

1946

Radio FOR THE SMALLER HOME



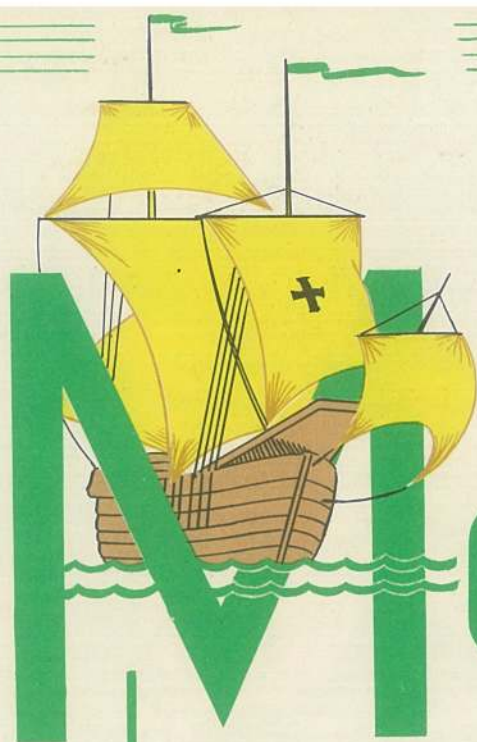
For the smaller home, where radio of quality and modest cost is desired, COLUMBUS offers selection of its five-valve Utility Model in a design for broadcast reception only, or alternatively, in a dual-wave version of the same design.

In both these models COLUMBUS has introduced tonal luxury to the five-valve class of radio, with the aim of providing inexpensively, radio which will be owned with pride and pleasure for many years.

MODELS
53
and
55



COLUMBUS
RADIO



MODELS 53 & 55

The five-valve radio has held, and will always hold a prominent place in New Zealand homes for the reason that most of our larger centres have excellent coverage from nearby broadcasting stations which cater adequately for the entertainment needs of a large proportion of the listening public.

Therefore, in the knowledge that many people will choose five-valve radio in preference to higher-powered and more expensive models, Columbus has been concerned to provide in its range, two designs capable of superlative reproduction of local programmes but which will, if need be, reach further afield for distant broadcast and shortwave programmes.

In both Model 53 (broadcast only) and Model 55 (dualwave), emphasis is strongly upon quality of tonal reproduction—tonal luxury, if you will, at the highest levels that modesty of cost will permit.

To reach this result, modern techniques of tonal control, which hitherto have been reserved for larger and more expensive radio, have been incorporated into these models and this inherent quality of design is further supplemented by the use of an 8-inch high fidelity loudspeaker and the acoustic advantages of substantial cabinet size. It is not usual to-day to find attributes such as these in five-valve radio, but it is precisely from such practice that Columbus is able to derive the undoubted superiority of performance of these models.

COLUMBUS RADIO

Exclusively-
COLUMBUS
RADIO



COLUMBUS 5-VALVE BROADCAST
MODEL 53 "CORVETTE"
with 8" Dynamic Loudspeaker
Height: 12½"; Width: 18½"; Depth: 9"

Exclusively-
COLUMBUS
RADIO



COLUMBUS 5-VALVE DUAL-WAVE
MODEL 55 "CORVETTE"
with 8" Dynamic Loudspeaker
Height: 12½"; Width: 18½"; Depth: 9"



VOLUME CONTROL WITH
POWER ON-OFF SWITCH

TONE CONTROL

STATION SELECTOR

MODEL 53 CONTROLS



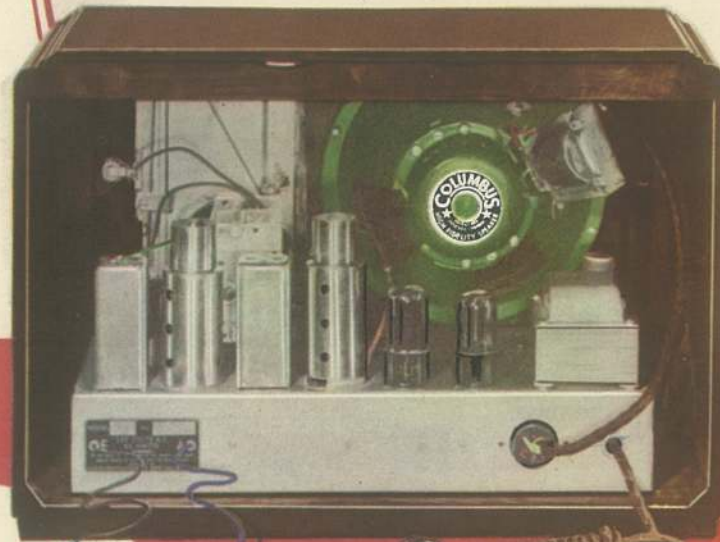
VOLUME CONTROL WITH
POWER ON-OFF SWITCH

TONE CONTROL

BAND
SELECTOR

STATION SELECTOR

MODEL 55 CONTROLS



EARTH LEAD

AERIAL LEAD

POWER CONNECTION
CORD

REAR CONNECTIONS (Common to both Models)

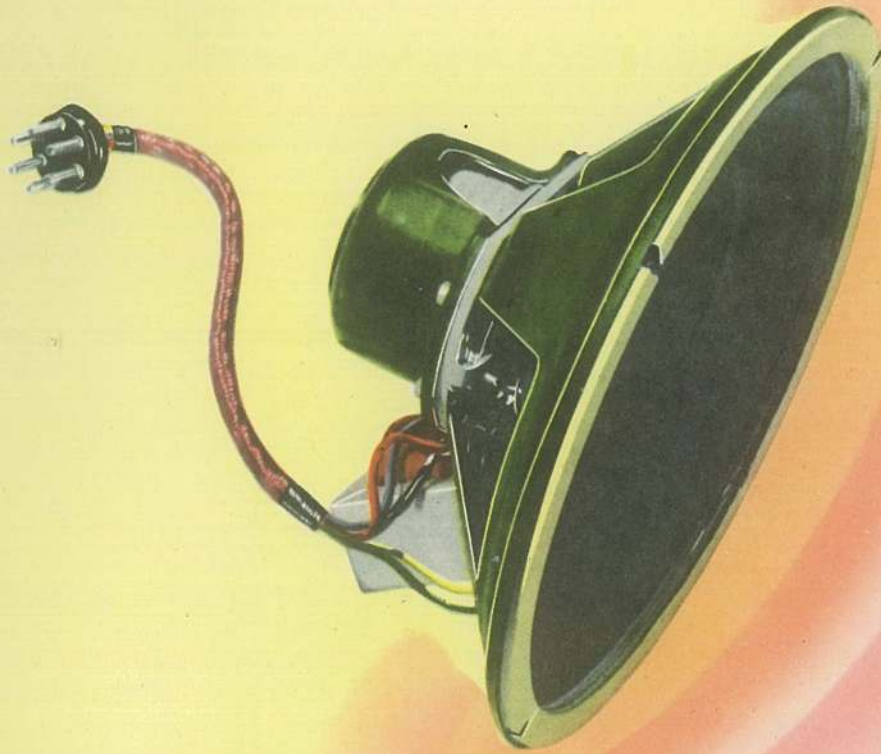
Externally, Model 55 differs from Model 53 only in the addition of a Band Selector control (for switching from broadcast to shortwave), and in the provision of a shortwave scale on the dial. Both models are fitted with a high-speed spin tuning station selector and a power on-off switch is incorporated in the volume control to obviate the necessity for switching at the wall point. Dial lettering is etched into glass and is therefore indestructible and fadeless. This treatment permits of brilliant floodlighting by concealed auto lamps, producing a remarkably legible and attractive dial effect.

A 7'6" power connection cord is provided and the correct style of plug will be fitted to conform with design of wall plug used in the client's home. A coil of aerial wire for indoor installation is available if desired.

For reception other than from powerful nearby stations, use of an outdoor aerial is recommended. Columbus will willingly and freely advise any client upon the best arrangement of aerial for his home and location.

No matter where you purchase a Columbus radio, you are welcome to ask for it to be delivered and installed in your home. That will be done anywhere in New Zealand, free of charge.

LOUDSPEAKER DESIGN



The function of the loudspeaker is to reproduce in audible form, the electrical impulses which are received from the aerial and which are converted by the radio receiver into impulses of "audio frequency." In the first place, the tonal quality of the radio depends upon the "purity" of the audio frequencies that are produced by the receiver itself, **but the ability of the loudspeaker to convert these impulses into audible tones of natural fidelity is of the highest importance.** In that respect the quality of a radio is made or marred by the efficiency of its loudspeaker.

For that reason, Columbus employs throughout its entire range, loudspeakers of highest possible sensitivity. By paying close

At one period in the evolution of radio—about the late 20's—loudspeakers were given the dignity of independent attachment to the radio and were frequently mounted on elaborate pedestals with a large horn for the projection of sound. Later this style gave place to the smaller, less ostentatious, cone type of speaker but the unit still remained a separate attachment. More recently, the invention of the modern dynamic loudspeaker has banished that important adjunct to the inner recesses of the radio cabinet, where it now remains concealed from view—and undoubtedly, largely forgotten or overlooked by the modern radio owner.

Although the loudspeaker of to-day is no longer prominently displayed, it still retains its vital importance to the correct functioning of a radio.

attention to the methods and materials used in the construction of the moving parts of the speaker, Columbus has developed a design of loudspeaker whereby the weight of the moving diaphragm and its attachments is greatly reduced and a high degree of flexibility in movement is imparted to the diaphragm. That freedom of movement enables the loudspeaker to respond accurately to all the finer shades of tone that are so frequently missing from the reproduction of music.

In this way, Columbus designed loudspeakers acquire splendid "frequency response" characteristics—that is to say, they achieve harmonious blending of tone throughout the range of audible frequencies, from notes of highest treble to the deepest bass.

COLUMBUS
RADIO



The performance which Columbus achieves in its various models, is an attribute which is procured by zealous and exacting laboratory research. All those qualities which characterise a fine radio — high sensitivity, freedom from extraneous noise, tonal fidelity, durability, and reliability in operation—are derived in the first place from painstaking care with what is known as "prototype" design.

Before any Columbus model is planned into production, several preliminary models or "prototypes" are built and subjected to exhaustive laboratory tests. In this process of confirmation and amendment of basic design, the versatility and precision of laboratory equipment play a vital part.

With the range of equipment that is illustrated above,

Columbus design engineers are enabled to appraise every aspect of the functioning of a radio with a precision that approaches extreme levels of accuracy.

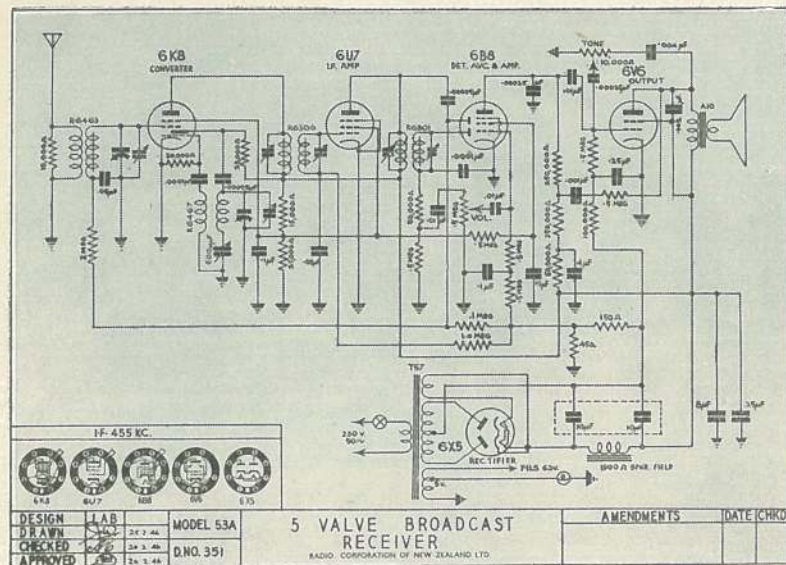
By way of example, the Wave Analyser, which occupies a central position in the illustration, is an instrument which checks the quality of reproduction of a radio with remarkable discrimination. The average human ear can detect distortion of a "pure" note if the proportion of distorted sound approaches 10 per cent. of the total. A highly musical person with a very critical ear may detect distortion in the region of 5 per cent. of the total. The Wave Analyser referred to will show up distortion of 1/150th part of 1 per cent.

That example is indicative of the degree of thoroughness

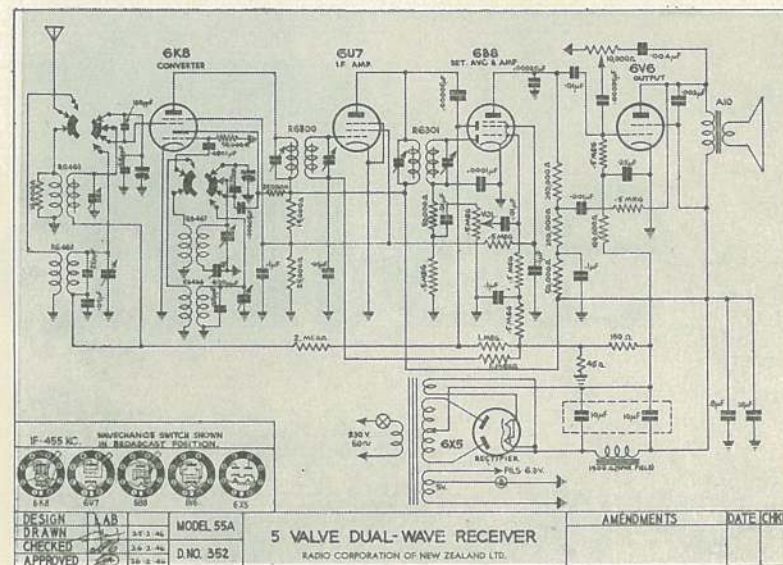
which Columbus is able to apply to the design of its models. But, one may ask, is such thoroughness justified? It is to be admitted that, to use a colloquialism, one can get away with lower standards of precision. But in the final analysis it is rigid standards of accuracy, imposed throughout the entire processes of manufacture, that produce a superlative rather than just an ordinary result.

And that is exactly what Columbus aim to do. Moreover, years of concentration at this high level of exactitude have created a spirit of technical keenness which permeates the whole Columbus organisation. Such a spirit, the most priceless asset that a radio enterprise can possess, is more than a guarantee of quality to-day. It is an assurance of dependability for many tomorrows to come.

TECHNICAL DATA



SCHMATIC DIAGRAM (Model 53)



SCHMATIC DIAGRAM (Model 55)

1. CIRCUIT

Models 53 and 55 are broadcast and dualwave versions respectively, of a 5-valve superheterodyne receiver which is designed notably for high-quality tonal reproduction.

A high impedance aerial coil is employed to minimise repeat spots and to promote selectivity. The oscillator is a plate-tuned, shunt-fed circuit which, in Model 55, contributes to stability and constancy of calibration at shortwave frequencies. Both I.F. transformers are iron-core, dual-tuned type. The volume control is isolated from both the diode and signal-grid circuits in order to eliminate noise during rotation of the control.

Frequency discrimination is applied to the control of tone through the feedback circuits, thereby considerably enhancing tonal effectiveness.

2. COVERAGE

Both models cover the standard broadcast band from 550-1,600 kilocycles. Model 55 covers shortwave frequencies 9,400 to 15,600 in a single

band. This coverage includes the principal shortwave bands at 19, 25 and 31 metres.

3. VALVES

The valves and their uses are:—

- 6K8 - Converter.
- 6U7 - I.F. Amplifier.
- 6B8 - Detector, A.V.C. and A.F. Amplifier.
- 6V6 - Output Beam Tetrode.
- 6X5 - Rectifier.

4. I.F. FREQUENCY

The I.F. frequency is 455 kc.

5. OPERATION

In their standard form, Models 53 and 55 are designed to operate from 230-volt A.C. mains. Modification to permit operation from any voltage, A.C. or D.C. (or any combination of both) between the limits of 6 and 230 volts, can be arranged.

MODELS 53-55

COLUMBUS
RADIO



Guarantee

Every COLUMBUS radio is unconditionally guaranteed. For TWELVE MONTHS after sale we service and attend to every COLUMBUS at its owner's request ABSOLUTELY FREE OF CHARGE.

This guarantee is given without any reservations whatever. We welcome our clients calling us to their homes at any time—even for matters which they think might turn out to be trivial. And that service is promptly and courteously given, because we operate on the assumption that when a client purchases a COLUMBUS, our part in the transaction does not end with the sale. We consider that we have bound ourselves to a contract to give that client full and complete satisfaction.

COLUMBUS
RADIO



A STATED AIM

For many years Columbus has been a name that has steadily grown in reputation and popularity wherever radio is concerned.

We are conscious of the fact—and we hope, modestly so—that the attributes of quality, reliability and courtesy have become inseparably linked with our name. And we believe that it is already commonly expected of us that we will always continue to find new ways of rendering greater service to the radio-listening public. That indeed, is our paramount aim and the dominant consideration in the conduct of our business.

We know, as you know, that apart from exercising judgment upon the externals of appearance and tonal quality, few people have the specialised knowledge to appraise adequately the technicalities of design in the radio that they acquire. Therefore when you buy a radio, you buy largely on trust and reputation. So it behoves us, who gain our livelihood solely from radio and your patronage of radio, to serve you meritoriously and with every consideration for your needs, personal, financial or otherwise.

That, we shall never cease to do.

COLUMBUS
RADIO