Wood-Mizer®

Remote Operation

Wireless Option **rev. A3.00**

Operator's Manual

⚠ **Safety is our #1 concern!** Read and understand all safety information and instructions before operating, setting up or maintaining this machine.

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SECTION 1   REMOTE OPERATION

1.1   Safety Precautions

IMPORTANT! This manual is provided as a supplement to the equipment manufacturer's manual. Refer to the manufacturer's manual before attempting to operate this equipment.

WARNING! Failure to follow the SAFETY PRECAUTIONS may result in radio equipment failure or serious personal injury.

CAUTION! Wood-Mizer will not bear responsibility for any unapproved changes or modifications made to the equipment.

Installation

CAUTION! PROVIDE A SAFETY CUTOFF SWITCH. If maintenance is required, the radio must be disconnected from power. USE PROPER WIRING. Loose or frayed wires can cause system failure, intermittent operation, machine damage, etc. DO NOT INSTALL IN HOT AREAS. This apparatus can be damaged by heat at a temperature of above 55°C (131°F).

Personal Safety

CAUTION! MAKE SURE THE EQUIPMENT AND SURROUNDING AREA IS CLEAR BEFORE OPERATING. Do not activate the remote system unless it is safe to do so.

CAUTION! TURN OFF THE RECEIVER POWER BEFORE WORKING ON THE SAWMILL. Always disconnect the remote system before doing any maintenance to prevent accidental operation of the machine.

Care

CAUTION! KEEP DRY. Do not clean the transmitter / receiver under high pressure. If water or other liquids get inside the transmitter battery or receiver compartment, immediately dry the unit. Remove the case and let the unit air dry.

⚠ **CAUTION!** CLEAN THE UNIT AFTER OPERATION. Remove any mud, dirt, concrete, etc. from the unit to prevent clogging of buttons, switches, etc. by using a damp cloth.

Maintenance / Welding

⚠ **CAUTION!** DISCONNECT THE RADIO RECEIVER BEFORE WELDING on the machine the receiver is connected to. Failure to disconnect will result in destruction of the radio receiver.

1.2   Control Panel Overview

The LT70DC sawmills can be equipped with the saw head remote control system (with a wireless control panel). This system allows you to fully control the saw head, i.e. engage and disengage the blade, the power feed and up/down operation, the blade guide arm and the debarker as well as to adjust the feed rate.

See Figure 1-1. Wireless control panel functions

Saw Head Forward

Blade Guide In/Out

Saw Head Backward

Blade Drive On/Off

Debarker On/Off

Saw Head Up

Emergency Stop
Button

Saw Head Down

Feed Rate Dial

Battery Charge Indicator
(Red)

Debarker In/Out

Panel Working Status
Indicator (Green)

See Figure 1-2. Wireless control panel functions (side panel)

START Pushbutton

Air-KEY (Electronic Starting Key)

1.3   Remote Operation

Set up the sawmill as instructed in your sawmill operator's manual.

Install the charged battery.

Refer to the provided Wireless System manufacturer's manual for detailed instructions for installing and charging the battery.

> **NOTE:** When the battery is fully charged, the panel should run for approximately 20 hours at 20°C.

To turn on the wireless control panel on any DC sawmill:

- **Make sure that all switches and joysticks are in the neutral or OFF position**. The feed rate dial should be set to the minimum value.

- Check that the switch located on the electric box is in the ON position;

> **NOTE:** When the green switch on the electric box is in the OFF position, the wireless control system is completely turned off and all sawmill functions can be activated from the standard control box on the saw head.

- Make sure the emergency stop button is released;

- Insert the electronic starting key (Air-KEY) into the corresponding socket located on the left side of the control panel. Turn the key right to the "1" position.

- Push and hold the START button on the left side of the control panel until the panel working status indicator comes on;

- Start the main engine using the key switch located on the sawmill control box (on the saw head);

- Load and clamp the log;

- Program the Accuset controller (or PLC-Setworks/SW-10) (*See Accuset, PLC-Setworks or SW-10 Operator's Manual*);

- Position the saw head at a height of the first cut;

- If necessary, turn the debarker on;

- Set the Blade Drive On/Off Switch in the "ON" position;

- Push the left joystick forward and hold it in this position. The blade drive will be turned on.

- Set the feed rate dial to the desired value;

- After making the cut, release the left joystick. The blade drive will be turned off and the main engine will still be running idle.

- Position the saw head for the next cut and set the Blade Drive On/Off switch in the "OFF" position and then in the "ON" position;

- Push the left joystick forward and hold it in this position. The blade drive will be turned on.

> **NOTE:** As soon as the joystick is released, the blade drive is disengaged. To engage the blade drive again, set the blade drive switch in the "OFF" position" and then in the "ON" position.

> **NOTE:** If none of the pushbuttons, switches or joysticks is used within 5 minutes after switching on the transmitter, the transmitter will turn off automatically.

When sawing is finished, switch the transmitter off by turning the electronic starting key to the "0" position. Remove the key and always store it in a safe place.

NOTE: The electronic starting key (Air-KEY) stores the receiver identification data. The transmitter cannot communicate with the receiver without this key. Do not lose the Air-KEY.

SECTION 2   DIAGNOSTICS AND MAINTENANCE

⚠ **IMPORTANT!** The description of the Wireless System diagnostics and maintenance procedures provided below is a supplement to the equipment manufacturer's manual. Before maintaining the Wireless System or performing its diagnostics, read the equipment manufacturer's manual.

⚠ **CAUTION!** DISCONNECT POWER SUPPLY FROM THE SAWMILL BEFORE SERVICING! Always turn the wireless control system off before performing any sawmill maintenance to prevent accidental start-up of the machine.

Before starting to perform any diagnostic operation, do as follows:

■ Bring the transmitting unit close to the receiving unit to avoid any radio interference and disturbances;

■ Determine if the existing problem lies with the wireless control system or with the sawmill. To do that, disconnect the wireless control system using the switch on the electric box (*See Section 1.3*) and try to activate the desired functions from the control box on the sawmill. If the problem persists, it is related to the sawmill control system (not to the wireless control system). If it does not exist, please refer to the diagnostic procedures described below.

2.1   Diagnostics - Transmitter

See Figure 2-1. Signal Lights
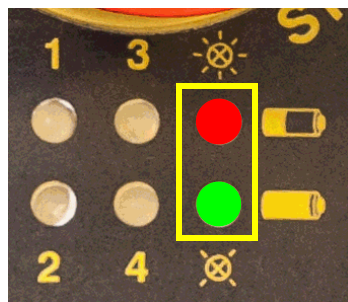
Signal	Signal Light Color	Possible Reason
The light is off.	🟢	The transmitter is turned off.
The light is steady on.	🟢	The transmitter and receiver do not communicate.

The LED blinks fast.	🟢	The transmitter and receiver communicate. It is possible to start the radio remote control by pressing the START pushbutton.
The LED blinks slowly (one blink per second).	🟢	It is possible to send commands.
The LED is off.	🔴	The transmitter works correctly.
The light is steady on.	🔴	At start-up, the STOP pushbutton is activated or damaged.
The light blinks twice per second.	🔴	At least one of the commands that were checked at start-up is enabled or damaged.
The LED blinks three times per second.	🔴	At start-up, the battery is flat.
The LED is steady on for 2s.	🔴	The transmitting unit does not work correctly.
The light blinks slowly (one blink per second).	🔴	The battery has a 2h run time.
The light blinks fast.	🔴	The battery has a 10min run time.

2.2 Diagnostics - Receiver

See Figure 2-2. Signal Lights

ENABLE LED
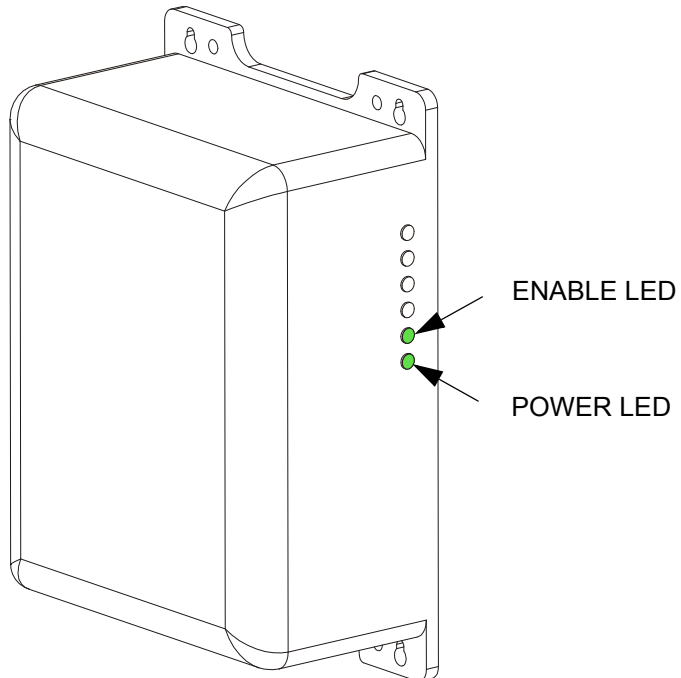
POWER LED

Signal	Signal Light Color	Possible Reason
The light is off.	POWER Light 🟢	The receiving unit is not powered.
The light is on.	POWER Light 🟢	The receiving unit is powered.
The LED blinks once every 5 seconds.	ENABLE Light 🟢	The transmitter and receiver do not communicate.
The LED blinks fast.	ENABLE Light 🟢	The unit is ready to receive commands sent by the transmitter.

2.3 Maintenance

2.3.1 Daily Maintenance Procedures

Before starting to work:

- Make sure that the symbols of all control elements on the transmitter panel are readable. Replace the transmitter panel if necessary.

- Check that the three plates on the transmitting unit are intact and readable.

- Make sure that the mechanical operation of the STOP pushbutton is correct.

During normal operation:

- Check that there are not any visible damages to the transmitting unit;

- Make sure that materials that could endanger the transmitter usage and safety (such as: sawdust, slabs, concrete, sand, dust, lime) are not accumulated on its surface.

After using the Wireless Option:

- Clean the transmitting unit: never use solvents or flammable/corrosive materials and do not use high-pressure water cleaners or steam cleaners;

- Store the transmitting unit in a clean and dry place.

2.3.2 Three-Month Maintenance Procedures

Every three months of operation:

- Remove any dust or debris from the transmitter. To do this, never use solvents or flammable/corrosive materials and high-pressure water cleaners or steam cleaners.

- Check that there are not any visible damages to the transmitting unit;

- Make sure that the electrical connections between the receiver and the electric box are not loose or damaged;

- Make sure that the receiver panel symbols are readable. Replace the receiver panel if necessary.

- Check that the plates located on the receiving unit are intact and readable.

2.3.3 Six-Month Maintenance Procedures

Every six months of operation:

■ Check if the commands sent by the transmitter are correctly performed by the sawmill.

■ Make sure that the SAFETY relay contact is open when the transmitter is not sending any commands. This is critical for the Wireless Option user's safety. It is necessary to keep a record (date, signature, comments) showing that this check has been carried out regularly. Keep the record together with other installation documents.

■ Make sure that the contacts of all receiver relays are functioning correctly. Check that each contact closes when the corresponding function is activated and opens when the function is disabled.

If any transmitter/receiver fault occurs, contact your Wood-Mizer Representative. All repairs of the equipment should be done by authorized persons only.

SECTION 3   SPECIFICATIONS

	Receiver	Transmitter
Size	287mm x 185mm x 105mm	258mm x 170mm x 126mm
Weight	2.2 kg	1.3 kg (w/battery)
Construction	High impact plastic, waterproof (IP65)	High impact plastic, waterproof
Input Power	12V-24V DC 1.2 A	7.2V DC
Battery Life	N/A	ca. 20 hours
Operating Temperature Range	-20°C to 70°C	-20°C to 55°C
Outputs	10A (max)	N/A
Antenna	Internal or external	Internal
Approvals	ISO 12100, 14121 IEC 60204-32	
Range	75-100m	

SECTION 4   PARTS LIST

4.1   How To Use The Parts List

- Use the index above to locate the assembly that contains the part you need.

- Go to the appropriate section and locate the part in the illustration.

- Use the number pointing to the part to locate the correct part number and description in the table.

- Parts shown indented under another part are included with that part.

- Parts marked with a diamond (♦) are only available in the assembly listed above the part.

See the sample table below. Sample Part #A01111 includes part F02222-2 and subassembly A03333. Subassembly A03333 includes part S04444-4 and subassembly K05555. The diamond (♦) indicates that S04444-4 is not available except in subassembly A03333. Subassembly K05555 includes parts M06666 and F07777-77. The diamond (♦) indicates M06666 is not available except in subassembly K05555.

4.2	**Sample Assembly**			
REF	DESCRIPTION (♦ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
	Sample Assembly, Complete (Includes All Indented Parts Below)	A01111	1	
1	Sample Part	F02222-22	1	
	Sample Subassembly (Includes All Indented Parts Below)	A03333	1	
2	Sample Part (♦ Indicates Part Is Only Available With A03333)	S04444-4	1	♦
	Sample Subassembly (Includes All Indented Parts Below)	K05555	1	
3	Sample Part (♦ Indicates Part Is Only Available With K05555)	M06666	2	♦
4	Sample Part	F07777-77	1	

To Order Parts:

- From Europe call our European Headquarters and Manufacturing Facility in Kolo, Poland at *+48-63-2626000*. From the continental U.S., call our toll-free Parts hotline at *1-800-448-7881.* Have your customer number, vehicle identification number, and part numbers ready when you call.

From other international locations, contact the Wood-Mizer distributor in your area for parts.

4.3   Wireless Control Kit, DC Sawmills

Wireless_001
097803_Manual
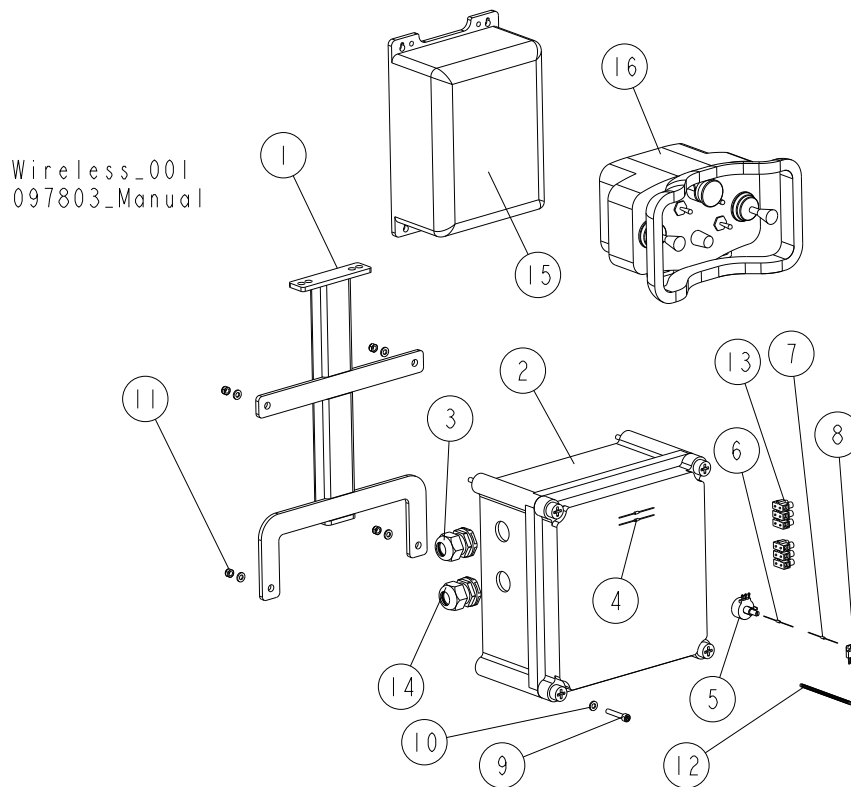
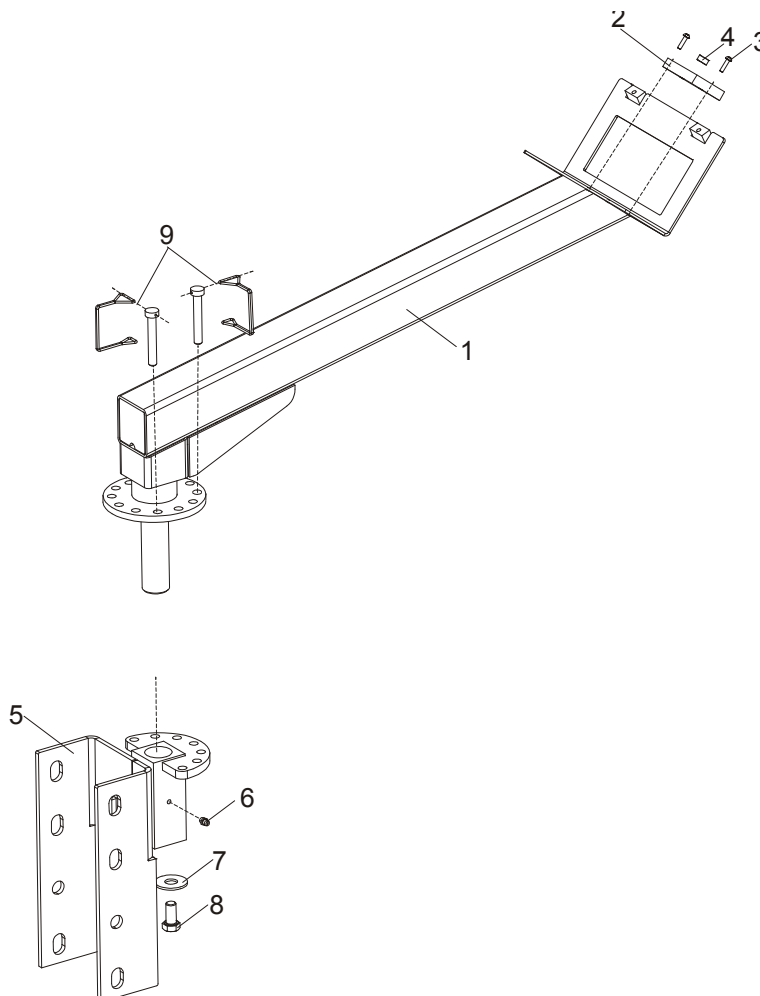| REF.	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
	WIRELESS CONTROL SYSTEM, DC SAWMILLS	**097803**	**1**	
1	BRACKET, WIRELESS JUNCTION BOX	096930-1	1	
	INTERFACE, AUTEC DC - COMPLETE	**515304**	**1**	
2	INTERFACE, AUTEC DC	516174	1	
3	GLAND, PG 21 CABLE	F81096-3	1	
4	DIODE, 1N4007	087497	1	
5	POTENTIOMETER, 2.5K 53C3-2500 KIT	505385	1	
6	RESISTOR, 600R/0.5W	505386	1	
7	RESISTOR, 180R/0.5W	506224	1	
8	STABILIZER, 12V L7812ACV	514017	1	
9	SCREW, M6 X 35-8.8 HEX SOCKET HEAD CAP ZINC	F81001-23	4	
10	WASHER, 6.4 FLAT ZINC C/R F05011-11	F81053-1	8	
11	NUT, M6-8-B HEX NYLON ZINC LOCK C/R F05010-69	F81031-2	4	
12	TERMINAL, HIx1.5 CORD-END	F81083-4	50	
13	FITTING, ELZ-4	F81086-1	2	
14	GLAND, Pg 21 CABLE	F81096-3	1	
	WIRELESS CONTROL KIT, DC AUTEC	**512965**	**1**	
15	TRANSMITTER, DC AUTEC	516134	1	
16	RECEIVER, DC AUTEC	516135	1	

4.4   CONTROL HANGER, AC WIRELESS (LES)
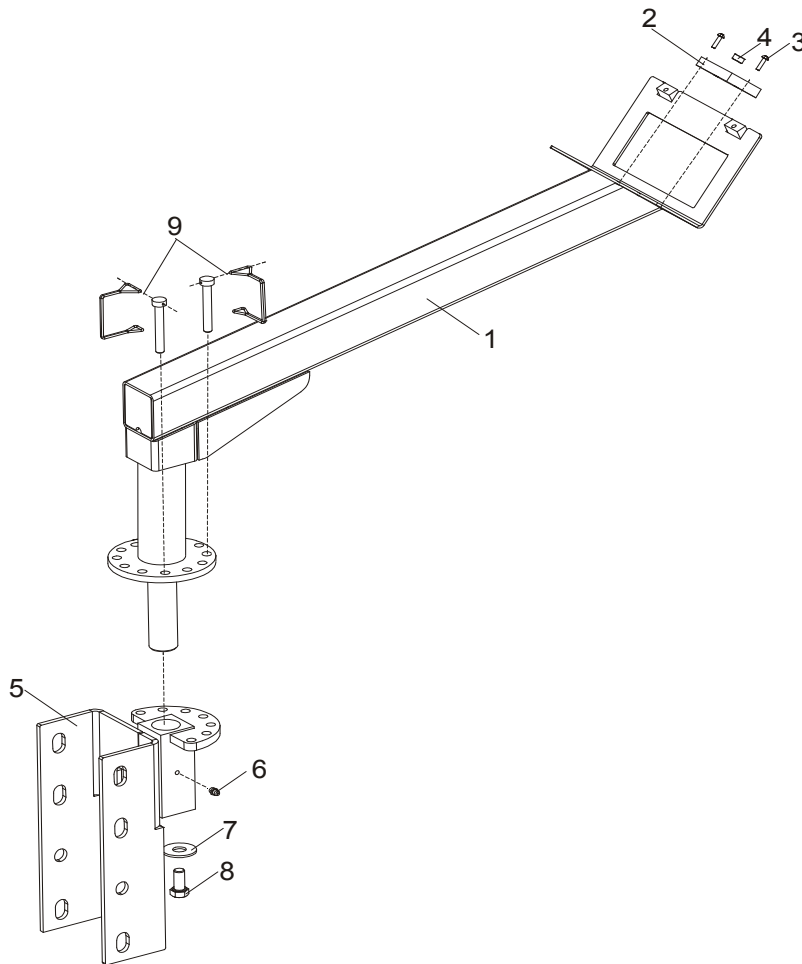
REF.	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	W-M PART #	QTY.	
	HANGER, AC WIRELESS CONTROL	501440-1	1	
1	HANGER WELDMENT, CONTROL	100458-1	1	
2	BLOCK, BORAMID	100222	1	
3	SCREW, M4X16 5.8-B CROSS RECESSED PAN HEAD	F81011-42	2	
4	MAGNET, ORANGE-PAINTED	S10519-1	1	
5	BRACKET, CONTROL HANGER	100445-1	1	
6	FITTING, M6 TYPE A GREASE	086280	1	
7	WASHER, 15 SPECIAL FLAT ZINC	F81057-3	1	
8	BOLT, M12X25-8.8 HEX HEAD FULL THREAD ZINC	F81004-31	1	
9	PIN, 3/8X2 1/4 SNAP	014151	2	

4.5 CONTROL HANGER, AC WIRELESS (LT40/70)

REF.	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	W-M PART #	QTY.	
	HANGER, AC WIRELESS CONTROL	100451	1	
1	HANGER WELDMENT, CONTROL	100458-1	1	
2	BLOCK, BORAMID	100222	1	
3	SCREW, M4X16 5.8-B CROSS RECESSED PAN HEAD	F81011-42	2	
4	MAGNET, ORANGE-PAINTED	S10519-1	1	
5	BRACKET, CONTROL HANGER	100445-1	1	
6	FITTING, M6 GREASE	086280	1	
7	WASHER, 15 SPECIAL FLAT ZINC	F81057-3	1	
8	BOLT, M12X25-8.8 HEX HEAD FULL THREAD ZINC	F81004-31	1	
9	PIN, 3/8X2 1/4 SNAP	014151	2	

4.6 WIRELESS CONTROL KIT, LT20 AC
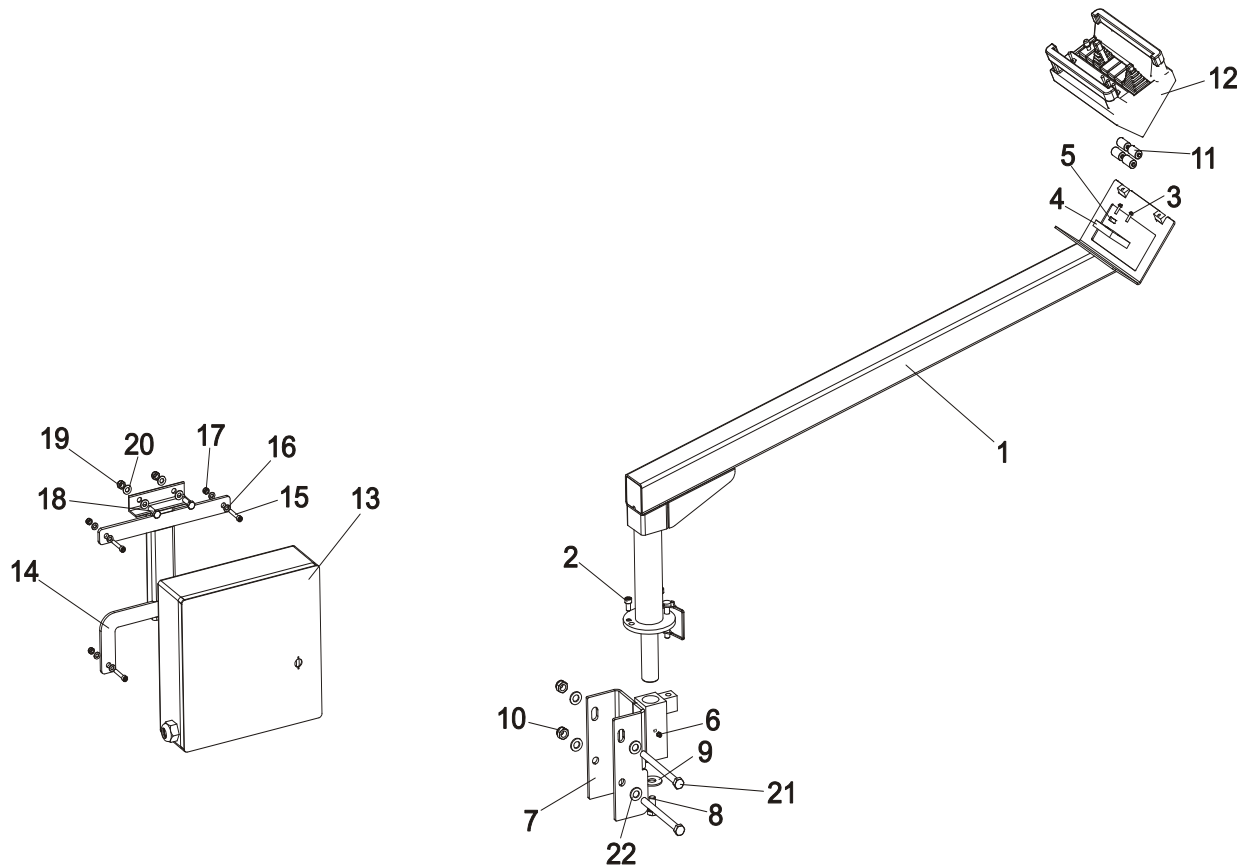
REF.	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	W-M PART#	QTY.	
	LT20 AC WIRELESS CONTROL SYSTEM	504354	1	
	HANGER, LT20 AC WIRELESS CONTROL	100200	1	
1	**HANGER, AC WIRELESS CONTROL**	501440-1	1	
2	BOLT M8X16-8.8, SOCKET HEAD	F81002-39	2	
3	SCREW M4X16 5,8-B FE/ZN5	F81011-42	2	
4	BLOCK, POLYAMIDE - WIRELESS	100222	1	
5	MAGNET, ORANGE PAINTED	S10519-1	1	
6	FITTING, M6 GREASE	086280	1	
7	BRACKET, CONTROL HANGER	501451-1	1	
8	BOLT, M12X25-8.8 HEX HEAD FULL THREAD ZINC	F81004-31	1	
9	WASHER, 15 SPECIAL FLAT ZINC-PLATED	F81057-3	1	
10	NUT, M12-8 HEX NYLON ZINC LOCK	F81034-2	2	
11	BATTERY, R14 ALKALINE	098174	4	
12	WIRELESS CONTROL PANEL, AC OMNEX	098917	1	
13	INTERFACE OMNEX AC LT20	504353	1	
14	BRACKET, WIRELESS JUNCTION BOX	100710-1	1	
15	SCREW, M6X35-8.8 HEX SOCKET HEAD CAP ZINC	F81001-23	2	
16	WASHER, 6.4 FLAT ZINC	F81053-1	4	
17	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	2	
18	BOLT, M8X25-8.8-B HEX HEAD FULL THREAD ZINC	F81002-5	2	
19	NUT, M8-8-B HEX NYLON ZINC LOCK	F81032-2	2	

20	WASHER, 8.4 FLAT ZINC	F81054-1	4	
21	BOLT, M12X140-8.8 HEX HEAD ZINC	F81004-35	2	
22	WASHER, 13 FLAT ZINC	F81056-1	4	