

**A HISTORY OF THE GPO MARK 1,2 AND 3
MORSE TELEGRAPH KEYS**

By

**DENNIS J. GOACHER
G3LLZ**

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markings are a varying number of filed grooves or centre punch dots on parts in a place where they would not normally be seen in use.

Early batch runs of the keys made for the GPO were numbered but the requirement to do so was stopped in April 1907. From that time keys were marked simply with a broad arrow, a code letter indicating the manufacturer, and the last two figures of the year. Keys made in the GPO Factory were stamped with the letter F. When a key was repaired in the factory the year was stamped close to the original mark. Those made to these patterns for other users i.e. the army and railway companies were not necessarily given numbers but equally could have company numbers, which do not relate to their age.

The keys were manufactured by many makers, including the GPO factories at Silvertown and Holloway in London, ATM at Liverpool, The Royal Ordnance Factory (ROF), and H. White and Co. Keys which were made for the army would have the familiar broad arrow stamped on them somewhere, and when decommissioned another broad arrow, point to point with the original would be stamped to show that the key was no longer army property. Keys may still be found with these markings, although it appears that there are more with the single arrow than the double arrow.

Typical of the times, the keys were made to a very high standard using the best materials. Brass was used for nearly all the metal parts, with small amounts of steel for the contact and coil springs and the pivot. Platinum was used for the contacts. The wooden plinths were specified as being made from well seasoned Spanish mahogany, French polished on both sides. The knobs were originally turned from horn but later production runs used wood. A hard leather pad was used to cushion the arm when depressed by the operator giving the key a slightly soft feel.

The conventional single current key

The mechanical function of the key differs in its operation from the conventional key in a fundamental way. The conventional single current key is constructed so as to have a contact at the front of the arm which makes with a contact fixed to the base when the knob on the arm is depressed by the operator, so completing the sending circuit. These are usually referred to as the front contacts. There are sometimes a similar pair of contacts at the rear of the arm, which close when the key is at rest. These are called the back or rear contacts and may be used to complete another circuit, or they may be absent. The spacing between the contacts and consequently the arm travel, is made adjustable by means of a screw tapped into the arm, locked in place by a lock nut. The GPO mark 1, 2 and 3 keys have these electrical contacts located at the rear of the arm and the moment at which they operate is determined by screws fitted to the arm. By these means the contact make and break sequence can be set so as to be independent of arm travel within certain limits.

The pressure needed to depress the lever is made adjustable by means of a tension spring anchored to the base and the other end being attached to the end of a pull rod running in a hole drilled in the lever. The height of the pull rod and thus the spring tension is adjusted by a screw with a special flanged head set in a threaded hole in the arm, the flange engaging with a slot in the pull rod.

IDENTIFICATION CODES AND COLOURS ALLOTTED TO MANUFACTURERS.

I.—Code Letters.

<i>Letter.</i>	<i>Firm.</i>	<i>Letter.</i>	<i>Firm.</i>
A	Edison Swan Electric Co., Ltd.	BD	Henleys, W. T., Telegraph Works, Ltd.
B	Brittan, T., Ltd.	BE	Callenders Cable & Construction Co., Ltd.
C	General Electric Co., Telephone Works, Ltd. (late Peol-Connor Co.).	BF	Spencer, E., & Co.
D	India-Rubber and Gutta-Percha Telegraph Works, Ltd.	BG	Johnson & Phillips, Ltd.
E	Ericsson Telephones, Ltd.	BH	Newton Chambers & Co.
F	General Electric Co.	BJ	Harcourts, Ltd., Birmingham.
H	Automatic Electric Co.	BK	Magneta Time Co., Ltd. (late Silent Electric Clock Co.).
I	International Electric Co.	BL	Bocchi, A.
K	Kelvin, Bottomley & Baird, Ltd.	BM	Wallis, H.
L	Elliott Bros.	BN	Karabon Co. (see E. J.).
M	Maxwell, W., & Co., Ltd.	BO	Standard Woodwork Co.
N	Nalder Bros.	BQ	Stockall Marples & Co.
O	Gent & Co.	BR	Milner's Safe Co.
P	Paul, R. W.	BS	Everett, Edgecumbe & Co.
R	Reid Bros.	BT	Prescott Clock & Mechanical Co.
S	Siemens Bros. & Co.	BU	Glover, C. H., & Co.
T	Tyer & Co.	BV	Brown & Co.
U	Walters & Co., Ltd.	BW	Cossor, Ltd.
V	Watson, T.	BX	Williamson Clock Co., Ltd.
W	The Standard Telephones & Cables, Ltd.	BY	Welch, G., & Sons.
X	Wilcox.		
Y	Wilson, W.	BBL	Brittania Batteries, Ltd.
Z	Negretti & Zambra.	BCC	The Bristol Concrete Co., Ltd.
AA	Pinching & Walton.	BEL	The British Electric Lamps, Ltd.
AB	Brown, A. C.	BET	The British Electric Transformer Co., Ltd.
AC	Nalder Bros. & Thompson.	BJB	Bayliss, Jones & Bayliss, Ltd.
AD	Spagnoletti (see CN).	BUL	Bullers, Ltd.
AE	Medical Supply Association.	BTR	Blick Time Recorders, Ltd.
AF	Armstrong Bros.		
AG	Bolt, H. W.	BNSF	British N.S.F. Co., Ltd.
AH	Tucker, J. H., & Co.		
AJ	Consolidated Supply Co.	CA	Blunden.
AK	Sterling Tele. & Elec. Co.	CB	Chubb & Son's Lock & Safe Co., Ltd.
AL	Robinson, W., & Co.	CC	The Carron Company.
AM	Wrench Mfg. Co.	CD	Malcolm & Co.
AN	Moy, E. F., Ltd.	CE	Boulton & Paul, Ltd.
AO	Beck & Co.	CF	Sullivan, H. W.
AP	King & Scarborough.	CG	Grimshaw, Baxter & Elliott.
AQ	Gambrell Bros.	CH	Alfred Graham & Co.
AR	Houghton, Ltd.	CJ	Ingram Bros.
AS	Noakes & Sons.	CK	White, H., & Co., Ltd. (Watchmakers), Cheapside, E.C.
AT	McMillan & Co.	CL	Prison Commissioners of Scotland.
AU	Russel, J., & Co.	CM	Mitchell.
AV	Tylers, Ltd.	CN	Park Royal Engineering Co., Ltd. (successors to Spagnoletti). See AD.
AW	Dennis, W. F., & Co.	CO	Bonnella, D. H., & Son, Ltd.
AX	White, H., & Co.	CP	Weston Electrical Instrument Co., Ltd.
AY	Lambert, R.	CR	Crystalate Co.
AZ	Irving, R., & J.	CS	Gurnett, E. F.
AES	Arthur East & Son.	CT	Record Elec. Co.
BB	Brush Electrical Eng. Co.	CU	Beasley, G. L.
BC	Herve, L., Ltd.	CV	Brooker, T. H., & Co., Ltd.
		CW	Comyn Ching & Co., Ltd.

POST OFFICE ENGINEERING DEPARTMENT.
TECHNICAL INSTRUCTIONS.
CIRCULATION E.

Letter.	Firm.
CX	Brook, E., Ltd.
CY	Marconi Wireless Telegraph Co., Ltd.
CZ	Buchanan, A. P.
CLS	Concrete, Ltd.
CLV	Colvern, Ltd.
CPL	Crompton Parkinson, Ltd.
CWT	The Caxton Wood Turnery Co.
DA	Cowill, W., & Sons.
DB	Gell, J.
DC	The Synchronome Co.
DD	Duncan, Tucker, Wm., & Sons, Ltd.
DE	Muirhead & Co.
DF	British Telegraph Instrument Co.
DG	Blake, T. O.
DH	Willing & Co.
DJ	The Telegraph Construction & Maintenance Co., Ltd.
DK	Buck & Hickman.
DL	Drury Bros.
DM	Vaughtons, Ltd.
DN	Dawes, H. J.
DO	Grant, Cameron & Curle.
DP	Cheshire, Pooley & Co.
DQ	Gamage, A. W., Ltd.
DR	Berry Skinner.
DS	Jones, S. G.
DT	Gerrard, J., & Sons.
DU	Cutlans.
DV	Creed & Co.
DW	Repetition Woodwork Co.
DY	Staples & Co.
DZ	Relay Automatic Telephone Co., Ltd.
DMR	Dynamo & Motor Repairs, Ltd.
DNT	Dent, E., & Co.
EA	Berry, N., & Sons.
EB	Francis & Son.
EC	Lange, C.
ED	The Waltham Cross Joinery Co., Ltd.
EE	Isenthal & Co.
EF	Albion Iron & Wire Work Co., Ltd.
EG	Norris, S. E., & Co.
EH	Cambridge Instrument Co., Ltd.
EJ	Apperley, C. A. (Karabon).
EK	Clacton Joinery & Engineering Co.
EL	Davis & Timmins.
EM	The BKB Electric Motors, Ltd.
EN	The British Time Recorder Co., Ltd.
EP	Potter & Co.
EQ	Anode, Ltd.
ER	Bonnella Bros.
ES	Sanders, Wm., & Co.
ET	Baxendale & Co., Ltd.
EU	Burnham & Co.
EV	Evans, G. W., & Co.
EW	Baxter & Caunter.
EX	Carter, C. A., & Co.

TESTS AND INSPECTIONS.
ACCEPTANCE TESTS.
A.0020.

Letter.	Firm.
EY	Buckloys (London), Ltd.
EZ	Zonith Manfg. Co., Ltd.
EBL	Edison Bell, Ltd.
EFW	Elliott, F. W., Ltd.
ELE	Engineering & Light Equipment Co., Ltd.
KRM	Epoch Radio Manfg. Co., Ltd.
ESC	Enfield Stone Co., Ltd.
FB	Birmingham Factory (Post Office).
FC	Bruce, Alex., & Co.
FD	Messrs. Hailwood & Ackroyd, Ltd.
FE	Dubilier Condenser Co. (1921), Ltd.
FF	Eclat Electric Lamp Manufactory.
FG	Burt, Boulton & Haywood, Ltd.
FH	Holloway Factory (Post Office).
FJ	The D.P. Battery Co., Ltd.
FK	The Alton Battery Co., Ltd.
FL	The Accumulators of Woking.
FM	Foster's Machine Tool & Engine Co.
FR	Ferranti, Ltd.
FS	The Foster Engineering Co., Ltd.
FT	Messrs. F. Tray & Co., Ltd.
FAC	Fuller Accumulator Co. (1926), Ltd.
FBR	Birmingham Factory (for repaired apparatus, specific cases only).
FHR	Holloway Factory (for repaired apparatus, specific cases only).
FJM	Moore, F. J., Ltd.
GB	Gibb, Jas., & Co., Ltd.
GC	East & Son, Ltd.
GE	Bruce, G.
GF	Girlings Ferro Concrete Co., Ltd.
GJ	Gillett & Johnston.
GM	Mugford, G.
GS	Gillson Syndicate.
GZ	Doulton & Co., Ltd.
GNT	The Great Northern Telegraph Co., Ltd., of Denmark.
HA	Hall Telephone Accessories, Ltd.
HB	Houghton Butcher Manfg. Co.
HC	British Insulated Cables, Ltd.
HD	Haward, C. A. & A. W.
HE	Sloog, H. (maker of Hennite).
HF	Eames Bros.
HG	Hart Accumulator Co., Ltd.
HH	Hough, J. E., Ltd.
HJ	Hodges, C., & Co., Ltd. (Business purchased by Gottlieb, J. L., & Co., Ltd.).
HK	Hillcrete, Ltd.
HL	Holland & Sons, Ltd.
HM	Chamberlain & Hookham, Ltd.
HN	Hannan, J.
HR	Brown, Henry, & Sons.
HS	Howells & Co.
HT	Hart, A. W.
HY	Harvey, G. A., & Co., Ltd.

POST OFFICE ENGINEERING DEPARTMENT.
TECHNICAL INSTRUCTIONS.
CIRCULATION E.

TESTS AND INSPECTIONS
ACCEPTANCE TESTS.
A.0020.

<i>Letter.</i>	<i>Firm.</i>
HEA	Ashdown, H. E. (Birmingham), Ltd.
IA	British Die Casting & Engineering Co., Ltd.
IB	Bartlett, G. H.
IM	Imperial Typewriter Co., Ltd.
IT	International Time Recorder Co.
JA	Crabtree, J. A., & Co., Ltd.
JB	Johnson, B. W.
JC	Chesterman, J., & Co., Ltd.
JK	Messrs. Brooker & Jackson, Ltd.
JM	McKenzie, J., & Co.
JN	Norman, John, Ltd.
JR	Reynolds, Joseph.
JS	Bates, J. & E.
JX	Sax, Julius, & Co., Ltd.
JGS	Switchgear Co.
KA	Calders, Ltd.
KB	Beswick, K. E.
KC	Combs, E. A.
KD	Cadman, J., & Co., Ltd.
KE	Chloride Electrical Storage Co., Ltd.
KJ	Crombie, J., & Son.
KL	The Crypto Electrical Co., Ltd.
KM	The Camelina Co.
KQ	Craig Lelo Quarry Co., Ltd.
KR	Cryselco, Ltd.
KS	Carver & Son.
KT	The Croft Granite, Brick & Concrete Co., Ltd.
KU	The Concrete Unit Co., Ltd.
KZ	Keizer, L., & Co., Ltd.
KCP	Kent Concrete Products.
LE	Litholite Insulators, Ltd.
LF	Lion Foundry Co., Ltd.
LK	Lock, W. & T.
LN	Lissen, Ltd.
LP	Lindsay, Parkinson & Co., Ltd.
LR	Thomas De La Rue.
LS	Lang & Squire, Ltd.
MA	Males & Andrews.
MD	B. D. & Co. (Edward A. Boynton).
ME	Male, F. W., & Son, Ltd.
MF	MacFarlane, Walter, & Co.
MH	Matthews, A. G.
MK	Marconi Scientific Instrument Co.
ML	Middleton, C. A., Ltd.
MM	The Condenser & Electric Co.
MN	Metropolitan Vickers Electrical Co., Ltd.
MP	Moulded Products, Ltd.
MS	Mead, Ltd.
MT	Moore & Wright, Ltd.
MU	Murray (c/o Reid Bros.). See R.
MV	Mullard Radio Valve Co., Ltd.
MW	Micklewright, Ltd.
NCA	McAinch, P., Ltd.
MTC	Millars' Timber & Trading Co., Ltd.

<i>Letter.</i>	<i>Firm.</i>
NB	Newton Bros. (Derby), Ltd.
NE	North of England School Furnishing Co.
NJ	British Nigerian Timber Co.
NS	Neil, Small & Sons.
NW	Norwest Construction Co., Ltd.
NTS	The Norton Boys' Home.
OD	Davies, D. M.
OM	Oldham & Son.
PA	Parkes, Samuel, & Co., Ltd.
PC	H.M. Prison Commission.
PE	The Power Equipment Co., Ltd.
PG	The Pitter Gauge & Precision Tool Co.
PH	Pye, W. G., & Co.
PK	Peacock, Chas., & Co., Ltd.
PL	The Plessey Co., Ltd.
PN	Radio Phonopore and Electricals, Ltd.
PR	The Premier Accumulator Co. (1921), Ltd.
PS	The Parkside Engineering Co., Ltd.
PW	Palmer & Waumsley.
PX	Phoenix Telephone & Electric Works, Ltd.
PZ	Pritchett & Gold and E.P.S. Co., Ltd.
RA	Radio Instruments, Ltd.
RC	Ross, Courtney & Co.
RD	Richmond, W. M., & Co.
RE	Reliable Engineering Co.
RF	Royal Gun & Carriage Factories.
RH	Ruston & Hornsby, Ltd.
RR	Robertson, R.
RS	Radio Supplies.
RT	Robert Edwards.
RV	Revo Electric Co., Ltd.
SA	The Saunders Electrical Co.
SB	Brown, S. G., Ltd.
SC	Smith, L. C., & Corona Typewriters, Ltd.
SD	Davall, S., & Sons.
SE	Small Electric Motors, Ltd.
SF	Scofield & Flexton.
SG	Salter, G., & Co., Ltd.
SL	Leach, S. G., & Co., Ltd.
SM	Stuart & Moore (taken over by G. Longfield Beasley).
SN	Solidite and Synthetic Mouldings, Ltd.
SP	Small Power Dynamo & Motor Co., Ltd.
SR	Estler Bros.
SS	Ebonestos Insulators, Ltd.
ST	Stuart Turner, Ltd.
SU	The Educational Supply Association, Ltd.
SV	Somerville, D. G., & Co., Ltd.
SY	Slingsby, H. C.
SAV	Bryan Savage, W.
SCP	Surrey Concrete Products, Ltd.
SFC	Standard Fuse Co.
SSL	Siemens-Shuckert (Gt. Britain), Ltd.
SSS	Smith, S., & Sons (Motor Accessories), Ltd.

<i>Letter.</i>	<i>Firm.</i>
TA	Thermega, Ltd.
TB	Turner Bros., Ltd.
TD	Townsend, H. J.
TE	The Telephone Manfg. Co., Ltd.
TF	The Timber Fireproofing Co., Ltd.
TG	Tungstone Accumulator Co., Ltd.
TH	The British Thomson-Houston Co.
TK	The Bradford Patent Truck & Trolley Co.
TL	Eastern Telegraph Co., Ltd.
TM	Telephone & Microphone Co.
TN	Thomson, J. W.
TP	Thornton Pickard Manfg. Co.
TR	Turner, Ernest, Electrical Instruments, Ltd.
TS	The Thames Manfg. Co., Ltd.
TT	Taylor, Tunncliffe & Co., Ltd.
TU	The Tudor Accumulator Co., Ltd.
TW	Tate & Wilkinson.
TY	Tinsley, H., & Co.
TCC	Telegraph Condenser Co.
TCL	Trent Concrete, Ltd.
UG	United Woodworking Co., Ltd.
UV	Underwood Portable Typewriters, Ltd.

<i>Letter.</i>	<i>Firm.</i>
VA	The Varley Magnet Co.
VD	The Ever Ready Co. (Gt. Britain), Ltd.
VG	Evershed & Vignoles.
VK	Vickers, Ltd.
VN	Vancsta, Ltd.
VS	Evans Bros., Ltd.
VV	Vandervell, C. A., & Co., Ltd.
VW	Visible Writing Machine Co., Ltd.
WB	Westinghouse Brake & Saxby Signal Co., Ltd.
WC	Walsall Conduits, Ltd.
WF	Foster, W. H., & Sons.
WG	Ward & Goldstone, Ltd.
WH	White, Wm., & Co.
WJ	Jones, Walter, & Co., Ltd.
WK	Weekes, L., Ltd.
WL	Willetts, David, Ltd.
WS	Woods, M. W.
WW	The Wilson Wolf Engineering Co., Ltd.
WEE	Eaton, W. E.
ZE	Zenith Watch Co. (Gt. Britain).

II. THREADS FOR CORDAGE, WIRE, CABLES, ETC.

Colours allotted to Manufacturers.

<i>Firm.</i>	<i>Colour.</i>	<i>Firm.</i>	<i>Colour.</i>
Automatic Electric Co., Ltd.	Yellow.	L.P.S. Electrical Co., Ltd.	Blue, Green, White.
British Insulated Cables, Ltd.	Green, Brown, Black.	Macintosh Cable Co., Ltd.	Red, Yellow.
Erewash Electric Wire Co.	Green, Brown, White.	Phoenix Electrical Co., Ltd.	Mauve.
Ericsson's Telephones, Ltd.	Slate.	Reliance Electrical Wire Co., Ltd.	Green, Red, Yellow.
General Electric Co., Ltd. (incorporating Peel-Conner Co.)	Brown, Yellow.	Siemens Bros. & Co., Ltd.	Blue, White.
International Electric Co., Ltd.	Blue, Slate.	Standard Telephones & Cables, Ltd.	Orange.
London Electric Wire Co. & Smiths, Ltd.	Red, Black.	Ward & Goldstone	Blue, Green.
		Yorkshire Cable Co.	Blue, Brown.

III. MOULDED PRODUCTS.

Code Letters allotted to Manufacturers.

<i>Letter.</i>	<i>Firm.</i>	<i>Letter.</i>	<i>Firm.</i>
B Ltd.	Birkby's, Ltd.	C	General Electric Co. (Telephone Works).
LR	De La Rue (Thomas), Ltd.	G	General Electric Co., Ltd.
MPL	Moulded Products, Ltd.		

Where the above manufacturers supply moulded products—which are parts of instruments—to other firms, the combined code letters for the manufacturers of the moulds, together with the Contractor for the instruments, are shown as per the following typical example:—

<i>Letters.</i>	<i>Firms.</i>
S	Siemens Bros. (for instrument).
MPL	Moulded Products, Ltd. (for moulded product).

References : None.

END.