BLADE®
#1 BY DESIGN

180 QX HD

Instruction Manual
Bedienungsanleitung
Manuel d'utilisation
Manuale di Istruzioni

SAFE™

RTF
READY-TO-FLY

BNF™

Meaning of Special Language

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

NOTICE: Procedures, which if not properly followed, create a possibility of physical property damage AND a little or no possibility of injury.

CAUTION: Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.

WARNING: Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury.

⚠ **WARNING:** Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.

This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not use with incompatible components or alter this product in any way outside of the instructions provided by Horizon Hobby, LLC. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.

Age Recommendation: Not for children under 14 years. This is not a toy.

Safety Precautions and Warnings

- Always keep a safe distance in all directions around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control.
- Always operate your model in open spaces away from full-size vehicles, traffic and people.
- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always keep all chemicals, small parts and anything electrical out of the reach of children.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- Never place any portion of the model in your mouth as it could cause serious injury or even death.

- Never operate your model with low transmitter batteries.
- Always keep aircraft in sight and under control.
- Always move the throttle fully down at rotor strike.
- Always use fully charged batteries.
- Always keep transmitter powered on while aircraft is powered.
- Always remove batteries before disassembly
- Always keep moving parts clean.
- Always keep parts dry.
- Always let parts cool after use before touching.
- Always remove batteries after use.
- Never operate aircraft with damaged wiring.
- Never touch moving parts.

Table of Contents

Blade 180 QX HD Features	RTF	BNF
Airframe – *Blade*® 180 QX HD	Included	Included
Motors – 8.5mm Brushed	Installed	Installed
On-board Electronics – 5-in-1 mixer/ESCs/Gyro	Installed	Installed
Battery – 500mAh 1S 3.7V 25C Li-Po	Included	Included
Charger – 1S USB Li-Po Charger, 500 mAh, JST	Included	Included
Transmitter – MLP6DSM SAFE™ Transmitter	Included	Required

Blade 180 QX HD Specifications			
Length	13.98 in (355mm)	**Flying Weight**	3.35 oz (95 g)
Height	3.15 in (80mm)	*To register your product online,visit www.bladehelis.com*	
Propeller Diameter	5.35 in (136mm)		

Box Contents

- Blade 180 QX HD
- 720p Digital Video Camera with Still Capability
- 1S 3.7V 25C 500mAh Li-Po Battery
- 1S USB Li-Po Charger
- MLP6DSM SAFE Transmitter (RTF Only)
- 4 AA Batteries (RTF Only)
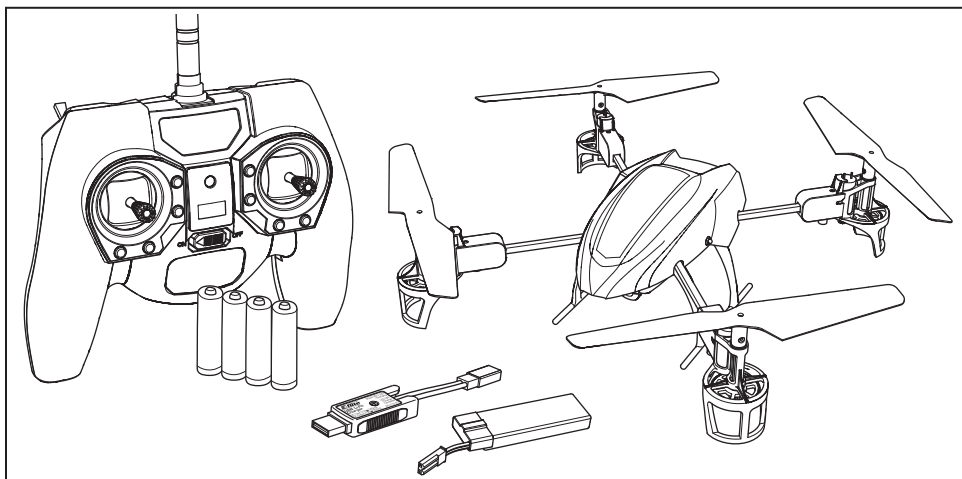
First Flight Preparation

- Remove and inspect contents
- Begin charging the flight battery
- Install the flight battery in the quadcopter (once it has been fully charged)
- Program your computer transmitter (BNF only)
- Bind your transmitter (BNF only)
- Familiarize yourself with the controls
- Find a suitable area for flying

Flying Checklist

- ❏ **Always turn the transmitter on first**
- ❏ Plug the flight battery into the lead from the 5-in-1 control unit
- ❏ Allow the 5-in-1 control unit to initialize and arm properly
- ❏ Fly the model
- ❏ Land the model
- ❏ Unplug the flight battery from the 5-in-1 control unit
- ❏ **Always turn the transmitter off last**

Charging Warnings

The Battery Charger (EFLC1010) included with your quadcopter has been designed to safely charge the Li-Po battery.

⚠ **CAUTION:** All instructions and warnings must be followed exactly. Mishandling of Li-Po batteries can result in a fire, personal injury and/or property damage.

- By handling, charging or using the included Li-Po battery, you assume all risks associated with lithium batteries.
- If at any time the battery begins to balloon or swell, discontinue use immediately. If charging or discharging, discontinue and disconnect. Continuing to use, charge or discharge a battery that is ballooning or swelling can result in fire.
- Always store the battery at room temperature in a dry area for best results.
- Always transport or temporarily store the battery in a temperature range of 40–120º F (5–49° C). Do not store battery or model in a car or direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.

- Always charge batteries away from flammable materials.
- Always inspect the battery before charging.
- Always disconnect the battery after charging, and let the charger cool between charges.
- Always constantly monitor the temperature of the battery pack while charging.
- ONLY USE A CHARGER SPECIFICALLY DESIGNED TO CHARGE LI-PO BATTERIES. Failure to charge the battery with a compatible charger may cause a fire resulting in personal injury and/or property damage.
- Never discharge Li-Po cells to below 3V under load.
- Never cover warning labels with hook and loop strips.
- Never leave charging batteries unattended.
- Never charge batteries outside recommended levels.
- Never charge damaged batteries.
- Never attempt to dismantle or alter the charger.
- Never allow minors to charge battery packs.
- Never charge batteries in extremely hot or cold places (recommended between 40–120° F or 5–49° C) or place in direct sunlight.
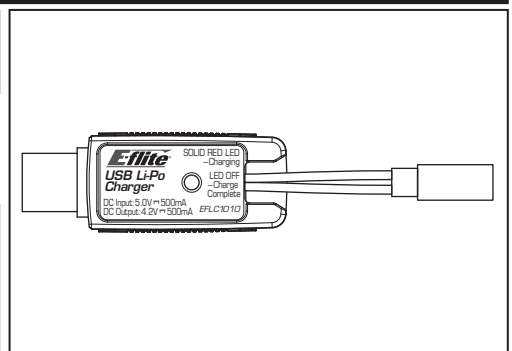
Battery Charging

NOTICE: Charge only batteries that are cool to the touch and are not damaged. Look at the battery to make sure it is not damaged e.g., swollen, bent, broken or punctured.

1. Insert the charger into a USB port.
2. Properly connect the battery to the charger lead.
3. Always disconnect the flight battery from the charger immediately upon completion of charging.

⚠ **CAUTION:** Only use chargers specifically designed to charge the included Li-Po battery. Failure to do so could result in fire, causing injury or property damage.

⚠ **CAUTION:** Never exceed the recommended charge rate.

LED Indications

When you make the connection successfully, the LED on the charger turns solid red, indicating charging has begun. Charging a fully discharged (not over-discharged) 500mAh battery takes approximately 60 minutes. The light goes out when the charge is complete.
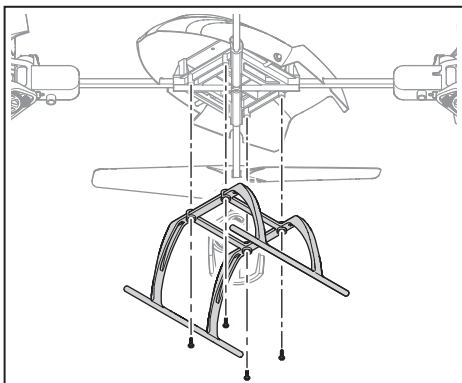
CHARGING (Solid Red)

MAX CHARGE (OFF)

⚠ **CAUTION:** Once charging is complete, immediately remove the battery. Never leave a battery connected to the charger.
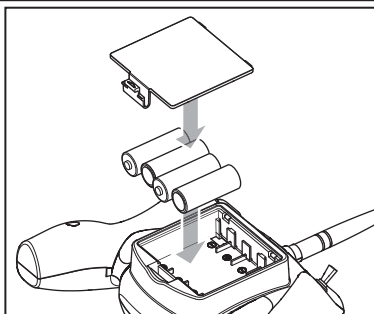
Installing the Landing Gear

Install the landing gear using the
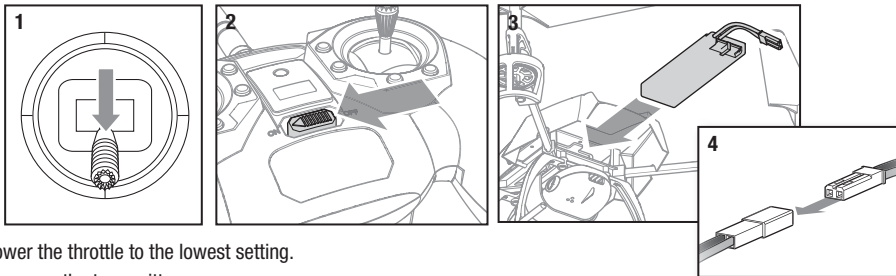four included screws.

Installing the Transmitter Batteries (RTF)

Replace the transmitter batteries when the power LED flashes and the
transmitter beeps.

Installing the Flight Battery

1. Lower the throttle to the lowest setting.

2. Power on the transmitter.

3. Install the battery by sliding it into the battery mounting slot below the 5-in-1 control unit. Slide the battery into the slots with the label facing upward so that the battery key molded into the battery end-cap comes in contact with the key on the battery slot.

4. Connect the battery cable to the 5-in-1 control unit.

5. Place the quadcopter on its skids on a flat surface and leave the aircraft still until the LED on the 5-in-1 control unit indicates one of the following flight modes:
   Solid blue: Stability, Low-angle mode
   Slow blue flashing: Stability, High-angle mode
   Solid red: Agility mode

If the LED is rapidly flashing blue, see the *Transmitter and Receiver Binding* section.

⚠ **CAUTION:** Always disconnect the Li-Po battery from the aircraft when not flying to avoid over-discharging the battery. Batteries discharged to a voltage lower than the lowest approved voltage may become damaged, resulting in loss of performance and potential fire when batteries are charged.

Transmitter and Receiver Binding

BNF

To bind or re-bind your quadcopter to your chosen transmitter, please follow the directions below.

General Binding Procedure

1. Disconnect the flight battery from the quadcopter.

2. Select a clean model memory on your transmitter (computer radios only).

3. Select Acro or Airplane model type on your transmitter.

4. Make sure all servo reversing is set to Normal on your transmitter.

5. Center all trims on your transmitter.

6. Power off the transmitter and move all switches to the 0 position. Move the throttle to the low/off position.

7. Connect the flight battery in the quadcopter. The blue LED on the 5-in-1 control unit flashes after 5 seconds.

8. Put the transmitter into bind mode while powering on the transmitter.

9. Release the bind button/switch after 2–3 seconds. The quadcopter is bound when the blue LED on the 5-in-1 control unit turns solid.

10. Disconnect the flight battery and power the transmitter off.

⚠ **CAUTION:** When using a Futaba® transmitter with a *Spektrum*™ *DSM2*®*/DSMX*® module, you must reverse the throttle channel and re-bind. Refer to your *Spektrum* module manual for binding and failsafe instructions. Refer to your Futaba transmitter manual for instructions on reversing the throttle channel.

RTF

Your RTF transmitter comes prebound to the model. If you need to re-bind, follow the directions below.

MLP6DSM Binding Procedure

1. Disconnect the flight battery from the quadcopter.

2. Center all trims on your transmitter.

3. Power off the transmitter and move the throttle stick to the down/off position.

4. Connect the flight battery in the quadcopter. The LED on the 5-in-1 control unit flashes after 5 seconds.

5. When the blue light is flashing, push in and hold down the left stick* while powering on the transmitter (you will hear a 'click').

6. Release the left stick. The transmitter will beep and the power LED will blink.

7. The quadcopter is bound when the LED on the 5-in-1 control unit is solid blue (not blinking).

8. Disconnect the flight battery and power the transmitter off.

* The trigger switch may also be used for the binding procedure.

If you encounter problems, obey binding instructions and refer to the troubleshooting guide for other instructions. If needed, contact the appropriate Horizon Product Support office. For a list of compatible DSM® transmitters, please visit *www.bindnfly.com*.

SAFE™ Technology

Revolutionary SAFE™ (Sensor Assisted Flight Envelope) technology uses an innovative combination of multi-axis sensors and software that allows model aircraft to know its position relative to the horizon. This spatial awareness is utilized to create a controlled flight envelope the aircraft can use to maintain a safe region of bank and pitch angles so you can fly more safely. Far beyond stability, this level of protection offers multiple modes so the pilot can choose to develop his or her skills with a greater degree of security and flight control that always feels crisp and responsive.

SAFE technology delivers:

• Flight envelope protection you can enable at the flip of a switch.

• Multiple modes let you adapt SAFE technology to your skill level instantly.

Best of all, sophisticated SAFE technology doesn't require any work to enjoy. Every aircraft with SAFE installed is ready to use and optimized to offer the best possible flight experience.

FlySAFERC.com

Transmitter Control

RTF
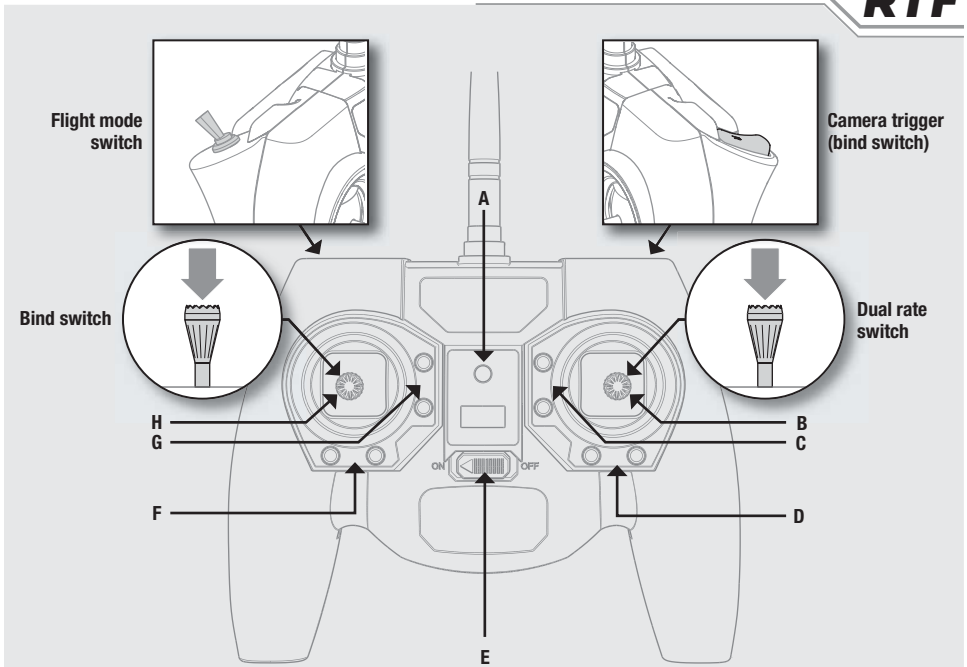
When pressed down, trim buttons make a sound that increases or decreases in pitch at each pressing. The middle or neutral trim position is heard as a middle tone in the pitch range of the sounds. The end of the control range is sounded by a series of beeps.

|	A	B	C	D	E	F	G	H
Mode 1	Power LED/ flight mode indicator	**Aileron** *(Left/Right)* **Throttle** *(Up/Down)*	**Throttle Trim**	**Aileron Trim**	**ON/OFF Switch**	**Rudder Trim**	**Eleva- tor Trim**	**Rudder** *(Left/Right)* **Elevator** *(Up/Down)*
Mode 2	Power LED/ flight mode indicator	**Aileron** *(Left/Right)* **Elevator** *(Up/ Down)*	**Eleva- tor Trim**	**Aileron Trim**	**ON/OFF Switch**	**Rudder Trim**	**Throttle Trim**	**Rudder** *(Left/Right)* **Throttle** *(Up/Down)*

Flight Mode and Rate Selection

RTF

Change flight modes by moving the three-position flight mode switch. Ensure the flight mode switch is in the desired position before flying.

- In stability low angle mode (switch position 0), the controls provide a minimum bank angle. This mode is shown by the flight control board on the quadcopter glowing solid blue.
- In stability high angle mode (switch position 1), the controls provide for a maximum bank angle. This mode is shown by the flight control board on the quadcopter slowly flashing blue.
- Agility mode (switch position 2) is shown by the flight control board on the quadcopter glowing solid red.

When powered on, this transmitter is automatically in high-rate mode. Change rates by pressing and releasing the right control stick.

- In low-rate mode, the controls cannot reach their maximum values.
- In high-rate mode, the controls can reach their maximum values.
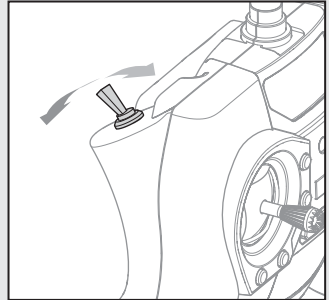
BNF

If you purchased a BNF 180 QX HD, the channel 5 switch on your transmitter will select flight modes. When the LED on the control board is solid blue, the flight mode is set to stability low angle mode. When the LED is slowly blinking blue, the quadcopter is in stability high angle mode. When the light is solid red, the quadcopter is in agility mode. See the *Transmitter Setup Table* for specific setup information.

Transmitter Setup Table

Transmitter	Model Type	Reverse Setup	Mode Setup	Switch Positions	Camera Operation	Dual Rate Switch	High Rate	Low Rate
MLP6DSM	N/A	N/A	N/A	Channel 5 (0) = Stability Mode, Low Angle Channel 5 (1) = Stability Mode, High Angle Channel 5 (2) = Agility Mode	**Still Mode(Default)** Press Trainer = Take Picture **Video Mode** Press Trainer = Start/Stop Recording Press & Hold Trainer for 4 Seconds = Change Modes	Rate	100% Fixed	70% Fixed
DX4e (Old) w/ 2 Position Switch	N/A	N/A	N/A	ACT/AUX (OFF) = Stability Mode, Low Angle ACT/AUX (ON) = Agility Mode	**Still Mode(Default)** Press Trainer = Take Picture **Video Mode** Press Trainer = Start/Stop Recording Press & Hold Trainer for 4 Seconds = Change Modes	Rate	100% Fixed	70% Fixed
DX5e (Old) w/ 2 Position Switch	N/A	N/A	N/A	Channel 5 (0) = Stability Mode, Low Angle Channel 5 (1) = Agility Mode	**Still Mode(Default)** Press Trainer = Take Picture **Video Mode** Press Trainer = Start/Stop Recording Press & Hold Trainer for 4 Seconds = Change Modes	Rate	100% Fixed	70% Fixed
DX4e (New) w/ 3 Position Switch	N/A	N/A	N/A	Channel 5 (0) = Stability Mode, Low Angle Channel 5 (1) = Stability Mode, High Angle Channel 5 (2) = Agility Mode	**Still Mode(Default)** Press Trainer = Take Picture **Video Mode** Press Trainer = Start/Stop Recording Press & Hold Trainer for 4 Seconds = Change Modes	Rate	100% Fixed	70% Fixed

Transmitter	Model Type	Reverse Setup	Mode Setup	Switch Positions	Camera Operation	Dual Rate Switch	High Rate	Low Rate
DX5e (New) w/ 3 Position Switch	N/A	N/A	N/A	Channel 5 (0) = Stability Mode, Low Angle Channel 5 (1) = Stability Mode, High Angle Channel 5 (2) = Agility Mode	**Still Mode(Default)** Press Trainer = Take Picture **Video Mode** Press Trainer = Start/Stop Recording Press & Hold Trainer for 4 Seconds = Change Modes	Rate	100% Fixed	70% Fixed
DX6i	Acro	GEAR - R All Others - N	Travel Adj: GEAR (0)↑ 100%; F MODE (1) ↓40% FLAPS: Norm ←↑100; LAND ↓100 MIX 1: ACT; Gear → Gear ACT RATE D 0% U + 100% SW MIX TRIM INH	GEAR (0); Mix (0) = Stability Mode, Low Angle GEAR (1); Mix (0) = Stability Mode, High Angle GEAR (1); Mix (1) = Agility Mode	**Still Mode(Default)** FLAP 0-1-0 = Take Picture **Video Mode** FLAP 0-1-0 = Start/Stop Recording FLAP Pos 0-1(4 Seconds)-0 = Change Modes	ELEV-AIL D/R	100%	70%
DX7/7SE	Acro	FLAP - R (6) All Others - N	Travel Adj: GEAR (0)↑ 100%; GEAR (1) ↑40% MIX 1: FLAP → Gear OFF/ON RATE → -50% 0% SW: MIX OFFSET: 0	GEAR (0); Mix (0) = Stability Mode, Low Angle GEAR (1); Mix (0) = Stability Mode, High Angle GEAR (1); Mix (1) = Agility Mode	**Still Mode(Default)** FLAP 0-1-0 = Take Picture **Video Mode** FLAP 0-1-0 = Start/Stop Recording FLAP Pos 0-1(4 Seconds)-0 = Change Modes	ELEV-AIL D/R	100%	70%
DX7S	Acro	AUX1 - R All Others - N	Switch Select: Trainer to Aux 1; F Mode to Gear Set All Others to Inh MIX 1: GER > GER RATE: 0% -100% OFFSET: 0%; TRIM: Inh SW: Mix0	F MODE (0) = Stability Mode, Low Angle F MODE (1) = Stability Mode, High Angle F MODE (1); HOLD (1) = Agility Mode	**Still Mode(Default)** Press Trainer = Take Picture **Video Mode** Press Trainer = Start/Stop Recording Press & Hold Trainer for 4 Seconds = Change Modes	ELEV-AIL D/R	100%	70%

Transmitter	Model Type	Reverse Setup	Mode Setup	Switch Positions	Camera Operation	Dual Rate Switch	High Rate	Low Rate
DX8	Acro	AUX1 - R All Others - N	Switch Select: Trainer to Aux 1 F Mode to Gear All Others to Inh	F MODE (0) = Stability Mode, Low Angle F MODE (1) = Stability Mode, High Angle F MODE (2) = Agility Mode	**Still Mode(Default)** Press Trainer = Take Picture **Video Mode** Press Trainer = Start/Stop Recording Press & Hold Trainer for 4 Seconds = Change Modes	ELEV-AIL D/R	100%	70%
DX9/DX18	Acro	AUX1 - R All Others - N	Channel Assign: NEXT 1-4: N/A 5 Gear: B 6 AUX1: I 7-10: Inh	B (0) = Stability Mode, Low Angle B (1) = Stability Mode, High Angle B (2) = Agility Mode	**Still Mode(Default)** Press Trainer = Take Picture **Video Mode** Press Trainer = Start/Stop Recording Press & Hold Trainer for 4 Seconds = Change Modes	ELEV-AIL D/R	100%	70%

LED Codes

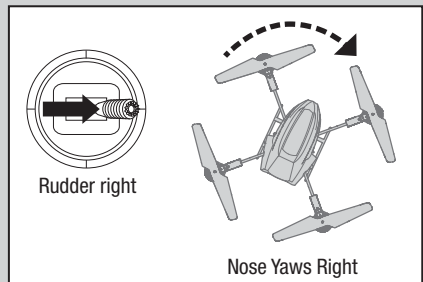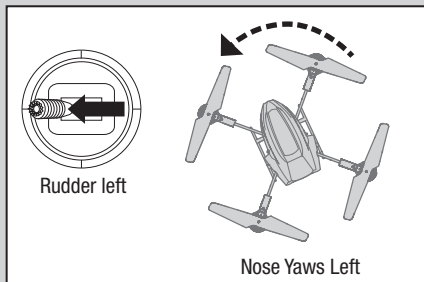| Equipment	LED Color	LED Status	Operation
Quadcopter	Blue	Rapid Blink	Bind Mode
		Solid	Stability Mode low angle
		Slow Blink	Stability Mode high angle
	Red	Solid	Agility Mode
	Red and Blue	Solid	Low Battery
		Blink	Loss of RF/TX Off
RTF Transmitter	Red	Blink	Low Rate
		Solid	Hi Rate

Understanding the Primary Flight Controls

If you are not familiar with the controls of your 180 QX HD, take a few minutes to familiarize yourself with them before attempting your first flight.

Throttle

Throttle up   Climb   *Left Side View*

Throttle down   Descend   *Left Side View*

Rudder

Rudder left   Nose Yaws Left

Rudder right   Nose Yaws Right

Elevator

Elevator down   Forward   *Left Side View*

Elevator up   Backward   *Left Side View*

Aileron

Aileron left   Left   *Rear View*

Aileron right   Right   *Rear View*
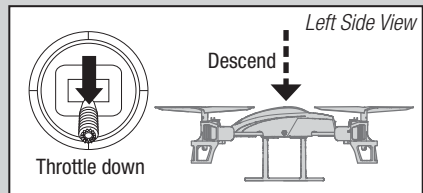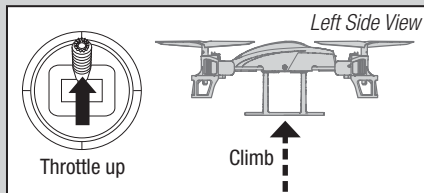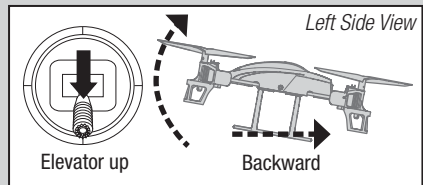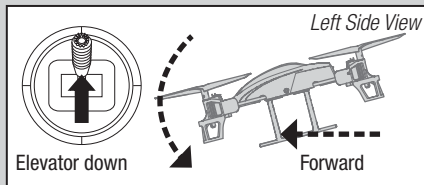
Flying the 180 QX HD

Takeoff

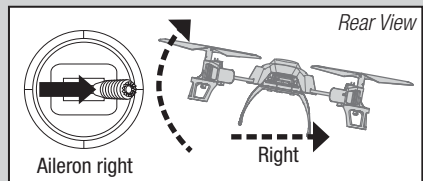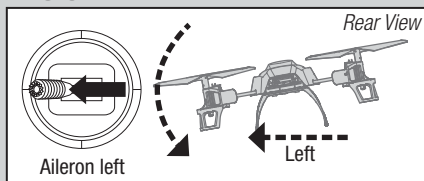Increase the throttle until the model is approximately 2 ft. (600mm) off the ground and check the trim so the model flies as desired. Once the trim is adjusted, begin flying the model.

Typical flight times for the included battery range from 5 to 10 minutes.

Low Voltage Cutoff (LVC)

LVC decreases the power to the motors when the battery voltage gets low. When the motor power decreases and the blue and red LEDs on the 5-in-1 unit are solid, land the aircraft immediately and recharge the flight battery.

LVC does not prevent the battery from over-discharge during storage.

NOTICE: Repeated flying to LVC will damage the battery.

Landing

To land, slowly decrease the throttle while in a low-level hover. After landing, disconnect and remove the battery from the aircraft after use to prevent trickle discharge. Fully charge your battery before storing it. During storage, make sure the battery charge does not fall below 3V per cell.
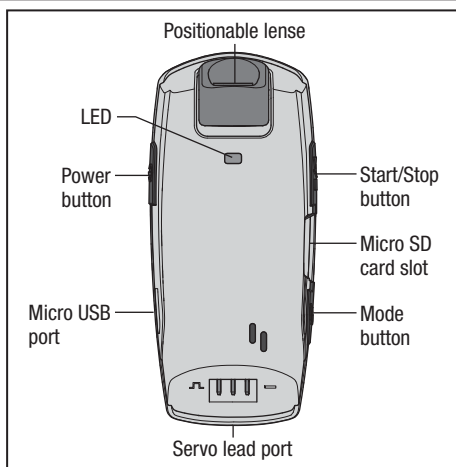
Post-Flight Inspection and Maintenance Checklist

√		
	Cleaning	Make sure the battery is not connected before cleaning. Remove dust and debris with a soft brush or a dry, lint-free cloth.
	Motors	Replace the motor when the model will not fly steady or veers off when doing a climb out.
	Wiring	Make sure the wiring does not block moving parts. Replace damaged wiring and loose connectors.
	Fasteners	Make sure there are no loose screws, other fasteners or connectors. Do not over-tighten metal screws in plastic parts. Tighten screws so the parts are mated together, then turn the screw only 1/8th of a turn more.
	Propellers	Make sure there is no damage to the propellers or other parts that move at high speed. Damage to these parts includes cracks, burrs, chips or scratches. Replace damaged parts before flying.

Operating the Camera

Charging

1. Connect the included USB cable to the USB port on a compatible power source.

2. Connect the other end of the USB cable to the camera.

3. The red LED will glow solid.

4. When charging is complete, the red LED will turn off and the blue LED will glow solid.

5. Disconnect the USB cable from the USB power source and the camera.

When the camera battery is low, the red LED will blink.

Positionable lense
LED
Power button
Micro USB port
Start/Stop button
Micro SD card slot
Mode button
Servo lead port

Installation

1. Install the included hook and loop tape on the bottom of the camera, as shown.

2. Install the camera on the model using the included hook and loop strap.

3. Connect the servo lead from the main board to the camera servo lead port.

4. Press the camera power button. The red LED will glow solid during initialization, then turn off. The blue LED will glow solid.

Changing Modes

The camera comes from the factory in still mode. To change between video and still mode, press and hold the trigger. When changing to video mode, the blue LED will blink twice. When changing back to still mode, the blue LED will blink once.

Operation

To use the camera, press and release the trigger on the back of the RTF transmitter. This will take a picture or start recording video. Press the trigger again to stop recording video. When taking a picture, the blue LED will blink once and return to solid. When recording video, the blue LED will blink slowly and return to solid when finished recording.

BNF Transmitters

To use the camera function with other transmitters, assign channel 6 to a momentary switch/button on your transmitter. The switch/button will function the same as the RTF trigger.

The camera also functions manually through the buttons.

Data Retrieval

Data from the camera can be retrieved through the micro USB port or the removable 2GB TF micro SD card.

Flight Mode Calibration

- It may not be necessary to do both calibrations.
- If the quadcopter is drifting only in Agility Mode, then follow the Agility Mode Calibration instructions.
- If the quadcopter is drifting only in Stability Mode, then follow the Stability Mode Calibration instructions.
- As there is no GPS, there may always be a small amount of drift in any flight mode.
- There is no self-leveling during calibration. It is up to the pilot to bring the quadcopter to a stable hover.

Agility Mode Calibration

1. Ensure all trims are centered.
2. Power on the transmitter and move the throttle stick to full throttle.
3. Ensure the transmitter is in Agility Mode.
4. Hold full down elevator.
5. Connect the fully charged flight battery in the quadcopter.
6. Both LEDs will flash. Leave the throttle at full and return the elevator to center.
7. Leave the quadcopter still until the LEDs flash red then blue. This can take up to 30 seconds or more. When the LEDs repeat with one blink per color, the calibration is complete.
8. If only the red LED is flashing, the calibration has failed. Repeat the process.
9. Disconnect the battery.
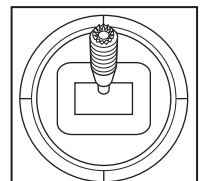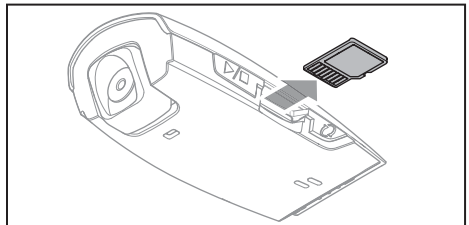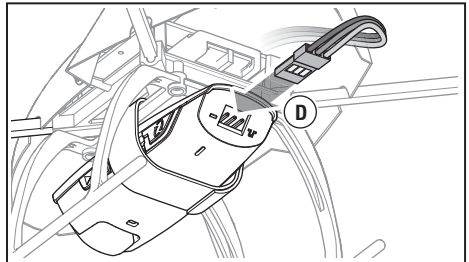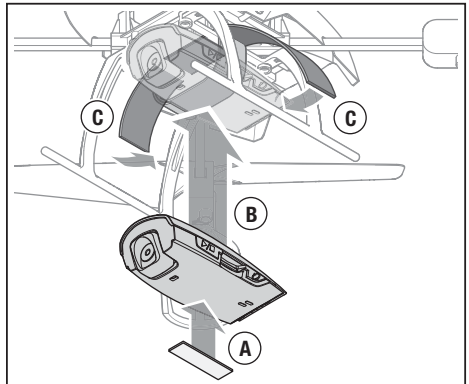
Full down elevator
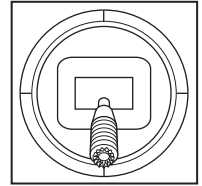
Stability Mode Calibration

1. Ensure all trims are centered.
2. Power on the transmitter and move the throttle stick to full throttle.
3. Ensure the transmitter is in Stability High or Low Angle Mode.
4. Hold full up elevator.
5. Connect the fully charged flight battery in the quadcopter.
6. Both LEDs will flash red twice, then blue twice for a few seconds.
7. When the LED turns solid blue, lower the throttle and return the elevator to center.
8. Raise the throttle to bring the quadcopter to a hover.
9. Use the trims on the transmitter to eliminate any drifting, allowing for a stable hover.
10. While in a stable hover, press and hold the camera trigger on the transmitter for 5 seconds. The quadcopter is now calibrating input from the sensors and transmitter.
11. Release the camera trigger and land the quadcopter. Upon landing, the LEDs should flash red then blue. When the LEDs repeat with one blink per color, the calibration is complete.
12. If only the red LED is flashing, the calibration has failed. Repeat the process.
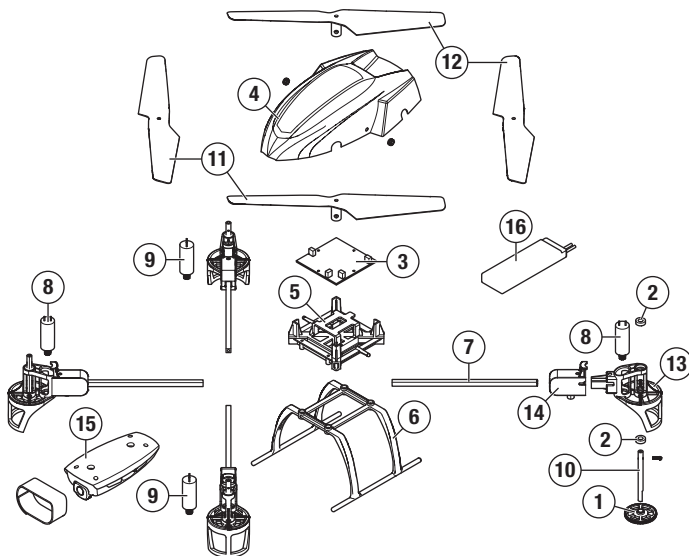13. Disconnect the battery, then return the trims to center.

Full up elevator

Troubleshooting Guide

Problem	Possible Cause	Solution
Quadcopter control response is inconsistent or requires extra trim to neutralize movement.	Aircraft not initialized on a level surface.	Disconnect the flight battery, center the control trim and re-initialize the quadcopter.
	Battery not correctly placed in battery slot.	Adjust battery position so quadcopter balances in the center of the frame.
Quadcopter will not respond to throttle.	Throttle too high and/or throttle trim is too high.	Reset controls with the throttle stick and throttle trim at the lowest setting.
	Quadcopter moved during initialization.	Disconnect the flight battery and re-initialize the quadcopter while keeping the quadcopter from moving.
	Throttle channel is reversed.	Disconnect flight battery, reverse the throttle channel on the transmitter, recconnect flight battery.
Quadcopter does not function and smells burnt after connecting the flight battery.	Flight battery connected with the wrong polarity.	Replace the 5-in-1 board. Connect the flight battery noting proper polarity.
Quadcopter has reduced flight time or is underpowered.	Flight battery charge is low.	Completely recharge the flight battery.
	Inadequate power to flight battery charger.	Use a different USB power source for the charger.
	Flight battery is damaged.	Replace the flight battery and follow the flight battery instructions.
	Flight conditions might be too cold.	Make sure the battery is warm (room temperature) before use.
LED on receiver flashes rapidly and aircraft will not respond to transmitter (during binding).	Transmitter too near aircraft during binding process.	Power off the transmitter. Move the transmitter a larger distance from the aircraft. Disconnect and reconnect the flight battery to the aircraft. Follow the binding instructions.
	Bind switch or button was not held while transmitter was powered on.	Power off transmitter and repeat bind process.
	Aircraft or transmitter is too close to large metal object, wireless source or another transmitter.	Move aircraft and transmitter to another location and attempt binding again.

Problem	Possible Cause	Solution
LED on the receiver flashes rapidly and the quadcopter will not respond to the transmitter (after binding).	Less than a 5-second wait between first powering on the transmitter and connecting the flight battery to the quadcopter.	Leave the transmitter powered on. Disconnect and reconnect the flight battery to the quadcopter.
	The quadcopter is bound to a different model memory (ModelMatch™ transmitters only).	Select the correct model memory on the transmitter. Disconnect and reconnect the flight battery to the quadcopter.
	Flight battery or transmitter battery charge is too low.	Replace or recharge batteries.
	Aircraft or transmitter is too close to large metal object, wireless source or another transmitter.	Move aircraft and transmitter to another location and attempt connecting again.
Crashes immediately upon lift-off	Propellers in wrong locations or incorrect flight mode selected.	Ensure propeller direction and motor direction are correct.

Exploded View

Parts Listings

	Part #	Description
1	BLH3506	Main Gear: BMSR/X, mCP X, mQX
2	BLH3515, EFLH2215	Outer Shaft Bearing 3 x 6 x 2mm(2): BMCX/2/MSR/X, FHX, MH-35, MCP X, mQX
3	BLH7401A	5-in-1 Control Unit, RX/ESCs/Mixer/Gyros/Camera Control: 180 QX HD
4	BLH7402	Canopy: 180 QX HD
5	BLH7403A	5-in-1 Mounting Frame: 180 QX HD
6	BLH7404	Landing Gear 180 QX HD
7	BLH7502	Thruster Boom with Wiring (2): mQX
8	BLH7503	Motor with Pinion, Clockwise Rotation: mQX
9	BLH7504	Motor with Pinion, Counterclockwise Rotation: mQX
10	BLH7513	Propeller Shaft, Carbon: mQX

	Part #	Description
11	BLH7405	Propellers, CW & CCW Rotation, Orange (2): 180 QX HD, mQX, 1 Propeller, Orange (CW), 1 Propeller, Orange (CCW), 2 Screws
12	BLH7406	Propellers, CW & CCW Rotation, Black (2): 180 QX HD, mQX, 1 Propeller, Black (CW), 1 Propeller, Black (CCW), 2 Screws
13	BLH7561	Motor Mount with Landing Skid: mQX
14	BLH7562	Motor Mount Cover (2): mQX
15	EFLA801	Digital Video Camera With Still Capability
16	EFLB5001S25	500mAh 1S 3.7V 25C LiPo Battery
	EFLC1010	1S USB Li-Po Charger, 500mA JST
	EFLH1063	MLP6DSM SAFE Transmitter

Optional Parts

Part #	Description	Part #	Description
BLH7407	Propellers, CW & CCW Rotation, White (2): 180 QX HD, mQX, 1 Propeller, White (CW), 1 Propeller, White (CCW), 2 Screws		DX5e DSMX 5-Channel Transmitter Only
EFLC3025/ AU/EU/UK	Celectra 80W AC/DC Multi-Chemistry Battery Charger (Based upon your sales region)		DX6i DSMX 6-Channel Transmitter Only
			DX7 DSMX 7-Channel Transmitter Only
	DX4e DSMX 4-Channel Transmitter Only		DX8 DSMX 8-Channel Transmitter Only
			DX9 DSMX 9-Channel Transmitter Only
			DX18 DSMX 18-Channel Transmitter Only

Limited Warranty

What this Warranty Covers

Horizon Hobby, LLC, (Horizon) warrants to the original purchaser that the product purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase.

What is Not Covered

This warranty is not transferable and does not cover (i) cosmetic damage, (ii) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (iii) modification of or to any part of the Product, (iv) attempted service by anyone other than a Horizon Hobby authorized service center, (v) Product not purchased from an authorized Horizon dealer, or (vi) Product not compliant with applicable technical regulations.

OTHER THAN THE EXPRESS WARRANTY ABOVE, HORIZON MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

Purchaser's Remedy

Horizon's sole obligation and purchaser's sole and exclusive remedy shall be that Horizon will, at its option, either (i) service, or (ii) replace, any Product determined by Horizon to be defective. Horizon reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Horizon. Proof of purchase is required for all warranty claims. SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

Limitation of Liability

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF HORIZON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the Product, purchaser is advised to return the Product immediately in new and unused condition to the place of purchase.

Law

These terms are governed by Illinois law (without regard to conflict of law principals). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Horizon reserves the right to change or modify this warranty at any time without notice.

WARRANTY SERVICES

Questions, Assistance, and Services

Your local hobby store and/or place of purchase cannot provide warranty support or service. Once assembly, setup or use of the Product has been started, you must contact your local distributor or Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please visit our website at www.horizonhobby.com, submit a Product Support Inquiry, or call the toll free telephone number referenced in the Warranty and Service Contact Information section to speak with a Product Support representative.

Inspection or Services

If this Product needs to be inspected or serviced and is compliant in the country you live and use the Product in, please use the Horizon Online Service Request submission process found on our website or call Horizon to obtain a Return Merchandise Authorization (RMA) number. Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon is not responsible for merchandise until it arrives and is accepted at our facility. An Online Service Request is available at http://www.horizonhobby.com/content/_service-center_render-service-center. If you do not have internet access, please contact Horizon Product Support to obtain a RMA number along with instructions for submitting your product for service. When calling Horizon, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. When sending product into Horizon, please include your RMA number, a list of the included items, and a brief summary of the problem. A copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

NOTICE: Do not ship LiPo batteries to Horizon. If you have any issue with a LiPo battery, please contact the appropriate Horizon Product Support office.

Warranty Requirements

For Warranty consideration, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be serviced or replaced free of charge. Service or replacement decisions are at the sole discretion of Horizon.

Non-Warranty Service

Should your service not be covered by warranty, service will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for service you are agreeing to payment of the service without notification. Service estimates are available upon request. You must include this request with your item submitted for service. Non-warranty service estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Horizon accepts money orders and cashier's checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Horizon for service, you are agreeing to Horizon's Terms and Conditions found on our website http://www.horizonhobby.com/content/_service-center_render-service-center.

ATTENTION: Horizon service is limited to Product compliant in the country of use and ownership. If received, a non-compliant Product will not be serviced. Further, the sender will be responsible for arranging return shipment of the un-serviced Product, through a carrier of the sender's choice and at the sender's expense. Horizon will hold non-compliant Product for a period of 60 days from notification, after which it will be discarded.

Warranty and Service Contact Information

Country of Purchase	Horizon Hobby	Contact Information	Address
United States of America	Horizon Service Center (Repairs and Repair Requests)	servicecenter.horizonhobby.com/RequestForm/	4105 Fieldstone Rd Champaign, Illinois, 61822 USA
	Horizon Product Support (Product Technical Assistance)	www.quickbase.com/db/bghj7ey8c?a=GenNewRecord	
		888-959-2304	
	Sales	sales@horizonhobby.com	
		888-959-2304	
United Kingdom	Service/Parts/Sales: Horizon Hobby Limited	sales@horizonhobby.co.uk	Units 1–4 , Ployters Rd, Staple Tye Harlow, Essex, CM18 7NS, United Kingdom
		+44 (0) 1279 641 097	
Germany	Horizon Technischer Service	service@horizonhobby.de	Christian-Junge-Straße 1 25337 Elmshorn, Germany
	Sales: Horizon Hobby GmbH	+49 (0) 4121 2655 100	
France	Service/Parts/Sales: Horizon Hobby SAS	infofrance@horizonhobby.com	11 Rue Georges Charpak 77127 Lieusaint, France
		+33 (0) 1 60 18 34 90	
China	Service/Parts/Sales: Horizon Hobby – China	info@horizonhobby.com.cn	Room 506, No. 97 Changshou Rd. Shanghai, China 200060
		+86 (021) 5180 9868	

FCC Information

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

⚠ **CAUTION:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 2.400GHz to 2.4835GHz frequency range.

IC Information

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Compliance Information for the European Union

Declaration of Conformity
(in accordance with ISO/IEC 17050-1)

No. HH2013091401

Product(s):   180 QX HD BNF

Item Number(s):   BLH7480A

Equipment class: 1

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC, EMC Directive 2004/108/EC and LVD Directive 2006/95/EC:

EN 301 489-1   V1.9.2: 2012
EN 301 489-17 V2.1.1: 2009

EN60950-1:2006+A11:2009+A1:2010+A12: 2011

EN55022:2010 + AC:2011
EN55024:2010

$C\epsilon$

Signed for and on behalf of:
Horizon Hobby, LLC
Champaign, IL USA
Sep 14, 2013

Robert Peak
Chief Financial Officer
Horizon Hobby, LLC

Declaration of Conformity
(in accordance with ISO/IEC 17050-1)

No. HH2013091202

Product(s):   180 QX HD RTF

Item Number(s):   BLH7400A, BLH7400AM1

Equipment class: 1

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC, EMC Directive 2004/108/EC and LVD Directive 2006/95/EC:

EN 300-328   V1.7.1: 2006
EN 301 489-1   V1.9.2: 2012
EN 301 489-17 V2.1.1: 2009
EN60950-1:2006+A11:2009+A1:2010+A12: 2011

EN55022:2010 + AC:2011
EN55024:2010

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Signed for and on behalf of:
Horizon Hobby, LLC
Champaign, IL USA
Sep 12, 2013

Robert Peak
Chief Financial Officer
Horizon Hobby, LLC

Instructions for disposal of WEEE by users in the European Union

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collections point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and make sure that it is recycled in a manner that protects human health and the environ-ment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

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