



... 'a new
conception of
ribbon and
magnet arrangement' ...

Cadenza

RIBBON MICROPHONE

Cadenza

Designed to provide performance to the level of that hitherto associated with studio class equipment, whilst remaining in the medium price bracket, the Cadenza incorporates a new conception of ribbon and magnet arrangement giving an output which is flat to within close limits over the wide range from 50 c.p.s. to 12,000 c.p.s. This enables the user to record the full gamut of the symphony orchestra, cathedral organ, or the strong rhythmic bass and percussive highlights which add so much to the drive of jazz.

The acoustic design of the shell is responsible for the exceptional freedom from those resonant peaks and troughs commonly associated with the mechanical necessities of ribbon microphone design. In par-

ticular, the "bass hump" or fundamental ribbon resonance which is the common disadvantage of this type of microphone is completely absent. The microphone head is designed for use in *both the high and low impedance condition* dependent on the cable connection to the socket on tripod stand or floor stand adaptor. Low impedance output is 30 ohms and the only practical limit on length of cable is its own D.C. resistance. High impedance output is of the order of 80K ohms which is sufficiently low to ensure that it will not be appreciably shunted by any grid-input impedance. It is high enough to provide a signal of the average sensitivity of single ribbon microphones. For use in the high impedance form 11' of cable is permissible.

Extensive field tests show no trace of intermodulation even in highly resonant buildings—large church organs are reproduced without trace of boominess whilst soloists and unaccompanied choral works yield exquisite icy clarity.

The Cadenza is one of the few microphones which can genuinely make "a piano sound like a piano."



RIBBON MICROPHONE

The standard tripod base is especially designed to provide firm support without the weight usually associated with stand bases.

The whole mechanical assembly is flexibly mounted in a rigid die-cast outer shell. Laboratory tests under controlled conditions in an anechoic chamber have produced curves from a batch not individually adjusted which were of remarkable similarity.

To meet the needs of specialized users, this microphone is also available as a head only. The floor stand adaptor into which the microphone is plugged has interchangeable connectors enabling it to be used on any microphone stand of British or American origin.

Both head and standard pack are provided with a most attractive presentation case which gives full protection to the microphone when not in use.



OVERALL DESIGN RESPONSIBILITY - ERIC TOMSON ACOUSTICS - STANLEY KELLY CONSULTANT DESIGNER - PETER BELL, M.S.I.A.

**BRIEF
TECHNICAL
DESCRIPTION**

4412-7/-

Overall Response 50-12,000 c.p.s.

Source Impedance 0.5 ohms (Ribbon) nominal

Minimum recommended Load Impedance (High Impedance 0.5 meg.) (Low Impedance 100 ohms)

True Pressure gradient response

Ribbon response 30-14,000 c.p.s. within very close limits and controlled by means of acoustic and mechanical compensation

Transformer response 30-15,000 c.p.s. ± 1 dB.

Dual output impedances of 30 ohms and 80k ohms—selected by alteration of cable connection to socket

Built-in Transformer mounted in Mu/metal shield

Microphone assembly fitted with anti-vibration mounting contained in double wind shield

Ribbon 4 times normal area (thus providing enhanced sensitivity) but because of its extreme thinness (about 1 micron) dynamic impedance is appreciably decreased

Sensitivity: (Open circuit) High Impedance: -58 dB ref. IV/dyne/cm²
(Open circuit) Low Impedance: -93 dB ref. IV/dyne/cm²
or with suitable line transformer: -58 dB ref. IV/dyne/cm²

DESIGNED AND MANUFACTURED BY

SIMON SOUND SERVICE LTD

46-50 GEORGE STREET, LONDON W 1

Telephone: WELbeck 2371

Cables: Simsale, London

Grams: Simsale, Wesdo, London

Since there are no reflections, sensitivity will appear low and Polar Diagram will apply strictly, *i.e.* pick-up at sides almost nil.

LARGE HALLS AND CHURCHES.

These buildings are highly resonant. The Polar Diagram is barely perceptible and apparent sensitivity is high. Locate microphone 6-60 feet from sound source and not necessarily "in line", *e.g.* church transept often excellent for choir and organ. The more remote the location the better the tonal blend and balance but the more does echo obscure words; also the output is lower and background noise more noticeable. Avoidance of excessive audience noises may therefore require suspension of the microphone high above the floor—*e.g.* from roof beam.

NON-RESONANT BUILDINGS.

Polar Diagram becomes much more noticeable and apparent sensitivity lower; microphone 3-30 feet from sound and close to "middle line". For wide-fronted sound sources such as stage or orchestra, optimum distance is that at which imaginary lines from outer corners of stage, etc., subtend angle of 90° at microphone.

ROOMS.

The more resonant or the smaller the room the greater reflections and apparent sensitivity, and the less is the Polar Diagram strictly applicable. A microphone too close to sound gives "hard" effect and exaggerates unnecessary minor effects—*e.g.* singer's breathing, piano action noises. Positions right in corners over-emphasize unsuspected room resonances.

ACCESSORIES AVAILABLE:

Standard High Impedance pack comprising Microphone Head, Desk Stand cabled High Impedance with 11' co-axial cable, in presentation case.....

Stand adaptor (with bushes).....

Stand adaptor (with bushes) connected to 30' twin feeder lead...

Microphone head (in case).....

Floor and banquet stands.....

Matching line transformer for use in low impedance condition to match into high impedance input.

Distributed by

SIMON SOUND SERVICE LIMITED

46-50, George Street, London, W.1

IMPORTANT

PLEASE READ BEFORE USING

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CADENZA

RIBBON MICROPHONE

"Cadenza a free flourish in a vocal or instrumental composition, introduced immediately before the close of a movement or at the end of a piece. The object is to display the performer's technique, or to prevent too abrupt a contrast between two movements. Cadenzas were formerly left to the improvisation of the performer, but nowadays usually are written by the composer. . . ."

—*Encyclopaedia Britannica.*

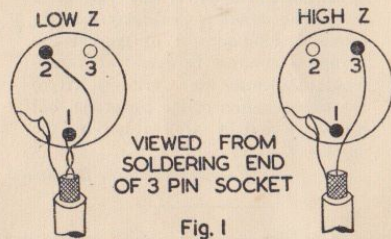
In order that the user of this microphone may "display the performer's technique" to best advantage, we enclose these notes as guidance.

THE CADENZA RIBBON MICROPHONE

The Cadenza microphone head has an inbuilt transformer giving, without adjustment or change, both high and low impedance. The microphone head terminates in recessed 3-pin plug, the case being the earth. Alteration to meet high or low impedance requirement is therefore made not in the microphone head, but by changing the cable connections to the socket plugs in the adaptor or tripod stand.

If it is required to change from one impedance to the other, and if you have the necessary technical facilities, proceed as indicated herein. If in any doubt whatsoever either as to the need to make a change or how to make it,

CONSULT YOUR DEALER.



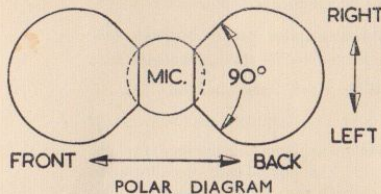
TO CHANGE IMPEDANCE.

(See Fig. 1)

From high impedance to low (30 ohms required). Remove existing coaxial cable where

fitted, substitute twin feeder cable of desired length. There is no practical limit to this length up to 100 yds. or so. Connect inner cores of long twin-feeder cable to pins 1 & 2 of 3-pin socket, and braid to case.

From low impedance to high (80,000 ohms required). Coaxial cable should be used, 11 ft. being longest length which may be used in this condition. Connect core of 11 ft. coaxial cable to pin 3, braid and pin 1 to case.



SENSITIVITY.

- (Open circuit) high impedance:—
—58dB ref. 1v/dyne/cm².
(Open circuit) low impedance:—
—93dB ref. 1v/dyne/cm².
or with suitable line transformer:
—58dB ref. 1v/dyne/cm².

RIBBON RESPONSE.

30–14000 c.p.s.

OUTPUT.

30 ohms (low impedance) or 80,000 ohms (high impedance).

OPERATING INSTRUCTIONS.

GENERAL.

1. (a) All hi-fi microphones are delicate instruments; they must be carefully handled and never dropped. Never place a microphone where there may be metal dust.

(b) To avoid hum pick-up and especially in high impedance condition, locate as far as possible from electrical apparatus. Do not run lead together with mains cable.

(c) For public address locate well away from and preferably to rear of loudspeakers to prevent acoustic feedback "howl".

2. Ribbon microphones (such as this) should be at least 18" from the speaker or singer, i.e. do not speak or sing closely into the microphone and on no account test by blowing into the instrument.

3. When using microphone with long twin core lead (i.e. in low impedance condition) in association with equipment having high impedance input, a step-up transformer is required to be interposed in the lead near the equipment input socket. A suitable transformer is available.

4. Where input to amplifier/recorder is via input transformer suitable for 25/50 ohms input, use microphone in low impedance condition.

5. Never stand microphone on vibrating surface, i.e. piano, amplifiers, radio and TV sets, recorders, etc.

OUT OF DOORS.

Ribbon microphones must be protected from strong winds otherwise "roaring" noises—or in extreme cases actual damage to ribbon—will result.