

the front and sides of the cabinet were opened up to allow the diffused sound to pass unimpeded to all parts of the room, so that no matter where you sit you get the full beauty of High Fidelity tone. The Diffuser consists of an assembly of vanes.

Every angle and dimension has a scientific basis. The horizontal vane is for the purpose of bringing the sound up to your ears while you are tuning the set, so that it will sound the same then as when you walk away. The vertical vanes follow acoustic reflection principles, being so arranged that the sound which hits each vane is reflected into the room without hitting any other vane.

The result acoustically is a tonal range and uniformity of musical reproduction throughout the room never before achieved in radio.

The result visually is an X cabinet whose appearance automatically expresses its function—as beautiful, as dignified and as symbolic of music as a grand piano.

There are thousands of musically inclined persons to whom tone is the first and determining factor in buying a radio. For these, the Model 200X is the musical instrument they have been waiting for. No music lover can hear the 200X without wanting it in his own home.

In connection with High-Fidelity reception certain limitations must be kept in mind:

1. Not all radio stations broadcast up to 7500 cycles and the receiver can of course pick up no greater tonal range than the stations put on the air.

2. Chain programs are often sent over land wires which may be limited to 5000 cycles, but even on this frequency the 200X gives noticeably more natural reproduction.

3. Such chain programs, however, may be heard with full 7500 cycles fidelity when picked up on the station originating the broadcast and not too far away from it.

4. High-Fidelity reception may be obtained from certain stations in the daytime when signals from distant stations on adjacent channels are too faint to interfere. At night however, the adjacent channel station signals may be strong enough to cause interference resulting in a whistle or so-called "monkey chatter," if full High-Fidelity reception is attempted.

To eliminate this merely turn the Fidelity-Selectivity control back until the interference disappears.

5. Unless the Fidelity-Selectivity Control is turned back, a poor quality, distorting or overmodulating broadcasting station sounds a great deal worse on a High-Fidelity receiver than on a receiver that cannot reproduce tone frequencies over 3500 cycles.

6. It is proposed to create three or more High-Fidelity broadcasting channels between 1500 and 1600 kilocycles spaced 20 kilocycles apart. When this is done High-Fidelity reception should be available at all times in parts of the country fairly close to these stations.

7. An important feature of the PHILCO 200X is its ability with the Fidelity-Selectivity Control turned back, to give unheard-of selectivity in congested parts of the dial and for separating distant stations from strong locals.

The general import of all the above is that High Fidelity in a radio is somewhat like high speed in a motor car. At times traffic conditions or bad roads or weather conditions prevent the use of high speed. Nevertheless, there are many occasions when high speed can be used and high speed ability in a car tends to improve the performance at lower speeds. Just as High Fidelity in a radio cannot always be used but it is a great delight when it can, and the fine audio system which 7500 cycle reproduction requires insures the best performance possible at 5000 cycles or below when conditions make it impossible to use the full High-Fidelity range.

And in conclusion, remember this: The 200X with its Fidelity-Selectivity control guarantees you the finest tone possible under any given set of conditions together with any needed selectivity.

**There's a PHILCO for Every
Purse and Purpose**

See Our Complete Display

PHILCO HIGH-FIDELITY RADIO

The Musical
Instrument of
Tomorrow

MODEL-200X



**CONTROLLED HIGH FIDELITY
SOUND-DIFFUSING CABINET**

Here is Tone Never Before Heard Over the Air!

New - Sensational - Revolutionary

Until you've heard PHILCO'S outstanding tonal achievement, the new Model 200X, you've never heard radio reproduction at its finest. There never has been anything like it! Here is tone never before heard over the air! Tone so magnificent, so real that listeners are startled!

Here, for the first time, is a radio that will reproduce the entire musical range from 50 to 7500 cycles! The deep tones of the organ, the high notes of the piccolo—sounds never before heard over the air are reproduced by the 200X accurately, naturally, in their true relation to the rest of the music.

Many stations today broadcast a tonal range up to 7500 cycles.

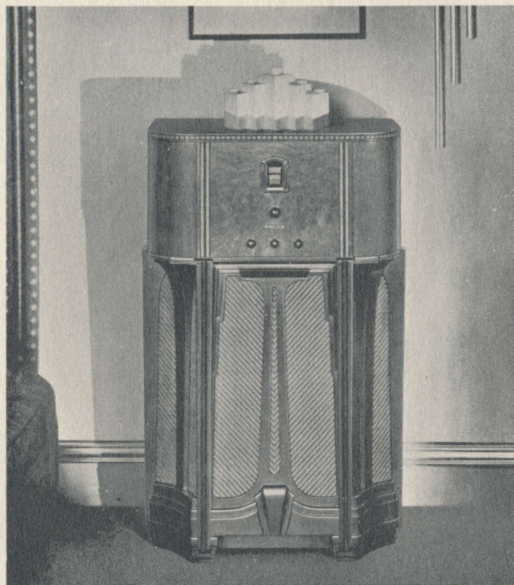
The ordinary fine radio, reproducing only up to approximately 3500 cycles, is unable to give the realistic tone quality which such broadcasting makes possible. That is why PHILCO has created this magnificent High-Fidelity Receiver with a musical range of from 50 to 7500 cycles.

Why haven't we had High-Fidelity Receivers before? First, because high-class broadcast stations, by improvement in equipment, have only recently extended the upper limit of their modulating equipment to 7500 cycles. The list of stations having such improvements, permitting High-Fidelity transmission, is steadily increasing.

Secondly, there were difficult problems for the radio receiver engineers to solve. Model 200X embodies the solution of these problems by Philco engineers, who, by applying advanced engineering principles, have produced some strikingly new features that make radio reception much more natural, more enjoyable.

Wide-Channel Reception—The first feature is wide-channel reception made possible by newly designed R. F. and I. F. High-Fidelity circuits, the selectivity of which have been broadened so as to fully accept the broader channel transmissions, without side-band cutting.

The greatest features ever designed for the finest reception of music and speech are built in this amazing High-Fidelity radio.



Tuning Range, 540 to 1720 kilocycles . . . Receives all American broadcasts and some police calls . . . extended musical range—50 to 7500 cycles . . . Fidelity-Selectivity Control . . . Tone Diffusing "X" Cabinet . . . Patented Inclined Sounding Board . . . High Fidelity PHILCO Electro-Dynamic Speaker—Auditorium type . . . Variable Bass Compensation . . . Variable Tone Control . . . Super-Class "A" Audio System with undistorted output of 15 watts . . . Automatic Volume Control . . . Shadow Tuning . . . Patented Rubber-Floated Chassis and Tuning Condenser . . . PHILCO Simplified Tuning . . . Echo Absorbing Screen . . . 10 Philco High-Efficiency Tubes equal to 12 single purpose tubes.

Fidelity-Selectivity Control—After the broad High-Fidelity R. F. and I. F. were developed it was necessary to provide means for the control of the fidelity and selectivity—so the coupling in the I. F. transformers is varied by varying the resistance in a link circuit. This permits smooth variations from the High Fidelity (broad) position to continuously sharper positions.

Incidentally, turning the Fidelity-Selectivity Control all the way back gives phenomenal selectivity for use in congested parts of the dial, and for distant reception.

Improved Audio Amplifier — Improvements to increase fidelity have been made in the PHILCO Super-Class A Amplifier, a powerful, efficient amplifier which provides 15 watts of undistorted output.

Newly Designed High-Fidelity Loud Speaker—Hundreds of experiments, months of untiring research, resulted finally in the design of a loud speaker which fulfils the difficult requirements in Model 200X, of smooth response, i. e. without objectionable "peaks," from 50 to 7500 cycles. This exceptional performance was obtained by the use of a very light-weight aluminum wire driving coil and an especially designed cone, the stiff inner portion of which radiates the high frequency notes and cooperates with the outer flexible portion to produce the low frequency notes.

The Sound Beam Diffuser and Sound-Diffusing Cabinet—As you know, high notes tend to travel in straight lines. With the additional high notes which this High-Fidelity 200X reproduces, the full tonal range could be heard directly in front of the speaker but was lost on either side. Furthermore, directly in front of the speaker the brilliance of the high notes impacted on the ear almost painfully, just as the brilliance of a high-power light hurts the eye unless it is surrounded by a diffusing globe.

For both reasons a Sound Beam Diffuser and a Sound-Diffusing Cabinet had to be developed. The Inclined Sounding Board was of course even more necessary than usual to bring all the additional high notes up to ear level. A scientifically designed Sound Beam Diffuser was placed in front of the speaker and