

OPERATING INSTRUCTIONS.

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DUOMATIC ELECTRONIC AUTO-KEY, Model AKS-7.

Power Requirements: 110-120 Volts AC/DC, 20 watts.

Controls: As indicated. On-off switch on Speed Control. Bias adjustment sets heaviness of keying characteristic. Test Switch permits closing of keying relay for transmitter tune-up or other test purposes.

Terminals: SPDT keying relay contacts are brought out to terminal strip. For normal circuits, use the first two terminals. Where one side of key line is at ground potential, connect ground side to center terminal. The third connection may be used in conjunction with a monitor circuit wherein the common center terminal and the back (#3) terminal short out a source of tone except when unit keys.

Caution: Contact spacing of the keying relay is of necessity small. It is important that the keyer not be used to key either highly inductive or highly capacitive circuits. The former tend to cause damaging arcs at the contacts whereas the latter may result in welding action or freezing of the contacts.

MISCELLANEOUS NOTES

During first hours of use, while pulse relay contacts are seating in, or after extended periods of idleness, resistance may develop at these contacts causing keyer to become inoperative. Usually, a slight jarring of the case will free the contacts and restore operation. However, cleaning of contacts may be required. Relays are reached by removing keyer top cover. Pulse relay is to the right and the bottom two contacts should be cleaned using either a burnishing tool or hard-surface paper drawn between contacts. UNDER NO CIRCUMSTANCES should pulse or keying relay contacts be filed or relay adjustment altered. This is important!

Key lever is factory set for spacing which experience in electronic key work has shown to be optimum for smoothest sending by a majority of operators. However, the adjustment may readily be changed by removing bottom plate to which lever assembly is attached.

Dot-dash Ratio: This is adjusted by means of the slotted control to the rear of the filter condenser. Factory setting provides a three-to-one ratio; however, more emphasis may be placed on dash length by slight re-adjustment if the user so desires.

It is recommended that neither of the above factory adjustments be altered unless the user is thoroughly familiar with electronic key sending. To alter these settings before the user has become proficient in operation of the key may result in formation of keying habits difficult to correct.

R.F. reaching keyer either through power line or key leads can cause a variety of effects---from distortion of dots, to variation in speed or bias. Where RF is present in power line, a filter of the type sold for use with electric shavers is a simple remedy. If RF is on key line, use an R.F. choke in one or both leads connected at keyer terminals.

Speed Range is concentrated over only a portion of the Speed Control dial. This is normal. As unit warms up, slight re-adjustment of the Bias Control to maintain desired keying characteristic may be required. Likewise, a wide change in speed may require a similar Bias Control adjustment. Most operators find that for high speed sending best results are obtained with the Bias Control intentionally set for a heavier characteristic.

Sending Technique: First step in learning proper sending technique is a full understanding of the self-completing action of the AKS-7 circuit. With the keyer set to a slow speed note carefully how each dot or dash once started will complete itself and automatically make its corresponding character space. Also note that once a dot or dash is started, the key lever may instantly be swung into position for the next dash or dot without causing mutilation. Learn to take advantage of this timing margin. It is the key to the perfect sending possible with Duomatic keyers.

After a little practice, you will find that each letter involves a sending sequence all its own. Once mastered, speed will develop naturally and the quality of your sending will be limited only by your ability to introduce correct word and letter spacing.

IMPORTANT NOTE: Late production units are equipped with a push-button switch on the rear of the chassis. Operating this button applies a switching voltage to the pulse relay allowing the self-cleaning action to restore normal operation should contact resistance develop. This normally makes unnecessary manual cleaning of the contacts referred to in the first paragraph under Miscellaneous notes.

All Duomatic AKS-7 keyers are guaranteed to give satisfactory performance when operated in accordance with instructions included with each unit.

ELECTRONIC SIGNAL DEVICES
Box 283
San Carlos, California