

American Telephone and Telegraph Company

BELL SYSTEM PRACTICES
Teletypewriter and Manual
Telegraph Station and PBX
Installation and Maintenance

ADDENDUM P36.475
Issue B, 9-9-46
Long Lines Department
Dist. Class. 602.02

NO. 15 TELETYPEWRITERS
WORD COUNTER MECHANISMS
INSTALLATION AND ADJUSTMENT

1. GENERAL

1.00 This issue supersedes Issue A.

1.01 This addendum supplements Section P36.475,
Issue 2 to provide:

(a) Information regarding the cleaning and lubrication of the KS-8358 (Veeder Root Type US), KS-8359 (Veeder Root Type UD), and the 94663M (Veeder Root Mechanical) counters.

(b) Description, installation and maintenance of the Wizard Electric counter.

1.02 This addendum is reissued to include the data on the Wizard counter and replaces like information shown on manufacturer's Form No. 20 furnished with each counter, which should be discarded.

10. (New) CLEANING PROCEDURE - VEEDER ROOT MECHANICAL AND MAGNETIC COUNTERS

10.01 Remove the counter from its mounting bracket.

10.02 Loosen the star wheel retaining screw and remove the star wheel.

10.03 Remove the four slotted nuts which fasten the retaining plate, using a KS-2348 cord repair screw driver.

- 10.04 Pry out the retaining plate as a unit with a thin screw driver and then push the mechanism out of the housing, taking care not to damage any of the parts.
- 10.05 Wipe the oil off the dials with a piece of lintless cloth wrapped around the end of an orange stick or other similar blunt instrument. All surfaces of the dials can be made accessible by means of the reset knob.
- 10.06 Wipe out the inside of the housing.
- 10.07 Replace the counter in the housing without adding any lubricant, as sufficient lubricant is provided before assembly to last throughout the life of the unit.
- 10.08 Remove the operating cam shaft from the retaining plate (do not wipe off any oil which may be on this cam or its shaft) and with the open end of the counter upward, insert the pin of the cam into the operating link hole.
- 10.09 Replace the retaining plate taking care that neither the four screws nor the two shafts are strained.
- 10.10 Replace the four slotted nuts and tighten only sufficiently to make them snug.
- 10.11 Rotate the operating cam shaft and the reset knob to check that no parts bind.
- 10.12 Replace the star wheel and tighten the retaining screw securely.
- 10.13 When reinstalling the counter, check all adjustments which are affected by its removal.

11. (New) WIZARD ELECTRIC COUNTER

(A) Description

- 11.01 This is an electrically operated counter that may be actuated from the 95212M operating mechanism on 15-type typing units. The counter

contains six black bakelite number wheels with white figures which may be reset to zero by one complete turn of the knob or each individual number wheel may be set manually to any desired digit. It is equipped with a base plate that may be removed for panel mounting on a smaller space.

11.02 The maximum overall dimensions of this counter are 5-13/32" high, 3-5/8" wide and 4-25/32" deep.

11.03 The counter can be obtained in the following models for use on voltages specified:

<u>Model</u>	<u>Operating Voltage</u>	<u>Veeder Root Equivalent</u>
EC-7	110 Volts, d-c	KS-8358
EC-9	110 Volts, 60 cycle	KS-8359
EC-11	110 Volts, 25 cycle	
EC-12	110 Volts, 40-50 cycle	

11.04 They may be ordered through the normal channels as follows:

"(Quantity) COUNTER, ELECTRIC, WIZARD, MODEL . Obtain from Production Instrument Company, 710 West Jackson Boulevard, Chicago 6, Illinois."

11.05 A mounting bracket is available for individual counters that may be secured to any surface and which contains a mounting plate with tapped holes for the counter. This bracket has a friction universal joint which permits the counter to be turned easily to any desired direction or angle.

11.06 This bracket should be provided only when specified on the private line service order. It may be ordered through the normal channels as follows:

"(Quantity) BRACKET, MOUNTING, UNIVERSAL, TYPE CB-1. Obtain from Production Instrument Company, 710 West Jackson Boulevard, Chicago 6, Illinois."

(B) Installation

11.07 The Wizard Electric counter will usually be employed in place of a Veeder Root Magnetic counter and therefore the installation data for the

latter will be applicable. This includes both the operating mechanism and the suppressors. However, in the case of the d-c counter the condenser provided in the base for spark suppression shall first be removed and discarded.

(C) Adjustment

11.08 Mechanical adjustments of the Wizard Electric counter should be limited to the correction of obvious minor faults. In the event of more serious troubles, replace the counter.

11.09 The defective counter shall be returned for repairs in the normal manner.

(D) Cleaning

11.10 When it is evident that the counter needs cleaning, it may be done with a small brush moistened with carbon tetrachloride. If any wiping is required use a KS-2423 cloth. The cleaning fluid shall not be allowed to enter the coil winding.

11.11 After the counter has dried it shall be completely lubricated as covered by the paragraph on lubrication.

(E) Lubrication

11.12 Lubricate with Calculagraph Clock Oil No. 152 (obtainable in one ounce containers) at intervals determined locally, approximately every two to three million counts.

11.13 Apply sparingly with a tooth pick to the points indicated by arrows on Figure 1.

11.14 The circles identify the armature shafts which are open at the back. Each of these shafts should receive three or four drops of oil.

11.15 At longer intervals apply oil to the main (number wheel) shaft.

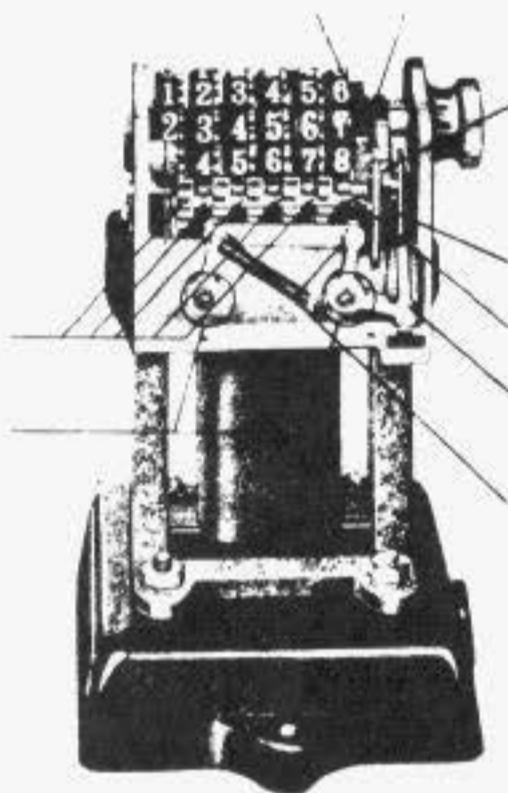


Figure 1

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NO. 15 TTY
WORD COUNTER MECHANISMS
INSTALLATION & ADJUSTMENT