



Pair of W80's on B58 Base

INTRODUCING
a most significant breakthrough
in home stereo reproduction . . .

The WHARFEDALE Model W80 VARIFLEX® Speaker System

This new concept completely eliminates the usual limitations involving speaker placement!

- The VARIFLEX requires no special spacing apart, or from a wall or above a floor.
- It can be used in pairs, anywhere in the room.
- Or, two W80 speakers can be used to form a single 56" console.
- VARIFLEX brings balanced stereo sound to the listener.
- Stereo perception is *preserved*, rather than splattered promiscuously by uncontrolled room acoustics or speaker elements.
- No need to disturb existing high fidelity systems. Does not require electronic equalizer.
- Exclusive sand-filled construction, to eliminate undesirable enclosure resonances and coloration.
- Modest in size (only 17" x 17¼" x 29"), the W80 is truly fine furniture, attractively styled to enhance rooms of virtually any decor.

Wharfedale . . . a pioneer in reflected and indirect sound techniques, as evidenced by a number of such speaker designs introduced over the years . . . refrained from introducing the W80 until the VARIFLEX technique could be refined into a carefully executed, easily utilized speaker system that not only would satisfy the acoustic objectives, but would retain the uncompromised *quality* of the reproduced sound. The W80 achieves both objectives successfully.

What is VARIFLEX?

Ordinary reflective and "omni" speaker systems have one thing in common: Sound dispersal is promiscuous and therefore subject to acoustical phase distortions caused by the shape and furnishings of the room. Splattered sound, whether solely against a wall or through use of a conical reflector in the speaker enclosure, is *uncontrolled* sound. Hence, in the case of some types of systems, "optimum" spacing is recommended from a wall or above the floor. In other instances, sound is projected over a wide area, equally, from both speakers of a stereo pair. But, in this case it should be obvious that the *levels* at which sounds of different frequencies arrive from both channels to a given point in the room are unequal and therefore *unbalanced*. In both instances, room conditions play further havoc because the distribution pattern of sound is fixed and therefore unable to accommodate the multitude of differences which exist between rooms and the general listening areas.

The Wharfedale VARIFLEX employs a *variable* device which bends sound waves in a definite and controllable manner so as to form the particular sound distribution pattern *required* by room conditions and/or the listening and decor needs of the user. It is capable of directing sound waves both in the vertical or horizontal planes, or any combination of these angles.

VARIFLEX | The Need for Controlled Sound

There are differing schools of thought among acoustics engineers on how live sound reaches the listener in a concert hall. The loudspeaker engineer must also keep in mind the differences in operating conditions of a room in the typical home, as compared with the environment of the concert hall. There are, nonetheless, several significant considerations which must be taken into account, if any design of loudspeaker system may be said to have reproduced the original sound with reasonable fidelity.

Briefly, it must be recognized that the acoustics of a large concert hall, with its great expanse, high ceilings and generally hard surfaces are in sharp contrast to the shape, dimensions and furnishings of a typical room in a home. To emulate in the home the sound propagation characteristics of the concert hall too closely can, in fact, compound those characteristics into a disfiguration of the original sound. The program source, be it a disc, tape or broadcast, has already interpreted the conglomeration of actual sounds and reflections, as seen by the microphones which are the originating pick-up device. Similarly, even in studio recordings, the careful separation and balancing of sounds achieved by the recording director and engineers must remain

unviolated by the playback reproducing system.

Consider, too, that the propagative qualities of different musical instruments are quite dissimilar, so that where an entire orchestra is concerned, the direct vs. indirect distribution of sound is not only a function of the concert hall's acoustics but also, and very prominently, a function of the individual instruments and their respective positions on stage. In studio recording, where close pick-up techniques and soundproofed rooms are frequently employed, the distribution pattern of the various musical instruments again takes on a tonal quality that can be quite different from that of an open concert hall.

Clearly then, whether the source of the live program is the concert hall stage or the recording studio, the sole purpose of the loudspeaker system is to bring to the listener the sound as *originally experienced*.

Therefore, a speaker system which uses a pre-determined ratio of direct to indirect sound distribution, and applies reflected sound that cannot be adjusted, is obviously *adding* an aural effect that is not in the original program . . . and that effect will vary uncontrollably with room acoustics and furnishings. Similarly, a speaker system which attempts to simulate the effect of wide-angle

propagation of sound (usually through use of an inverted reflecting cone or by an array of speakers in a circle or several quadrants of a cabinet) merely creates a splashing or scattering effect that is also fixed, and equally affected by room acoustics. The basic thought that needs to be borne in mind is that the listener to any live performance is almost never *surrounded* by the program source, unless perhaps he is one of the musicians! The totality of the sound comes from a particular direction, and depending upon the nature of the sound (voice vs. small combo vs. full symphony orchestra, etc.) it is either a confined point in space or over a broad dimension. True "stereo", therefore, is the listener's ability to distinguish the direction of the total sound and the individual components of the sound. If this requirement of "stereo" is compromised, then all that really results is a room full of sounds unbalanced and unrelated to the acoustical and musical composition of the original. If one wishes merely for that, it can easily be accomplished using mono programs on speaker systems of the fixed reflector and "omni" inverted cone types. This is, in fact, exactly what was often done in the earlier days before stereo, to enhance the spatial effect of mono programs.