

THE SAFEGUARD

KUAXON

TYPES
SPARE PARTS
ADJUSTMENT
MAINTENANCE

KLAXON LTP. 36 BLANDFORD ST W.I.

CONTENTS

				Page
Notes on Traffic Congesti	ion			1
What is a Klaxon?		***		2
Where are Klaxons Made	?			3
Price List				4
Installation and Wiring				5
General Maintenance Hint				6
Commutator				7
Adjusting Klaxon A1				8
" Klaxonet H, Kla				9
., Kifo	***	***		10
" Klaxonet Comb	ination a	and Kla	axon	
Combination	1			11
Klaxonet				12
Spare Parts, Klaxon Al				13
Klaxonet				14
Klaxet, Klaxor				
bination an				15
., ,, Klaxon H	***	***	***	16

KLAXON LIMITED,

HEAD OFFICE (Service and Sales Dept.):

36, Blandford Street, Baker Street, London, W.1.

Landor Street, Birmingham.

THE GROWING TRAFFIC CONGESTION

TN 1924 there were one million cars in use in this country. This number will be considerably exceeded during the next few years. With the traffic congestion grows the need for a powerful signal. Street noises are louder. A weak signal cannot make itself heard above them; nor can it penetrate into the interior driven cars which are now in general use. The need is growing for a dependable signal—a signal which will respond instantly in an emergency and which will warn unfailinglyevery time. The motorist has come to realize this. He knows that the signal he can trust saves worry. He knows it saves time by getting the right of way on crowded streets and narrow roads, and that it saves the car mechanism because its timely warning cuts down the use of emergency brakes. He knows, too, that a good signal saves life and limb and indemnities of thousands of pounds which accident insurance cannot fully cover. Yet sometimes he drives for years with a dangerous unreliable horn on his car-simply because no one has advised him to replace it. All car owners need dependable signals. A simple reminder from an interested party is usually sufficient.

Klaxons are universally known. There are in use to-day more than four million Klaxon machines. The Klaxon note is arresting because its distinctive tone demands attention. It is commanding because it tells the hearer to do something, and it is impelling because it impels immediate action.

Klaxon Ltd. take a pride in the perfection of every detail connected with the manufacture of Klaxons. The utmost care is exercised so that no instrument shall leave the factory which is not as perfect as mechanical and human workmanship can possibly make it. The Klaxon is designed to give continual service over considerable periods without practically any attention whatsoever. Further, each Klaxon is guaranteed by Klaxon Ltd. against defects in material, or workmanship, for a period of twelve months:

FIT KLAXON

WHAT IS A "KLAXON"?

ALMOST any motorist will say at once: "A 'Klaxon' is an electric horn which sounds when you press the button." Early in the history of motoring, this would have been correct, but not so to-day. There are many electric horns, but only one "Klaxon," which is illustrated below.

The Original
Klaxon A1-L
after 15 years
is still the
pre-eminent
Warning Signal

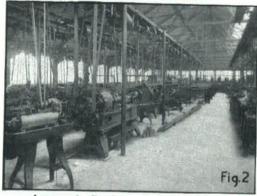


Arresting
Commanding
Impelling

The "Klaxon" is the warning signal which made fast driving on public roads possible and safe. In reply to the question, "What is a Klaxon'?" we may say that it is a noise machine, operated by an electric motor, which produces a note the principal harmonic of which is low and loud. Superimposed on this is a harmonic of very high pitch, which, like all sounds of high pitch, is very arresting. The combination of these is the "Klaxon" note—arresting, commanding, impelling.

As far as we know to-day, there is only one way of producing this note and that is the "Klaxon" way, and because of our numerous patents, no horn, other than the "Klaxon," can produce an exactly similar note. Taking advantage of the materials and methods modern engineering places at our disposal, used in the largest factory in England which is exclusively devoted to the manufacture of warning signals (see page 3), we are able to maintain the leading position we originally attained by being first in the field. There is no finer steel in the world than that which we use for our diaphragms, and our research department keeps us in touch with all modern developments so that we may always use the best.

Where are KLAXONS made?



Automatic Section of Machine Shops



Assembly Shop



Heavy Press Shop

At our works in Birmingham. The largest in England devoted exclusively to the manufacture of Warning Signals.

Accurate tools and welldesigned jigs co-operate with skilled labour to produce standardised and interchangeable parts which are rigorously inspected after each operation.

The long projector used on our horns is stamped on powerful presses from a single sheet—a unique production—and is an important factor in obtaining Klaxon results.

During the final test of the finished product it is a common occurrence for an instrument to receive 100.000 blasts of three seconds' duration, equal to about three years' ordinary wear. An automatic device makes this reliability test. We are willing to loan this instrument to any car manufacturer who standardises Klaxons and who wishes to compare them with other horns.

KLAXONS for all Requirements

are illustrated below to one-tenth scale (type S)projectors. The lattergive a higher pitched note and are recommended only where space is a consideration.

Prices are for 6, 8 and 12 v. windings



The original Klaxon model de luxe and still the best for high power or fast cars.

BLACK .- L £6 10 0 : S £6 0 0 NICKEL -L £7 0 0 : S £6 8 0





KLAXON-H.

Not so loud as the Al, but a good road clearer.

BLACK .- L £4 0 0 : S £3 10 0 NICKEL - L £4 8 0 : S £3 15 0





KLAXONET.

Model de luxe for medium-power cars. An exquisite instrument which takes only 11 amps. on 12 volts.

BLACK .- L £4 0 0 : S £3 10 0 NICKEL - L £4 5 0 : S £3 15 0





KLAXONET-H.

A cheaper model than the Klaxonet. BLACK .- L £2 5 0 : S £2 0 0 NICKEL.-L £2 12 0 : S £2 5 0



KLAXET.

For small cars and motor-cycle combinations.

BLACK.-L £1 15 0 : S £1 15 NICKEL -L £2 0 0 : S £2 0





KLAXONET COMBINATION. BLACK .- £3 3 0 NICKEL .- £3 10 0

There is no need to fit two horns. We have combined the Klaxet and Kifo in one instrument, operated from one button, which gives a touring or town note at will.



KIFO (BUZZER TYPE HORN).

BLACK .- £1 1 0 NICKEI .- £1 6 0

General Instructions relating to ALL ELECTRIC "KLAXONS"

INSTALLATION

When selecting a position, do not forget that any object in front of the instrument tends to muffle the sound. Always take a position which is as accessible as possible, so that you can oil and adjust when

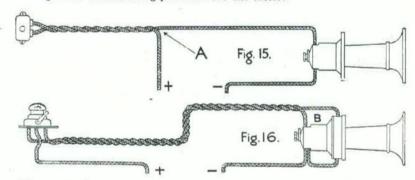
Keep away from the exhaust manifold. Fix rigidly to prevent vibration. We stock a large number of brackets for fitting in various positions, details of which may be had on application. Fit on the running board wherever possible.

WIRING

First attach the push-button to some convenient part of the carpreferably the steering wheel or the inside of the fore door.

Do not disconnect the wires from the push. Half the complaints we have are due to improper connections to the push, the making of which requires great care.

The wiring for a single tone instrument is shown in Fig. 15, and for a combination instrument in Fig. 16, a single push-button incorporating a change over switch being provided for the latter.



For a single tone, carry the wires to the point "A," where it is necessary to branch to go to the battery and the instrument. Separate the strands at this point and carry one to one side of the battery and the other to an instrument terminal. The short end of the wire which is cut off should be used to connect the other side of the battery with the remaining instrument terminal. This arrangement makes splicing of the wire unnecessary. For combination instruments, the wire is supplied in three portions. The piece of twin flex from the push is connected to one "Klaxon" terminal and one "Kifo" terminal. The piece of single flex, also from the push, is connected to one battery

terminal. The remaining length of wire is connected from the other side of the battery to the remaining two instrument terminals, two tabs being provided for this purpose.

If the wire supplied is too long, shorten it from the instrument ends "B," and avoid making a join in the wire.

If extra wire is required, do not use a smaller size than that supplied with the instrument, or you will waste too much of your battery voltage



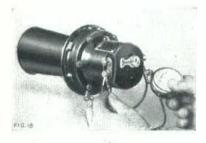
Fig. 17

in overcoming its resistance. Be sure to solder and tape the spliced joint, each wire being taped separately. Do not pull the wire tight; it should be slack everywhere.

If more convenient, the wires can be fixed to the positive and negative terminals of the lighting outfit switchboard, instead of taking them to the battery.

Separate pushes can be supplied with combination instruments, if desired.

GENERAL MAINTENANCE





(You should read this if your instrument fails to operate properly.)

If the note falls off, it may be due to trouble with battery, wires, or push-button, or the instrument may require readjusting.

To test for the former trouble (Figs. 17 and 18), a voltmeter should be applied to the terminals of the instrument, at the same time pressing the push-button. In the case of combination instruments, apply the voltmeter to each pair of terminals in succession, the change-over switch being in the corresponding positions.

If the trouble does not lie in this direction, see that the six screws securing the projector are tight. This is very important (Fig. 19).

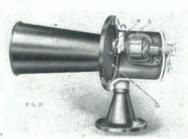
In the case of the combination instruments, it is necessary also to see that the six screws securing the motor to the buzzer are tight (Fig. 20).



As far as is possible, we have eliminated the necessity of oiling our instruments, but this is necessary on some types. Where oil is required, this will be specifically stated in the details relating to the particular instrument. See pages 8,9 and 11 and on the instrument label.

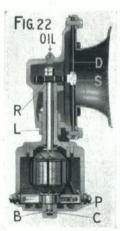
after applying the previous tests, then the instrument must be readjusted. The method of doing this for each type is detailed on pages 8, 9, 10, 11 and 12, but the following is a general guide:

Figs. 21 and 22 show sections of a "Klaxet" and a "Klaxon A1"



respectively. In each case it will be seen that a hard steel rotor "R" is in engagement with a stud "S" in the centre of a diaphragm "D." The note emitted by the instrument depends on the pressure between the rotor and the stud. The object of adjustment is to get just the correct pressure.

COMMUTATOR



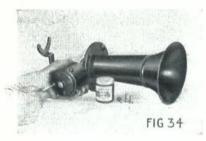
Since 1920 we have effected great improvements in material for commutators and brushes, the result being that the commutators of instruments made from that date require NO OIL. After about two seasons' use, the commutator may require cleaning with fine glass paper. We recommend that this should be done by a competent repairer, or the instrument returned to us to clean and adjust, for which we make only a nominal charge.

If you are not satisfied with your "Klaxon" after carrying out the instructions given in this book, return it carriage paid to our service dept., 36, Blandford Street, Baker Street, W. 1.

We welcome correspondence on the performance of our products, and keep a service department to deal with your wants.

Type A1-L KLAXON Type A1-S







(See also pages 5, 6, and 7 on General Maintenance.)

LUBRICATION.

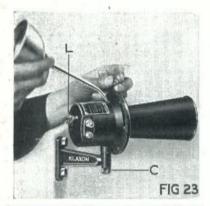
A section of the Klaxon may be seen in Fig. 22. It is operated by a motor rotating at 2,000 r.p.m. which occasionally requires lubrication. Fig. 33 shews the upper bearing being lubricated. This should be done once a month. using a thin oil. The bottom bearing is a hardened steel cup "C" Fig. 22, which is half filled with vaseline. About once in three months the bottom plate "P" should be removed, see Fig. 34, and this cup refilled, but don't lose the ball "B" Fig. 22 when replacing, and be sure that the screws are securely tightened.

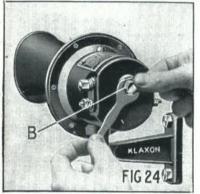
ADJUSTMENT.

This may appear necessary when the only thing required is either lubricating or tightening the six projector screws, see Fig. 19. After both have been done press the button and see if the note is correct. If unsatisfactory proceed as below:—

First loosen the lock nut (see Fig. 35). Then start the current by pressing the push button (in other words, sound the Klaxon), meanwhile twist the motor (see Fig. 35), until no sound is heard except the buzzing of the motor. Then twist on in either direction till the note is loud and clear. Afterwards tighten the locknut securely.

KLAXONET-H: KLAXET: KLAXON-H







The Klaxet and Klaxonet-H have a bearing which requires one or two drops of thin oil monthly. See Fig. 23. The Klaxon-H has a ball bearing which requires no oil. Always tighten the six projector screws (see Fig. 19) before adjusting.

ADJUSTMENT

(1) Slacken the clamping bolt "C" (Fig. 23), and swing the instrument into an easily accessible position.

(2) Loosen the locknut "L," referring to Fig. 23 or 25, depending on which type is fitted to your instrument.

(3) Rotate the bush "B" (Fig. 24) backwards (off) about half a turn, either by means of a coin or broad screwdriver (in the case of Fig. 24), or by means of the handle "H" in the case of Fig. 25.

(4) Press the push-button, at the same time holding the bush "B" from rotating. You should hear the noise of the armature buzzing round.

(5) Now rotate "B" forward (on) until the rotor just touches the diaphragm; you can tell this by the note emitted. Then give an \$\frac{1}{2}\$th turn, more or less, until the correct note is heard. Before feeling satisfied, release the push-button once or twice, when the clear resonant "Klaxon" note is easily detected. Do not screw the bush too far forward, or the instrument will tend to stick.

(6) Tighten the locknut "L" very securely, and reclamp the bolt "C."

(See also pages 5, 6, and 7 on General Maintenance.)

Instructions for Adjusting

KIFO

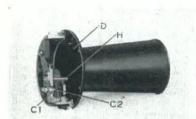
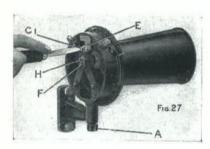


Fig. 26



A section of the "Kifo" is shown in Fig. 26; the objects of adjustment are two-fold. In the first place, the correct relative positions of the contacts "C₁" and "C₂" must be obtained; secondly, the hammer "H" must be correctly placed with respect to the diaphragm "D."

Always tighten the six projector screws (Fig. 19) before adjusting.

ADJUSTMENT

(1) Slacken the clamping bolt "A," and swing the instrument

into an easily accessible position; remove the cover by taking out the cover screws.

- (2) Slacken the locking screw "E" (Fig. 27), and remove the contact screw "C!." Clean the contact point by rubbing it lightly on fine emery or glass paper. If this is not available, the contact may be scraped with a penknife. Clean the contact "C2" similarly.
- (3) Replace the contact screw and turn it up till it just makes contact with "C2." You will know when this is by the buzzer beginning to operate on pressing the push-button. Then give it an extra \$\frac{1}{2}\$ th turn, and lock securely by tightening screw "E." This should result in the movement vibrating freely when the button is pressed. Next, slacken the locking screw "F" (Fig. 27), and adjust the hammer screw "H" until it lightly taps the diaphragm. Give an extra \$\frac{1}{2}\$ turn, and lock securely, when a suitable note is obtained.

Do not tune up from the contact screw "C1." The function of this is to make and break the electric current. Tuning is done by means of the hammer screw "H."

(See also pages 5, 6, and 7 on General Maintenance.)

KLAXONET COMBINATION

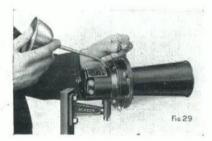
AND

COMBINATION

Fig. 28 shows a section of the "Klaxonet Combination." This instrument consists of a "Klaxet" motor and a "Kifo" buzzer.

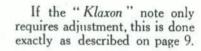


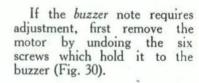
Klaxonet Combination." This motor and a "Kifo" buzzer. The "Klaxon Combination" is similarly designed, but on a larger scale. As in the case of the "Klaxet," the front bearing of the motor in the "Klaxonet Combination" requires one or two drops of oil monthly (see Fig. 29). The "Klaxon Combination" has two ball bearings, and requires no lubrication.



Always tighten the six projector screws (Fig. 19) and the six motor screws (Fig. 20) before adjusting.

ADJUSTMENT





Then proceed to adjust the buzzer as described on page 10.

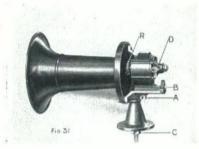
When satisfied with the note replace the motor, tightening the screws very securely and proceed to adjust the Klaxon note as described on page 9.

Fig. 30

(See also pages 5, 6, and 7 on General Maintenance.)

Instructions for Adjusting

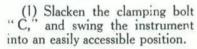
KLAXONET

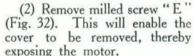


The "Klaxonet" motor is fitted with ball bearings, which require no lubrication.

Always tighten the six projector screws (Fig. 19) before adjusting.







(3) Examine the commutator "D" (Fig. 31). If dirty, take a narrow strip of glass paper and press it against the commutator whilst the motor is running. Do not finger the commutator or allow it to become greasy.

(4) Slacken the locking screw "A."

Fig.32

(5) Give the screw "B" a turn in a clockwise direction. The motor should now run freely on pressing the push-button.

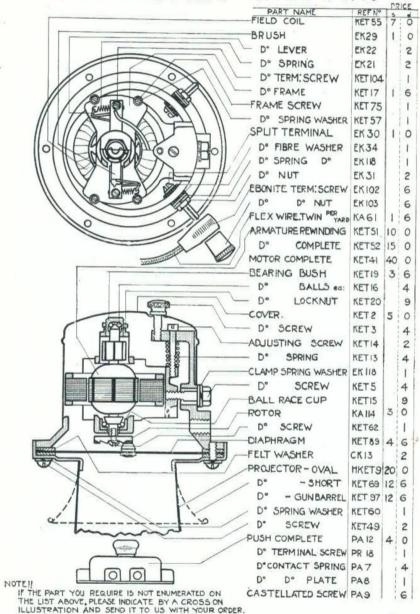
(6) Now turn the screw "B" in an anti-clockwise direction, until the rotor just touches the diaphragm; this point will be known by the note emitted. Give "B" a further \$\frac{1}{8}\$th turn, more or less, in the same direction, until the correct note is obtained; by releasing the push-button once or twice during this operation, the clear, resonant "Klaxon" note can easily be detected.

(7) Lock by means of the screw "A," replace the cover and the milled screw "E," and clamp the instrument back in the correct position by means of the bolt "C."

With a matchstick occasionally apply grease to the rotor "R."

(See also pages 5, 6, and 7 on General Maintenance.)

KLAXONET SPARE PARTS



SPARE PART LIST KLAXET KLAXONET TYPEH ICOMBINATION REF Nº PRICE REF Nº BRUSH HOLDER NUT ECG 2 ECG 2 EC6 D° SPRING WASHER EC63 I EC63 1 8063 2 EC43 2 EC 43 D' LOCKNUT EC5 I EC 5 I ECS D° FIBRE WASHER D" TUBE EC4 3 EC 4 3 F.C.4 3 1 DECIB BRUSH & SPRING EC 18 O ECIB 10 3 EC62 -ADJUSTING ARM EC 62 3 EC62 Do NUT EC3 4 EC3 4 EC3 BEARING THRUST PLUGEC46 9 EC46 9 EC46 BUSH EC2 OEC 2 O EC2 MET 16 D* BALLS ea. NETIG NET 16 TERMINAL SCREW EC56 2 EC 56 2 EC 56 NUT KA16 2 KA16 2 KA16 2 KA 16 D" SPRING WASHER ECGO 1 ECGO 1 ECGO 1 1 0060 D" FIBRE D" EC64 1 EC64 1 EC64 I MAIS EC24 7:0 HM2+3 7 FIELD COIL 0 EC24 7 0 ECII I GECII 6 ECII I BEARING PLATE D" SPRING WASHER EC41 I EC4I I ECAL D" SCREW EC79 1 EC 79 1 EC 79 -ARMATURE REWINDING EC22 8 0 EC22 8 0 CRETE4 8 0 D' & BRG COMPLETE EC45 15 0 EC45 15 0 CHETEGIS O KAH4 2 0 KAH4 2 0 KAH4 2 0 I KAZI D" SCREW 11 KA31 DIAPHRAGM EC33 4 0 KET 89 4 0 KET 89 4 0 G 29 1 6 2 CK 13 2 CK 13 2 CK 13 FELT WASHER FC 15 EC40 6 0 KET69 7 6 KET69 7 6 PRO JECTOR-SHORT D" - GUNBARREL EC32 6 0 KCT97 10:0 KCT 97 10 0 KCT 97 6 0 D" - OVAL HIZT 9 12 6 HKZT 9 12 6 D* SPRING WASHER KAIIS KAHS I KAUS KAIIS D* SCREWS CK26 CK26 1 CK26 1 CK26 FLEX: WIRE TERMINAL KA62 KA62 1 KAGE 1 KA62 6 KAGI FLEX: WIRE-TWIN. PER VAGO KAGI 6 KAGI I 6 KACI DOOR FIXING 3 4 PRI4 3 4 PRI4 3 4 PRI4 3 4 FOR STEERING WHEEL FIXING PR25 3 4 PR25 3 4 PR 25 3 4 PR 25 3 4 D* FOR MOTOR CYCLE FIXING PR 24 3 4 PR 24 3 4 PR 24 3 4 PR 24 3 4 G26 1 6 G26 1 6 INTERRUPTION SPRING CONTACT SCREW 625 | 6 G25 | 6 -STRIKER G6 3 66 3 G27 2 6 G27 2 6 -OPERATING SPRING D° SCREW KA31 1 KA31 DO SPRING WASHER Ker70 1 KET 70 623 1 6 623 1 6 MAGNET COIL 624 2 6 624 2 6 D° & SHUNT COIL COMBINATION PUSH & TT10 7 0 HOLLOW FIXING PLATE TTII 6 PUSH TERMINAL SCREW PRIS I PRIB COMBINATION PUSH TT12 3 0 - 30 COVER G2 -COVER SCREW CK26 NOTE!!

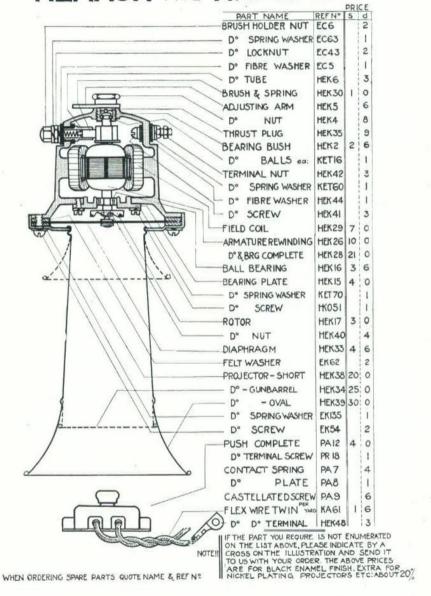
IF THE PART YOU REQUIRE IS NOT

ENUMERATED ON THE LIST ABOVE, PLEASE
INDICATE BY A CROSS ON THE ILLUSTRATION

AND SEND IT TO US WITH YOUR ORDER. THE ABOVE PRICES ARE FOR BLACK ENAMEL FINISH. EXTRA FOR NICKEL PLATING PROJECTORS, ETC., ABOUT 20%. WHEN ORDERING SPARE PARTS QUOTE NAME AND REF.N? BODY SCREWS CKETE!

THE ABOVE PRICES ARE FOR BLACK ENAMEL FINISH. EXTRA FOR NICKEL PLATING PROJECTORS ETC: ABOUT 20% WHEN ORDERING SPARE PARTS QUOTE NAME AND REF. N.

KLAXON TYPE H. SPARE PARTS



Fit Klaxon

for the following reasons:-

- (1) The Law imposes on you the duty of giving adequate warning of your approach to all other users of the road. The Klaxon is the only means whereby this may be accomplished.
- (2) Experience gained by motor drivers during the past fifteen years shews that only the Klaxon gives safety with speed.
- (3) Service rendered by both Klaxon Products and Personnel has established a reputation maintained only by performance and quality.
- (4) Value. There is no better value obtainable at any price.

Warning. Novelists and Newspapers frequently spell Klaxon with a small "K." The public is reminded that KLAXON is our registered trade mark and legally may be applied only to warning signals made by us.