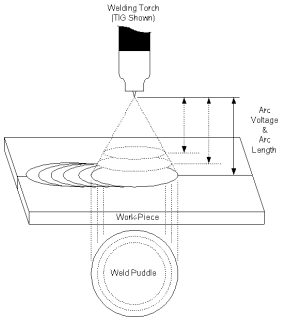
Arc Products, Inc.
A Lincoln Electric Company
1245 30th Street
San Diego ! CA ! 92154 ! U.S.A.
TEL: 619-628-1022 ! FAX: 619-628-1028
www.arcproducts.com

AVC-5 Quick Setup Guide



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For additional support, please contact the factory.

The AVC-5 Control can be a bit confusing to setup for those not familiar with Arc Voltage Control Systems. These setup steps should alleviate confusion, getting you up & running quickly.

DIP Switch Settings

AC or DC Welding?

If your welding application is using DC welding amperage, then set the S8 Position # 2 DIP Switch to Open (to the right). If you are welding AC amperage, then set the S8 Position # 2 DIP Switch to Closed (to the Left). See Figure 13 & 14 in the manual.

High Frequency or Lift-Start Mode?

To start the arc using High Frequency, set the S8 Position # 1 DIP Switch to Closed (to the Left). To start the arc using the Lift-Start technology, set the S8 Position # 1 DIP Switch to Open (to the Right). See Figure 13 & 14 in the manual.

Panel or Remote Voltage Preset?

To preset the Voltage from the front panel pot, set the S1 DIP Switch # 1 to Closed (to the Left) and Switch # 2 to Open (to the Right). To adjust the arc voltage from a remote source, simply reverse these settings. See Figure 20 & 21 in the manual.

Front Panel Controls

Adjust the following front panel controls to the values listed:

Start Delay	2.0	**Voltage**	12.0	**Deadband**	4
Sensitivity	7	**Retract**	2		

If using High Frequency arc start, set:	**Start Arc Gap**	0.7
If using our Lift-Start technology, set:	**Tungsten Preheat**	2.0

Remote Interface Cable

If you are using remote Lockout, Remote Voltage Preset, or K1 / K2 relays, follow the wiring instructions throughout the manual.

Turn On the Arc Voltage Control Unit

Turn On the control unit. The Power Lamp will light and the display will read approximately 3 volts +/- 1 volt.

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Enable Lockout

Press the Lockout button on the front panel to lockout the AVC-5 from correcting for voltage and prevent the AVC-5 from stopping the arc if some of our settings are not appropriate for your application. This also allows us to view the actual arc voltage on the AVC-5 Display to verify our settings are correct.

Strike an Arc

If you are using High Frequency or Lift-Start Arc Starting, the process is the same to start the arc. Press the Down Arrow button on the front panel or the down drive button on the AVC drive. Continue pressing the button until the AVC-5 has touched the tungsten to the work-piece, and, if High-Frequency is selected, the AVC Drive prepositions above the work. At this time, the AVC will turn on the power source and an arc will start.

Actual Arc Voltage

While the AVC-5 is in Lockout, the display will show actual arc voltage. After the power source has completed the upslope of amperage, if selected on the power source, the arc voltage should be close to the preset voltage, 12 volts, slightly less voltage is better. If the voltage is higher than preset, the AVC-5 may stop the arc when Lockout is disable; initiating the Burn-Through Protection circuit.

Is voltage less than Preset?

If the arc voltage is less than the preset voltage, disable Lockout, by pressing the Lockout Button and the AVC-5 will begin tracking the arc voltage. The AVC-5 will drive up to maintain the preset voltage, 12 volts in this example.

Is Voltage more than Preset?

If the arc voltage is more than the preset voltage, stop the arc by pressing the up arrow. There are two ways to correct this, 1) Adjust the Starting Arc Gap to a lower value—smaller gap—to lower the arc voltage at start, 2) Adjust the preset voltage to a higher value that matches the reading on the display while welding earlier. Repeat the process of starting the arc with the Lockout Enabled, until the arc voltage is at or below the preset voltage.

AVC Drive Constantly Corrects

If the AVC Drive is constantly correcting for voltage errors, adjustments to the Deadband or Sensitivity settings or both may be required. To minimize the drive movement, adjust the Deadband clockwise slightly while welding to widen the acceptable voltage window. In addition, adjust the Sensitivity counter-clockwise to slow the correction speed. Trail and error is required for these settings, since every application is slightly different. Adjust them while welding and make note where the best performance was achieved.

Conclusion

The AVC-5 systems are very versatile and easy to operate once setup. This guide gets you up and running fast with simple instructions and sample configurations for the front panel controls, so that you can begin to realize the benefit of the AVC-5 systems. The sample configurations for the front panel controls should be modified for your application once the setup is proven and reliable arc starts and arc voltage tracking is accomplished. You should now begin to step through the functions and fine tune the system to achieve your performance goals. Please review the AVC-5 Manual for additional information and descriptions of all AVC-5 control functions and Input / Output capabilities.