BP-700
RF Exposure Data

The BP-700 beltpack transceiver is worn on the belt on the user's side or back. The transmit antenna extends downward from the waist, away from the head. The antenna normally is held away from the body by the thickness of the plastic case for the unit. The six electronic PCBs in the BP-700 all have large areas of copper, with the majority having one side entirely given over to a full copper plane. The five primary PCBs are also bonded together with metal spacers and grounding straps into one volume, whose dimensions are approximately 1/4 wave over the operating frequency range. As a result, the PCBs are the primary ground plane for the BP-700 transmit antenna, and relatively little energy appears on the headset cable.

The headset cable itself is at least 45" long, with the first 12 to 15" routed downwards from the waist before bending upwards again. Due to the cable being more than 1.5 wavelengths long and the 180 degree bend, only a small amount of the energy propagates up the cable to the head.

The nominal power output of the BP-700 is 70 mw, with a maximum variation of +/- 1.5 dB. Therefore the maximum power output is less than 100 mw. For a small person weighing only 50 kg, the maximum exposure would be less that 2 mw/kg even if no RF power is radiated externally. The BP-700 transmitter is also normally operated in the PTT mode, with an intermittent transmission, typically with a duty cycle of less than 30%.

From this information, it is concluded that the BP-700 is well inside the established RF exposure guidelines. In addition, Table 2 of Appendix A to OET Bulletin 65 indicates that for the applicable subparts of Part 74, no evaluation is required.

As a precaution, it is requested that the following statement be added under Item 14 of FCC For 731:

"This device and its antenna must not be co-located or operated in conjunction with any other antenna or transmitter. End-users must be provided with specific operating instructions for satisfying RF exposure compliance."