

[54] RADIO HOUSING AND EXPANDABLE CHASSIS WITH INTEGRAL KEYPAD AND ACOUSTIC SPEAKER SEAL

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[57] ABSTRACT

An expandable chassis includes a four sided frame with a central opening to receive a plate or "shield" which is allowed to move within the frame between two predetermined positions. Protuberances on the shield contact the frame and limit its inward movement while outward movement is limited by a spring clip on the shield that snaps into an aperture in the frame. Tabs on the frame support integrally formed spring fingers on the shield which tend to force the shield outward. A membrane switch contact assembly and a speaker are respectively attached to the inside and outside surfaces of the shield. By compressing the shield partially into the frame, the chassis assembly slides into a molded plastic housing. A rubber key actuator pad on the outside of the housing has a plurality of keys each having a protrusion or "actuator" that extends partially into an actuator hole in the housing. When the key is depressed, the actuator depresses and activates one of the switches in the membrane switch contact assembly. A plurality of speaker apertures extend through the housing, the membrane switch contact assembly, and the plate. An acoustic seal is formed between the plate and the housing because the spring fingers force the shield towards the housing until the membrane contacts the housing's inner wall. When the chassis is removed from the housing, testing and repair are facilitated because the keypad switches and speaker remain attached to and electrically connected to the chassis.

31 Claims, 3 Drawing Figures

