

Sound Reproduction.—An audience of over 1,300 attended the lecture-demonstration recently given by G. A. Briggs, of Wharfedale Wireless Works, in St. George's Hall, Bradford, when the Wharfedale corner three-speaker system was used. For the purpose of comparison piano solos were played and were followed by commercial recordings of the same pieces reproduced by the three-speaker system.



IMPORTANT ANNOUNCEMENT

ROYAL FESTIVAL HALL

(GENERAL MANAGER T. E. BEAN)
LONDON



8 P.M. MONDAY
NOV. 1st, 1954

Sound Reproduction

A NON-TECHNICAL LECTURE-DEMONSTRATION BY
G. A. BRIGGS

Author of Loudspeakers, Sound Reproduction, Pianos, Pianists & Sonics and (with H. H. Garner) Amplifiers

CHAIRMAN: J. R. TOBIN, B.Mus.

The following artistes have been booked to appear:

DENIS MATTHEWS
PIANO

RALPH DOWNES
M.A., B.MUS., A.R.C.M.
ORGAN

STANISLAV HELLER
HARPSICHORD

Recordings of various items will be compared with live performances,
and excerpts from a wide selection of records will be played.

STEINWAY PIANO
GOFF HARPSICHORD
FESTIVAL HALL ORGAN
LEAK PICK-UP & AMPLIFIER

E.M.I. TAPE RECORDER
GARRARD TURNTABLE
AND MOTOR
WHARFEDALE LOUDSPEAKERS

ADMISSION: Reserved seats . . 3s. 6d. (inc. 1s. 5d. Entertainment Tax).
(*ALL seats numbered and reserved.*)

Standing room . . 1s. od. each. *Ladies specially invited.*

The prices of admission have been arranged to cover the bare cost of the hall, excluding advertising.

Tickets will be available on and after Monday, August 16th at The Festival Hall Booking Office; by post from Wharfedale Wireless Works (cash and stamped addressed envelope with order); and from hi-fi dealers in the London area.

Promoted in the interest of the Science and Art of Sound Reproduction by:

WHARFEDALE WIRELESS WORKS LTD • IDLE • BRADFORD • YORKSHIRE
TELEPHONE: IDLE 1235 & 6

“Live” versus “Recorded” Sound

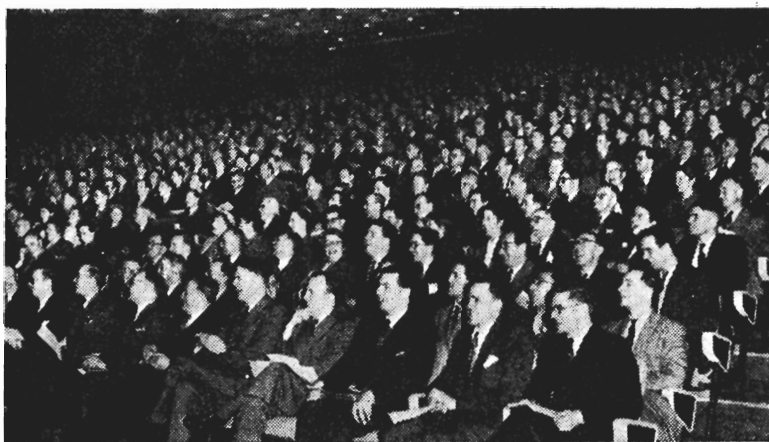
ENCOURAGED by the response to his efforts in the provinces, G. A. Briggs has booked the Royal Festival Hall in London for 8 p.m. on November 1st for a lecture-demonstration on sound reproduction.

The audience will be invited to compare high-quality tape recordings with “live” performances of the same items by such distinguished executants as Denis Matthews (piano), Stanislav Heller (harpsichord) and Ralph Downes (organ).

The reproducing equipment will be of the same calibre as that used for high-quality sound reproduction in the home, and many may think it a bold experiment to attempt to demonstrate it in so large an auditorium. Early scepticism has already receded as the result of two successful rehearsals, and there can be little doubt that an enjoyable and instructive experience awaits those who can “make it a date.” Tickets (3s 6d reserved, including tax) will be obtainable on and after August 16th, from the Festival Hall booking office, from dealers in audio equipment in the London area, or from Wharfedale Wireless Works, Idle, Bradford.

FESTIVAL OF SOUND

A Bold Experiment Succeeds



WHEN G. A. Briggs announced his intention of taking the Royal Festival Hall in London for a lecture-demonstration on sound reproduction there was much shaking of heads. Could he hope to fill a hall with a seating capacity of 3,000? Would the vast size and acoustic clarity of the Hall prove too searching a test for equipment designed primarily to give an illusion of reality in domestic surroundings?

The first question was unambiguously answered when it was announced that all tickets—including those for standing room—had been sold within four days. Any misgivings on the second were quickly dispelled on the night, when, after listening critically and perhaps a little anxiously to the opening items, we were able to sit back and enjoy ourselves—as Mr. Briggs intended that we should.

For many of the items a single Wharfedale "3-speaker" system was used; two of these units, in parallel, were used for organ and orchestral pieces demanding a greater power output. A third unit, reinforced with extra high-frequency units, was reserved for demonstrations of effects which were primarily dependent on good h.f. response; in a hall of this size atmospheric absorption is a significant factor—at least for those in the back seats.

Pilot lamps showed the audience which loud-speaker(s) were in operation, and a visual power level indicator enabled all to see what was going in at any given moment. This instrument, devised by E. M. Price, M.Sc., consisted of a row of neon lamps arranged to strike in ascending order as the power increased from 3 to 60 watts. Viewing this meter from a seat in the stalls, one gained the impression that levels in excess of 15 watts were extremely rare. The whole of one organ piece (Allegro-Voluntary in D, by John Stanley) was accomplished within the 3-watt level. On the other hand, there were occasions, usually when one least expected it, when the power flicked up to the 60-watt level. To take care of the peaks, four of the Acoustical Manufacturing Company's "Quad II" amplifiers were connected in parallel.

Records were played on a Garrard Model 301 transcription turntable in which the speed control enabled exact equality of pitch to be found with the "live" performances with which comparisons were made. The pickup was a Ferranti ribbon type.

Tape records were made and reproduced by an E.M.I. Type BTR/2 professional machine.

All seats and standing room were filled long before

The trenchant commentary by G. A. Briggs was as much enjoyed by the audience of 3,000 as were the demonstrations of good sound reproduction and the "live" performances by well-known musicians.

8 p.m.; thus, even before the proceedings were opened by the genial chairman, J. R. Tobin, B. Mus., we were already in debt to Mr. Briggs for showing us the strength of the public interest in good sound reproduction. With a disarming pretence of being non-technical, and with many bold sallies at the pundits Mr. Briggs quickly cut through the undergrowth of "hi fi" to get at the roots of good sound reproduction where art is more important than science; in particular the importance of microphone and studio technique to create the exact degree of "atmosphere," "ambience"—call it what you will—when replayed in given surroundings. It followed that his choice of orchestral recordings for demonstration in the Festival Hall carried a higher ratio of direct to reverberant sound than would be chosen for playback in a small room.

The acoustic level of reproduction relative to that of the original has a profound influence on balance and quality and must obviously be exact when direct comparisons with the original are made. For some of the items this yardstick was not available, but in all cases one felt that judgment in the choice of level was well informed.

The most courageous of Mr. Briggs' experiments—the immediate comparison of live performances by Stanislav Heller (harpsichord), Ralph Downes (organ) and Denis Matthews (pianoforte) with disc and tape recordings—proved to be the highlights of the evening. The delicacy and precision of the harpsichord playing, with every gradation of tone crystal clear in the recording made by C. E. Watts, were exactly matched in the impeccable playing of Stanislav Heller. The background noises in the Hall, which fell to a level creditable to an audience of three in a country cottage rather than 3,000 in the heart of London, was an even more eloquent comment than the applause which followed.

In the Bach organ Toccata in D we were able to compare an E.M.I. tape recording, made in the Festival Hall by Ralph Downes, with a live repetition of the same piece by the same player. In volume and quality the original and the reproduction were again exactly matched. By listening carefully the slightly



A study in concentration at one of the rehearsals. Facing the camera are G. A. Briggs (left) and P. J. Walker, who was responsible for the operation of the amplifier controls.

longer reverberation time of the recording was perceptible—proof that the Festival Hall really has got a hangover of sorts, if you go looking for it by successive recordings. This effect was absent in the harpsichord recording, which was made in accordance with the principle advocated by Watts of “no ambience” for solo instruments other than that of the space in which they are reproduced.

Unfortunately the piano available for Denis Matthews’ playing of the Beethoven D minor sonata was not the one he used for the E.M.I. recording, so comparative analysis was given a holiday while we sat back and enjoyed two similarly realistic and virile examples of the pianist’s art.

No live orchestra was available for comparison with the Decca l.p. recording (LXT2872) of the Beethoven 6th Symphony by the Concertgebouw orchestra under Erich Kleiber; but none was needed, for the inherent clarity and definition of all the parts was self-evident. The sight of an empty stage was the only incongruity. The string tone—wiry in some early l.p.s—was as near the real thing as the tone of one violin is to another.

Those whose appetite for the classics is insatiable



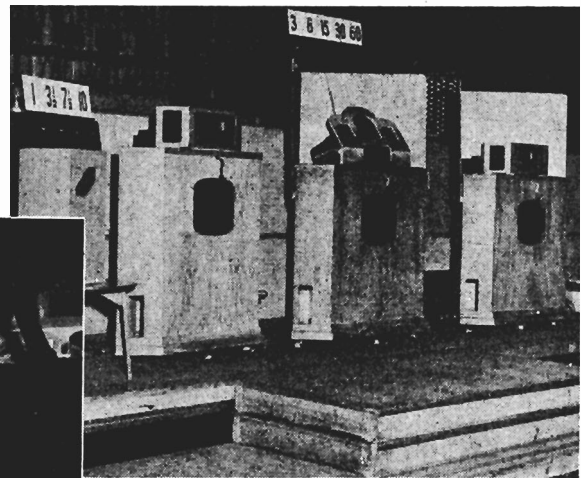
would have liked longer excerpts from many of the works, but that would have deprived others in the audience of a hearing of some remarkable sound effects, the records of which are themselves classics in their sphere. There was R. Bradford’s recording of breaking glass, the B.B.C. recording of awe-inspiring reverberation effects in the Hamilton Mausoleum, the incisive tugboat engine-room noises captured by Mercury Sound Recordings, Ltd. and the W. S. Barrell collection of percussion instruments, with and without high frequencies (E.M.I. JGS74).

Mr. Briggs made some pithy comments on exaggerated claims for frequency response, particularly in the bass, and proved his point by having 32-c/s and 16-c/s notes played on the organ. The 32-c/s pure tone sounded useful, but most people would have needed a barometer to detect the 16-c/s. A 32-c/s reed pipe gave a plausible imitation of a loudspeaker with the coil off-centre.

The last item on the programme was the Vaughan Williams Sea Symphony (Decca LXT2907). A suggestion from Mr. Briggs that Ralph Downes should double the organ part was received in shocked silence by the musical purists, until Mr. Briggs fired a characteristic parting shot: “Well, if he plays as loudly as all the rest put together, we shall be only 3 db up—and what’s 3 db among friends?”

On this note ended a most successful evening. The sound reproduction community owe a great debt to Mr. Briggs for his courage, vision and drive in staging this event. He in turn paid tribute to the help received from firms collaborating in the assembly of the equipment, to P. J. Walker for his sure handling of the amplifier controls, and to the recording companies for putting on disc and tape the high standard of quality which he was able to reproduce.

There was still much shaking of heads as the crowds left the Festival Hall, but it was noticeable that whereas six months ago the polarization was horizontal it had now changed to vertical.—F. L. D.



Original and reproduction. Denis Matthews alternates with the loudspeakers in a performance of a Beethoven piano sonata.