RANGE SYSTEMS™

Pro-Bot Rogue
4WD Moving Target
Operation and Maintenance Manual

5121 Winnetka Avenue North
Suite 225
New Hope, MN 55428

Tech Support:
Toll Free: 888.999.1217
Main Office: 763.533.9200
service@range-systems.com



Copyright 2026 Range Systems
All rights reserved. No part of this document may be reproduced or transmitted in any form or by any means without permission in writing from the publisher.

Part Number: YD5042 Revision 1.1 9/1/26

Table of Contents

Introduction ..... **Page 3**

Basic Components ..... **Page 4**

Features and Specifications ..... **Page 4**

Setup ..... **Page 5**

Operating the Pro-Bot Rogue ..... **Page 6**

Optional Accessories Installation and Operation ..... **Page 6**

Service/Maintenance ..... **Page 10**

Service/Replacement Parts List ..... **Page 11**



Introduction

The Pro-Bot Rogue is an all-terrain mover designed for improved range sites like Hogan's Alleys, UACs, MOUTs, combat villages, and sniper training areas. It offers easy battery replacement for extended use and supports various target mounts, including military E, F, IVAN, 3D Manikin Mike™, and law enforcement backers. With rugged, steel construction, durable design, and "plug and play" field-serviceable components, it's built for tough conditions.

Thank you for choosing the Range Systems Pro-Bot Rogue moving target system.

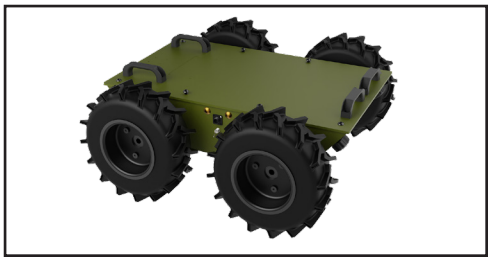
WARNING:

- Failure to follow the instructions in this manual may result in bodily harm to yourself or others.
- Turn the power OFF when not in use.
- Keep all personnel and obstructions clear of the target area.
- The target is not 100% waterproof or weatherproof. Prolonged exposure to the elements may result in damage to the unit, and any needed repairs may not be covered under warranty.
- Do not ride on the target. The platform is not designed to carry passengers.
- Due to the target's nature as a radio-controlled device, it is possible that interference from an outside source could cause unwanted movements.
- The target platform moves fast and is heavy. Avoid slamming the Rogue into people or stationary objects. This can cause bodily harm or substantial damage to a target or object.
- The target does not have towing or plowing capabilities. It can be severely damaged by pulling or pushing heavy objects.
- The target platform is considered stuck when at least one wheel is not turning. Continuing to apply power to the unit when stuck could damage the electronics. A stall condition will cause the motors and electronics to overheat, and could lead to permanent damage.
- Do not drive the target off jumps and ramps, drop the unit, or jump onto the unit. Any of these actions could cause the chassis to bend or damage the motors and motor shafts.

Basic Components of the System

Rogue

Versatile 4WD moving target system designed for flexible training.



Controller

Simple, user-friendly wireless controller that gives you precise, smooth speed control in both forward and reverse for realistic movement.



Charger

Dual bank charger designed to efficiently charge the Rogue battery packs.

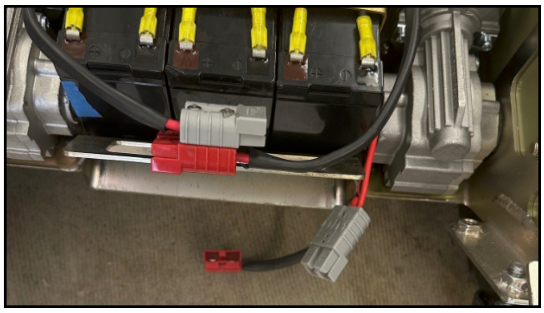


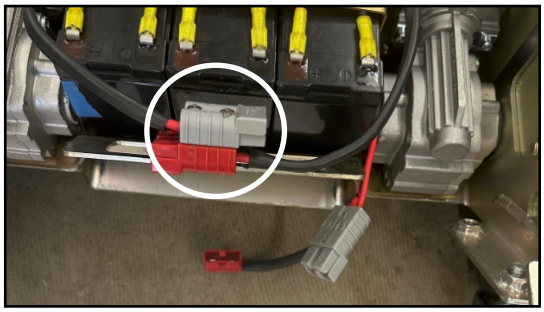
Features and Specifications

- Turns 360° on its own radius for lifelike maneuverability
- Wireless variable speed control
- Standard effective range: up to 300 meters, line of sight.
- Full Running Man speeds
- Larger tires (standard)
- Armored (standard)
- High ground clearance
- Swappable battery packs for extended runtime with optional part XA5359

Setup

Installing the battery pack

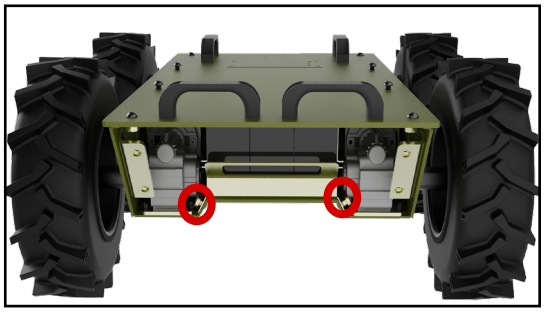




1. Ensure the power switch is in the OFF position.
2. Remove the covers by unscrewing the knobs at the back of the machine.
3. Slide battery pack into machine
4. Tighten knobs that hold the battery pack to the frame
5. Connect the large red connector to red and grey connector to grey. The connector will only mate in one direction to ensure polarity. To disengage, firmly pull the connectors apart.

CAUTION: Do not pull on the wires; only use the connector housing.

Note: This unit operates at 24V. The motors as well as the motor controller are rated at 24V. The combination of batteries supplies 24V. The unit will operate down to 14V (7V in each pack) before under-voltage shutdown occurs. However, at this low voltage, the unit will move much slower and operation is not recommended due to the possibility of battery deep discharge.



6. Once batteries are connected and in place, replace the back cover.

Installing Batteries in the handheld Target Controller

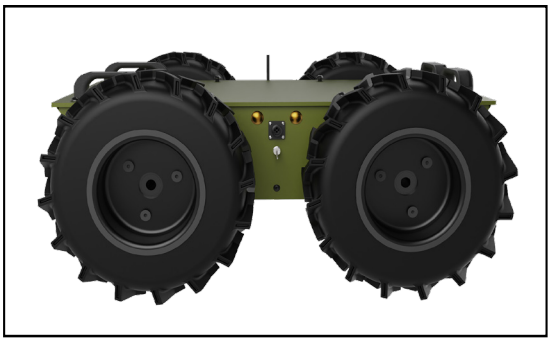
1. Slide the bottom cover towards the front of the unit.
2. Insert 8 AA alkaline batteries in the battery holder.
3. Re-insert the cover in the slots, then snap shut.

Note: Refer to the manual included with the transmitter for further information.

Powering the Controller (ALWAYS POWER ROBOT FIRST)

1. Slide the power switch to the ON position without touching the trigger or the steering wheel.
2. Verify battery voltage on the display. Replace batteries if “Low” condition is displayed.

Powering the Pro-Bot Rogue Unit ON (ALWAYS POWER ROBOT FIRST)



1. For safety purposes, the handheld target controller should be turned on AFTER the Rogue platform is powered to the ON position. Once the Controller is powered, you can turn the switch ON at the Rogue. It is very important that when powering ON the Rogue, you do not touch the controller’s trigger or steering wheel. Doing so could cause the Rogue to move without warning. When operating the power switch you should hear an audible mechanical click from inside the Rogue. This audible click comes from the internal power control relay and indicates that the relay is operating normally..
2. Turn Power OFF when not in use. Make sure you turn the power OFF at the controller first, then the Rogue can be powered OFF.

Note: Turn controller power off when not in use. You must turn the controller off before powering down the Rogue.

Operation of the Rogue:

Both the trigger and steering wheel have linear speed control. The further you pull the trigger or turn the wheel, the faster the unit will respond.

Straight:

To make the Rogue go straight, pull the trigger on the remote without turning the wheel. The further you pull the trigger, the faster the unit will move. Slight course corrections made via the steering wheel to keep the unit running straight are normal.

Turn:

Without pulling the trigger, rotate the steering wheel in either direction to turn the Rogue. The unit operates on the principle of skid steering, meaning the tires on opposite sides of the platform turn in opposite directions to make the turning motion. If you turn the wheel fully in one direction, the Rogue will spin in circles on its own diameter. CAUTION: Although fun, this results in increased tire wear.

Forward and Turn:

To make the unit go forward and turn gently, pull the trigger and rotate the wheel one direction or the other to initiate a turn. When pulling the trigger at full speed, the unit will not turn. You must reduce speed slightly to allow the unit to turn. This safety feature ensures the unit travels in a straight line at full speed.

Reverse:

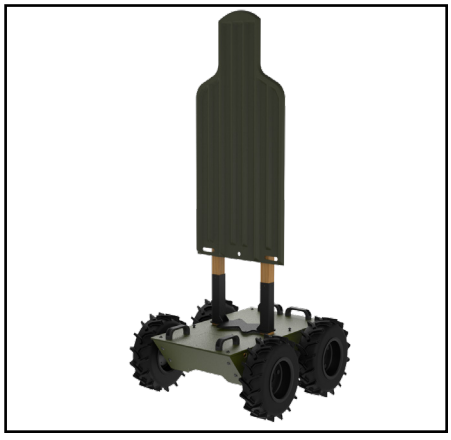
The unit operates the same in reverse. To make the unit move in reverse, push the trigger by extending your finger upwards.

Refer to the manual included with the transmitter for further information on the transmitter's operation.

Optional Accessories

Mounting the Pocket Holder:

1. Select an orientation for the holder if required.
2. Remove the nuts.
3. Place the holder over the studs on the top of the platform.
4. Re-install the nuts to securely fasten the holder in place.
5. Install the Mannequin target or 2x2 poles as desired.



Ensure that the target is a safe distance above the Rogue to avoid any stray rounds from impacting the platform.

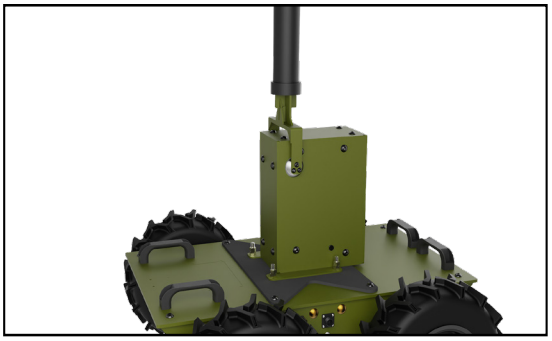
Since the Rogue platform is compatible with many different Range Systems target systems like the Pro-SIT Series tactical targets, special adapter brackets will be required. For those brackets, a separate instruction sheet will be included along with any necessary hardware.

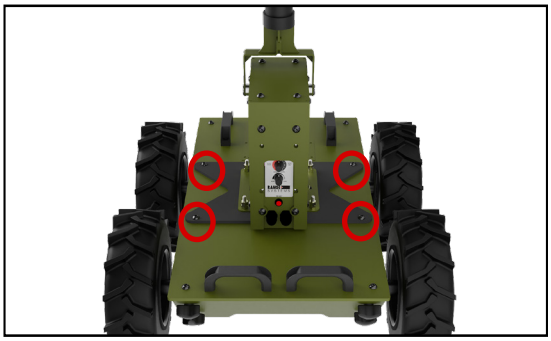
Mounting the Stop/Tilt:

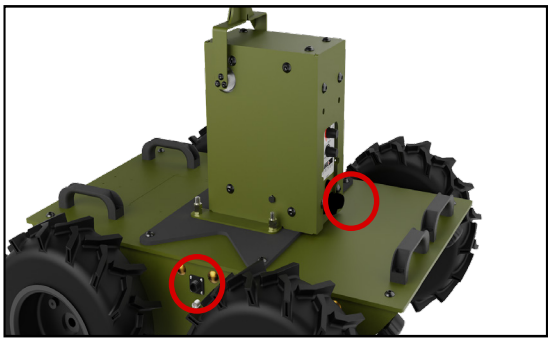
1. Position the Assembly on the Pro-Bot Rogue

- Position the completed Stop/Tilt mounting plate assembly on the top plate of the Pro-Bot Rogue.
- Before securing the assembly, verify the orientation of the controls. The controls must face the rear of the Pro-Bot Rogue. The rear of the Rogue is identified by the four removable tri-nuts.

2. Secure the Mounting Plate to the Rogue
   - With the controls facing the rear of the Rogue, secure the mounting plate directly to the top plate of the Pro-Bot Rogue using the provided hardware.
   - Verify that the mounting plate is seated properly and all mounting hardware is securely tightened.
3. Connect the Stop/Tilt
   - Using the supplied cable, connect the Stop/Tilt assembly to the Pro-Bot Rogue.
   - Plug the cable into the side port on the Rogue located on the same side as the power switch. Ensure the connector is fully seated and secured before operating the system





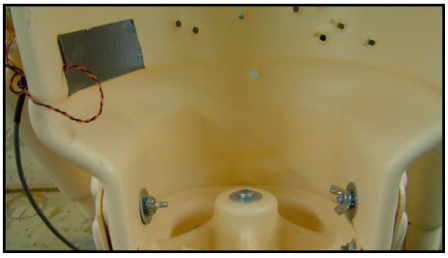


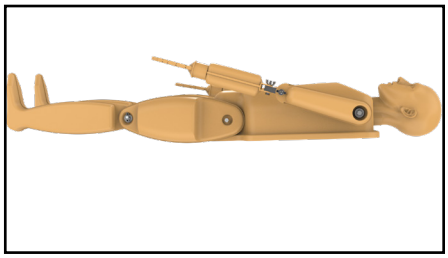
Note: The Stop/Tilt is auto-reset

Mannequin Assembly

The mannequin is shipped from the factory pre-wired and ready for assembly.

1. Inspect the Mannequin and Wiring
   - Before assembly, verify that the mannequin wiring and hit-detection sensor are properly installed.
   - If the hit-detection sensor has been replaced, install duct tape over the sensor as shown in the accompanying illustration.
   - Ensure the sensor wires are routed as shown and will not be pinched during assembly.
2. Install the Legs
   - Position the mannequin legs in the orientation shown in the accompanying illustration.
   - Secure the legs to the mannequin using the provided hardware.
3. Remove the Pole Mounting Screw
   - Locate the large mounting screw at the top of the pole and remove it before inserting the pole into the mannequin body.
   - Retain the screw and both washers for re-installation.

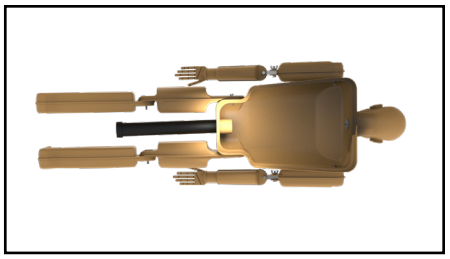


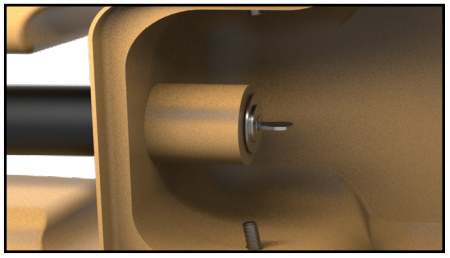


4. Identify the Washer Locations
   - Two washers are used with the pole mounting screw:

- The star washer is positioned between the top of the pole and the mannequin body, inside the mounting pocket.
- The large flat washer is positioned directly beneath the screw head.

5. Install and Align the Pole
   - Insert the pole into the mannequin body.
   - Align the slot on the pole with the taller keyed tab on the mounting bracket.
   - Verify that the mannequin and pole are properly oriented before securing the assembly.
6. Secure the Pole
   - With the pole properly aligned, reinstall the mounting screw.
   - Ensure the star washer and flat washer are positioned correctly, then tighten the screw to secure the pole and mannequin assembly.



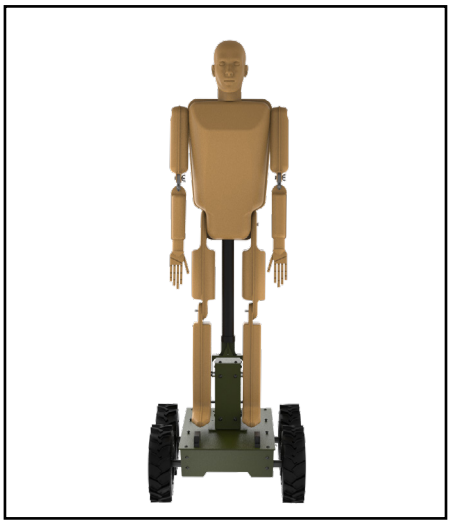


Verify that the pole is securely mounted and the mannequin is properly oriented before continuing with installation.

Operating the Stop/Tilt

Power-Up and Hit Detection
Upon power-up, the hit-detection system is disabled. To enable the system, press the red RESET button located on the back of the unit.

The hit-detection system has two operating modes:



Hit-Stop: The system detects and counts impacts. When the selected number of impacts is reached, the Rogue stops and the target tilt function is activated.

Hit-Pause: The system detects and counts impacts. When the selected number of impacts is reached, the Rogue pauses for 5 seconds. Once the pause has expired, the Rogue resumes motion as commanded.

Hit-Detection Controls
Two adjustment knobs are located on the unit:

- Top Knob — Mode and Hit Count
- Bottom Knob — Hit Sensitivity

IMPORTANT: Turn the Rogue power OFF before making any changes to either knob setting.

AFTER MAKING AN ADJUSTMENT, RESTORE POWER AND PRESS THE RED RESET BUTTON TO ENERGIZE THE POST.

Top Knob — Mode and Hit Count

- Position 0 — Disabled
  Hit detection is disabled. Pressing the RESET button with the knob set to 0 will cause unit to not sense hits.
- Positions 1–6 — Hit-Stop
  The selected number determines the number of impacts required to activate the system.
- Positions 7–11 — Hit-Pause
  These positions provide settings for 1–5 detected impacts before activating the 5-second pause.



Bottom Knob — Sensitivity

- Position 0 is the most sensitive setting. As the number is increased, a larger impact is required to trigger the sensor.
- The normal operating range is typically 4–8, depending on the caliber being used.

Recommended starting points:

- Setting 4 — 5.56mm
- Setting 6 — .40 S&W

Note: These settings may require adjustment based on ammunition and operating conditions.

Setting the Hit Sensitivity

Proper sensitivity requires balancing the system so it ignores bumps and vibrations caused by the Rogue while in motion but still reliably detects bullet impacts to the mannequin torso.

1. Turn the Rogue power OFF.
2. Set the system to Hit-Pause with 1-hit activation.
3. Select the desired starting sensitivity using the bottom knob.
4. Turn the Rogue power ON.
5. Press the red RESET button.
6. Drive the Rogue through its normal range of motion without firing at the mannequin.
7. If the Rogue stops and pauses during normal movement, the system is detecting false impacts.
8. Turn the power OFF and increase the number on the sensitivity knob to reduce sensitivity.
9. Restore power, press RESET, and repeat the test.
10. Continue adjusting until normal Rogue movement does not cause the system to activate.
11. Once false triggers have been eliminated, test the system with live fire to verify that actual bullet impacts are reliably detected.

IMPORTANT: Always turn the power OFF before changing the knob settings. Each time power is restored, press the RESET button to reactivate the hit-detection system.

Service

Rogue Receiver and Motor Controller:
The motor controller and receiver are housed under the center of the platform. There are no serviceable parts for either the motor controller or receiver, so there is no need to remove this cover.

Rogue Power Switch:
The power switch is a sealed toggle switch. To replace the switch in the event it becomes damaged: Disconnect the batteries.

1. Remove the 4 screws on the switch plate; pull the switch assembly out.
2. Note the position of the wires.
3. Remove the damaged switch and install the new switch into the plate.
4. Re-install the plate to the chassis using the 4 screws.

Maintenance

Storing and Transporting the Pro-Bot Rogue

With Rogue powered off, safely remove loose debris from the target and platform. Wipe down the platform if needed to prevent dirt and debris from entering the inside.

When not using the Rogue, store it indoors in a clean, dry space. The target is not 100% waterproof or weatherproof, and may be damaged by extended exposure to the elements.

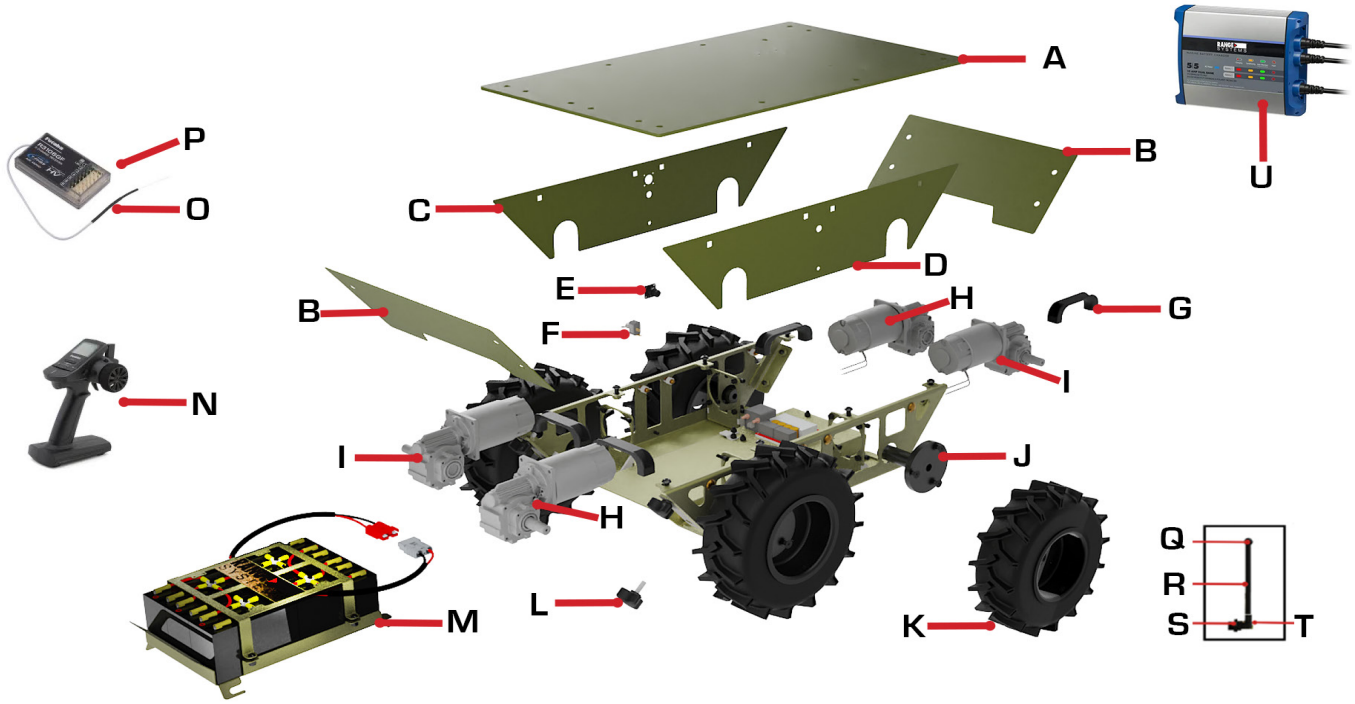
When transporting the Rogue, grab it by the edges, not by the target holder or other optional accessories as this can cause damage to the unit.

WARNING: Do not allow the batteries to become deeply discharged. Running the unit on low batteries can cause decreased battery life or even battery failure. If the batteries are low, charge the unit as soon as possible.

The motor control is housed under the center of the platform. There are no serviceable parts for either of them, so you do not need to remove this cover.

The receiving antenna is located at the center of the platform. Keep the antenna vertical at all times to ensure the best reception of the radio signals. Do not bend or damage the antenna; this will affect the platform's effective control range.

Recommended Replacement Parts



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
A	XA2152	Top Plate	1
B	XA1086	End Plate	2
C	XA5369	Side Plate-Left	1
D	XA5275	Side Plate-Right	1
E	HM0051	Port	1
F	HM0451	Toggle Switch	1
G	HM0705	Handle	4
H	HM1151	Left Motor	2
I	HM1152	Right Motor	2
J	XA2329	Wheel Hub	4
K	HC0040	Wheel	4
L	HM0489	Knob	1
M	XA5359	Battery Pack	1
N	HM0462	Controller and Receiver	1
O	HM1155	Receiver	1
P	HM1154	Velcro	1
Q	HM1153	Plastic Cap	1
R	HM0648-04	Tubing	1
S	MP1032	Nut	1
T	HM0613	Elbow	1
U	XA5118	Battery Charger	1