



SOUND REPRODUCTION EQUIPMENT



4032

HAND MICROPHONE

PRINCIPAL FEATURES

- ★ All weather finish with full marine and tropical protection.
- ★ High electrical output and good frequency response.
- ★ Can be used for close talking.
- ★ Windshield enables wind noise to be reduced to a minimum.



Standard Telephones and Cables Limited

DESCRIPTION

The 4032 type hand microphone is a pressure operated moving coil or 'dynamic' microphone, suitably mounted with a handle, for use by commentators or interviewers. Essentially, the unit is a version of the well known Standard Telephones and Cables studio microphones which are precision instruments incorporating the latest magnetic and other materials. The basic design of this microphone has been proved over many years' use in this exacting field.

The microphone housing and unit are designed to keep wind noise to a minimum. However, when wind conditions are at all severe, the use of a 4001A windshield is recommended and this will afford an improvement of up to 15 db in wind noise. Under very severe conditions some bass cut in the following circuits may be necessary.

Special moisture resisting treatment is applied to the microphone and it can thus be considered an all weather instrument. Adequate protection is provided against ingress of moisture when used for close talking.

As is well known, close talking can lead to poor high frequency response caused by standing waves between the microphone and the speaker's mouth and also unpleasant blasting effects on the more explosive consonants. These undesirable effects are adequately suppressed by means of screens fitted in front of the diaphragm.

Distortion is practically nil in all sound fields likely to be encountered in practice. The total harmonic content is of the order of $\frac{1}{2}$ to 1% at sound intensity levels approaching the threshold of pain. The microphone is sufficiently omnidirectional to give uniform efficiency for speech from the front over a wide angle of incidence.

In order to provide maximum convenience in use a pressel switch is fitted in the handle which may be connected in four different ways to provide:

- a. Moving coil direct to line (switch inoperative).
- b. Switch in series with line (opened for muting).
- c. Switch in parallel with line (line shorted for muting).
- d. Moving coil direct to line and switch used to operate remote control circuit.

The switch itself is noiseless and by a minor adjustment can provide the following three conditions:

1. Switch non-locking.
2. Switch with locking or non-locking position as required.
3. Switch permanently locked on.

The adjustments and the various possible connections are shown overleaf.

The materials, finishes and internal construction of the microphone make it suitable for use in tropical and marine atmospheres. The standard external finish is that of the semi-bright black shockproof bakelite moulding with satin-chrome fittings and stainless steel front screen.

Microphone cable should be ordered in yards as required. LCR.1113 screened twin is recommended.

SPECIFICATION

4032G (TYPICAL VALUES)

MEAN SENSITIVITY

Open circuit voltage per dyne/cm ² (micro-bar)	..	..	..	..	..	0.128 mV
Open circuit voltage level per micro-bar ref. 1 volt	..	..	..	..	..	-78 db
Power delivered into 30 ohms for 1 micro-bar ref. 1 mW	..	..	..	..	..	-69 db
American ASA rating ref. 1 mW	..	..	..	..	..	-144 db

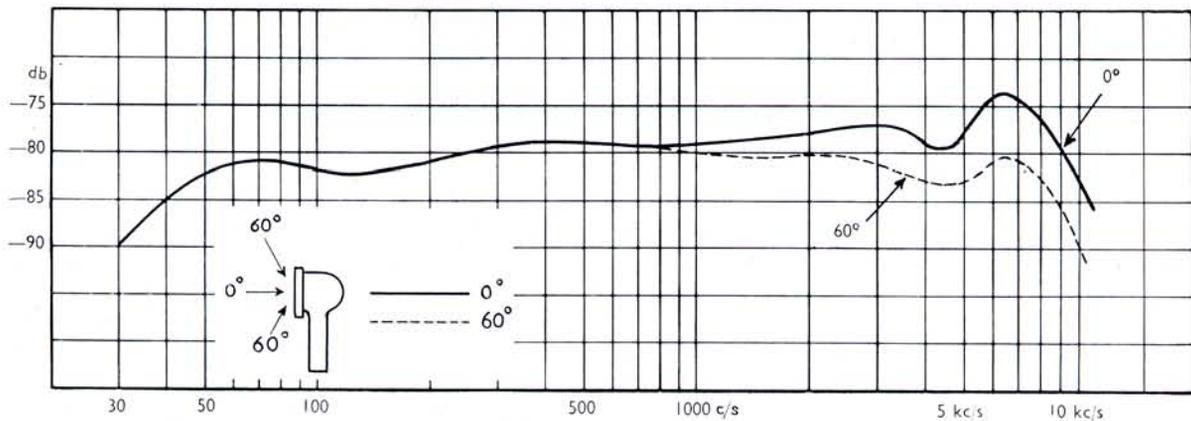
ELECTRICAL RESISTANCE

Resistance	..	..	..	..	..	..	..	..	..	20 ohms
Nominal Impedance	..	..	..	..	..	..	..	..	..	30 ohms

NOTE: The microphone is normally operated into an impedance which is high compared with 30 ohms. It may, however, be terminated by a resistance as low as 50 ohms without appreciably impairing the frequency response, though there will be some loss of sensitivity and a reduction of the signal-to-noise ratio.

FREQUENCY RESPONSE

Typical Free Field response (0 db=1 volt/dyne/cm²—open circuit).



DISTORTION Less than 0.5% for a sound intensity level of 125 db above 0.0002 dynes/cm² (20 micro-Newtons per sq. metre) at 500 c/s.

DIMENSIONS 7in x 2.5in x 2.3in overall (17,8cm x 6,3cm x 5,8cm).

WEIGHT 12 oz (350 grammes).

ACCESSORIES

LCR.1113 Twin Screen Cable
(order in yards as required).

4001A Windshield (optional).

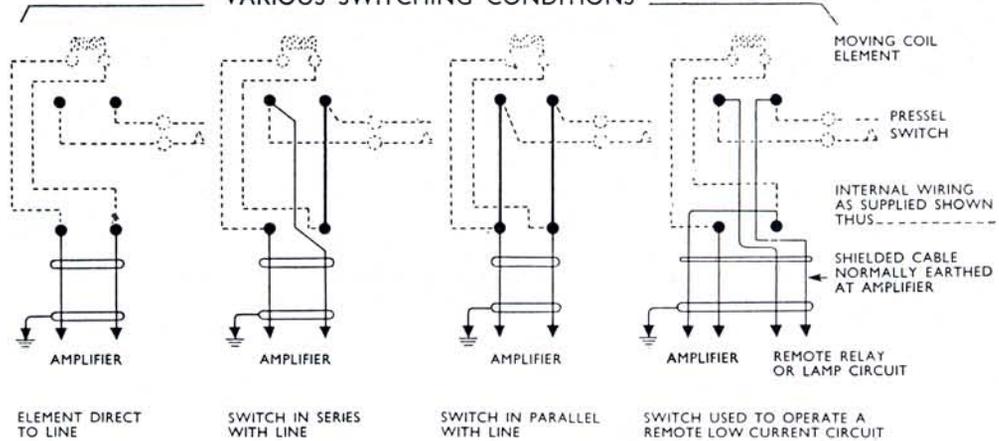
PAS 45/43 Wooden Transit Box
(Optional)

IMPORTANT

COIL RESISTANCE AND BREAKDOWN MEASUREMENTS

Care must be exercised not to pass more than 1 mA d.c. through the coil, and if it should be desired to check breakdown to case, the voltage should not exceed 80 volts applied through a protective resistance which will limit the current to 1 mA.

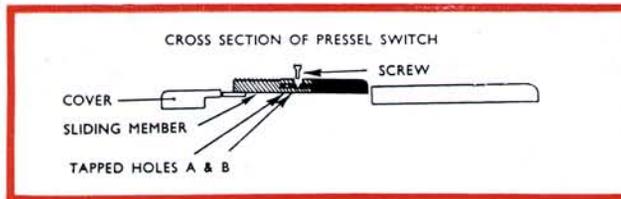
MICROPHONE TERMINAL CONNECTIONS FOR
VARIOUS SWITCHING CONDITIONS



INSTRUCTIONS FOR USING PRESSEL SWITCH

1. **NON-LOCKING.** Screw is inserted in hole B. Press to operate.
2. **LOCKING.** Screw is removed. To lock, press and slide forward. To release, slide back.
3. **PERMANENTLY LOCKED.** Remove screw from B, press and slide forward, inserting screw in hole A.

A simple adjustment to the Pressel Switch enables it to be used either as a non-locking switch, a switch with a locking position or, when not required, it may be locked permanently. This illustration shows the microphone fitted with the A4001 windshield.



© 1960 Standard Telephones and Cables Limited



Standard Telephones and Cables Limited

PUBLIC ADDRESS DEPARTMENT

ESTERBROOKE STREET

LONDON S.W.1

Telephone: VICToria 7741

Telegrams: Relay, London W.C.2

Enquiries concerning Public Address equipment may be made at any of the following Branch Offices of the Private Communication Equipment Division

BRANCH OFFICES

BIRMINGHAM

DEVONSHIRE HOUSE, GREAT CHARLES STREET, BIRMINGHAM 3. Telephone: Central 3042

BRISTOL

51 BROAD STREET, BRISTOL 1. Telephone: Bristol 20613

MANCHESTER

CORONATION HOUSE, 69-71 MARKET STREET, MANCHESTER 1. Telephone: Deansgate 3245

GLASGOW

49 QUEEN STREET, GLASGOW C.1. Telephone: Glasgow Central 6193

LEEDS

NORWICH UNION BUILDINGS, CITY SQUARE, LEEDS 1. Telephone: Leeds 27227

BELFAST

14 ADELAIDE STREET, BELFAST 2. Telephone: Belfast 24900

PRIVATE COMMUNICATION EQUIPMENT DIVISION

FOOTSCRAY · SIDCUP · KENT

Telephone: FOOTscray 3333