

UNITED STATES PATENT OFFICE

2,064,520

RADIO DIAL

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Application May 6, 1936, Serial No. 78,104

9 Claims. (Cl. 250—40)

This invention relates to radio receivers of the type designed to operate over a number of frequency bands, including the broadcast band and several short wave bands. More particularly the invention relates to a dial for such a receiver having an indicating means to show which particular frequency band is in use at the moment. In the past such devices were placed outside the immediate field of vision of the person tuning a receiver and required a separate lamp with its associated wiring. In the invention herein illustrated and described the tuning and indicating elements are closely grouped in a single field of view and no separate lamp is required for the band indicator.

An object of this invention is to provide a radio dial and band indicator in which the component parts may be more readily observed.

Another object is to provide a radio dial assembly which is more simple in construction and efficient in performance.

Still a further object is to provide a radio dial with a tuning band indicator which is more economical in construction.

Other objects and advantages will in part be stated and in part be obvious when the following specification is read in connection with the drawing, in which:

Fig. 1 is a front view of the dial as installed in a radio receiver, not completely shown; Fig. 2 is a front view of the band indicator disc; and Fig. 3 is an enlarged fragmentary section taken on line 3—3 of Fig. 1.

Referring to Fig. 1 in more detail, the numeral 1 indicates a front panel of a radio receiver which is designed to operate over a number of different frequency bands. Such receivers are known in the art as all-wave receivers. The receiver tuning is controlled by the knob 2, and the wave change switch is controlled by the knob 3. The dial 4 carries scales 5, each of a different color, which may be marked to indicate the frequency range of each scale. A pointer 6 extends across the scales 5 and is operated by the tuning control. The vernier pointer 7 is arranged to complete a revolution with a relatively small angular movement of the pointer 6, and is provided with a suitable scale 8. In its preferred form, the dial 4 is a sheet of glass with the scale markings etched or painted. An opaque backing 4' is applied and the dial is illuminated by edge lighting as shown in Fig. 3 to cause the scale markings to appear luminous against a dark background. Above the scales 5 a small window 9 is formed in the opaque backing material and through this

window is visible the shadow cast by a "shadow tuning" resonance indicator. These indicators are well known and produce a varying shadow on an illuminated field. When the shadow is narrowest, the receiver is correctly tuned. Immediately in back of the window 9 is rotatably positioned a translucent color disc 10 as shown in Fig. 2, containing areas colored in accordance with the colors of the various scales 5 on the dial. A drive cord 11 or equivalent mechanism is connected to the wave change switch 3 and rotates the disc 10 upon actuation of the switch. If the broadcast scale on the dial 4 is colored yellow, for example, the yellow segment of the disc 10 will be visible through the window 9 when the wave change switch 3 is set for broadcast reception. Similarly, when the switch 3 is set for a particular band of short wave reception, the color which is visible will correspond to the color of that particular scale on dial 4. As shown in Fig. 3, a bracket 12 carries the color disc 10 upon a stub shaft 13 and also supports the shadow tuning meter 14 and lamp 15 in alignment with the dial window 9. The bracket 12 may be attached to any suitable portion of an associated receiver, not shown, such as the frame of the tuning condensers. Upon its upper end the bracket 12 carries a lamp 16 which is suitably hooded to cast light only on the edge of the dial 4. A glass cover plate 17 encloses the dial 4 with the pointers 6 and 7 and protects them from accidental damage.

When the receiver is placed in operation the lamp 15 is lighted and a beam of light is projected through the tuning meter 14 to fall upon the color disc 10. A movable vane in the tuning meter partially interrupts the light beam to produce a central shadow as shown in Fig. 1. The observer sees the shadow on a colored field of illumination and the color indicates that the receiver is operating on the particular wave band having a dial scale 5 of the same color. The close grouping of the elements in a single field of view reduces eye strain and fatigue on the part of the operator and the soft illumination presents a pleasing effect.

It will be obvious that many changes and modifications may be made by anyone skilled in the art without departing from the spirit and scope of the invention as set forth in the following claims:

What is claimed is:

1. In a multi-band radio receiver having a wave band change switch, a resonance indicator visible from the front of said receiver, a source of illumination for said indicator, and means operable

by said band change switch for varying the color of the illumination of said indicator, whereby a particular wave band of receiver operation is indicated.

5 2. In a multi-band radio receiver having a wave band change switch, a resonance indicator visible from the front of said receiver, a source of illumination for said indicator, a varicolored translucent member movably positioned in front of
10 said illumination source, and means operable by said band change switch for moving said translucent member, whereby the color of the illumination on said resonance indicator indicates the wave band of receiver operation.

15 3. In a multi-band radio receiver having a wave band change switch, a front wall in said receiver having a sight opening therein, a light source, a resonance indicator having means for projecting light from said source toward said sight
20 opening, a translucent varicolored member movably positioned between said indicator and said opening, and means operable by said band change switch for moving said translucent member, whereby the color of the projected light indicates
25 the wave band of receiver operation.

4. In a multi-band radio receiver having a wave band change switch, a light source illuminating a field, a resonance indicator positioned in front of said light source and casting a shadow on
30 said field, and means operable by said band change switch for varying the color of said illuminated field, whereby a particular wave band of receiver operation is indicated.

5. In a multi-band radio receiver having a wave band change switch, a light source illuminating a field, a resonance indicator having an indicating means visible against said field, and means operable by said band change switch for varying the color of said illuminated field, whereby a
40 particular band of receiver operation is indicated.

6. In a multi-band radio receiver having a wave band change switch, a dial, a plurality of different colored tuning scales on said dial, a light source illuminating a field, a resonance indicator
45 having an indicating means visible against said field, and means operable by said band change switch for varying the color of said illuminated

field to correspond with the color of any of said tuning scales, whereby the particular wave band of receiver operation is indicated.

7. In a multi-band radio receiver having a wave band change switch, a dial having a sight opening therein, a plurality of different colored tuning scales on said dial, a light source illuminating a field visible at said sight opening, a resonance indicator positioned behind said sight opening and having an indicating means visible against
10 said field, and means operable by said band change switch for varying the color of said illuminating field to correspond with the color of any of said scales, whereby the particular band of receiver operation is indicated. 15

8. In a multi-band radio receiver having a wave band change switch, a dial having a sight opening therein, a plurality of different colored tuning scales on said dial, an illuminated resonance indicator positioned in back of said sight opening, a translucent member movably supported
20 between said resonance indicator and said sight opening, colored areas on said translucent member corresponding with the respective colors of said dial scales, and means operable by said
25 band change switch to move said translucent member and change the color of illumination, whereby the particular band of receiver operation is indicated.

9. In a multi-band radio receiver having a wave band change switch, a translucent dial, an opaque backing on said dial and having a sight opening therein, a plurality of different colored tuning scales on said dial, an illuminated resonance indicator positioned in back of said sight opening,
30 a translucent disc rotatably supported between said resonance indicator and said sight opening, colored areas on said disc corresponding with the respective colors of said dial scales and being singly visible through said sight opening, and
35 means operable by said band change switch to rotate said disc and present another colored area to view, whereby the particular band of receiver operation is indicated.

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