1-1	-	U3A-1	+
Coil force	up	Sig A	-	Coil force	up	Sig A	+
Testing disconnected coil/magnet, with power off				Testing disconnected coil/magnet, with power off			
Boom moved up				Boom moved up			
J1-1	+			J1-1	-		
Boom moved down				Boom moved down			
J1-1	-			J1-1	+		

It is customary for upward ground motion (downward boom motion) to result in a positive output signal.

Sensor capacitor labeled Cb is always assumed to go to P3 pin 2, which is shown going to the bottom side of the sensor plate, (pad labeled J3-2), resulting in incorrect output polarity.

For the correct output sense Cb should be from the top side of the sensor plate (pad labeled J3-3). So P3-2 should connect to pad J3-3 on the sensor plate and P3-3 should connect to pad J3-2.

After changing this, in order to not have positive feedback the connections from the coil to J1 must be reversed.

To test, with the coil unplugged, downward boom motion should cause J1-1 to go positive with respect to J1-2.

Circuit boards Rev. 1.40 and later have the J3 connections correctly marked to match with P3.