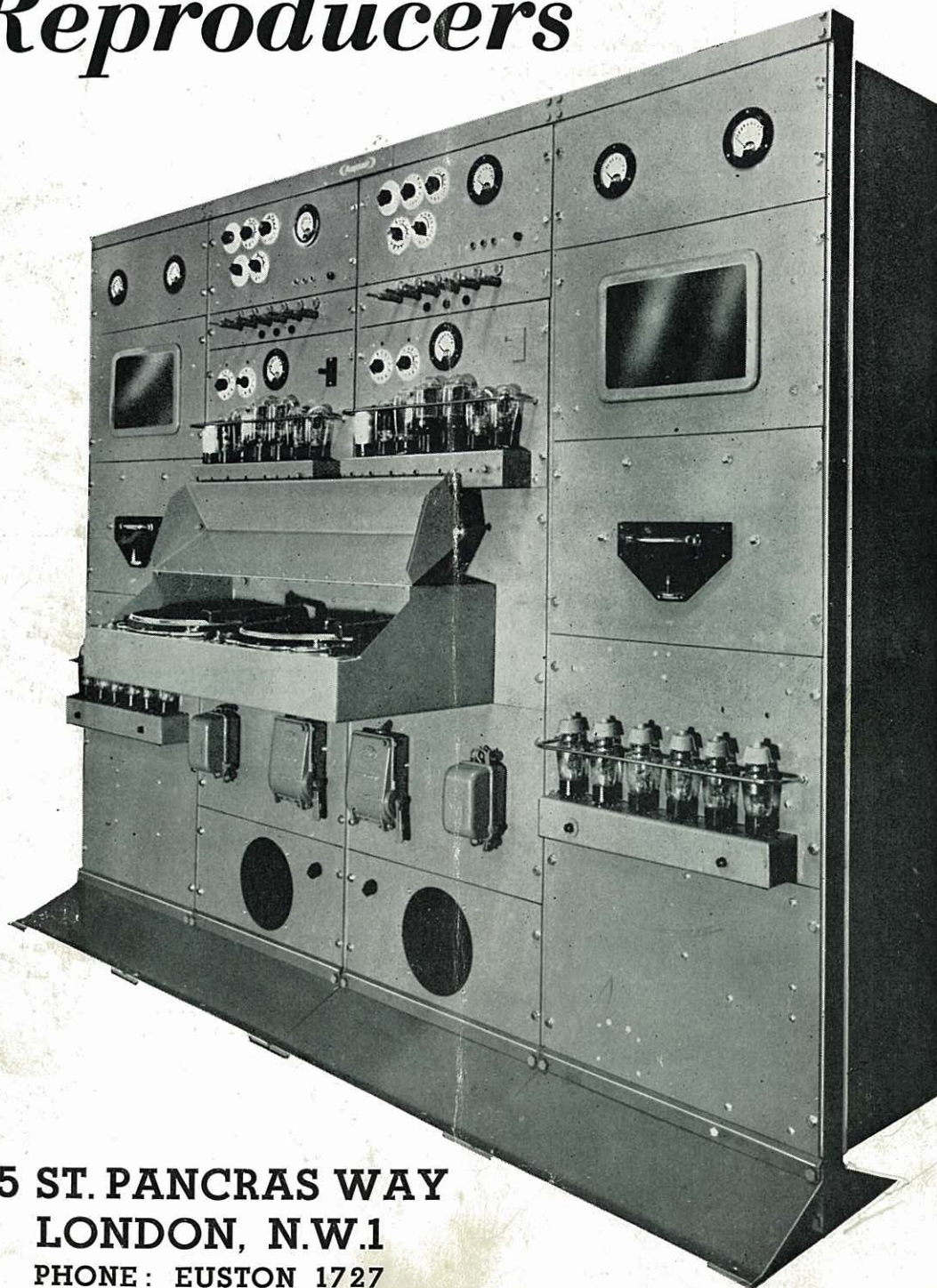


Pamphonic

Reproducers



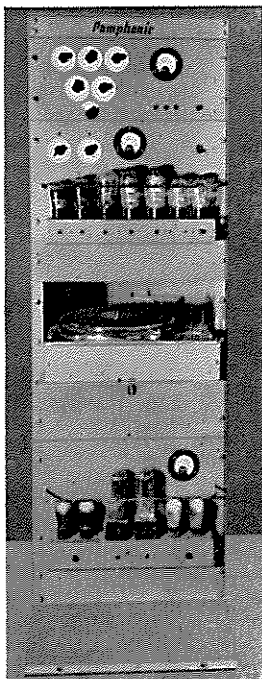
Spt 39

45 ST. PANCRAS WAY
LONDON, N.W.1
PHONE: EUSTON 1727



Pamphonic

UNIT CONSTRUCTION



Pamphonic Public Address equipment has achieved wide renown in providing reproduction of speech or music, from gramophone or microphone, at a standard of quality that is practically indiscernible from actuality. For this reason Pamphonic installations are to be found always where this standard of quality is required. Moreover, it is as a result of this high quality of reproduction that Pamphonic installations have been effected in buildings where the acoustical difficulties are most exacting.

Experience has shown that the most desirable form of construction for public address equipment is one that is flexible, enabling expansion to be effected economically without rendering any part of the equipment redundant or obsolete.

Pamphonic unit construction enables all rack constructed installations to be extended as and when necessary. By a system of standardisation practically any combination of units may be coupled together.

Pamphonic Reproducers Ltd., have a staff of engineers who are experts in assessing acoustical requirements for public address installations. The services of these engineers are available to agents and their advice and recommendations may be had without fee.



PAMPHONIC BABY GRAMOPHONE

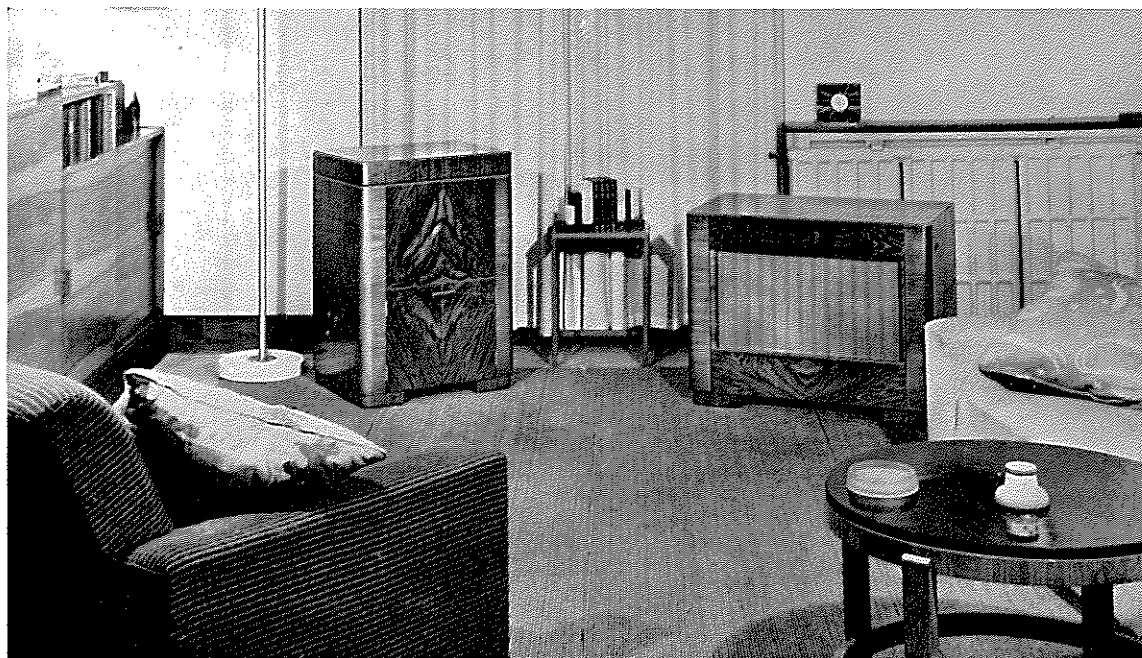
For very many years the connoisseur of recorded music has looked to Pamphonic Reproducers for the criterion of all media for reproduction of his records. The latest Pamphonic Baby Gramophone is a worthy successor to the previous instruments Pamphonic have produced, but for the first time here is an instrument available at a price that is well within the reach of all users.

The Pamphonic Baby Gramophone consists of two units: an amplifier and record unit housed in an attractive console finished in walnut and with record storage space; a 16" Pamphonic loudspeaker unit housed in a specially designed acoustical cabinet, finished to match. The separation of the two units is necessary, firstly as the most satisfactory position for operation of the instrument is rarely suitable for the loudspeaker to achieve the most satisfactory reproduction. Secondly, that it has been found more convenient to make use of two neat and small units than one of necessarily large dimensions.

Embodied into the reproducer are all the requirements that modern development of audio frequency amplifiers has produced; but notably two features have prominence. For the correct reproduction of music comparatively large power handling capacity is necessary. The Pamphonic Baby Gramophone has a total power output of 20 watts with less than $2\frac{1}{2}$ per cent. total distortion. The second feature relates to the development of a point that is to be found in all Pamphonic reproducers—full tone correction and control. The tone control filter unit incorporated into the Baby Pamphonic Gramophone is a patented device that corrects the response of the pickup and the recording to within .5 dB of linear response between the limits of 50 and 9,000 cycles per second. Two controls are fitted to enable adjustment to be made to either treble or bass individually to suit local conditions.

Record units incorporated into the Pamphonic Baby Gramophone may be of the single turntable type with piezo or Telefunken pickup or the standard Model RC1A Garrard automatic record changer with piezo pickup. The price remains the same in each case.

60 Guineas



PORTABLE EQUIPMENT

TYPES 503, 504, 505 and 506

Built into an oak case with lid and carrying handles, these units are compact and robust. Heavy induction type gramophone motors with piezo high fidelity pickups are arranged in the top of the case, protected by a clasped and detachable lid.

The units embody a standard type 500 20 watt amplifier. In addition to gramophone reproduction, operation from carbon microphone is possible with the necessary energising volts taken from a source of supply on the amplifier and without necessitating the use of batteries.

Bass and treble tone controls are included for use with the pickup and the press-button metering device is provided.

Model 503, 20 watt amplifier unit with motor and piezo pickup, in oak case.

Model 504, 20 watt amplifier as above but with two turntable units with piezo pickups, in oak case.

Model 505, 20 watt amplifier unit with automatic record changer and piezo pickup, in oak case.

Model 506, 20 watt amplifier less gramophone unit, in oak case.



20 WATT AMPLIFIER

TYPE 500 & 501

General purpose amplifier, operating from a.c. mains 200/250 volts, 50 cycles.

Input: Gramophone and/or microphone.

Input impedances:

- (1) 250,000 ohms.
- (2) 10,000 ohms.

Maximum input volts:

- (1) 120 millivolts r.m.s.
- (2) 4 volts r.m.s.

Output:

Output impedances:

2.5, 5, 10, 20 ohms.

Output power:

20 watts, 2.5 per cent. total harmonic content.

Frequency response: ± 1 dB 40 to 14,000 c.p.s.

Amplifying sequence:

1st stage (Mullard 904V) resistance-capacity coupled to

2nd stage (Mullard TT4) resistance-capacity coupled to

3rd stage (Mazda AC/P1) transformer coupled to output stage (2 Mullard D024) with cathode-follower output transformer.

Rectifiers:

(2 Mullard 1W4/500) full wave.

A.C. mains consumption: 240 watts. Loaded: 270 watts.

Overall dimensions:

12 ins. high
19½ ins. wide
12¾ ins. deep } for rack mounting.

Weight:

48½ lbs.

Finish:

Grey stove enamel on "parkerized" steel, with chromium-plated fittings.

General Features:

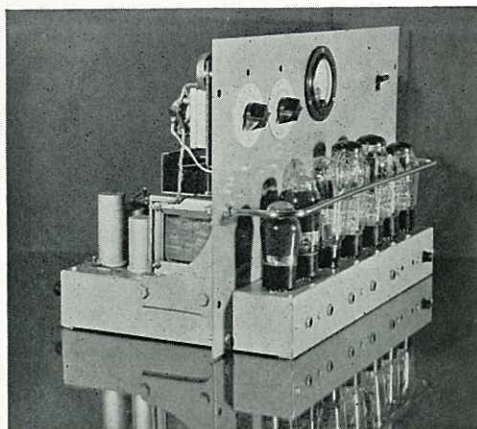
Designed for high quality amplification of speech or music. Two input sockets are provided, one for pick-up or carbon microphone connection and possessing its own volume control; the other caters for the injection of the output from the Type 513 Microphone Mixer or other relatively high level signal. A master volume control adjusts the combined volume of both inputs. Where a carbon microphone is used there is an energising source available; this source is derived from the main high tension supply and obviates the necessity for external batteries.

A tone control filter unit is included in the first stage grid circuit. This unit is supplied in two types—for piezo or electro magnetic pick-ups. The type of pick-up should be stated when ordering. Two controls give adjustment of bass and treble.

A moving coil milliammeter and push buttons in all cathode circuits provides an instantaneous method of checking operating conditions.

Note:

A modified form of this amplifier is available as a driver (Type 501) for class AB output stage operation.



20 WATT OUTPUT STAGE

TYPE 502

This unit is similar in most respects to the Type 500 Amplifier, except that the three voltage amplifying stages and one rectifier are omitted. This permits direct connection to the Type 500 Amplifier, providing a total output of 40 watts. Push buttons are fitted, which operate in conjunction with the meter on the main 20 watt amplifier. A.C. mains consumption.

Mains consumption: 200 watts.

Weight: 41 lbs.

Finish: Standard.

Overall dimensions: 9 ins. high.

19½ ins. wide.

12¾ ins. deep.



MICROPHONE MIXER AND PRE-AMPLIFIER

TYPE 513

High gain multi-stage pre-amplifier with mixing arrangements for three microphone inputs. Operating from a.c. mains, 200/250 volts, 50 cycles.

Input: Up to three microphones of moving-coil or velocity type.

Input impedance: 600 ohms.

Maximum input volts: 130 microvolts.

Output:

Output impedance: 1 megohm.

Output voltage: 10 volts.

Frequency response: 40 to 14,000 cycles per second.

Amplifying sequence:

1st stage (Mullard EF5) resistance-capacity coupled to

2nd stage (Mullard EBC3) resistance-capacity coupled to output stage (Mullard EBC3).

Rectifier: (Mullard IW4/350) full wave.

Overall dimensions: 18½ ins. high, 19½ ins. wide, 9 ins. deep.

Weight: 19 lbs.

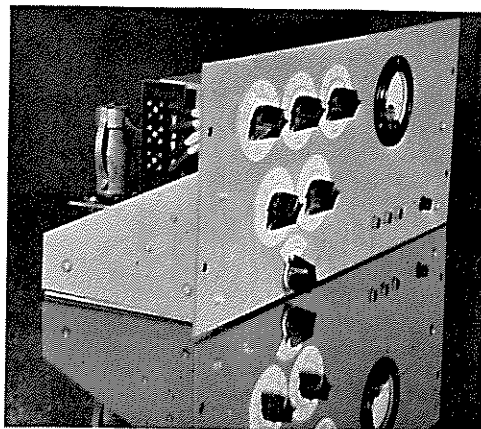
Finish: Grey stove enamel on "parkerized" steel, with chromium-plated fittings.

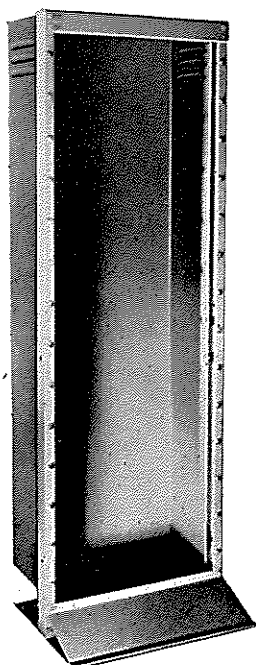
General Features:

Designed for use in conjunction with the Type 500 Amplifier, although it will be found suitable for connection to any amplifier requiring not more than 10 volts input. Three inputs are arranged with line transformer and volume controls in cascade. The line transformers are exceptionally well screened against hum pick-up and the primaries are balanced to earth.

Being a high gain amplifier this unit is intended for use only with low sensitivity microphones such as moving coil or velocity types. Comprehensive tone control arrangements are provided whereby the treble and bass response can be altered at will.

A moving coil milliammeter and push buttons in the cathode circuit of each valve provides an instantaneous method of checking operating conditions.





RACK AND COVERS

TYPE 515/A

Standard rack arranged and drilled to order to receive the units required. Construction is carried out in heavy gauge steel channelling and the rack base enables the assembled equipment to be self-supporting, thus avoiding the necessity to anchor to the floor.

A single cover encases all chassis work, and is so fastened as to afford quick and easy removal.

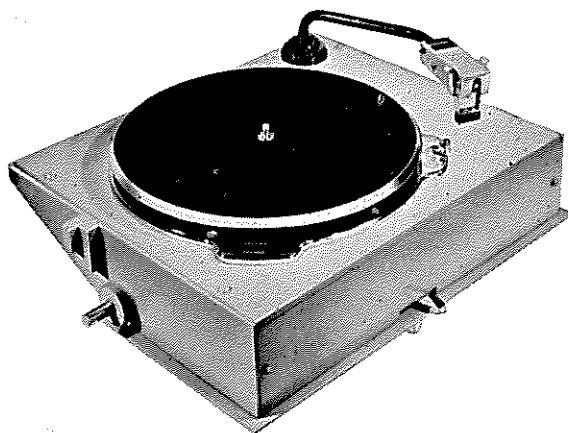
Other sizes of racks and covers are available to order and finish is in the standard grey stove enamel or parkerised steel.

SINGLE TURNTABLE GRAMOPHONE UNIT FOR RACK MOUNTING. TYPE 507

The Type 507 unit incorporates a direct drive high torque induction motor with piezo, Telefunken or ordinary electromagnetic pick-up.

The unit is designed to fit to a standard rack, and is so arranged that when not in use it can be folded away into the body of the rack.

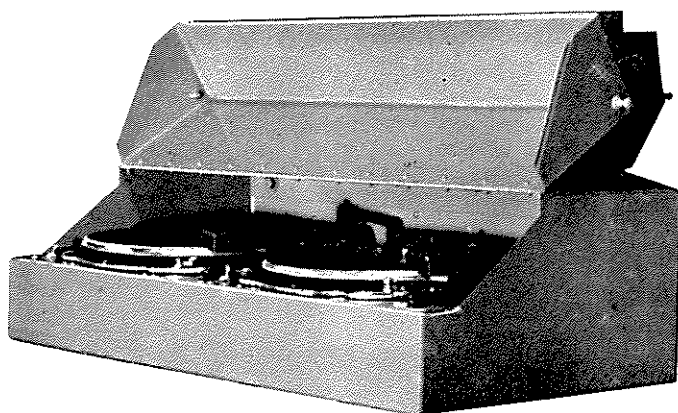
Finish is in grey stove enamel. The unit is particularly suited to requirements where the equipment must be placed and operated in a confined or restricted space.



AUTOMATIC RECORD-CHANGER GRAMOPHONE UNIT FOR RACK MOUNTING. TYPE 509

The Type 509 unit is comparable with the Type 507 fitting but for the use of an RC1A Model Automatic Record Changer by Garrard. There are no arrangements for folding the unit as with Type 507.

This model will take up to eight records of 10 ins. and 12 ins. mixed. The pick-up may be of the piezo or electromagnetic type, the choice of which should be stated when ordering.



TWIN TURNTABLE GRAMOPHONE UNIT FOR RACK MOUNTING TYPE 507/A

The Type 507/A unit embodies two single gramophone turn-tables placed side by side. The unit projects slightly beyond each side of the rack. No provision is made for folding the unit into the body of the rack, but a folding lid covers the turn-tables and pick-ups. A switch is fitted to effect the change from one pick-up to the other, while also allowing mixing of both pick-ups. Pick-ups may be of the piezo, Telefunken or ordinary magnetic type. Finish: Grey stove enamel.



80 WATT OUTPUT STAGE

TYPE 512/80

High power class AB output stage operating from a.c. mains 200/250 volts, 50 cycles.

Input: Designed especially for use with Type 501 Driver Amplifier.

Output:

Output impedances: 2.5, 5, 10 and 20 ohms.

Output power: 80 watts, 2.5 per cent. total harmonic content.

Frequency response: Less than ± 1 dB 40 to 14,000 cycles per second.

Output valves: 2 Mullard MZ05/60.

H.T. rectifier valves: (2 Mullard RG1/240) Mercury vapour.

G.B. rectifier valves: (2 Mullard RG1/240) Mercury vapour.

Delay tube: (Mullard 4687) Neon stabiliser.

Overall dimensions: 12 ins. high, 19½ ins. wide, 12¾ ins. deep.

Weight: 74 lbs.

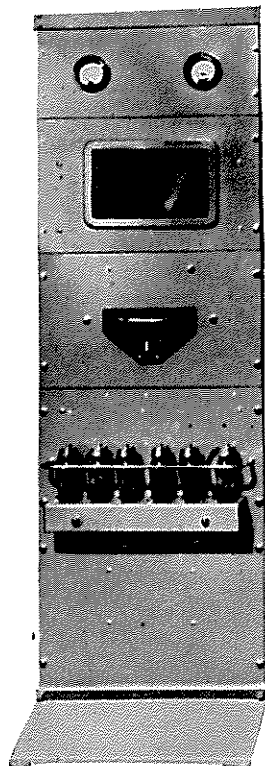
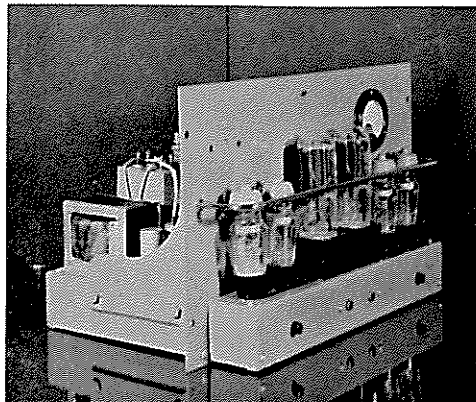
Finish: Grey stove enamel on "parkerized" steel.

General Features:

This unit is intended to provide an alternative to the 20 watt output stage when a relatively larger power output is required. Great care has been taken in the design of this unit, achieving a high undistorted output, good frequency response and reliable automatic switching features.

The use of mercury vapour rectifiers necessitates some form of delay in application of the anode voltage supply, and the scheme evolved in this instance is devoid of the many short-comings usually associated with such devices. The delay is effected solely by the charging time of a condenser through a resistance and the device may be relied upon to operate however quickly the amplifier is switched off and on. A further refinement which is inter-connected with this device is the protection of the various circuits in the event of failure of the grid bias supply.

A moving coil milliammeter, and push buttons in the cathode circuit of each valve provides an instantaneous method of checking operating conditions.



250 WATT OUTPUT STAGE. TYPE 512/250

High power class AB output stage operating from A.C. mains 200/250 volts, 50 cycles.

As Type 512/80 but with greater power output.

Output valves: 2 Mullard M21/600.

Rectifiers:

H.T. supply (4 Mullard RG1/240) in bridge.

G.B. supply (2 Mullard RG1/240) full wave.

600 WATT OUTPUT STAGE. TYPE 512/600

As Type 512/250 but with greater power output.

Construction and layout of Types 512/250 and 512/600 Output Stages differ from Type 512/80, although the circuit arrangements are substantially the same. Output impedances of the two larger units are arranged to order. Further details upon request.

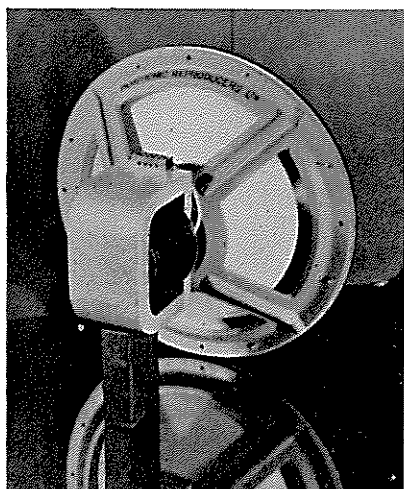


PAMPHONIC LOUDSPEAKERS

MODEL 521A UNIT

Type: Moving Coil. Energised.

Speech coil impedance:	10 ohms at 400 c.p.s.	Diameter of Diaphragm:	14 ins.
„ diameter:	2 ins.	Overall diameter of diaphragm:	16 ins.
„ total gap clearance:	0.016 ins.	Diameter of baffle aperture:	15 ins.
„ power handling capacity:	20 watts, average.	Overall height of speaker:	18 ins.
Magnetic flux density:	17,000 lines/sq. cm.	Overall depth of speaker:	10½ ins.
Total magnetic flux:	260,000 lines.	Total weight of speaker:	44 lbs.
Field coil resistance:	550 ohms.	Finish:	Cadmium plate and grey cellulose.
„ dissipation:	40 watts.		



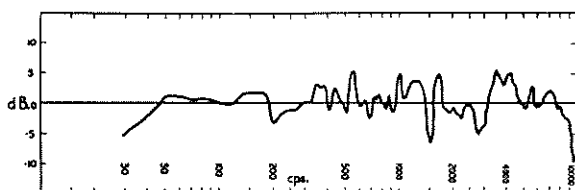
The field of application of this loudspeaker covers practically the whole extent of sound reproduction. Its exceptional sensitivity permits its use with advantage in the smallest domestic radio receiver, while its large power handling capacity makes it eminently suitable for the most ambitious outdoor public address installations.

By virtue of the high flux density considerable damping upon the excursions of the diaphragm is effected. This, together with carefully proportioned dimensions of coil and gap preclude any possibility of distortion arising from this source.

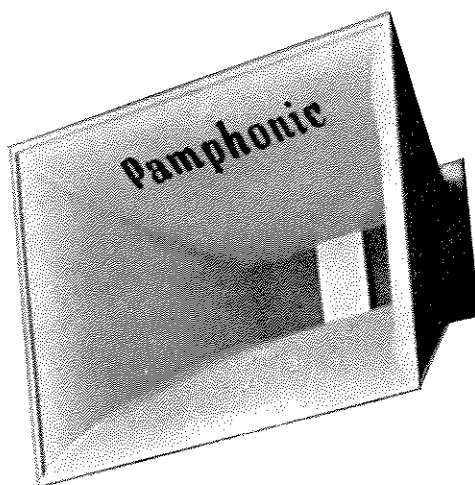
The frequency response curve of the 521A unit shows that the acoustical range is of exceptional extent for a loudspeaker of this type.

Owing to the usual difficulty in providing adequate baffle area for the proper reproduction of the lower frequencies a cabinet has been produced and so designed as to represent an infinite plane baffle down to the lowest frequency necessary for the proper reproduction of music. Below this frequency the cabinet effectively acts as a brake on the movement of the diaphragm, thus protecting it to a large extent from such accidental shocks it may receive during, for instance, the insertion of a gramophone needle.

For out-of-door use, where directional properties are usually desirable, Pamphonic have evolved a wooden flare, the curve of which is arranged to provide good directional properties, together with low bass cut-off. Unlike the normal metal horn, this type of flare is admirably suited to high quality reproduction of music as well as speech.



Type 521A loudspeaker unit in 524 cabinet. 3 watts to speech coil.
Microphone on axis ½ metre distant.



Model 521A Loudspeaker Unit. Price: £8 14s. 0d.

Model 522 Field Rectifier Unit 200/250 volt A.C. mains. Price: £2 12s. 6d.

Model 523 Cabinet Loudspeaker, incorporating 521A Unit and 522 Rectifier. Finish: Natural waxed Oak. Price: £17 10s. 0d.

Model 524 Cabinet Loudspeaker, containing 521A Unit and 522 Rectifier. Finish: Walnut. Price: £20 0s. 0d.

Model 525A Single Flare, incorporating one 521A Unit, less Rectifier. Finish: Grey. Price: £14 14s. 0d.

Model 525 Double Flare, incorporating two 521A Units, less Rectifiers. Finish: Grey. Price: £20 14s. 0d.



MICROPHONES AND STANDS

MOVING COIL MICROPHONE TYPE 516

Having an exceptionally good frequency characteristic extending from 30 to 14,000 cycles per second, this microphone is equally suited to musical or speech reproduction. The greater spectrum of response is independent of direction of source of sound, making the microphone particularly suited to such use as relay from stage or platform.

The microphone contains as an integral part a transformer giving a line impedance of 600 ohms.

The sensitivity is approximately 65 dB below 1 volt per dyne per square centimetre.

No energising current by way of batteries is required.

Finish is in chromium plate and the presentation is in an attractively streamlined case.

CARBON MICROPHONE TYPE 520

Is a high grade form of this popular type of microphone. The response is exceptionally good and its use is particularly commended for local speech, i.e. where the user is speaking in close proximity to the microphone.

Sensitivity is of a high order. External energising is necessary for this microphone, but in the case of the latest Pamphonic equipment, facilities are available on drivers and amplifiers for taking the necessary energising current without the necessity for use of external batteries.

The microphone is supplied on short desk stand and complete with matching transformer.

DESK STAND For Moving Coil or Carbon Microphone TYPE 519

Being a chromium-plated stand of approximately three feet in height, with heavy base. Finish is of a high order and combines with the general construction to make it particularly suited for use at banquets, etc.

ADJUSTABLE FLOORSTAND For Moving Coil or Carbon Microphone TYPE 518

Being an adjustable form of Type 519, extending to a total height of five feet. The finish is in the same high order, and carried out in heavy chromium plate.



PAMPHONIC UNIVERSAL AMPLIFIER

Universal amplifiers comparable in performance with the high quality non-universal type have been up to the present conspicuous by their absence. Recognising this, Pamphonic have produced an a.c./d.c. instrument that will fulfill the requirements of the more discriminating user.

The Pamphonic 16 watt Universal Amplifier is a three-piece portable outfit consisting of two loudspeakers in cabinets, a main amplifier unit with all controls and a high grade microphone with floor-stand. No batteries are employed.



To facilitate portability the two loudspeaker cabinets have been provided with catches whereby they may be attached to the amplifier cabinet, thus presenting a neat and compact unit. A strong carrying strap adds further to ease of transport, and the dead-weight of the complete instrument is only 65 lbs.

Construction is carried out in solid oak with an unusually attractive and durable finish.

The amplifier is designed to provide amplification of speech or music from microphone input. In addition, it is possible to operate from gramophone input.

The total output is from 8/16 watts according to mains voltage (200/250), and in spite of the high power output obtained the mains consumption is only 80 watts.

An effective tone control is included which operates on both microphone and gramophone input.

Special attention has been paid to the matter of voltage input adjustment, and an arrangement has been evolved whereby this can be effected from the control panel with ease and safety.

PRICE: TWENTY-SIX GUINEAS COMPLETE

The H.M.V. or Marconiphone Record Player is particularly suited for use with the Pamphonic Universal Amplifier, should gramophone input be desired.



A Few Representative PAMPHONIC INSTALLATIONS

White City Stadium
Wembley Empire Pool
Harringay Arena and Stadium
Twenty-two London West End Theatres,
including Drury Lane, Colliseum, etc.
Walthamstow Stadium
New Cross Stadium
Northolt Park Racecourse
Birmingham Ice Rink
Shakespeare Memorial Theatre, Stratford-on-Avon
Theatre Royal, Glasgow
M.V.'s Royal Daffodil
Royal Sovereign
Royal Eagle, etc.
Rolls Razor Factory
Rochester Cathedral
Rotunda Hospital, Dublin
Etc.

Equipment suitable for:

Air Ports	Holiday Camps	Ships
Churches	Hotels	Racecourses
Flats	Clubs	Dog Tracks
Factories	Railway Stations	A.R.P.
Hospitals	Swimming Pools	Dance Bands
Halls	Theatres	Private Houses

PAMPHONIC REPRODUCERS LTD

LONDON, N.W.1

