

## User Instructions

# IMPORTANT SAFETY INSTRUCTIONS

### **WARNING**

## TO REDUCE THE RISK OF SEVERE INJURY OR DEATH TO PERSONS:

1. READ AND FOLLOW ALL INSTRUCTIONS.
2. Never let children operate or play with door controls. Keep the remote control (where provided) away from children.
3. Personnel should keep away from a door in motion and keep the moving door in sight until it is completely closed or opened. **NO ONE SHOULD CROSS THE PATH OF A MOVING DOOR.**
4. Test the door's safety features at least once a month. After adjusting either the force or the limit of travel, retest the door operator's safety features. Failure to adjust the operator properly may cause severe injury or death.
5. For products having a manual release, if possible, use the manual release only when the door is closed. Use caution when using this release with the door open. Weak or broken springs may cause the door to fall rapidly, causing severe injury or death.
6. **KEEP DOORS PROPERLY OPERATING AND BALANCED.** See Door Manufacturer's Owner Manual. An improperly operating or balanced door could cause severe injury or death. Have trained door systems technician make repairs to cables, spring assemblies and other hardware.
7. **SAVE THESE INSTRUCTIONS.**

### **NOTICE**

- The installer should perform a demonstration of the operator and it's accessories (ex: push-button station, radio control), external entrapment protection device and manual release for the end-user.

## **1 Operation Instructions**

Door Operation Instructions	Refer to Installation Instructions
<ul style="list-style-type: none"> <li>• <b>Disconnect Mechanism:</b></li> </ul>	Section 5, p.11.
<ul style="list-style-type: none"> <li>• <b>Push-Button Wall Station:</b> - Use Open/Close or Stop on the push-button wall station</li> </ul>	Section 8.3.1, p.25.
<ul style="list-style-type: none"> <li>• <b>Radio Transmitter:</b></li> </ul>	Section 9, p. 28.

## 2 Quick Fix Instructions

Table 8 - Basic Troubleshooting Guide ~ from floor level

Symptom	Possible Cause	Fix Problem
Door doesn't respond to any command	<ul style="list-style-type: none"> <li>◆ Chain hoist is in engaged position, if applicable. (LED D9 is OFF)</li> <li>◆ Disconnect chain is in engaged position, if applicable. (LED D9 is OFF)</li> <li>◆ "Stop" button is stuck. (LED D9 is OFF)</li> <li>◆ No power supply. (LED D2 is OFF)</li> </ul>	<ul style="list-style-type: none"> <li>➔ Return the chain to its neutral position (electrical mode). Refer to p.Error: Reference source not found for further details.</li> <li>➔ Release tension from the disconnect chain and secure the chain keeper. Refer to p.Error: Reference source not found for further details.</li> <li>➔ Press and release the "Stop" button on the wall station several times.</li> <li>➔ Verify the incoming power line from the main breaker, making sure it has not tripped or blown a fuse.</li> </ul>
Door closes only on constant pressure	<ul style="list-style-type: none"> <li>◆ Photo cells are not properly aligned or are obstructed. (LED D4 is ON)</li> <li>◆ Loop is obstructed (presence of metal). (LED D10 is ON)</li> </ul>	<ul style="list-style-type: none"> <li>➔ Clear the obstruction or re-align photo cells.</li> <li>➔ Clear the obstruction.</li> </ul>
When pressing "Open" button, door opens ~1-2 ft, then stops and reverses	<ul style="list-style-type: none"> <li>◆ Mechanical door lock is engaged.</li> <li>◆ Verify if the rubber seal at the bottom of the door is frozen to the ground (winter time).</li> </ul>	<ul style="list-style-type: none"> <li>➔ Release the door lock.</li> <li>➔ Clear ice and free the rubber seal at the bottom of the door.</li> </ul>
Door doesn't respond to any radio command	<ul style="list-style-type: none"> <li>◆ No power supply (transmitter light is OFF)</li> <li>◆ Poor radio control range.</li> <li>◆ Photo cells are not properly aligned or are obstructed. (LED D4 is ON)</li> </ul>	<ul style="list-style-type: none"> <li>➔ Replace the transmitter's battery.</li> <li>➔ Bring the radio transmitter closer to the operator.</li> <li>➔ Clear the obstruction or re-align photo cells.</li> </ul>
Timer to Close doesn't close the door	<ul style="list-style-type: none"> <li>◆ Timer to Close has been suspended accidentally for ONE cycle.</li> </ul>	<ul style="list-style-type: none"> <li>➔ Timer to Close will return to normal after door have been fully closed. Refer to p.26 for further details.</li> </ul>
Timer to Close closes the door after being suspended	<ul style="list-style-type: none"> <li>◆ Timer to Close has been reactivated accidentally.</li> </ul>	<ul style="list-style-type: none"> <li>➔ To suspend the Timer to Close, close door completely. Then press the "Stop" button 3 times and then press the "Close" button 3 times. Refer to p.26 for further details.</li> </ul>

## Maintenance Instructions

# IMPORTANT SAFETY INSTRUCTIONS

### **WARNING**

## TO REDUCE THE RISK OF SEVERE INJURY OR DEATH TO PERSONS:

- Inspections, service and repairs should be performed anytime a malfunction is observed or suspected.
- Only qualified persons should perform maintenance on a door operator and all safety precautions should be taken into consideration.
- When servicing, always disconnect operator from main power supply.
- **KEEP DOORS PROPERLY OPERATED AND BALANCED.**
- See Door Manufacturer's Owner Manual. An improperly operated or balanced door can cause severe injury or death. Have qualified door system technicians perform repairs to cables, spring assemblies and other hardware.

## 1 Preventative Maintenance Schedule

### 1.1 Mechanical Inspection

The door area should always be kept clear of dirt, rocks or any other substances in order to insure proper operation. Maintenance of the door operator should be performed according to the schedule in Table 9 and Table 10.

Table 9 - Mechanical Inspection Schedule (Part 1)

Time Frame	Inspection
Every Month	<ul style="list-style-type: none"> <li>• Test the door's safety features.</li> <li>• Verify the brake function (if applicable).</li> <li>• After adjusting either the clutch or the limit's travel, retest the operator's safety features.</li> <li>• Verify gear reducer's oil level (if applicable).</li> </ul>
Every 3 Months	<ul style="list-style-type: none"> <li>• Verify and adjust the clutch if necessary.</li> </ul>
Every 6 Months	<ul style="list-style-type: none"> <li>• Lubricate all moving parts. Bushings are oil impregnated and are lubricated for life.</li> <li>• Verify that all mechanical parts function properly.</li> <li>• Inspect the V-belt and adjust or replace if necessary.</li> <li>• Manually operate the door. If the door does not open or close freely, correct the cause of the malfunction.</li> </ul>

Table 10 - Mechanical Inspection Schedule (Part 2)

Time Frame	Inspection
Once a Year	<ul style="list-style-type: none"> <li>• Run the operator a few cycles:               <ul style="list-style-type: none"> <li>◦ Make sure that the door rollers are rolling smoothly on the track.</li> <li>◦ Listen to the motor: The motor should hum quietly and smoothly.</li> <li>◦ Verify that the limits operate quietly and smoothly: investigate any unusual noise.</li> </ul> </li> <li>• Verify that the mounting bolts are holding the unit securely.</li> <li>• Inspect the unit for evidence of corrosion.</li> <li>• Change the gear reducer's oil, at the very least, after every <b>2500 hours</b> of operation or once a year (if applicable).</li> </ul>

## 1.2 Electrical Inspection

It is recommended that the electrical maintenance inspections be performed at the same intervals as the mechanical maintenance inspections.

Table 11 - Electrical Inspection

Time Frame	Inspection
Every Month	<ul style="list-style-type: none"> <li>• Inspect the unit for evidence of corrosion on electrical wires and connectors.</li> <li>• Inspect the wiring compartment and remove any dirt from the control units.</li> <li>• Verify all the grounding wires and terminals for corrosion. Be particularly careful to verify the ground wires.</li> <li>• Verify the terminal strips to insure that all the screws are tightened.</li> <li>• Verify that the pneumatic edge or other entrapment protection devices installed on the operator are fully operational.</li> <li>• Verify the voltage at the input terminals while the operator is running. The voltage must not drop more than 10% momentarily. If the voltage drop is too deep when running, the relays may chatter and the contact points will wear prematurely and may eventually seize. Verify the power terminals for corrosion.</li> <li>• Verify the current consumption of the unit with an amp-meter. The current value should be consistent with the nameplate specifications. Investigate any anomaly.</li> </ul>

## 1.3 Band Brake Maintenance

### WARNING

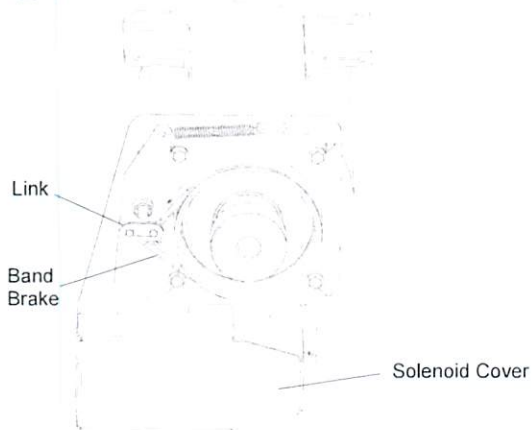
To reduce the risk of SEVERE INJURY or DEATH to persons:

- Be sure that the main power is OFF before performing any changes on the operator.

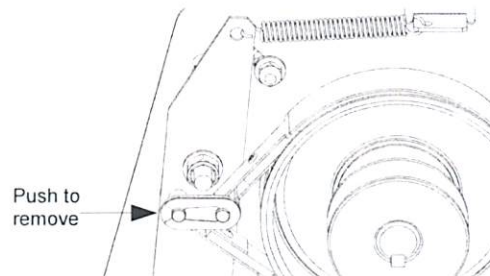
### 1.3.1 Changing a Brake Band

The brake band is preformed at the factory. Please insert the brake band carefully around the brake drum.

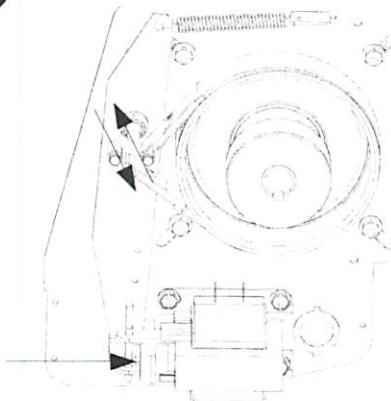
#### 1 Remove solenoid cover



#### 2 Remove link and used band brake

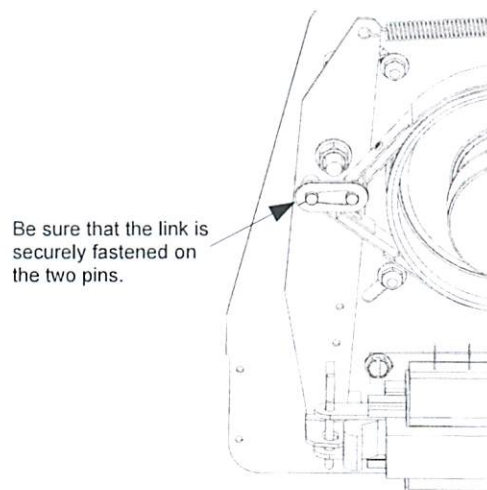


#### 3 Replace band brake



Push solenoid plunger to reduce tension when removing or installing the band brake.

#### 4 Place the link

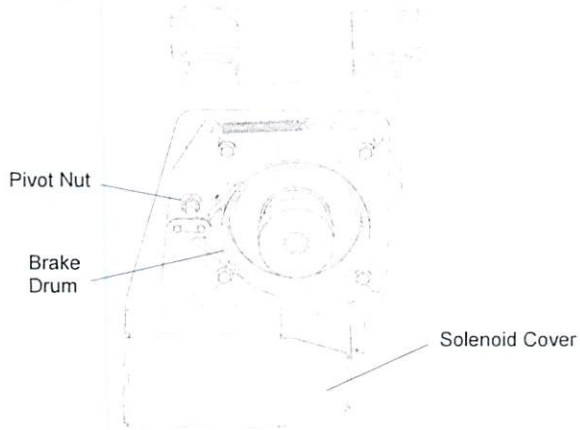


#### 5 See brake adjustment on next page

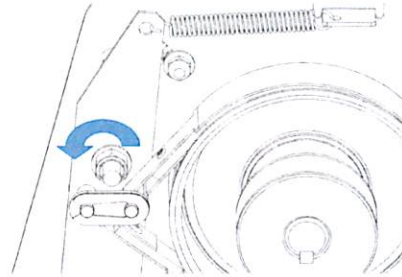
### 1.3.2 Brake Adjustment

The brake is factory set, however, after extensive use the brake may need to be adjusted.

#### 1 Remove solenoid cover



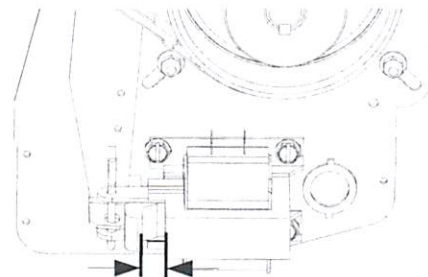
#### 2 Loosen pivot nut



#### 3 Adjust solenoid gap

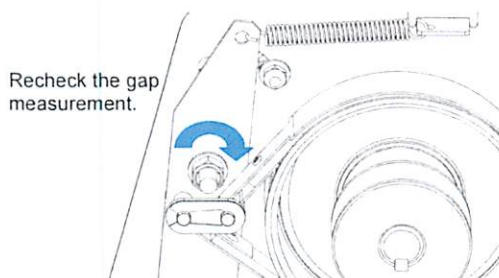


Pull the lever to adjust the gap between the plunger and solenoid body.



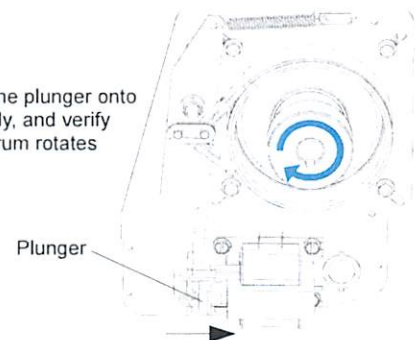
Gap must be between 1/4" and 3/8".

#### 4 Tighten pivot nut



#### 5 Check brake adjustment

Manually push the plunger onto the solenoid body, and verify that the brake drum rotates easily by hand.

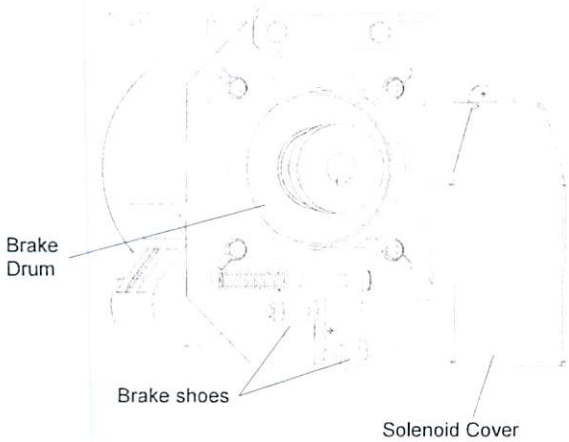


#### 6 Re-install solenoid cover

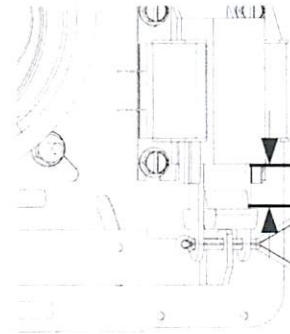
## 1.4 Drum Brake Adjustment (Premium Apartment Trolley or BRAKE014/015)

The brake is factory set, however, after extensive use the brake may need to be adjusted.

### 1 Remove solenoid cover

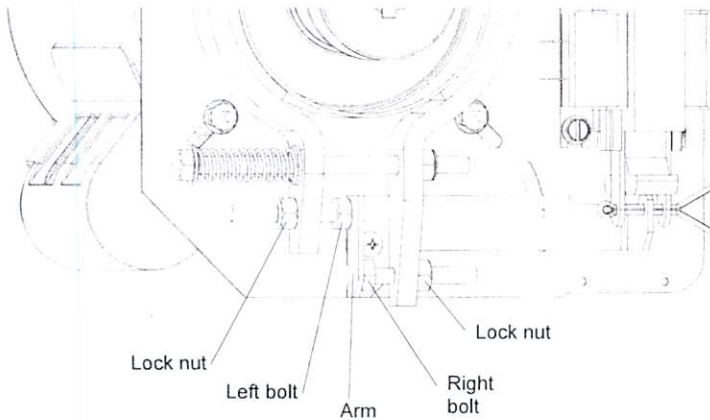


### 2 Adjust solenoid gap



Gap must be between 1/4" and 3/8".

### 3 Adjust the right and left holding bolt



- A) Set the proper gap on the solenoid and hold it with one hand.
- B) Adjust the right holding bolt until it touches the arm.
- C) Adjust the left holding bolt until it touches the arm.
- D) Manually push the plunger onto the solenoid body, and verify the gap between the brake shoes and the brake drum. If the gap is not the same on both side re-adjust the brake.
- E) Tighten the lock nut.

### 4 Check brake adjustment

Manually push the plunger onto the solenoid body, and verify that the brake drum rotates easily by hand.



### 5 Re-install solenoid cover

## 2 Troubleshooting Guide

The electronic control board LEDs help with wiring and troubleshooting diagnostics. Every LED indicates the status of the door. The electronic control board has a non-volatile memory and the LEDs return to their initial state after a power interruption.

**Easy Fix:** Before starting any intervention, verify the LED's monitoring status and refer to Table 3, p.23 for a proper diagnosis.

Table 12 - Troubleshooting Guide - Part 1

Symptom	Probable Cause	Suggested Action
Door doesn't respond to any command	<ul style="list-style-type: none"> <li>◆ "Stop" button is stuck. (LED D9 is OFF)</li> <li>◆ Control station not connected or wired correctly. (LED D9 is OFF)</li> <li>◆ No power supply. (LED D2 is OFF)</li> </ul>	<ul style="list-style-type: none"> <li>➔ Press and release any "Stop" button.</li> <li>➔ Verify and correct wiring.</li> <li>➔ Verify the incoming power line from the main breaker, making sure it has not tripped or blown a fuse.</li> </ul>
Door closes only on constant pressure	<ul style="list-style-type: none"> <li>◆ Selector switch set on C2 mode.</li> <li>◆ Photo cells are not properly aligned or are obstructed. (LED D4 is ON)</li> <li>◆ Faulty monitored photo cells or loose wires. (LED D4 is ON)</li> <li>◆ Reversing device not connected (Monitored photo cell as per UL325). (LED D4 is ON)</li> <li>◆ Loop is obstructed (Presence of metal). (LED D10 is ON)</li> </ul>	<ul style="list-style-type: none"> <li>➔ Set switch on B2 mode (B2=1).</li> <li>➔ Clear the obstruction or re-align.</li> <li>➔ Verify, tighten or replace.</li> <li>➔ Connect monitored photo cells as per UL325 for momentary contact to close.</li> <li>➔ Clear the obstruction.</li> </ul>
Operator not operating as expected	<ul style="list-style-type: none"> <li>◆ Selector switch is not set on the desired mode.</li> </ul>	<ul style="list-style-type: none"> <li>➔ Set switch on desired mode, refer to p.25 for further details.</li> </ul>
Timer to Close doesn't close the door	<ul style="list-style-type: none"> <li>◆ Timer to Close has been suspended accidentally for ONE cycle.</li> </ul>	<ul style="list-style-type: none"> <li>➔ Timer to Close will return to normal after door have been fully closed. Refer to p.26 for further details.</li> </ul>
Door doesn't respond to any radio command	<ul style="list-style-type: none"> <li>◆ No power supply (Transmitter light is OFF)</li> <li>◆ Transmitter is not properly programmed.</li> <li>◆ Photo cells are not properly aligned or are obstructed. (LED D4 is ON)</li> </ul>	<ul style="list-style-type: none"> <li>➔ Replace the transmitter's battery.</li> <li>➔ Reprogram transmitter.</li> <li>➔ Clear the obstruction or re-align.</li> </ul>
"Stop" button doesn't stop the door	<ul style="list-style-type: none"> <li>◆ Two 3-push button stations (or more) are connected in parallel.</li> </ul>	<ul style="list-style-type: none"> <li>➔ Verify and correct wiring. (Stop buttons in series, only Open &amp; Close in parallel).</li> </ul>



Table 13 - Troubleshooting Guide - Part 2

Symptom	Probable Cause	Suggested Action
Door doesn't respond to "Open" command, but does respond to "Close" command	<ul style="list-style-type: none"> <li>◆ Defective "Open" push-button or "Open" limit switch.</li> <li>◆ Loose wire on "Open" push-button or "Open" limit switch.</li> </ul>	<ul style="list-style-type: none"> <li>➔ Replace push-button or limit switch.</li> <li>➔ Verify and correct wiring.</li> </ul>
Door doesn't respond to "Close" command, but does respond to "Open" command	<ul style="list-style-type: none"> <li>◆ Defective "Open" push-button or "Open" limit switch.</li> <li>◆ Loose wire on "Open" push-button or "Open" limit switch.</li> </ul>	<ul style="list-style-type: none"> <li>➔ Replace push-button or limit switch.</li> <li>➔ Verify and correct wiring.</li> </ul>
Door reverses to fully open position after the door closes and reaches the floor	<ul style="list-style-type: none"> <li>◆ The "Close" limit switch is not being engaged by travelling cam.</li> <li>◆ An "Open" command is being given.</li> </ul>	<ul style="list-style-type: none"> <li>➔ The close limit switch needs to be adjusted properly at the end of travel.</li> <li>➔ Verify "Open" push-button or any opening device for short-circuit.</li> </ul>
Door doesn't open or close, motor hums or blows the main breaker	<ul style="list-style-type: none"> <li>◆ Mechanical door lock is engaged.</li> <li>◆ Door is jammed.</li> <li>◆ Brake doesn't release, if applicable.</li> <li>◆ Loose wire on solenoid brake, if applicable.</li> <li>◆ Faulty solenoid brake, if applicable.</li> </ul>	<ul style="list-style-type: none"> <li>➔ Release the door lock.</li> <li>➔ Verify manual operation of door.</li> <li>➔ Verify and adjust brake tension.</li> <li>➔ Verify and correct wiring.</li> <li>➔ Replace.</li> </ul>
Motor hums when "Open" or "Close" buttons are pressed	<ul style="list-style-type: none"> <li>◆ Loose motor wires.</li> <li>◆ Defective capacitor.</li> </ul>	<ul style="list-style-type: none"> <li>➔ Verify and correct wiring.</li> <li>➔ Replace.</li> </ul>
Motor fails to shut off at fully closed or fully opened positions	<ul style="list-style-type: none"> <li>◆ Defective limit switch.</li> <li>◆ Limit cams are not adjusted.</li> <li>◆ Limit drive chain is broken.</li> <li>◆ Loose sprocket on limit shaft.</li> <li>◆ Limit shaft does not rotate.</li> </ul>	<ul style="list-style-type: none"> <li>➔ Operate limit switch manually while door is moving. If door does not stop, replace the switch.</li> <li>➔ Verify and adjust.</li> <li>➔ Replace.</li> <li>➔ Tighten set screw.</li> <li>➔ Verify and replace accordingly.</li> </ul>
Motor turns but door does not move	<ul style="list-style-type: none"> <li>◆ Sprocket key is missing.</li> <li>◆ Drive chain is broken.</li> <li>◆ Clutch is slipping.</li> </ul>	<ul style="list-style-type: none"> <li>➔ Replace.</li> <li>➔ Replace.</li> <li>➔ Adjust clutch to proper tension.</li> </ul>
Limit switches do not hold their settings	<ul style="list-style-type: none"> <li>◆ Loose drive or limit chain.</li> <li>◆ Limit cam retaining bracket is not engaging in the slots of the limit cams.</li> <li>◆ Limit cams are binding on shaft threads.</li> <li>◆ Limit shaft has a slight "play".</li> </ul>	<ul style="list-style-type: none"> <li>➔ Adjust chain to proper tension.</li> <li>➔ Be sure it is engaged in slots of both cams.</li> <li>➔ Lubricate shaft threads. Limit cams should turn freely.</li> <li>➔ Verify and adjust.</li> </ul>
Poor radio range	<ul style="list-style-type: none"> <li>◆ Transmitter battery is low.</li> <li>◆ Radio antenna is not properly positioned.</li> <li>◆ Ambient radio, environmental or building structure interference.</li> </ul>	<ul style="list-style-type: none"> <li>➔ Verify and replace battery.</li> <li>➔ Make sure antenna cable is not bent. Cable should be passed through control box.</li> <li>➔ Check connection of plug-in antenna. If required add an external antenna (socket on receiver available).</li> </ul>