

## INDEX TO KEYS Etc. BY COUNTRY Part 2 132– 263

### **Australia:**

139 – 142. 148. 162 – 163. 174. 178. 180 – 181. 186. 197. 205 – 207. 212 – 213. 217. 222. 225.  
228 – 229. 231 – 237. 240 – 241. 247 – 250. 261 – 263.

### **Austria:**

191.

### **France:**

134.

### **Germany:**

194.

### **Italy:**

243.

### **Japan:**

133. 137. 145 – 146. 155. 158 – 161. 175. 177. 188. 203. 238.

### **New Zealand:**

208 – 209.

### **Russia:**

156. 157.

### **United Kingdom:**

136. 149. 153 – 154. 164. 170 – 171. 173. 182 – 183. 192 – 193. 195 – 196. 198 – 202. 210 – 211. 214 – 215.  
218 – 219. 223. 226. 230. 239. 245.

### **United States:**

132. 135. 138. 143 – 144. 150 – 152. 165 – 169. 172. 176. 179. 184. – 185. 187. 189 – 190. 204. 216.  
220 – 221. 224. 227. 242. 244. 246.

### **Unknown:**

147.

**Rarity rating:** - shown below item numbers

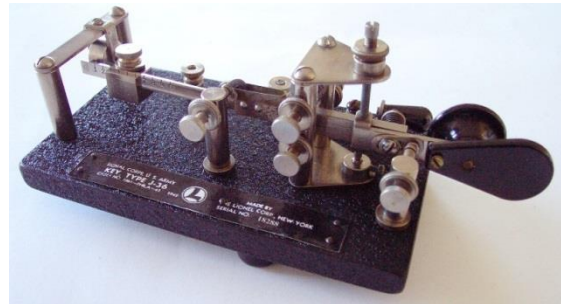
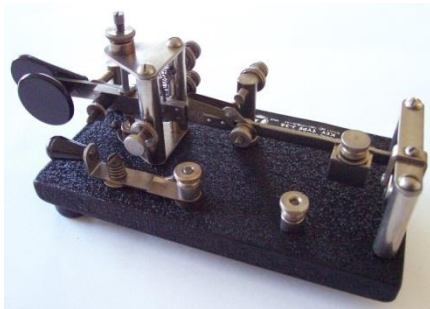
**E** = extremely rare.

**V** = very rare.

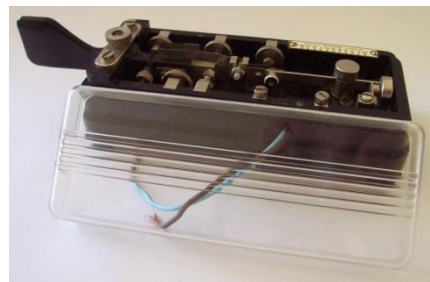
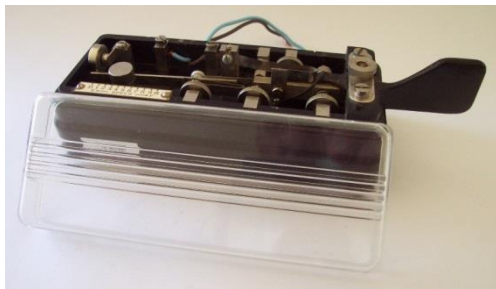
**R** = rare.

Shown below item number.

- 132.** U.S. 'Lionel' J36 semi automatic key. Black wrinkle paint base 160 x 90mm. WW2 era. S#18288. Bridge type damper with flat pendulum marked 1 – 0 and square weight. Two terminals on right hand side. Black bakelite finger/thumb pieces and circuit closer on front right. Label reads SIGNAL CORPS U.S. ARMY KEY. TYPE J-36 ORDER NO. 7861PHLA 1942 Lionel logo centre and MADE BY THE LIONEL CORP. NEW YORK SERIAL NO. 18288. Portion of the original label is still held, but a replacement has been added to the machine. Obtained from U.S.A.

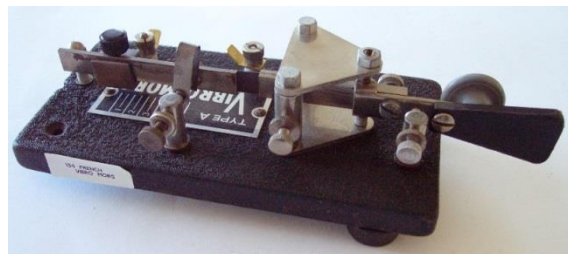


- 133.** Japanese Hi-Mound BK100 semi automatic key. Black bakelite with metal fittings. Black base measures 175 x 76mm with JAPAN marked on back. Main base is red. Scale on front left marked 0 – 10 S ← SPEED → F. Single finger/thumb piece. Flat pendulum with vertical round weight. Two terminals on front right hand side. Five ribbed clear plastic cover. Obtained from U.S.A. See instruction sheet at end of this file.



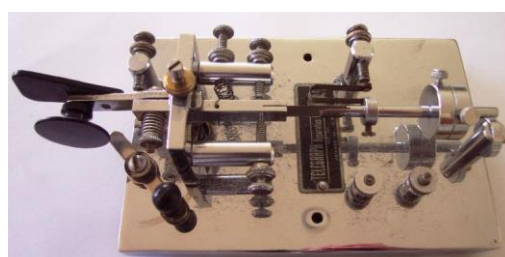
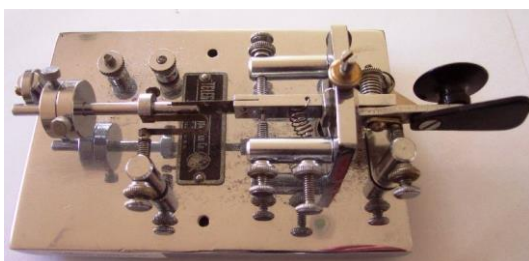
- 134.** French Vibro-Mors Type A semi automatic key. Metal base measures 160 x 80mm. Label marked TYPE A VIBRO-MORS and numbers 1 to 5 for speed. Square weight with black knob on screw. Black bakelite thumb piece and grey finger piece. These keys were made from 1953 for about 15 years. Sold exclusively by the Radio-Lune radio store 10 Rue de la Lune, Paris and the only semi automatic key made in France. Obtained from Wales. (Wyn Davies).

**V.**



- 135.** U.S. Telegraph Apparatus Co. (a McElroy Company) semi automatic key. Chrome base 153 x 100mm. Known as 'Hole in the Wall' because of bridge configuration. Small upright damper with wheel. Two terminals on front right hand side. Black bakelite finger/thumb pieces and circuit closer. Label reads TELEGRAPH APPARATUS Co. CHICAGO ILL. U.S.A. Obtained from USA.

**R.**



- 136.** U.K. 'Eddystone' semi automatic key c1948. Black wrinkle paint metal cover and base 157 x 90mm approx. Removable screw top cover marked EDDYSTONE near hole and 3659P underneath. Front of top of base marked 3660P. Under base marked MODEL S689 Ro No 353967 and under paddle 3657P. Circuit closer on left hand side near rear. Single black bakelite finger/thumb paddle. Brass fittings. Believed no more than 500 made. Made by Stratton & Co Ltd which became Eddystone, Birmingham. Obtained from Wales. (Wyn Davies). See Eddystone ad at end of this file.



- 137.** Japanese Hi-Mound MK701 manipulator. Black bakelite sub base 115 x 60mm mounted on 154 x 85mm base. 3 terminals on back - DOT COM DASH. Single lever. Triangular shaped bridge. 'Manipulator' marked on top of sub base. Base marked HI-MOUND MK-701 JAPAN. Obtained from Sydney.



- 138.** U.S. Electric Specialty paddle. Green metal base 127 x 89mm. 3 terminals at rear. Triangular shape bridge on top. All posts six sided. Two black plastic finger/thumb pieces. These were made from old parts of Cedar Rapids bugs. In the mid-1990's somebody bought 55 gallon drums full of new old stock parts for Cedar Rapids bugs that had been sitting around for 50-60 years. They were able to assemble a certain number of bugs from the parts, but the limiting item was the cast bases. These keyer paddles were made for sale to the ham radio community out of what was left of the bug hardware parts. Obtained from Sydney.



- 139.** Australian and UK Air Force aircraft round blinker black bakelite switching key. Marked A M Type B. Ref No. 5c/372 SWITCHBOX IDENTIFICATION. 2 levers on top (one at each side). Left marked STEADY OFF MORSE DOWNWARD. Right marked MORSE OFF STEADY UPWARD. Key centre top. Base 83mm diameter. Used for 'visual identification' in the circuit prior to landing or when approaching convoy at sea. The switch was connected to the white signal lights, one above and one below the aircraft. The key was intentionally made quite rough to ensure reliable operation in the vibrating aircraft. Used on Spitfire, Anson, Lancaster, Sunderland and Catalina flying boats, etc. Obtained from U.K.





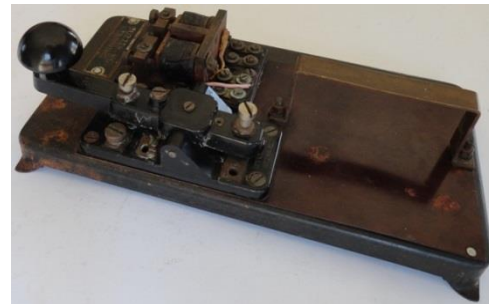
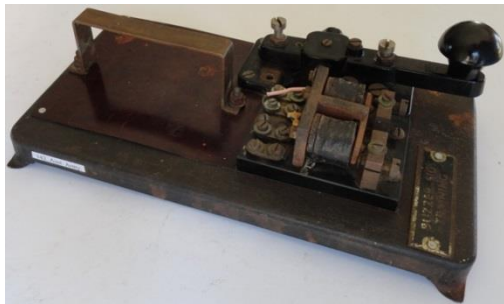
- 140.** Australian army small AWA brown bakelite key with cord and plug attached. 63 x 24 x 30mm. Embossed on top plate KEY TELEGRAPH LIGHT WEIGHT (AUST)  
**R.** NO 1 MK 2 028-2839 with ↑ underneath. Used with portable field radio sets. Completely sealed and waterproof and has non adjustable contacts which require 10 oz. pressure and have .013" travel. Grooved on sides of base to mount on a key support fixture on front panel of PRC-F1 radio sets from about 1970 to 1995. Obtained from Sydney.



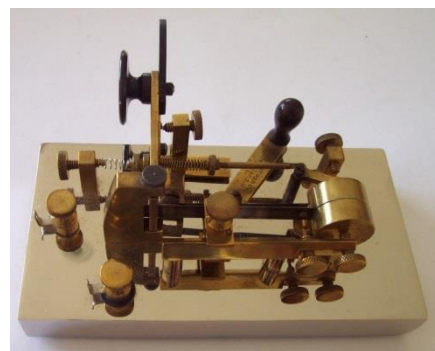
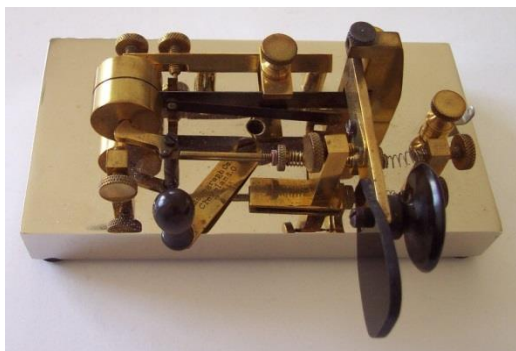
- 141.** Australian Blue Point XX20A all Black bakelite key and buzzer. Base measures 210 x 92mm. BLUEPOINT decal on front of base under arm. Wire from arm to base of anvil. Buzzer with cover mounted behind key. 3 terminals at rear marked + L2 and —. XX20A embossed under base. Bakelite knob and skirt.



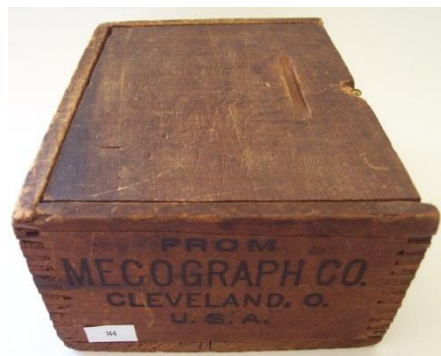
- 142.** Australian army training key and buzzer on metal base 215 x 114mm. Large thin insulating strip on top. Black bakelite WT8AMP No. 2 MK III key marked CEL in circle on arm. Label on front left of base reads 'BUZZER SIG. TRAINING'.  
**R.** 2 terminals on left of buzzer marked L on each. Bridge for battery at rear of base. Instructions on metal plate under base.



- 143.** U.S. Mecograph, Model 3 round weight semi automatic key. All brass fittings on nickel plated base 149 x 78mm. S#09050 stamped under front base. Small 3 also embossed under base. Circuit closer stamped Mecograph Co. Cleveland, O. U.S.A.  
**R.** Main arm stamped Patented FEB 13. '06 MAY 28. '07 MAY 5. '08 NOV 9. '09. Complete with original cord which is frayed and kept in a separate plastic tube. Obtained from U.S.A.



- 144.** U.S. Wooden dovetailed Mecograph box for 143. 177 x 138 x 80mm. Sliding lid secured with small brass screw. Both sides of box marked FROM MECOGRAPH CO. CLEVELAND, O. U.S.A. Hole in base of box for screw to secure the instrument inside.  
**R.** Obtained from U.S.A.



- 145.** Japanese black metal cover electronic keyer 142 x 93mm. EK-9X KATSUMI ELECTRONIC KEYER on front of base. Speed dial 1 to 9 and knob on front left. Twin finger/thumb pieces on front right. 4 terminals at rear marked MONI and TX with BUG AUTO switch. Marked — JAPAN — on left and DC-6V ADAPT. + in circle and earth symbol on right. Under base marked 72///55. Inside marked 72E11055. Obtained from Sydney.



- 146.** Japanese black metal cover monitor for 145. Measures 80 x 80mm. Label reads K MONITOR MODEL EKM-1 KATSUMI ELECTRIC Co., Ltd. Knob on left, socket on right and 2 terminals under base. With #145.

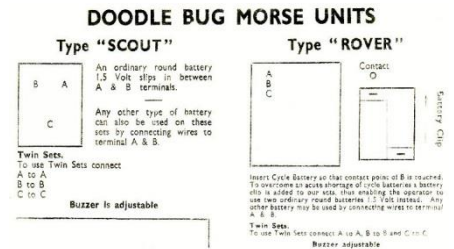


- 147.** Unknown relay on wooden base 178 x 152mm. Long coil at rear with adjusting extension rod, armature on right hand end. 4 terminals at rear and three position sliding switch front left. This may be an old medical device, but can operate as a relay. Obtained from Melbourne.

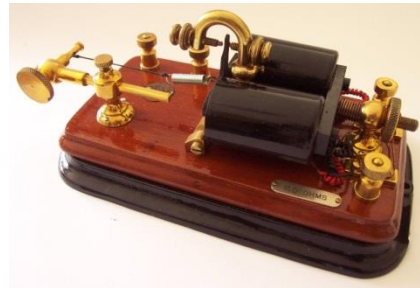




148. Australian Doodlebug 'scout' learner key. Wooden base 156 x 124mm with metal upper section. Key on right, buzzer to left and lamp to left again. Made by Buzza Products Sydney. Complete with original cardboard box labelled "The DOODLEBUG" MORSE KEY and SCOUTMASTER stamped on side. Boxes were stamped with various scout designations such as Cub, Rover etc. Morse code written underneath. Obtained from Goulburn NSW 1998.



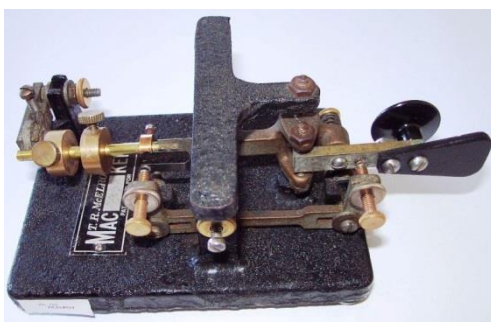
149. U.K. BI & HC 150 ohm relay, brass fittings on wooden sub base 190 x 100mm and metal base 205 x 120mm. All brass fittings. Round plate with logo in centre, on base near armature spring reads BI & HC Ltd LIVERPOOL (British Insulator & Helsby Cables, an associate company of WE (Western Electric) which went out of business in 1907. This relay must date 1907 or earlier). Plate marked 150 OHMS on wooden base. R851 stamped under wooden base and 686X stamped under metal base. Obtained from Melbourne.



150. U.S. KOB. US style black oval base key brass screws and circuit closer, metal arm. Sounder with black metal base and vertical spring. Brass parts; '2 cross' design on upright section of base. 2 brass terminals on base at rear. Wooden base 180 x 115mm round corners. 5 OHMS stamped under wooden base.



151. U.S. McElroy semi automatic black wrinkle paint finish key 149 x 100mm. c.1936. T bar style. Round pendulum with two weights. Long contact bar on left. Upright damper post with wheel and clip to hold pendulum for use as a straight key. Label reads T. R. McELROY'S MAC 7332 KEY PAT. APPLD FOR. Black bakelite finger/thumb pieces. Under base reads PAT APP FOR 1934 SEMI-AUMC TGH & RDO CODE XTR MAC 9-34 KEY MFD AJD & GA BY T R McELROY WLDS FASTEST RDO TGHR BOSTON MASS. Obtained from U.S.A.



152. Wooden box for #151. 226 x 134 x 136mm. Has handle and screw catch. Self made.



153. U.K. Rheostat D, black metal base 181 x 120 x 90mm, ebonite top. 4 rheostats (THOUSANDS, HUNDREDS, TENS, UNITS) Marked 0 to 9 anticlockwise with rotating bakelite top switches. Top marked CAMPBELL BROS & C<sup>o</sup> L<sup>td</sup> LONDON on top front left. Ser No. 1230 marked on top front right. Black terminal on left top rear, red terminal on right top rear. S123/34 C3984 on top rear back.

43



154. U.K. Rheostat D. Box wooden base 178 x 116mm, ebonite top. Hole on each vertical side. Brass fixing plates on left and right sides of base. 2 rheostats marked 0 to 4000 in 400Ω steps and 0 to 400 in 40Ω steps (clockwise) with rotating switches. A.T.M label on back. 2 terminal screws each side on top back. Brass 5 hole bar at top rear with 3 brass plugs.



155. Japanese electronic keyer. Measures 170 x 123 x 63mm. Twin paddles centre front. Auto/semi switch on front left, off/on switch on front right. Knob on front left for speed. Knob on front right for monitor. Marked 'SQUEEZE ELE-KEY<sup>®</sup> MODEL EK-150 KATSUMI ELECTRONIC KEYSER.'. Metal cover, speaker under base. At rear, ⊖ keyed line ⊕ KEYING RELAY/Tr. SWITCH. Dial for tone l to h, DC.7~13.5V Ext. SP/PHONE, 0.5A FUSE. AC LINE AC.100~120V 50~60Hz JAPAN KATSUMI ELECTRIC CO., LTD. Complete with instruction sheet and original cardboard box.





156. Russian black bakelite key 80 x 66mm mounted on bakelite sub base 88 x 75mm and 130 x 75mm metal base. 4 terminals at rear marked a 6 8 and earth symbol. Top ribbed hinge cover with logo in centre opens to right. Large black bakelite knob. Complete with original cardboard box. Obtained from Sydney.



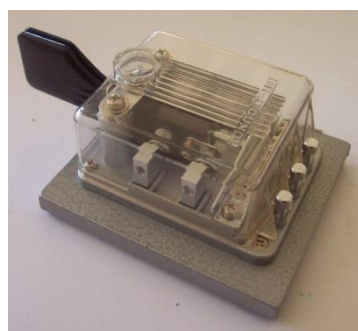
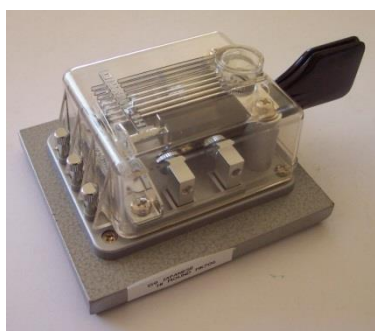
157. Russian black bakelite key. Base measures 80 x 66mm. 4 terminals at rear. Top ribbed hinge cover with logo in centre opens to right. Large black bakelite knob. Complete with Russian language sheet and original cardboard box. Obtained from Sydney.



158. Japanese Hi-Mound HK702 key. Metal base 115 x 60mm on marble base 129 x 71mm with lower plastic base 145 x 88mm. Chromed fittings. Two terminals at rear. Black bakelite knob and skirt. Clear plastic cover marked HiMOUND. Lower plastic base marked TELEGRAPH KEY HK-702 Hi MOUND ELECTRO CO. LTD. HI MOUND JAPAN stamped under lower base. Complete in original cardboard box.



159. Japanese Hi-Mound MK706 keyer. Plastic base 83 x 65mm mounted on metal base 100 x 90mm. Twin black plastic paddles. Three terminals at rear. Marked \* HI-MOUND \* MANIPULATOR hi mound electro CO., ltd. JAPAN. Clear plastic cover. Complete with original cardboard box.





160. Japanese Hi-Mound HK708 key. Black bakelite sub base 115 x 60mm mounted on black bakelite base 150 x 75mm. Two terminals at rear. Cord holder at rear of base. Black plastic knob. Base marked Hi-MOUND TOKYO HK-708 JAPAN.



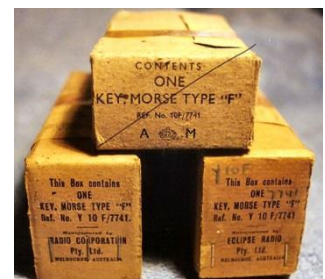
161. Japanese Hi-Mound HK709 key. Black bakelite sub base 115 x 60mm mounted on wrinkle finish black bakelite base 155 x 85mm. Brass fittings. Straight lever with bakelite knob. Two terminals at rear. Base marked Hi-MOUND HK-709 JAPAN. Complete with original cardboard box.



162. Australian brown bakelite Air Force 'Bathtub' bomber key 130 x 40mm. Opens upwards. Top section marked REF NO. 10A/7741 secured by large clip which can be placed on skirt to emit a continuous signal. Two terminal knobs marked 10A/7789. Knob with built in skirt marked REF NO. 10A/7790. Complete with original cardboard box marked This Box contains ONE KEY, MORSE TYPE "F" Ref No. Y 10 F/7441. *Manufactured by* RADIO CORPORATION Pty. Ltd. MELBOURNE AUSTRALIA.



163. Australian brown bakelite Air Force 'Bathtub' bomber key 130 x 40mm. Opens upwards. Top section marked REF NO. 10A/7741 secured by large clip which can be placed on skirt to emit a continuous signal. Two terminal knobs marked 10A/7789. Knob with built in skirt marked REF NO. 10A/7790. Complete with original cardboard box marked This Box contains ONE KEY, MORSE TYPE "F" Ref No. Y 10 F/7441. *Manufactured by* ECLIPSE RADIO Pty. Ltd. MELBOURNE AUSTRALIA.



- 164.** U.K. BPO brass cover relay on wooden base 130mm diameter. 145mm high. Base marked on edge MORSE. Seven terminals marked **Ⓢ** **Ⓣ** **D** **U** **S** **T** and **M**. Flat brass connections between T and M. Side of brass cylinder cut out to allow for adjusting knob with cylinder marked SPACING  $\curvearrowright$  and MARKING  $\curvearrowleft$ . Top opening glass cover and top plate of relay marked No 542 H. W. SULLIVAN LONDON. Underneath base marked 278 546. Chip on back of base. Obtained from New Zealand.



- 165.** U.S. Weston DC galvanometer 0–30 each side; black metal case 90 x 83 x 75mm. Dial marked PAT. NOV. 6.'88 APR 29. '90 FEB 17. '91 OCT 4.'98 July 16. '01. WESTON D. C. GALVANOMETER WESTON ELECTRICAL INSTRUMENT CORP., NEWARK N.J., U.S.A. Model 375 NO. 34026. R V Brigham scratched on face surround. Two terminals on top.



- 166.** U.S. Central Scientific Co. Cenco black metal galvanometer MEASURING 120 x 107 x 85mm. Calibrated 0 – 50 both sides – and +. Dial reads GALVANOMETER Trade Mark CENCO REG U.S. Pat OFF made exclusively for CENTRAL SCIENTIFIC COMPANY by WESTON ELECTRICAL INSTRUMENT CORP NEWARK NJ., U.S.A. CAT. NO F4462 W MOD 375-4 No 43841. 2 terminals on top (right marked +), 3 buttons on base at front. Large 8 painted under base. Directions plate at back missing. Underneath base marked Ecole Polytechnique laboratoire de physique. Left button marked Key 1 / 5volts. Centre button marked Key 2. 0.1 volts. Right red button marked Key 3 – Galv. Obtained from Canada.

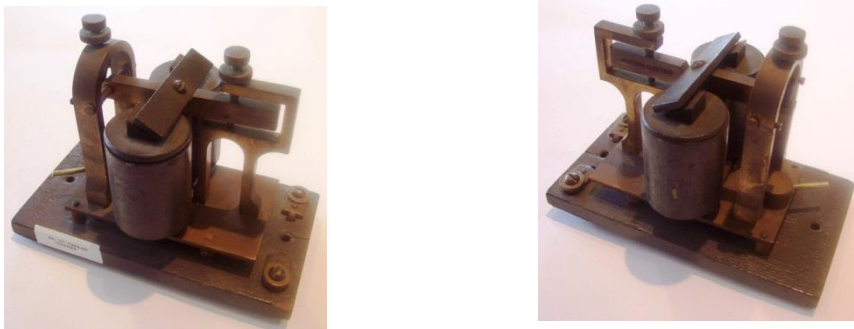




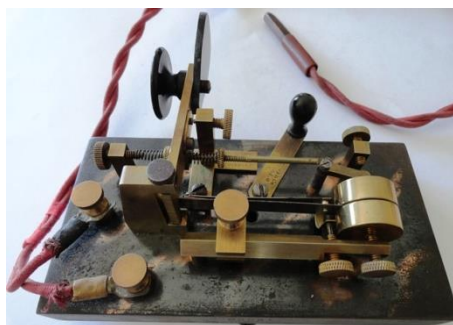
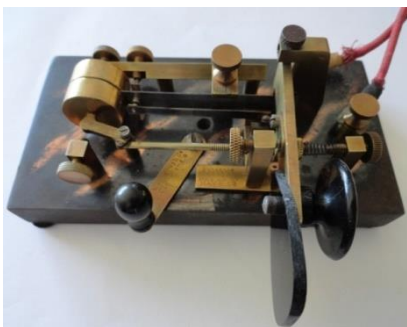
167. U.S. Mesco KOB. Wooden base 190 x 115mm. Stamped underneath 5 OHMS. Two terminals at rear. Black oval base with brass fittings key on right with circuit closer. Black bakelite knobs. Sounder on left marked MESCO in oval. Brass fittings. Two cross pattern on anvil uprights. Vertical spring.



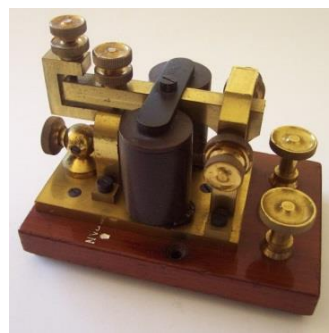
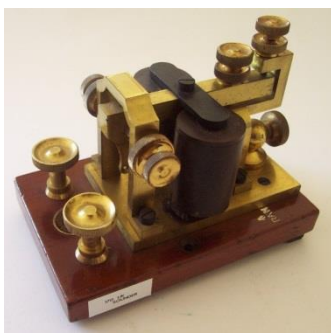
168. U.S. Western Electric mainline sounder. Wooden base 139 x 76mm marked at rear of base MAINLINE SOUNDER 120 ohms. Marked under base NYRS 729 and NYRS 726. Striker arm marked WESTERN ELECTRIC. Two terminals at rear. Angled armature adjustment at rear. Taller than normal sounder. Obtained from U.S.A.



169. U.S. Mecograph Model 3 round weight semi automatic key. S#6051 stamped on rear vertical edge. Mecograph 'tiger' stripe. Base measures 149 x 78mm. Circuit closer engraved Mecograph Co. Cleveland, O. U S A. Circuit closer plate engraved Patented FEB 13, '06 MAY 28, '07 MAY 5, '08. Single bar under base. Obtained from Victoria 2007.



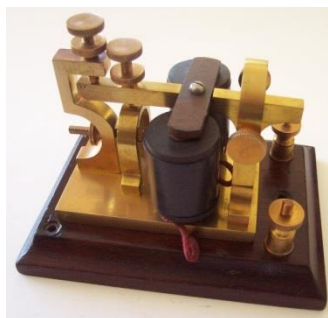
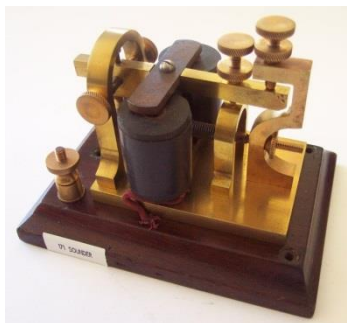
170. U.K. heavy sounder. All brass fittings on brass base 94 x 60mm and wooden base 132 x 86mm. Stamped 155 on front of base and 20w at back. Large terminals at rear. Label ATM Co Ltd Liverpool at rear. Stamped RAN with ↑ above both sides of base. Circular shunt under base. Stamped E B in large S? Horizontal spring. Obtained from Canberra and possibly used at HMAS Harman, the main naval communications station. This type of sounder was largely used by the Royal Australian Navy.



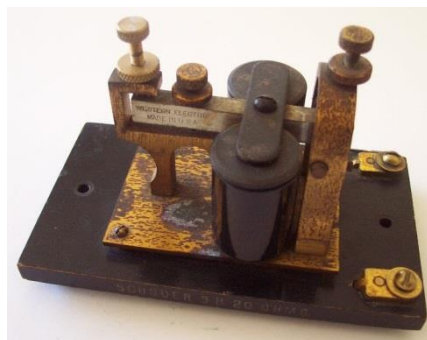
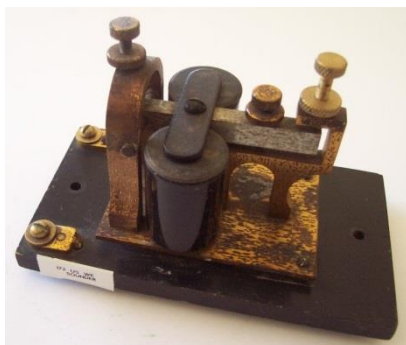


171. U.K. Heavy sounder all brass fittings mounted on brass sub base 89 x 60mm and wooden base 138 x 97mm. 2 terminals at rear. 'Camfield' written under wood base. Horizontal spring.

R.



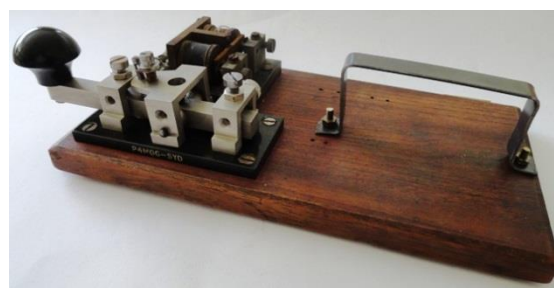
172. U.S. Western Electric 20 ohm sounder. Wooden base 139 x 76mm. Marked sounder 3B 20 ohms on right hand side. Two terminals at rear. Black plastic covered coils all brass fittings. Striker arm marked WESTERN ELECTRIC MADE IN USA. Vertical spring. Obtained from Melbourne Vic.



173. U.K. Navy key. Ebonite base 143 x 90mm. Stamped on front of base ADMY. PATT No. 7681 KEY MORSE SERIAL No. P3711 YEAR 1938. Steel fittings. Bakelite knob with skirt. Rear wiring harness missing. Full cover under base Similar to #105, but earlier vintage. Obtained from Yass N.S.W.



174. Australian army training key and buzzer on wooden base 211 x 114mm. WT8AMP key mounted on front right. Marked in front, KEY W T 8 AMP No. 2 and on right P4MOG - SYD. Black bakelite knob. No makers name under key. End of arm stamped ↑. Buzzer with four terminals marked — + L L mounted to left of key. Connection diagram under base.



175. Japanese Hi-Mound HK708. Black bakelite base 114 x 65mm mounted on second black bakelite base 150 x 75mm. 2 terminals and cord holder at rear. Base marked 'Hi-MOUND TOKYO HK-708 JAPAN' on front. Black bakelite knob (circles).



176. U.S. Vibroplex double lever semi automatic key. Black painted base 160 x 88mm. Unusual T bar bumper post with wheel. Black bakelite finger and thumb pieces with extra round finger piece (original) c1920. S#75291. Two terminal screws on right. Black bakelite knob circuit closer front right. Round pendulum with one weight. Bug decal front left. C3 plate 253 Broadway. Obtained from U.S.A.



177. Japanese copy of US key. All metal with black bakelite knob and circuit closer knob. Oval base measures 50 x 72mm. Stamped JAPAN under base.



178. U.K. Air Force brown 'Bathtub' bomber key. Brown bakelite base measures 117 x 35mm. Top opening key section with two terminals marked REF. No. 10A/7739. Brown bakelite knob with skirt marked on skirt REF. No. 10A/7790. In front of skirt marked REF. No. 10A/7741. Key arm stamped 47 with 3 in circle and 2 in square. Large spring clip at front secures the two main parts and when placed on skirt emits a continuous signal.

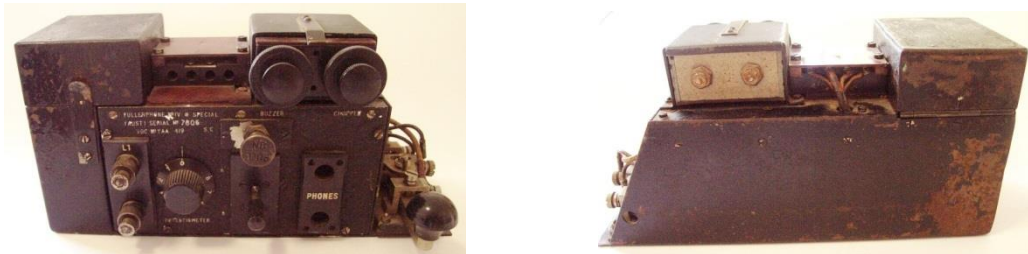




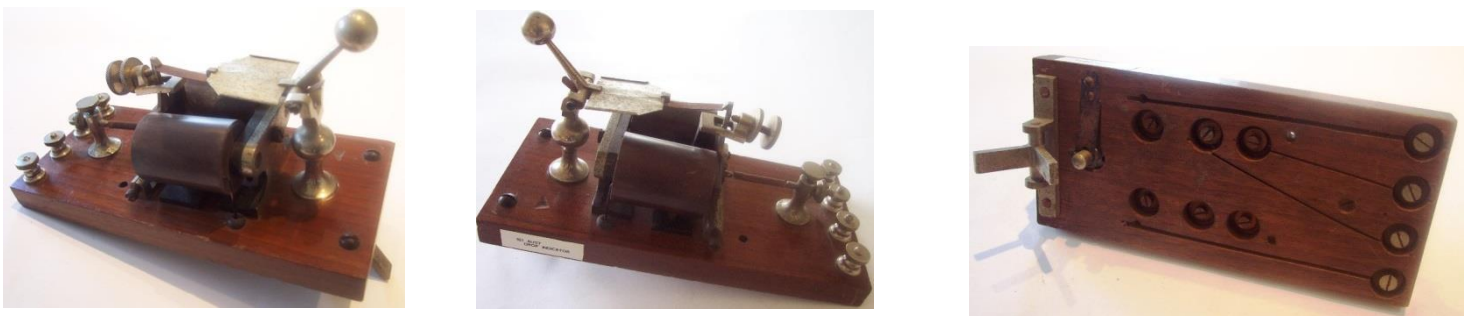
- 179.** U.S. Bunnell KOB. Wooden base 197 x 126mm stamped 5 Ohms left of key. Marked 'J H Bunnell & Co New York USA' on sounder striker bar. Vertical spring. Black painted oval base on key with circuit closer. Black bakelite key and circuit closer knobs. 2 terminals at rear. Obtained from Melbourne Vic.



- 180.** Australian Fullerphone MKIV. Measures approx. 258 x 88 x 122mm high. WT 8AMP No.2 Key on right hand side. Two knobs on top right labelled BUZZER (top right marked T MK.1 S.T.C. 1941- 6 metal strips marked M 01 – + R 02) and CHOPPER. Switch below marked PULL ON. To left of switch is marked FULLERPHONE MK IV SPECIAL (AUST) SERIAL NO. 7806 VOC No. YAA 419 SC. Below two terminals marked L1 and L2 with dial to right marked from 0 to 8 and labelled POTENTIOMETER below. To right of dial is up and down switch marked A B and again to right two sockets marked PHONES. Centre top is a four plug socket. Obtained from Wagga Wagga NSW 2001.



- 181.** Australian Drop Indicator. Used by Australian PMG Dept. to protect against rises in voltages. Wooden base 192 x 90mm. Two electro magnets with armature similar to line relay. Armature releases weighted spring when excess voltage arises. Connects to alarm bell. Four terminals at armature adjusting end. Swinging right angle piece under base with spring loaded button. Obtained from Bendigo Vic. 1998.



- 182.** U.K. wooden galvanometer. Triangular base 233 x 213mm, 244mm high. Top portion 105 x 104 x 213mm. Levelling screws each corner, 2 terminal screws at front on block. Large adjusting screw on top and smaller screw marked 'INCREASE SHUNT' under curved  $\sim$  arrow at right. 'Window' centre front. Label on front marked 'MADE IN ENGLAND' and label marked 'GALVANOMETER TYPE 4500LS H. TINSLEY & Co Ltd London S.E.25 No. 156.860. 239 written under base. Obtained from Oatlands Tasmania.

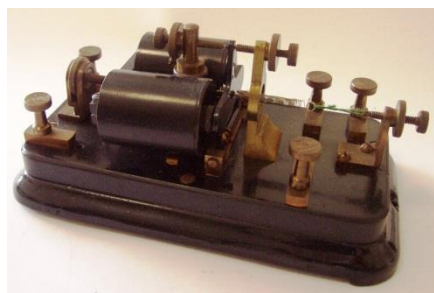
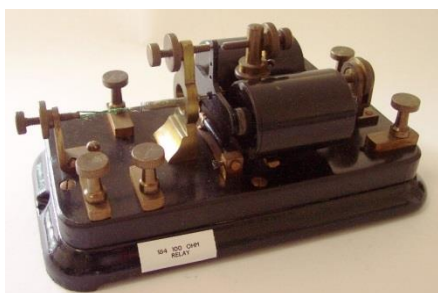




- 183.** U.K. Single coil 'Cathedral' galvanometer. No scale on dial. Brass bezel. Two 'pins' to control movement of needle. Stamped on base PMG (poorly) twice. Wooden case with base measuring 245 x 65mm. Two large terminals at rear with knurled screw retaining rear cover which has 5 stamped into base. Two brass resistance blocks on front of base.
- R.** Obtained from Berry NSW.



- 184.** U.S. 100 ohm relay. 2 x 54 ohm coils (marked on yoke ends). Five terminals; two at end, two in left front and one at left rear. All brass fittings on black bakelite sub base 170 x 80mm and metal base 185 x 99mm. Marked 400IE on base below armature spring attached to L shaped post and winder. 207A stamped under end of metal base. Obtained from Berry NSW.



- 185.** U.S. Bunnell Camelback KOB. All brass fittings on wooden base 190 x 121mm. Black metal based camelback key with circuit closer marked J. H. BUNNELL & Co. NEW YORK. Striker bar on sounder marked J. H. BUNNELL & Co. NEW YORK. Two terminals at rear. Vertical spring. Obtained from U.S.A.
- V.**

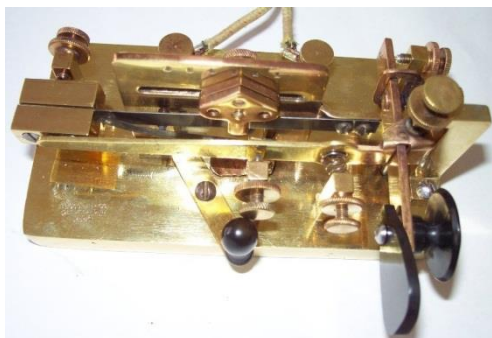


- 186.** Oppenheimer pole bracket 295 x 115mm and porcelain insulator. Found on a stock route near Bourke NSW in 1975. These were used on the Overland Telegraph Line in 1874 and other lines in Australia.

**V.**



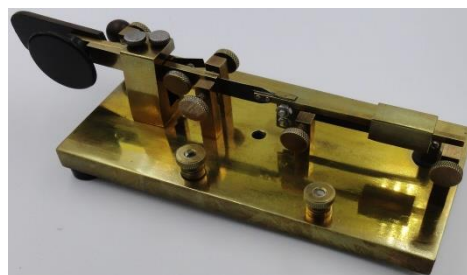
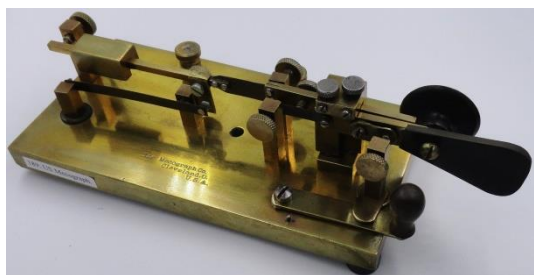
- 187.** U.S. Mecograph Model 3 square weight semi automatic key S#2097. All brass base measures 150 x 80 mm. Complete with original cord. Long release lever. Marked on left end Patents Pending and long flat dot spring. Large 3 under front left of base. Serial number 2097 stamped on rear side of base. Frame in centre marked 1 to 6 right to left with 'arrow' in front to indicate speed position. Square weight. Two terminals at rear. Circuit closer. Black bakelite finger/thumb pieces and circuit closer knob. Front left of base stamped MECOGRAPH CO. CLEVELAND O., U.S.A. (overstrike in stamping). Obtained from U.S.A 2005.



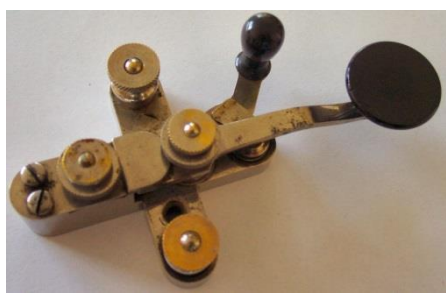
- 188.** Japanese Hi-Mound HK705. Black bakelite base with rubber under cover 113 x 59mm with steel fittings. Arm marked HK-705. Black bakelite knob (circle pattern).



- 189.** U.S. Mecograph Premier model. S#10204 stamped under base. All brass. Base measures 153 x 77mm. High single post damper. Square pendulum with flat weight. Long flat dot spring on front left. Two terminals right hand side. Black bakelite finger/thumb pieces and circuit closer on front left. 'The Mecograph Co. Cleveland O. U.S.A. Stamped on base. Obtained from Canada 2005, from the collection of the late Murray Willer, Canada.



- 190.** U.S. 'Steiner' key. Rarer version as opposed to the leg version. 'Cross' type frame measures 76 x 68 x 16mm. Two terminals either side. Black bakelite knob and circuit closer. Front right hand side marked W. E. Co. NEW YORK PAT'D DEC. 21 1886. Key designed to eliminate the use of a trunnion and pivot by using a springy strip of steel as the flexing mounting for the lever. Manufactured by Western Electric. They were hard to adjust and not popular. Obtained from U.S.A.

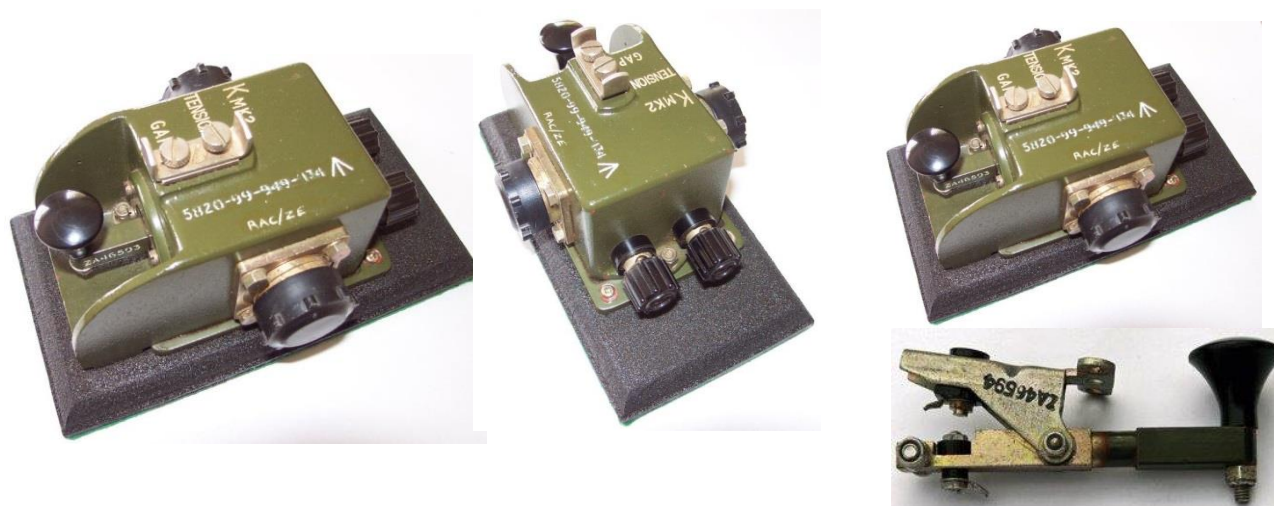




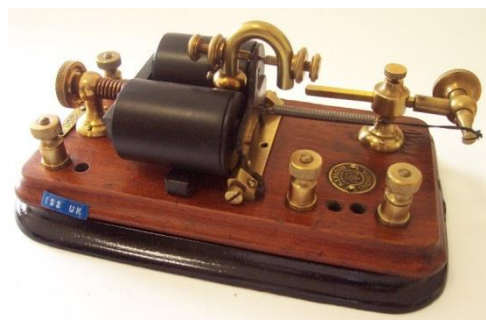
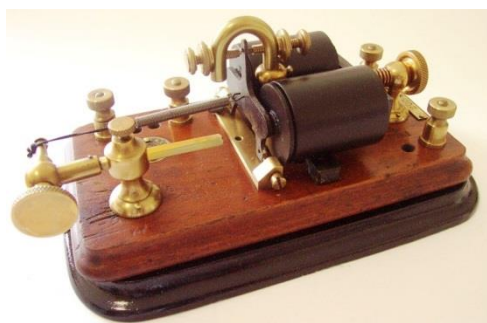
- 191.** Austrian camelback made by Hekaphon Vienna c1870. All brass on wooden 'two tier' base 153 x 90mm with brass blocks and terminal screws at back. Black wooden knob. Holes for securing screws either side centre base. From the collection of V.



- 192.** U.K. military key (Remote control unit) also used in Australia. Metal on wrinkle base (152 x 86mm) with felt under. Marked on top K MK2. TENSION. GAP. On right hand side NATO stock number 5820-99-949-174 ↑. RAC/ZE denotes made by Racal, UK. Small black bakelite key knob. Key arm marked ZA46503. Screw cap for connections on left. The early models of (official title) Remote Control Unit K Mk 2. British stock code ZA 51445 or NATO stock code 5820-99-949-1174. The earlier models only had the ZA number. They were part of post war British Army control harness type 'B' used from the mid 1950's onwards. They were used to remotely control vehicle mounted HF radio sets in the range EAGLEHAWK VIC C11, C12 and C13. The key slotted on to a base that had two webbing straps to tie on to the operator's knee. The table on the left of the key was for modification records. There was also a later model K Mk 3 which had a slightly longer arm and a thumb guard under the knob. Obtained from Tasmania October 2005.



- 193.** U.K. 200 ohm relay made by A.T.M. Co. Ltd Liverpool. All brass fittings on wooden sub base and black cast iron base (205 x 121mm). 636X stamped underneath iron base. Wooden base (190 x 100mm) is slightly longer than the metal base and has two extra holes drilled between the local terminals and two extra holes drilled between the line terminals and the coil yoke. Has A.T.M. Label near local terminals. The 200 ohm label at the back of the coil tension spring appears to be stamped on the reverse of the original label which shows 150 ohms. The same label may have been used for both 150 and 200 ohm relays. Stamped under the wooden base is 'R851' and what appears to be a star. PMG, with arrow below, is stamped on top of the wooden base near the ATM label and near one line terminal. Obtained from Orange NSW in 2004 with #195, #196 and #346 and it is thought the four were used together. The four are said to have come from a Western Australian railway station in 1944 despite the relay being stamped PMG. Pre Federation items were often stamped PMG.

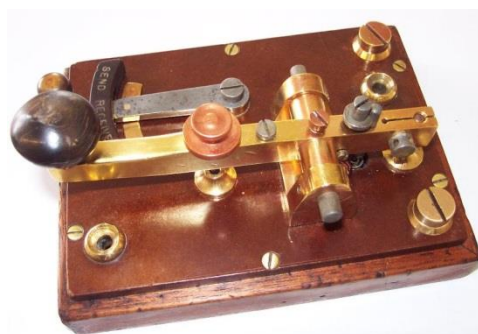
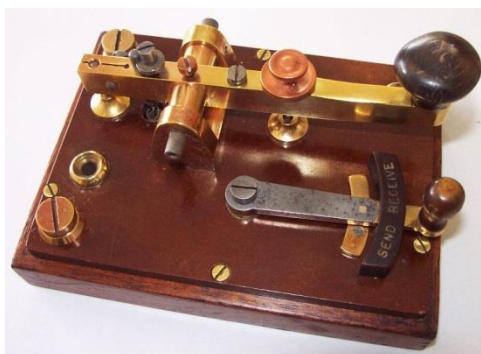




- 194.** German 'olive drab' army key made by Junker, Bonn. Bakelite base (95 x 75mm) with steel fittings. 'Click stop' adjuster at rear for contact spacing and large thumbscrew for lever tension adjustment to left. Mounted on heavy 'olive drab' metal plate (195 x 80mm) with cast aluminium cover approx. 115 x 60 x 55mm hinged at the back. Embossed on left front bakelite base is DBGM (Deutsches Bundes Gebrauchsmuster – German Federal Utility Model): indicating post WW2 manufacture. On the right front black bakelite base is embossed Junker Honnef/Rh. Three terminals at rear. The contacts at the rear are held closed (for a receiver muting circuit, etc.) until the key is pressed, opening the rear contacts and closing the front ones a millisecond or so later. Painted under base TGSA SUD.



- 195.** U.K. Post Office pattern single current key with Send/Receive switch made by A.T.M. Co Ltd Liverpool. Ebonite sub base (130 x 95mm) on wooden (Teak) base (140 x 104mm). A.T.M. Label on centre front of wooden base. All brass fittings, wooden knob. Switch with wooden knob marked SEND and RECEIVE. Two terminal screws at back. Used for repeaters and single current working. Obtained from Orange NSW in 2004 with #193, #196 and #346 and it is thought the four were used together. The four are said to have come from a Western Australian railway station in 1944 despite the relay being stamped PMG. Pre Federation items were often stamped PMG.



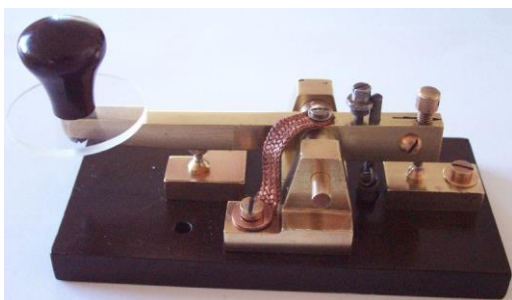
- 196.** U.K. single coil 'Cathedral' galvanometer by A.T.M. Co Ltd Liverpool. Wooden base 135 x 58mm and case 55 x 160mm. Split on top of case. Back of case secured with knurled screw. Brass fittings. Two terminal cheesecake screws at rear. A.T.M. Co. Ltd. LIVERPOOL label on lower front. Bezel has three lugs soldered to it to support glass (this is not original). Stamped R157 under wooden base and 83 under case. No scale on dial. Two 'pins' to control movement of needle. Obtained from Orange NSW with #193, #195 and #346 and it is thought the four were used together All removed from WA railway station in 1944.



- 197.** Australian Buzza key mounted on wooden base (base 186 x 96mm not originally supplied). Stamped 'Buzza Products Sydney' on cross arm. Oval base 75 x 50mm all metal fittings. Circuit closer with black bakelite knob same as used on Buzza jiggers. Bakelite knob. These were probably made for the US forces during WW2 and are typical U.S.A. design.

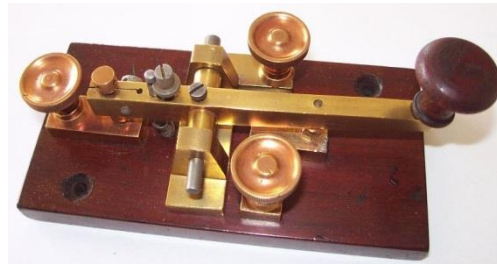


- 198.** U.K. key on ebonite base 153 x 76mm. All brass fittings. Bakelite knob may not be original. Braided brass strap from arm to anvil base. Clear perspex skirt under knob may not be original, but believe the key came from New Zealand where such skirt types were common. Typical U.K. key layout.



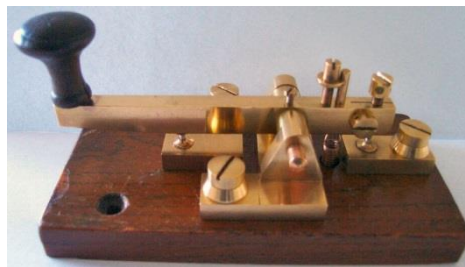
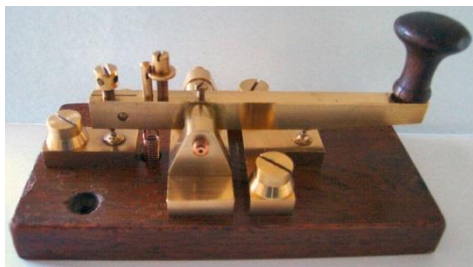
- 199.** U.K. key all brass fittings on wooden base 150 x 76mm. Wooden knob and very large terminal screws (3). Hawkers Ltd No 1 stamped on wooden base below knob. Typical UK key layout. Obtained from U.K. 2004.

R.



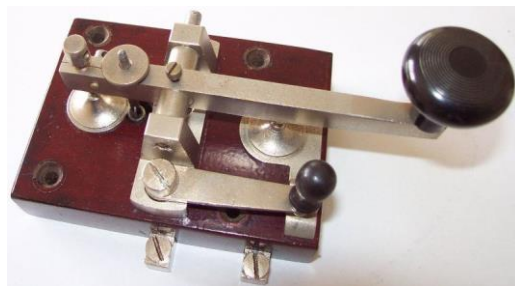
- 200.** U.K. key all brass fittings on wooden base 151x 75mm. Wooden knob. Plate on front of base beneath knob stamped 'Elliott Brothers (London) Limited'. Stamped under base 'made in England' (circular) and 2 52 with E B L L in a circle between the 2 and 52 'Mertens' scratched under base.

R.



- 201.** U.K. brass plated key on wooden base (109 x 79mm). Black bakelite knob (typical PMG circle pattern and not original) wooden circuit closer knob. Has jack for jigger. Stamped 'Siemens Bros & Co' (this dates the key prior to 1880) on front of anvil base. Stamped PMG with ↑ below at right of back stop which would account for the bakelite knob and jigger jack. 15302 stamped under base with a scratched X, X918 and circle of dots. Two terminal screws on left of base. Obtained 2004.

R.



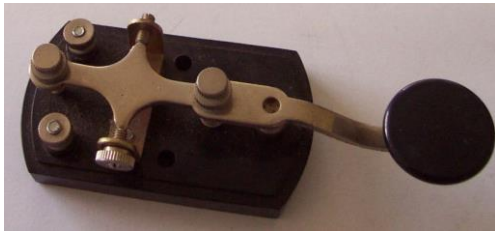
- 202.** U.K. brass key. Wooden base (109 x 79mm), wooden knobs on both arm and circuit closer. Base of anvil stamped 'SIEMENS BROs & Co Ltd LONDON' (this dates the key post 1880). Arc cut out of back stop base to allow for tension spring. No jack for jigger indicating possibly pre 1910. Stamped 5606 on back of base. Two terminal screws on left. Obtained 2004 from Brisbane and said to have been used by Queensland Railways.

R.





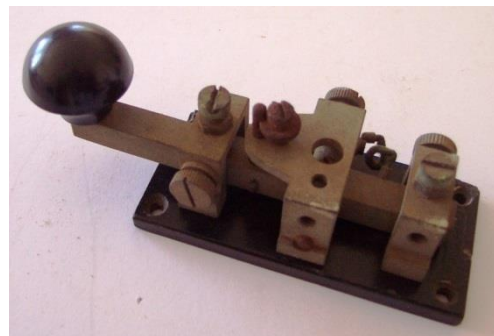
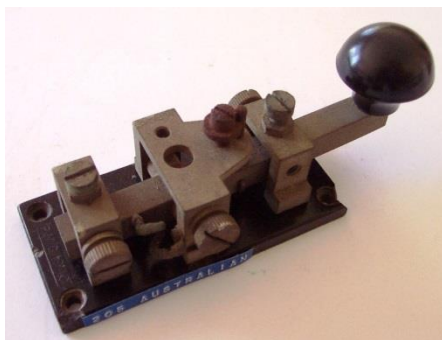
203. Japanese small black bakelite base (82 x 46mm) steel parts learner's key. Two terminals at rear. Marked 'Japan' at either end under base and under knob. Bakelite knob. Missing right hand fulcrum screw.



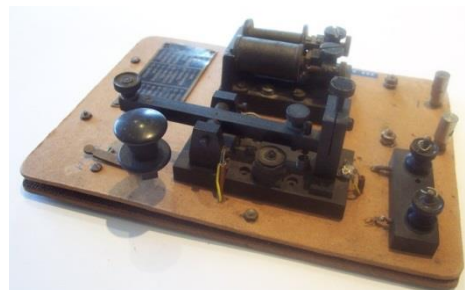
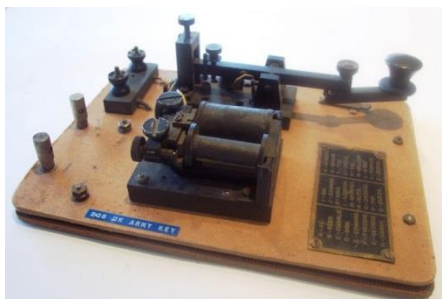
204. U.S.A. Navy Flameproof key. Used throughout WW2. All metal construction with black bakelite knob and skirt. Stamped CJB26003A on front left of base which measures 84 x 47mm. (C indicates Navy prefix, JB indicates maker J. H Bunnell, 26 indicates telegraph key, 003 indicates third model and A, indicates modification of original). Plug stamped 'NAF PART NO. 1136-1 J. H. BUNNELL & CO'



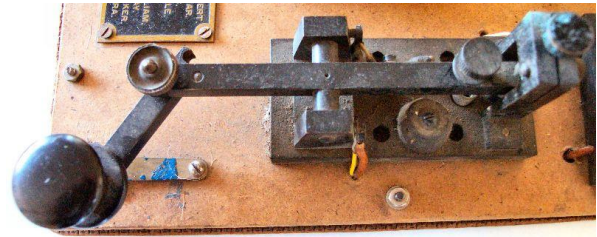
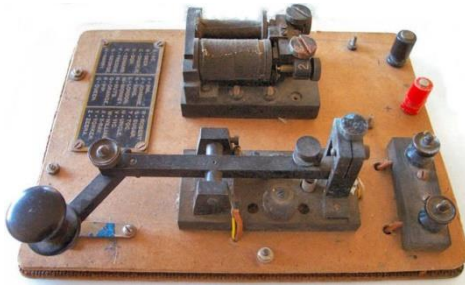
205. Australian military key. Black bakelite base (88 x 46mm) steel fittings. PMG 1940 embossed on top of rear base. End of arm stamped ↑159. Bakelite knob. This is a KEY WT. 8. AMP No 2 but is not stamped as such.



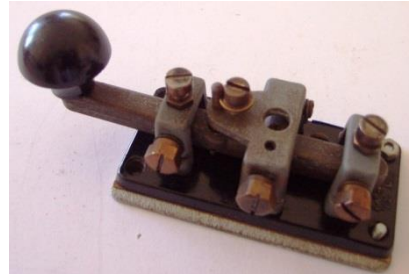
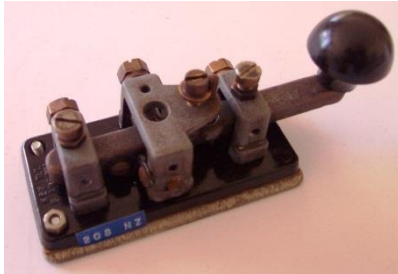
206. Practice set made up from various parts. Key (base 88 x 40mm) is WW1 U.K. with folding arm. Thread on arm is left hand. No markings on key. Terminal block at rear (61 x 20mm) with two terminals marked L1 and L2. Two separate terminal units at rear, Buzzer (base 79 x 57mm) at left and radio code plate front left of wooden base measuring 231 x 168mm. This is the old radio code. Obtained 2004 from Victoria. Similar to #207.



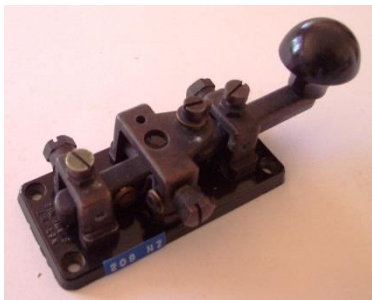
- 207.** Practice set made up from various parts. Key (base 88 x 40mm) is WW1 U.K. with folding arm. Thread on arm is left hand. No markings on key. Terminal block at rear (61 x 20mm) with two terminals marked L1 and L2. Two separate terminal units at rear, Buzzer (base 79 x 57mm) at left and radio code plate front left of wooden base. This is the old radio code. Obtained 2004 from Victoria. Similar to #206.



- 208.** New Zealand army key. Black bakelite base (88 x 41mm) steel fittings, black bakelite knob. Embossed 'KEY W.T. 8 AMP No.2' at rear of base and NZ under base. Metal sub base (88 x 48mm) stamped KEY & PLUG ASSEMBLY No 2B N.Z.



- 209.** New Zealand army key. Black bakelite base (88 x 41mm) steel fittings, black bakelite knob. Embossed 'KEY W.T. 8 AMP No.2' at rear of base and NZ under base.



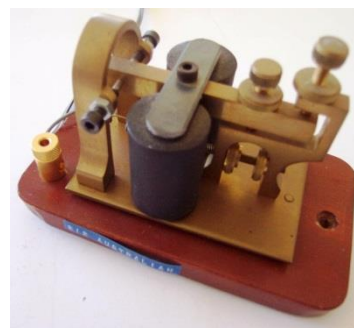
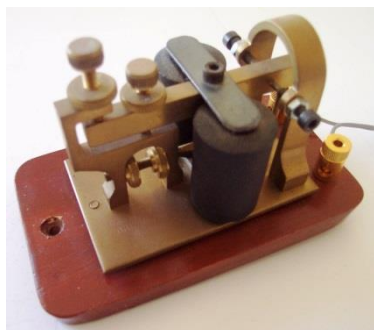
- 210.** U.K. wooden cased Q & I (Quantity and Intensity) meter. 90 x 55 x 93mm. Used in Australia. Calibrated 0-70 each side, 3 brass terminals and ring holder on top. Inserts between terminals marked INTY. and QNTY. Top of case has sliding lever with top plate marked '1/5 SHUNT' and lower plate marked 'FULL COIL'. Back of case slides down to open and secured with small screw. Dial reads 'TELEGRAPH WORKS. SILVERTOWN LONDON.' Stamped 'PMG<sup>S</sup> DEPT 189' top front left of case. Obtained from Sydney.



- 211.** U.K. A.M.T. Co Ltd Polechanger. All brass fittings on wooden sub base 195 x 107mm and black wrought iron base 209 x 125mm. Label between terminals marked 900. (Ohms). Five terminals along back. Stamped 'A.M.T. Co LIVERPOOL' on base on opposite end to coils. Stamped 294 under wooden base. Used by Australian PMG Dept. Obtained from Sydney.



- 212.** Australian 20 ohm sounder made by former Melbourne PMG Telegraphist Bill Morrow. 57 were made and serially numbered. This one is 08 and is marked on the metal base plate (90 x 55mm) '08 12/97 Bill Morrow Melbourne'. Under wooden base 136 x 77mm is marked '08 12/97 W R M'. Two terminals at rear. Horizontal spring.




- 213.** Australian wooden resonator box and base 126 x 125mm. Stem 130 x 19mm. Box 152 x 185 x 210mm. Box open front with curved back with screws both sides. Brass fittings. Made by former Melbourne PMG Telegraphist Bill Morrow. Made with #212 but no markings.



- 214.** U.K. relay. Stamped 'KAMM'S RELAY PATENT 6744/05 105' on main case. Logo on upper part of wooden base measuring 139mm diameter x 49mm high. Seven terminals marked **U** **D** and **Ⓢ** **Ⓣ** and **S** **T** and **M** on wooden base. Joiner between **U** and **Ⓢ**. Under wooden base marked R320 105 and 100+100. All brass fittings and case with large 34mm diameter thumbscrew. Top opening glass cover. Large horseshoe magnet underneath. Chip under base.





- 215.** U.K. 'Cathedral' differential galvanometer. Wooden case 117 x 55 x 157mm with brass bezel holding glass 95mm diameter. Stamped 11 front top and 7 underneath. Bottom front left stamped with  and V.T.S. in circle (Victorian Telegraph Service – pre Federation). Bottom front right stamped RESISTANCE 150 O.H.M.S. 150. Two shunts mounted on wooden base 128 x 60mm. Base stamped PMG with arrow beneath on left side AND 11 ON FRONT. Brass mounting plates on either side. Four large terminal screws at back. Dial reads 0 to 70 on either side of zero and marked REID BROS LONDON. N.



- 216.** U.S. oval base (75 x 52mm) all metal Navy key with circuit closer. Two terminals (one not original) at back. Marked SC1 4371 under base; also B within diamond shape stamp. Black bakelite knob and circuit closer knob.



- 217.** Australian Clipsal key. Black bakelite base marked CLIPSAL on top of base (116 x 72mm) at front. Black bakelite knob and large skirt. All brass fittings, two terminals on right hand side. Connection from arm to anvil. Embossed 'MADE IN AUSTRALIA' under base. In original cardboard box marked 610 MORSE KEY. Box marked 25213 49 - 49 possibly indicating 1949 as year of manufacture. Card with Morse code and wiring diagram for No. 610 included. These were often referred to as 'PMG key' – they are definitely not.



- 218.** U.K. signal lamp. Wooden dovetailed box 97 x 58 x 120mm. Lamp in front. Morse key on left side. Sliding top opening door at rear. Handle on top with sliding on off switch. (Unit turns 90° to operate). Top Label reads "SIMPLEX" MORSE LAMP.  
**V.** Bottom label reads BROMELL PATENTS Co LTD GLASGOW AND LIVERPOOL. Connections for battery inside. Obtained from Wales. (Wyn Davies).



- 219.** U.K. Lucas key, from Lamp Electric Signalling Daylight Long Range 1918. Made by Joseph Lucas Ltd, Birmingham, England. Brass fittings on wooden base 113 x 55mm. LUCAS stamped on top of arm. Wooden knob. Two terminals on left 2 connectors on right. Obtained from U.K. 2006.  
**V.**



- 220.** U.S. brass leg key 75 x 50mm oval shape. Legs 50mm long with wing nuts and washers. Two rod arm with trunnion stamped PAT'D DEC 5. 1893. Circuit closer stamped WESTERN ELECTRIC CO. Black bakelite knob and circuit closer knob.  
**V.** Obtained from U.K. 2006.



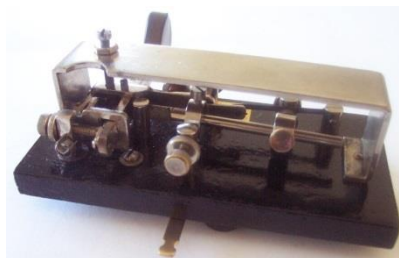
- 221.** U.S. 20 ohm sounder wooden base 130 x 92mm. Black metal frame, brass fittings. Two large terminals at rear, cloth covered terminals. Armature stamped A B LYMAN CLEVELAND O. c1875. Horizontal spring. Almost identical sounders were made by Moses and M A Buell Co. Cleveland Ohio c1870 - 1884. See Lyman key #373. Obtained from U.S.A. 2005.  
**V.**





- 222.** Australian Simplex Auto semi automatic key. S#120 c1920. Black painted base 150 x 75mm. Plain square bridge with semi circle cut out on rear right. Pivot screw on top. Round pendulum. Damper post rear centre. One terminal on dash post and the other a plain screw on the rear of base to the left of arm. Single round finger/thumb piece. Small brass plate 24 x 17mm marked SIMPLEX AUTO 120 L. G. COHEN MELB. under release arm post. First model. This is the earliest known serial number.

**R.**



- 223.** U.K. SET c1918. Wooden box with key, buzzer (cover stamped 1872 EDWARDS), switch and three terminals inside top. Lens on right hand end. Top opening lid stamped between terminal 1 and 2 P and between 2 and 3 L. Terminals can be connected to line. Scratched inside lid is KRMF. Sliding cover underneath compartment to hold battery and globe. Box measures 150 x 82 x 78mm. Appears identical to one made by A. W. Gamage Ltd Holborn London E.C.1 as illustrated in a Gamage's advertisement and designated Morse Signalling Apparatus (Improved model). Obtained from U.K.

**R.**



- 224.** U.S. Box relay KOB. 298 x 125mm. Wood with brass fittings. Metal label stamped J. H. Bunnell & Co. N. Y. 150 ohms. Key base stamped J H Bunnell & Co. New York. Trunnion stamped PATENTED FEB 15 1881. Box 100 x 98 x 75mm. Obtained from U.S.A. 1998.

**R.**



- 225.** Australian PMG 2 terminal key Wooden knob. Wooden base 109 x 81mm, brass fittings. Wooden knob, circuit closer and jigger jack. Set up as training set with #226.





**226.** U.K. 900 ohm sounder, wooden base 140 x 75mm, brass fittings. 2 terminals at back. Base stamped 900 ohm and plate on front of base reading WALTERS ELECTRICAL MFG. CO. LTD., MAKERS — LONDON. N.B. #225 and #226 are mounted on a wooden base 266 x 212mm together with a socket for a battery pack and socket for connection.

**227.** U.S. Wheatstone bridge, 290 x 290 x 115mm wooden base, brown ebonite top with all brass fittings. .1 to 10,000 ohms. 27 plugs + 1 spare. 2 side 'wings' on right hand side. Front of box stamped 1253. Label on top front reads DESIGNERS MANUFACTURERS AND IMPORTERS SCIENTIFIC EQUIPMENT L. E. KNOTT APPARATUS COMPANY BOSTON. MASS. Obtained from U.S.A. See #375 for Knott Galvanometer used with this instrument.



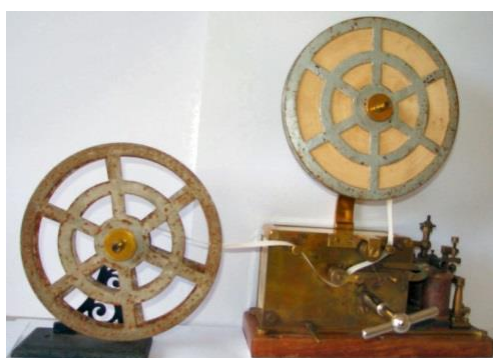
**228.** Australian 'Pandora's box'. Wooden box 252 x 129 x 130mm containing meter marked PANDORA and scale 1 – 80. MASTER INSTS PTY LTD SYDNEY AUSTRALIA FSD 80 VOLTS 200 K OHMS NO. E63776 MODEL PT 35. One button (red) and one dial).  
**V.** Used for testing underground cables. Obtained from old Yass, N.S.W. Telephone Exchange.



**229.** Australian PMG 5 bar switch. Four small bars 39 x 18mm and one longer bar 80 x 18mm mounted on wooden base 86 x 107mm. Six connecting holes between bars.  
**V.** Central hole in back of base to hold unused plug. Two brass bars nearest long earth bar have serrated edges to act as lightning arrestors. Three brass plugs shown in normal working positions, with full round loops at tops. Six terminal screws for wire connections. Used throughout NSW country Post Offices where only one line connected.



**230.** U.K. Morse register - Embosser. Probably c1870 or earlier. Brass housing with clockwork mechanism and two electro magnets. Pin embosses line onto tape when pressed against groove in small wheel. Five brass terminals at rear of wooden base. Complete with reel holder and tape and arm. Also wind up stand with reel holder to hold used tape. Small flat switch at front to start and stop clockwork motion. Base measures approx. 229 x 114mm. Similar style to #353. The board to which it was originally fixed read 'Property of South Australian Railways 1878'. See switch at #88 and article in Bits and Pieces on South Australian Railways Telegraphs.



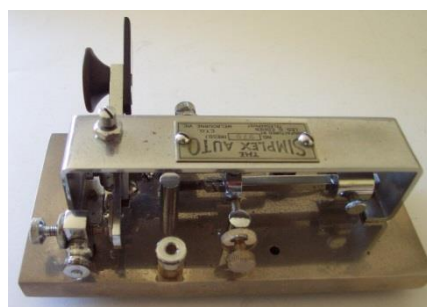
- 231.** Australian PMG Dept portable set comprising key, relay and sounder. Contained in wooden box 340 x 203 x 186mm with rubber bumpers on most sides to act as feet. Front of box hinged downwards, then slides left and turns 180° to put key on right hand side. Main box turns 90° right with sounder at top of box. Connections then between front and main box to complete circuit. Obtained from Canberra.
- E.**



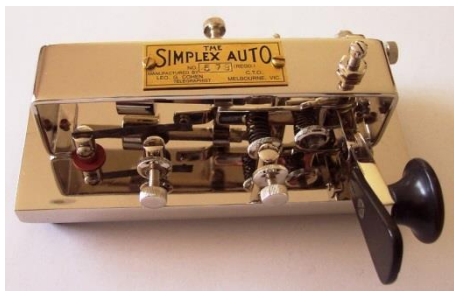
- 232.** Australian PMG Dept test Megger. Contained in box measuring approx. 229 x 152 x 203mm with carry strap. Two switches on top labelled 'bridge' 'Meg' and 'Varley' on one and 1x 10x 100x 10÷ 100÷. Rotating handle on left side of box. Four switches on front of box with small windows to show readings. Main dial on front with directions for Varley test and ID sticker for PMG Dept - Supervising Technician PMG Dept Yass Unit No. 017. Right hand side of box has three terminals 'Varley earth', 'Line' and 'Earth' and also infinity adjustment.
- E.**



- 233.** Australian Simplex Auto semi automatic key. S#979. All nickel plated brass. Base measures 156 x 77mm. Label reads THE SIMPLEX AUTO No 979 (REGD.) MANUFACTURED BY LEO. G. COHEN TELEGRAPHIST C.T.O.. MELBOURNE. VIC. Feet holes have been wrongly drilled right through base. All Simplex Autos had black finger and thumb pieces. Obtained from Sydney NSW in 2005 and formerly owned by Leo McGarrigle, Sydney Telegraphist (now deceased) who saw service in Antarctica pre 1950. Note 2 dots after C.T.O
- R.**



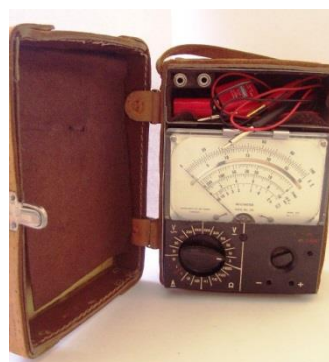
- 234.** Australian Simplex Auto semi automatic key. S#579. All nickel plated brass. Base measures 151 x 74mm. Label reads THE SIMPLEX AUTO No 579 (REGD.) MANUFACTURED BY LEO. G. COHEN TELEGRAPHIST C.T.O.. MELBOURNE. VIC. This was my first semi automatic key bought second hand for 5 shillings in 1947 from a relieving Postal Clerk (Noel Cox) at Leura NSW. Refurbished by me in 2006.
- V.**



- 235.** Australian Simplex Auto semi automatic key. S#3875. Base 151 x 76mm. All nickel plated brass. Label reads THE SIMPLEX AUTO No 3875 (REGD.) MANUFACTURED BY LEO. G. COHEN MELBOURNE. VIC. Damper left rear. Terminal screw back of base, pivot adjustment on frame. U shaped long flat dot spring. Engraved 'C A Forman' on left side of bridge. Claude Forman was a Telegraphist in Sydney C.T.O. Obtained from Sydney 2006.
- R.**



- 236.** Australian PMG Dept Technician's multimeter. Marked A.P.O. No. 2A Master Instruments Pty Ltd Sydney Australia. Model PT53 No. E4122. Obtained from old Yass Telephone Exchange 2003. Contained in solid leather case 205 x 150 x 80mm with carry strap. c1940. Leather case stamped P.M.G. S. 399/20.
- R.**



- 237.** Australian Multi purpose testing box. Wooden box 240 x 197 x 273mm. Is Wheatstone bridge, Varley Loop Test and Murray Loop Test combined. Five resistance switches. Two keys and eight terminals and set of leads. Marked V.M.L. Pty Ltd Melbourne Australia. Instruction sheet on inside of lid. Plate on base. Ser. No. 1732-2. Leather carry handle. Obtained from Goulburn, N.S.W.
- V.**





- 238.** Japanese black galvanometer 115 x 75 x 72. 0 – 15 either side with magnification at centre. Clamp button with ↑ above under dial. Large central knob. Two terminals at bottom. Rear label reads D.C. GALVANOMETER TYPE G<sub>3</sub>-B NO. 21907 COIL RES. 153 Ω Ex.C.D.R. 750 Ω PERIOD 24 SEC SENS 4.1 X10<sup>-7</sup> A 37 X10<sup>-5</sup>V DATE 1959 ⊕ 'SHIMADZU SEISAKUSHO LTD KYOTO JAPAN N.666' and smaller label SUPPLIED BY TOWNSON & MERCER (DIST.) PTY. LTD. and ⊕ 'SHIMADZU SEISAKUSHO LTD Kyoto Japan' below.



- 239.** U.K. Wheatstone Bridge. Label reads W G Pye & Co Cambridge England. Wooden box 287 x 165 x 160mm. Top row 10 – 1000 on either side. Other 2 rows 1 – 5000 with INF. Marked CONSTANTAN COILS OHMS AT 17° CENT.  
**V.** Five terminals plus Galvo and battery terminals. Inside lid, sticker reads 'Philip A. Wood 86 Bradfield Rd Stretford'.



- 240.** Australian PMG 20 ohm sounder. 2 terminals at rear. Wooden base 139 x 74mm. Brass fittings. Horizontal spring. Mounted on wooden board with PMG key #241 (below) and used with my dial up set. Socket on base so that any sounder can be used on the set.



- 241.** Australian brass PMG 2 terminal key. Wooden base 108 x 78mm. Two terminals on left. Black bakelite 'circle' type knob, circuit closer and jack for jigger front right. Used with my dial up set. See #240.

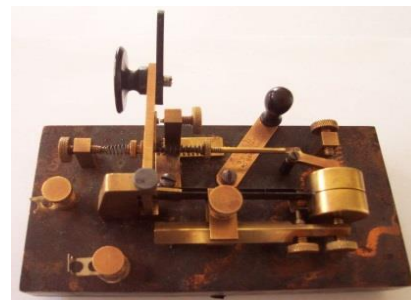
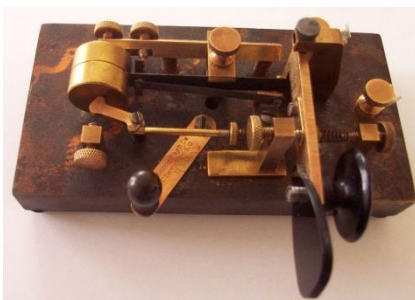
- 242.** U.S. J-7-A. Aircraft key. 'Winker' light (metal cover) aims back at the operator to counter aircraft noise. Base measures 139 x 67mm. Round cover reads 'FLAME PROOF KEY TYPE J-7-A . DATE 1921 ORDER No. 141082 mfg. By L. S. BRACH MFG. CO. NEWARK, N.J.' Arm comes from left hand side with black bakelite knob and skirt. Two terminals at rear. Adjusting screw and lock nut at front of round box. Said to have been used on U.S.N. Blimps. Obtained from Wales (Wyn Davies).



- 243.** Italian Safar Maritime key. Brass with black plastic on front of arm. Black bakelite knob and skirt. Black knobs on rear contact screw and tension adjuster. Black base measures 146 x 83mm mounted on wooden base measuring 172 x 96mm.  
**V.** Obtained from Wales (Wyn Davies).



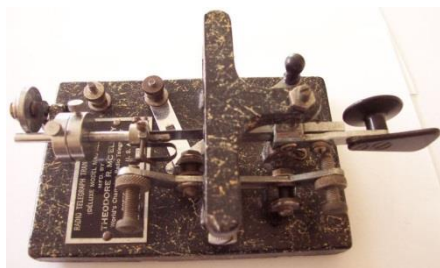
- 244.** U.S. Mecograph Model 3 round weight semi automatic key. S#09005 (marked under front base edge). 3 and Mecograph (very faint) under base. Mecograph 'Tiger' stripe. Base measures 149 x 78mm. Circuit closer engraved Mecograph Co. Cleveland, O. U S A. Arm engraved Patented FEB 13, '06 MAY 28, '07 MAY 5, '08 NOV 9, '09 Obtained from U.S.A.  
**V.**



- 245.** U.K. naval key. 155 x 71mm thin metal base. With ebonite base above - front marked ADMY PATT. No X. 691. KEY MORSE W. G YEAR 1943. Knob unscrews and lock nut unscrews to remove cover. Two terminals at rear of ebonite base
- V.** 121 x 68mm with yoke and two clamping screws each. Tension screw nut marked 'lift and turn'. Back right hand terminal strip marked 26379<sup>D</sup> 7. Cover has two slots at rear for wires to pass. Some grey paint missing from cover.



- 246.** U.S. McElroy 'marble' base semi automatic key. c1938. Base 156 x 100mm. T Bar style with two weights and very long circuit closer. Two terminal screws on back right hand side. Label reads RADIO TELEGRAPH TRANSMITTING KEY. (DELUXE MODEL MAC KEY) MFD. BY THEODORE R. MCELROY World Champion Radio Telegrapher BOSTON, MASS., U.S.A. SPEED KEY SERIAL NO. 1282.
- V.**



- 247.** Australian reversing key commutator. Used for changing current around. Black Ebonite base 96 x 96mm marked CASPER PRECISION ENGINEERING P<sup>TY</sup> L<sup>TD</sup> SYDNEY. Central black ebonite rotating arm (spring adjusted) with two terminals and contact terminal on end moves over two arced brass plates each with one terminal. From Sydney Morning Herald newspaper of 2/1/1942 'Casper Precision Engineering P/L Capital £2,500 in £1 shares, iron founder, mechanical engineer and machinery manufacture. First directors Kurt Casper and Alfred Joop.' Kurt Casper was a German who came to Australia in the 1930s. The business made parts for Beaufort bombers during the war and many other items. Many types of manufacture were undertaken. Again, SMH of 18/4/52 'Toolmakers, plastic moulders'. The business closed in 1952.
- V.**

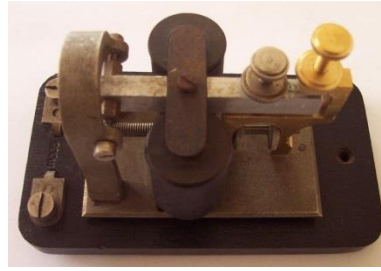
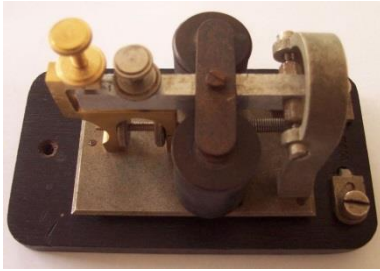


- 248.** Australian PMG three position sliding switch. Brass parts on round wooden base 95mm diameter. Almost half of left hand side of base missing. Obtained from Melbourne.

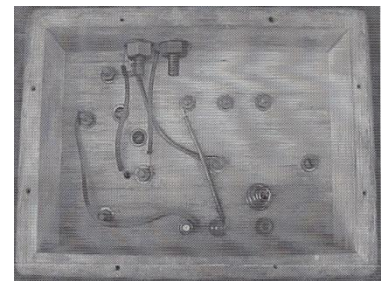




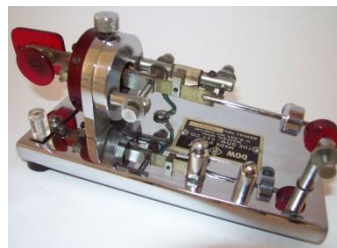
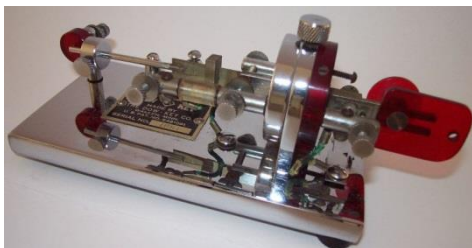
249. Australian PMG 900 ohm sounder. Stamped 900w on wooden base 140 x 76mm. Under base stamped S123 38 C4601-45 and C4260/44. Anvil and limiting screw replacements made from brass. Original, alloy metal parts. Horizontal spring.



250. Australian military training key. Wooden base 200 x 137 x 60mm high with removable thin wooden base cover underneath. Base cover stamped 139143 HARRISON. O. S. This all stencilled by hand into base cover. Key and fittings all brass. Two terminals at top rear with two to left of arm near knob. Front two have sliding connector switch. Black bakelite knob and black bakelite covered buzzer on top left. Two jacks on front side left of centre.



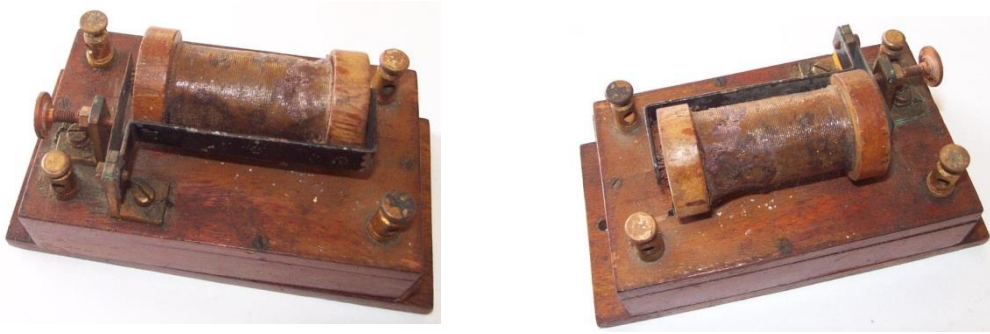
251. Canadian Dow rotating semi automatic key. 'Universal' model. Base measures 166 x 88mm. All chrome with red plastic paddles, damper and round frame. Upright damper post with red wheel. Circuit closer with clear plastic knob on front right. V. Two terminals on right side towards back. Label reads DOW KEY (with DK in diamond logo between DOW and KEY) MADE BY THE DOW-KEY CO. WARREN. MINN. U.S. PAT. NO. 2481091 SERIAL NO. 1061. Pendulum can be rotated to be used at any angle including 180° for left hand. Also as a straight key. These keys were initially made in Winnipeg, Canada by Dow Corp and later keys such as this in U.S.A.



252. Wooden box for #251. Measures 220 x 113 x 103mm. Handle on top. Up sliding door at front.



- 253.** Induction coil. Wooden base 137 x 69mm with two brass terminals at each end. 47 stamped on top of base near frame. At right hand end adjustable armature working to single coil running left to right. Both base and top plates unscrew.
- R.**



- 254.** Ship signal lamp. Wooden case 238 x 212 x 238mm with handle on top and 53x 53 x 50mm hollow box for access to key arm below on top front left hand corner. Glass front with 173mm diameter reflector. Sliver of wood slides out to release glass. Top rear door opens for access to interior with lamp and small brass key mounted on top right hand side. Key has two terminals. Lower wooden section (attached to door) secured by four brass screws. Obtained from Yass.
- V.**



- 255.** Australian Lineman's test set mounted on wooden base 113 x 87mm. Small brass key with wooden knob and circuit closer. Two leather covered coils (relay) with small compass between coils. Two terminals at rear with tension knob for armature spring. W B????? Unreadable name scratched underneath with 1906. These sets were used on the Overland Telegraph line c1872 and this one would appear to be earlier than 1906. Contained in leather case with strap and buckle fastening. Obtained from Victoria. See article at end of this file.
- E.**





256. Australian home assembled practice set on wooden board comprising army key similar to #250 mounted on wooden base 1211 x 80mm. 20 ohm sounder (possibly Levenson). Base 138 x 74mm. Socket for power. Oscillator with switch, to switch between sounder and oscillator contained in wooden box 165 x 80mm. Obtained from Canberra. (Curly Moger now S K).



257. Wooden base 150 x 73mm all brass fittings learner's key. Two terminals at rear. Narrow fulcrum with split sections on each side tightened by one screw each side. Wooden knob.



258. Australian three terminal PMG brass key. Wooden base 108 x 78mm. All brass fittings. Wooden knob and circuit closer knob.

R.



259. German T1 black bakelite covered key on base with black rubber sub base approx. 149 x 84mm. Cover has ⚡ (high voltage) at top and circle in centre and 'vor dem Offnen Stecker herausziehen' (pull out the plug before opening) at bottom. Black bakelite base on main key has eagle and swastika and inspection number WaA376 below. All German items carried an inspection number. WaA = Waffenamt (Weapons office). Complete with cord and plug from right hand side of key.

R.



260. Australian WT 8 AMP no 2 key mounted on metal 'slide in' base. Clips on either side of base (to enable the key to be slid out) which measures 88 x 58mm. Used in Type 109 Transmitter MKII c1940. Possibly used with Wireless Remote Control Units B or E. Arm stamped ↑2 on end and D↑D on left front.





- 261.** Australian Morse code keyboard 304 x 280mm. INFO-TECH MODEL 10 marked on label. From left : switch LOAD Run, dial WEIGHT, light BUFFER FULL, dial SPEED, light ON, dial VOLUME OFF, switch TUNE. Typewriter type keyboard. On back two sockets marked GRID CATHODE and S/N 164. Fuse holder on rear left. VO3305470 stamped on front left. See also #262.

**R.**



- 262.** Australian Transformer for use with 261. 173 x 117 x 113mm. Marked Ironcore TRANSFORMER TYPE T6/6 PHASES 1. PRI. 240V FREQ. 50~ Sec. 110V 100 VA MADE IN AUSTRALIA. Plate on side 240v. 50 cycles. Second plate 110v 100va. Handle on top air slots front and back.

**R.**



- 263.** Australian army Wireless Remote Control Unit A in khaki metal box 224 x 129 x 137mm complete with webbing strap. Front of box marked WIRELESS REMOTE CONTROL UNIT A SERIAL NO. 2 1 6 1 6. Top MARKED ↑ 971 D↑D. Top opening lid has instruction and diagram plates inside. WT8AMP key on left. Battery compartment centre back marked WIRELESS REMOTE CONTROL UNITS 'A' STROMBERG CARLSON SERIAL No. 8081 D↑D 1941. Left key reads CONNECT EXCHANGE, Centre button PRESS TO SPEAK EXCHANGE and right button CALL EXCHANGE. Buzzer with two dials on right. Below from left, Socket marked MIC, 3 connectors marked CONTROL EXCHANGE and two sockets for PHONES on right.

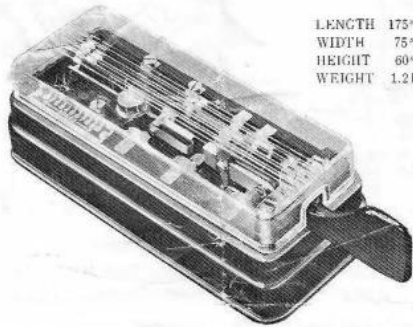
**R.**



# HI-MOUND

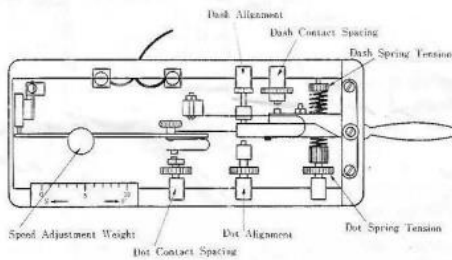
## SEMI AUTOMATIC KEY

### HI-MOUND MODEL BK-100



LENGTH 175<sup>mm</sup>  
WIDTH 75<sup>mm</sup>  
HEIGHT 60<sup>mm</sup>  
WEIGHT 1.2 kg

Top view of the HI-MOUND Semi-Automatic Telegraph Key



HI-MOUND ELECTRO CO., LTD.

### Semi-Automatic Telegraph Key

This Lafayette semi-automatic telegraph key enables the operator to transmit a series of dots in rapid succession with one movement of the thumb. Dashes are sent individually with the index finger. Proficiency comes only with practice but the end result will be a clean sounding code transmission at speeds much higher than those readily obtainable with a straight key and with only a small fraction of the physical exertion previously required. This semi-automatic key or "bug" will produce clear, distinct code characters at speeds ranging from 10 to 40 words per minute, the speed depending upon the adjustment of the vibrating arm weight and the skill of the operator.

There are seven adjustments on the key which effect the quality of the code transmission and the speed at which the key will properly function. These are the dot and dash contact spacing, dot and dash spring tension, dot and dash arm alignment screws, and the vibrating arm dot speed adjustment weight. Dot and dash contact spacing is a matter of individual preference but it should be noted that the faster speeds may only be obtained with very small spacing. Actually, high speeds may still be obtained with wide spacing but the entire quality of the transmission will be sacrificed because the code will sound "choppy"---the time spacing between letters and words will be disproportionate to the spacing between the individual characters in each letter. At high speeds the two limiting factors are the ability of the operator to move the paddle fast enough through the distance between the paddle and the dot and dash contacts and also the speed at which the dot contact can vibrate. Nothing can be done to improve the dot contact vibrating speed-- it is a physical property of the particular metal of which it is made. Wide spacing tends to provoke a "swing" in the operator's sending. A properly adjusted key should sound close to taped code transmissions.

Spring tension too, is a matter of individual preference. Initially, most "bug" operators tend to apply too much pressure to the paddle; they have not yet mastered the "feel" of the paddle. Therefore, most novice operators will find it wise to begin with heavy spring tension and gradually decrease the tension as one becomes more proficient. With increasing practice a combination of small contact spacing and very light spring tension will produce the best sounding code.

The best way to adjust any "bug" or other automatic sending device is, of course, by ear. However, the new operator may not know what properly spaced code sounds like. Therefore, as a guide, the following visual method is recommended.

Using an ohmmeter or the plate current meter of the transmitter:

1. Press the dash side of the paddle and note the maximum meter reading.
2. Press the dot side of the paddle and while sending a series of dots adjust the dot contact and dot arm alignment screw for 60-75 % of the reading obtained in step 1 above.

When the key has been properly adjusted, it should be capable of producing clear, crisp code at speeds between 10 and 40 words per minute with only an adjustment of the vibrating arm weight.

It is important that a smooth transition be achieved from dots to dashes and vice versa. The best practice letters for this purpose are V ( · · · — ), B ( — · · · ), and the period ( · — · — ). The new operator is encouraged to devote some time practicing these letters before using the key in actual communication.

HI-MOUND ELECTRO CO., LTD.

See #133 above.

Whilst the instruction sheet refers to 'Lafayette' the instructions are the same for all brand names this model was marketed under.



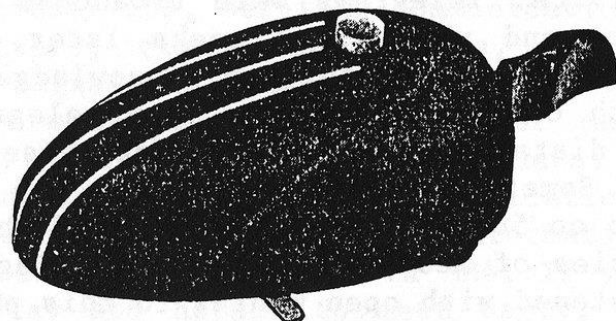


See #139 above. Switchbox in Spitfire cockpit.

## YOUR **EDDYSTONE** DEALER WILL DEMONSTRATE THIS OUTSTANDING SEMI-AUTOMATIC MORSE KEY

This is a first-class production, totally enclosed in a streamlined die-cast housing finished in fine ripple black with chrome relief. This key has a really beautiful movement (try it at your Dealers) and is fully adjustable to enable the operator to make full use of the wide range of speeds provided. The handle has been designed to give equal facility to right- or left-handed operators. A short-circuiting switch is fitted to the base which is a heavy diecasting, provided with rubber feet and holes for screwing down.

No. 689, £3/17/6



ALSO IN PRODUCTION :

No. 669, "S" Meter, 5 Gns.

No. 678, Modulation Indicator, £8/15/-.

No. 690, Crystal Calibrator, £12.

No. 687, Vibrator Power Unit, £7/17/6.

Order from your Eddystone Dealer

**STRATTON & Co., Ltd., EDDYSTONE WORKS, ALVECHURCH Rd., BIRMINGHAM, 31**

See # 136 above



## LINEMAN'S TEST SET – See #255 above

The following applies to Australian conditions.

It must be remembered that it is a **test** set and not a conventional operating set. Also the period in which it was used - well prior to 1900.

The coils were relay coils and not sounder coils. Relays could operate up to about 200 miles whereas sounders could not and weren't designed for that purpose. Hence the spacing of repeating stations along the line. Telegraph poles were erected approximately 33 to the mile, although differences often occurred.

A galvo was not necessary and was not used - it has a compass. No roads, sign posts or train lines running alongside the telegraph line - just wide spaces covered with bush and intense heat in summer which can readily cause disorientation. This still happens today particularly with tourists, leading to annual events of death.

A lineman would never travel alone and had his own compass. Perhaps the set manufacturer included the compass as a 'duty of care' exercise.

The compass on the set was simply screwed into the wooden base between the coils and as the set was contained in a leather pouch did not hinder its enclosure.

The approximate location of a fault, which largely fell into three categories (open circuit, earth fault and cross) could be determined by the telegraph station using Wheatstone Bridge, Murray Loop and Varley tests along with mathematics.

The Lineman would then be despatched to repair the line and needed small, light equipment, which could be carried by horseback along with any other needs.

Generally a Lineman was not proficient in Morse, his task being to repair the line and satisfy himself that current was flowing in the line and the restoration was successful. The clicks of the armature in the set would provide him with the answer. In fact an operator could work just on the sound of the relay coils. If operating duties were required along the way a Telegraphist, equipped with a larger telegraph set, would accompany the group. e.g. when Charles Todd sent his message from Frew's Ponds at the joining of the overland telegraph line in 1872 (he was an operator, not a Lineman) he used a larger set.

No doubt in many cases the lineman did not follow the line which may have meandered around hills and other obstacles, but rather took a direct route to the site of the fault. For instance, on outset he would know if he was on the east or west side of the line and if he strayed, the compass would show him to proceed say east to west or vice versa, to return to the line.

Sets had small 'circuit closers', but these would only have been useful if the set had to stay connected to the line for a short time whilst it was in operation, when the Lineman was attending to something else.

I

... R McM.