



This manual covers equipment which is no longer in production by The Lincoln Electric Co. Specifications and availability of optional features may have changed.

## OPERATING INSTRUCTIONS

### SAFETY

Follow all safety guidelines in your power source operators manual and any additional guidelines covered in this manual.

### GENERAL DESCRIPTION

The Hand Ampctrl is a finger or thumb operated remote control, in a lightweight (14oz.) compact package that attaches to a TIG welding torch handle. The Ampctrl has a 28 ft cable with a 6-pin MS-type connector (18-12P) to connect to a power source or high frequency generating accessory. It is designed to fit any Lincoln TIG Torch.

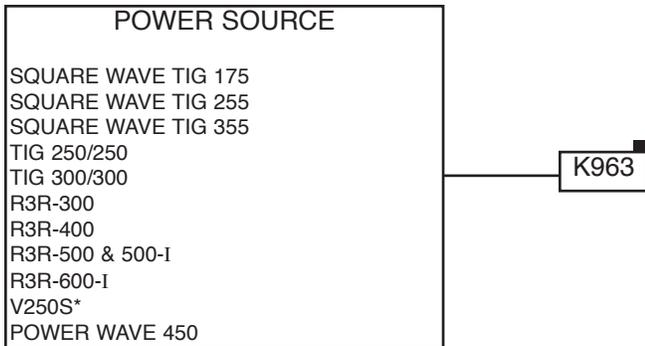
### INSTALLATION

#### TYPICAL INSTALLATIONS

Refer to the following block diagrams for compatible power sources and required adapters.

##### A. DIRECT CONNECTION

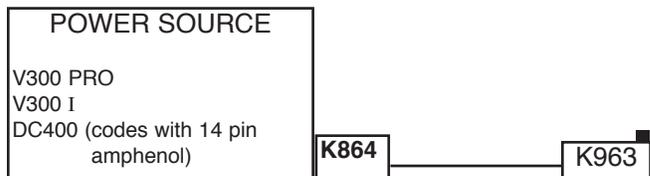
6 Pin Amphenol to K963



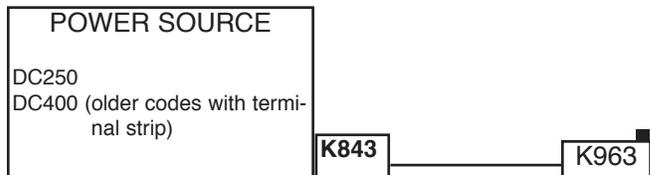
\* Disconnect ground lead at connector end of K963 when used with V250S. See **CONNECTION OF THE AMPCTRL TO THE POWER SOURCE** in this manual for details.

##### B. INDIRECT CONNECTION

14 Pin Amphenol to K963 via K864 Adapter.

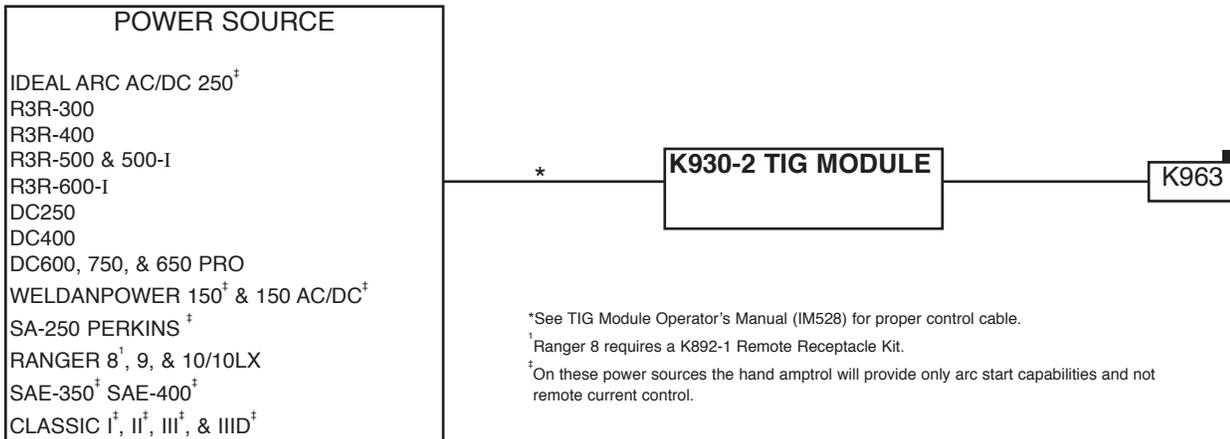


Terminal Strip to K963 via K843 Adapter.

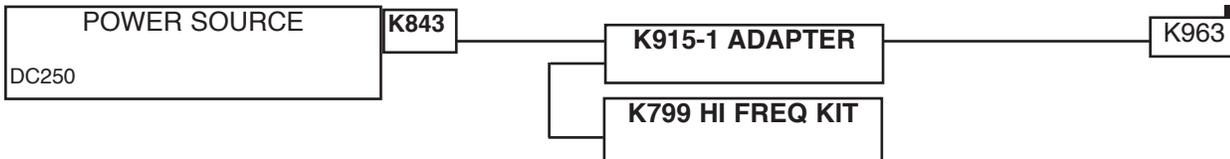


## C. OPTIONAL EQUIPMENT CONNECTIONS

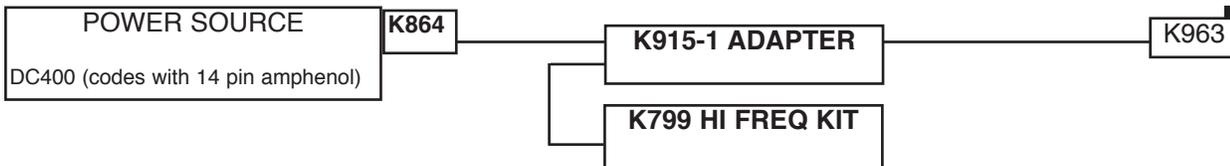
### Power Source to K963 using a K930-2 TIG Module



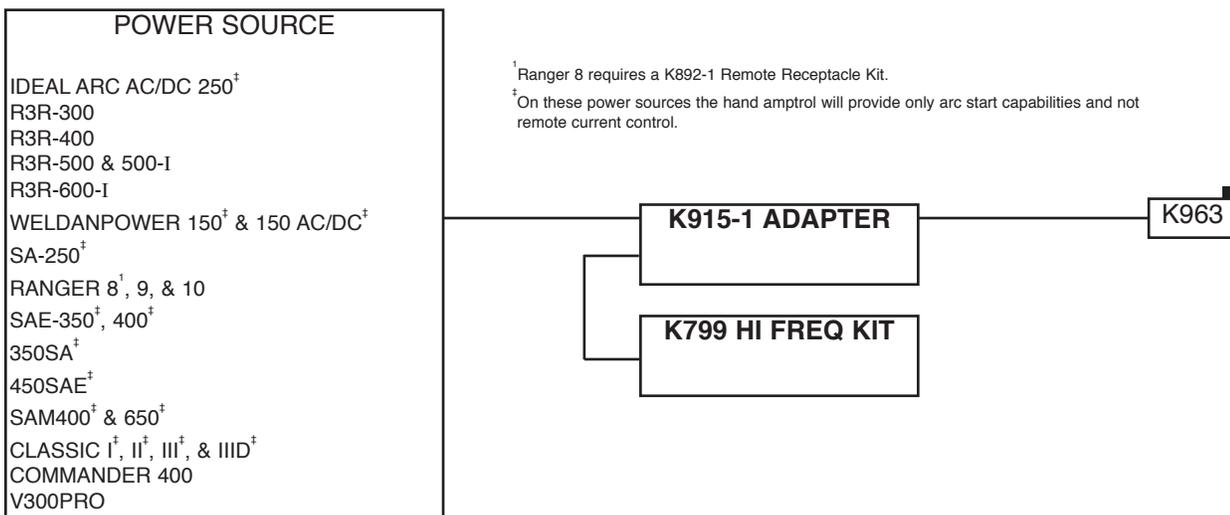
### Power Source to K963 using a K799 High Freq Kit (DC250)



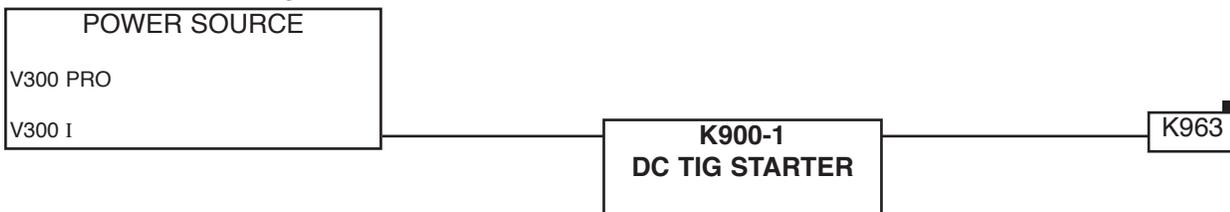
### Power Source to K963 using a K799 High Freq Kit (DC400)



### Power Source to K963 using a K799 HI Freq Kit (Most Power Sources)



### Power Source to K963 using a K900-1 DC TIG Starter



## ATTACHING THE AMPTROL TO THE TORCH.

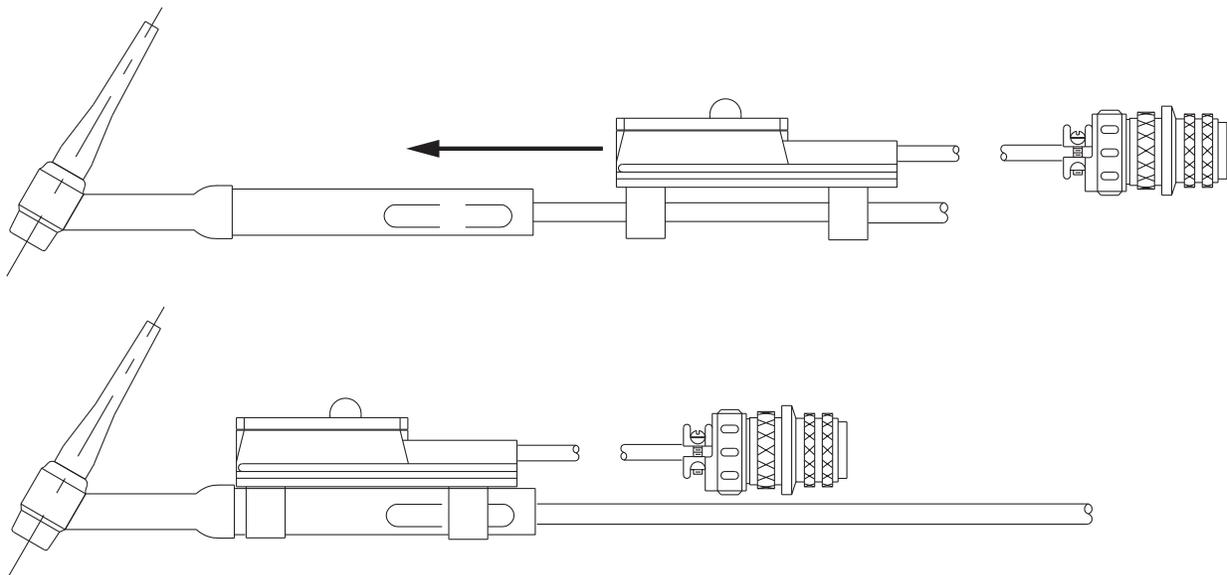
Place the hand Amptrol along the TIG welding torch cable, as shown in figure 1. Slide the hand Amptrol along the torch handle, so the control knob can be extended conveniently by the thumb.

## CONNECTION OF THE AMPTROL TO THE POWER SOURCE

With power source off, connect 6-pin MS-type (Amphenol) connector to the Remote Receptacle if available, or use required adapter. Secure with the threaded collar\*. The Amptrol is designed for use with a 25-ft TIG torch. It is recommended that any excess length be tucked under the power source.

\* A minor modification is needed when K963 Hand Amptrol is used with the V250-S. The braided ground strap must be disconnected from connector body on end of cable that attaches to the machine. Remove cable clamp screw securing grounding strap, remove strap, and reinstall screw. Run grounding strap along side of cable so that it does not contact connector body, and secure in place with electrical tape. This modification is necessary in order to avoid coupling electrical noise from the case of the machine onto the control leads, which would otherwise result in poor starting and unstable welding performance.

Figure 1- Attaching the Amptrol to the Torch Handle



## GROUNDING THE AMPTROL

### ⚠ CAUTION

Failure to properly ground the amptrol may cause the unit to fail.

If a K915-1 adapter is needed (when using a high freq kit) or the equipment has a plastic amphenol, a ground lead must be fastened from the cable clamp screw on the hand Amptrol to the mounting screw on the amphenol as shown in figure 2.

## OPERATION

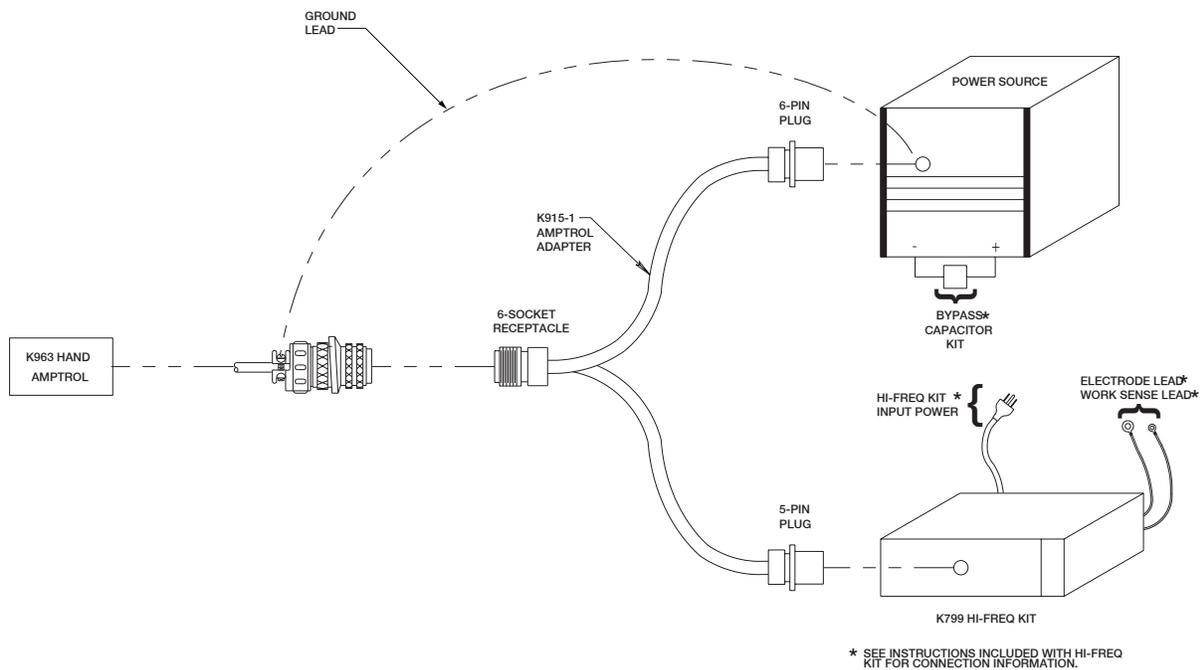
Extend the knob forward to start the welding sequence. Extending the knob increases the current. Extend the knob fully to obtain the maximum set current. Retract the knob to reduce the current. For equipment with output contactor controls, fully retracting the knob stops the weld and stops the welding sequence. Refer to the power source and/or TIG accessories manual for specific operations instructions.

**NOTE:** SINCE THE FULL OUTPUT OF THE CURRENT SETTING IS AVAILABLE WHEN THE AMPCTRL IS FULLY EXTENDED, CARE MUST BE TAKEN NOT TO SET A CURRENT WHICH WILL EXCEED THE CURRENT CARRYING CAPACITY OF THE TUNGSTEN. WHEN IN DOUBT, USE A LOWER CURRENT SETTING FIRST, THEN INCREASE.

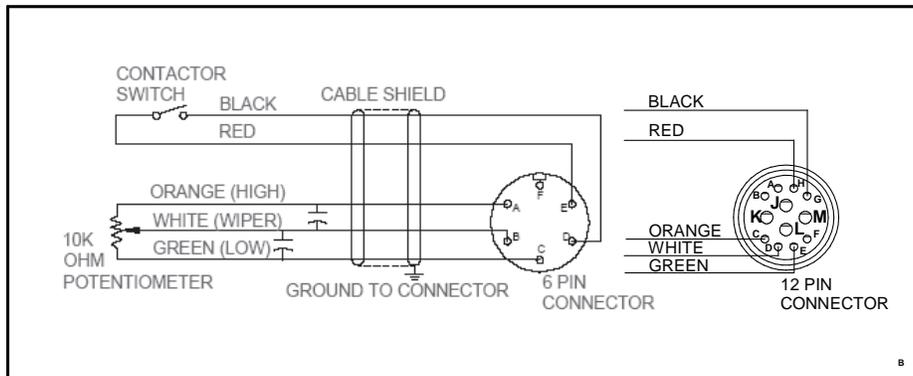
**⚠ WARNING**

TO AVOID BEING STARTLED BY A HIGH FREQUENCY SHOCK, KEEP THE TIG TORCH AND CABLES IN GOOD CONDITION.

**Figure 2- Ground Lead Installation with a K915-1 Adapter**



**WIRING DIAGRAM**



**M20516**



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Cleveland, Ohio 44117-1199 U.S.A. TEL: 216.481.8100 FAX: 216.486.1751 WEB SITE: www.lincolnelectric.com