APPLIED WIRELESS ID

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Technical Reference

LR-2000 Reader in ADA Application – Tags on Wheelchairs

Change History

Version	Date	Author	Comments
1.0	02 July 2009	L. Hickcox	First release.

The Americans with Disabilities Act requires public accommodations and services that are operated by private entities to make access possible for individuals who are not able to use common facilities. One application is for people in wheelchairs – to provide access to mechanically actuated door and elevator entrances, to track the movement or location of wheelchairs, and to trigger a "wandering patient" alarm.

Tag: Attach the MT-UHF-0-0 metal-mount tag on the side of the wheelchair that faces the reader as the wheelchair passes the reader. Ideal height of the tag above the floor is around 4 feet or 4-1/2 feet. The MT tag may be fastened to a side-member of the wheelchair's frame, or to a side-bag, by screws (non-metal screws are ideal), or pop-rivets, or cable ties, or tape at the ends of the tag, or the tag's own adhesive. Vertical orientation of the tag is ideal. After fastening the tag, insert the screw-hole plugs.

Reader: Mount the LR-2000-B-U reader directly on the wall or on other structure at the side of the lane in which the wheelchairs will move. The reader should be at the same height above the floor as the MT tags. The tags and reader should face each other and be about parallel to each other at the reading area.

Mounting : To mount the reader on a pedestal where the reader must be aimed at the tags' reading area, use AWID's LR-MB-0-0 adjustable-head bracket, or a similar camera-mount-type bracket with adjustable head.

To mount the 8-inch-square LR-2000 reader on a wall or other surface that is parallel to the tags on the wheelchairs at the reading area, make a mounting adapter. This may be a square plate of clear plastic, about 12 inches square. Use two ¼"-20 flat-head or round-head screws to match countersunk or recessed holes that are drilled through the plastic plate. Screw holes must align with the two capture-nuts on the reader's aluminum back-plate. After attaching the reader to the adapter plate, fasten the plastic plate's outer edges to the wall.

Other mounting techniques may use an adapter for a single-gang electrical utility box on the wall, for the reader's cable junction; or The Housing Company's Model PCH196 Lexan housing, with the reader mounted inside the housing.

Use the PCH196 housing also if the reader is mounted outdoors and exposed directly to rain or snow, or if the reader faces bright sunlight in a hot environment.

Lane: The lane for passage of the wheelchairs should allow for a horizontal distance between the reader and the tags of around 4 feet to 10 feet at the reading area. The reading area is where the tag and the reader face each other and are about parallel to each other. In the reading area there is sufficient diameter to the reader's effective RF field so that reading is robust as the wheelchair passes the reader. If necessary, mark the lane on the floor so that users are guided into the proper distance between the tag and the reader.

Line-of-Sight: The tags and reader need a clear space between them at the reading area. The tag on a wheelchair should not be covered by clothing, a blanket, the user's arm, etc.

Special Cases: If the wheelchair must be monitored in two directions at the reader, fasten a second MT tag to the other side of the wheelchair. AWID can provide tag sets in which pairs of tags have the same code.

Motor-driven wheelchairs will not interfere with the tag and read function.

Reference: Technical Reference "LR-2000 – Material List".