

PT+z Controller™

Pan - Tilt Controller for Bescor™ MP Series pan motor heads with LANC (Control-L) remote zoom protocol for Canon and Sony cameras¹



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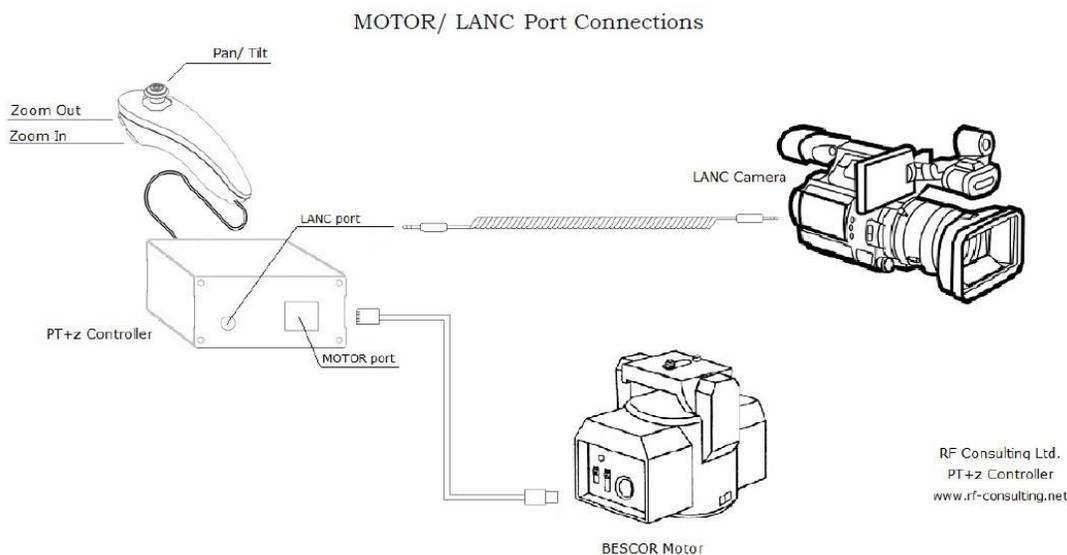
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IMPORTANT PLEASE READ!

Always turn off the video camera before plugging or unplugging the LANC cable. Locate the RESET switch on the rear panel of the PT+z Controller™ *before* powering the motor on. While powering on the BESCOR™ motor head, be ready to immediately reset the PT+z Controller™ if the motor moves on its own. After the first reset the motor should stop moving and normal operation can begin. If the motor does not stop moving, unplug the unit and contact us. Keep an eye on the BESCOR™ motor each time power is applied.

Product Description

Thank you for purchasing the PT+z Controller™, a remote control device that allows 8 way pan and tilt control of the inexpensive and sturdy Bescor MP series motor heads without any modification. In addition to pan and tilt, the controller can also be used for zoom functions and record on/off function on some 2.5mm LANC/Control-L/remote equipped Sony and Canon cameras (other adapters may need to be purchased separately). Built in the USA we stand behind our product and offer a **three years repair or replacement warranty**. Since our product interfaces with other manufacturer's equipment please call to make sure the product fits your need and carefully read the limitations in the warranty notes. All our kits have been tested with the motors we sell thus we guarantee compatibility with the products we sell, but we cannot be responsible for changes in design that affect operation of our PT+z Controller™



LANC functionality not included

The LANC remote commands included in the programming of the PT+z Controller™ were derived from day to day operation and limited to available hardware thus not all commands usually found on LANC remotes have been included. Most notably the “search”, “iris”, “photo”, “power off” and “on screen” functions have been omitted. **The only LANC commands included are:** power on (if supported), Zoom in/out, and record on/off, in some cases power off/standby as a requested option.

Highlights

*The PT+z Controller™ replaces the original Bescor™ MPRemote™ and borrows functionality from the eBenk® zoom controller, streamlining both technologies in one box while providing effective controls in the palm of your hand. The best part is that **the PT+z Controller™ is motor powered, and does not require a separate power source.** This makes it extremely suitable for use in portable environments where commercial power is not available. Use four AA alkaline batteries to power the Bescor™ pan tilt head or the included Bescor™ power supply and the PT+z Controller™ will use a small amount of power for all its functions. Please note the PT+z Controller™ is not waterproof and cannot be used outdoors unless protected by a suitable enclosure.*

Pan and Tilt speeds are dynamically controlled by the joystick so a separate speed control is not necessary, push the joystick lightly for slow movement or all the way for full speed, and the motor will follow. In addition to the usual four way control (up, down, left, right,) the PT+z Controller™ allows the user to execute 8-way maneuvers by combining motions in the nearby axis thus extending its functionality to include additional (up-right, up-left, down-right, down-left) movements.

The PT+z Controller™ is programmed to work with the LANC protocol to provide basic zoom in/out functions plus a record start/stop button. A LANC camera power-up procedure is preprogrammed in the unit so that remotely mounted cameras may be turned on without the need to physically reach the camera.

Using the controller

Plug the supplied cable in the controller's RJ-45 jack labeled MOTOR and the round 7 pin DIN plug in the Bescor™ motor labeled REMOTE SOCKET. Use the supplied 2.5 mm to 3.5 mm cable and plug the 3.5mm jack in the PT+z Controller™ port labeled CAMERA, plug the 2.5 mm end in your video camera's REMOTE/LANC port. Power on the motor in the M (manual) position and the PT+z Controller's power LED, and record button ring, should light up. The PT+z Controller™ tests all the power functions and turns off the red LED record ring after boot-up. If the green power LED on the PT+z Controller™ is not lit, follow the troubleshooting procedure at the end of this manual.

The joystick functions as a one hand PTZ controller that is easy to use right out of the box. Using the controller is very intuitive, the interface consists of a joystick that moves the motor left, right, up, down, up-right, up-left, down-right and down-left depending on the user's input. Zoom in function is achieved by pressing the Z button, and zoom out by pressing the C button on the joystick. Zoom speed is

controlled by a speed control on the front panel of the unit, so if this feature is desired, it is advisable to keep the unit within reach in order to achieve smooth zoom-in or zoom-out.

The PT+z Controller has the ability to detect whether or not a LANC connection is present. As such if no LANC camera is connected the controller ignores any zoom and record commands sent. You may continue using the motor's pan and tilt functionality without the LANC attached.

A record button sends a command to the camera when pushed in and turn on the red LED ring. To stop a recording push the record button again. Make sure you have a suitable media card installed or enough hard drive space especially if the camera is remotely mounted. *Since the LANC protocol only sends commands to the camera, thus there is no feedback to turn the ring LED off when media or hard drive space is depleted. The camera display should show a notification.*

Auto camera on is a feature added to the PT+z Controller™ LANC interface and it works by turning on any LANC camera with a soft start button, such as the Canon Vixia HF-G20 This allows for remotely mounted cameras to be powered on.

You may extend the cabling between the motor and the PT+z Controller, using an optional splitter, but be mindful of voltage drops on long wire runs and keep the total length of the extensions only as long as necessary. A regular TIA/EIA-568B patch cable or 7 pin Bescor RE-20/50 extension cables may be used.

*Do not use any powered CAT 5 extenders and don't use any switches, hub or routers or an extension patch cable wired as EIA 568A. The PT+z Controller™ requires non-powered connectivity to work properly, otherwise you risk damaging both motor and the PT+z Controller™. **Cabling over 150ft is not recommended.***

Operational details

For clarity of operation the following pictorial diagrams and description of various ports and switches are shown below.

Step 1. Plug the nunchuck joystick in the PT+z Controller port labeled JOYSTICK until it locks and set the Zoom Speed to maximum.



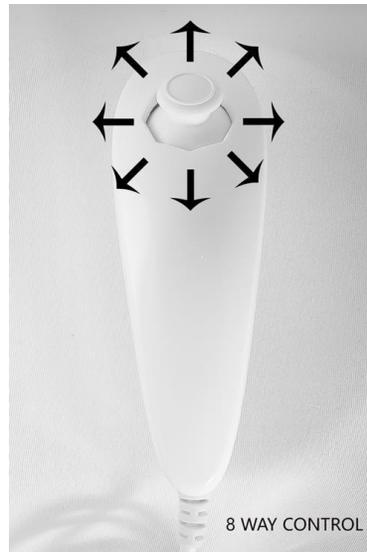
Step2. Plug the supplied round 7 pin DIN plug in the Bescor MP motor labeled REMOTE SOCKET and the RJ45 plug on the rear panel of the PT+Z Controller™ port labeled MOTOR.



Step 3. Plug the supplied 3.5mm jack in the PT+z Controller port labeled CAMERA, plug the 2.5 mm end in the video camera's REMOTE/LANC port. Use your own extension if additional length is necessary.



Using the PT+z Controller is a very intuitive operation, the interface consists of a single nunchuck/joystick that moves the motor left, right, up, down, up-right, up-left, down-right and down-left based on user input.



ZOOM IN function is achieved by pressing the Z button while ZOOM OUT by pressing the C button on the joystick. Zoom speed is controlled by the ZOOM SPEED control on the front panel, so if this feature is desired keep the PT+z Controller unit within easy reach.



Troubleshooting controller

Power on the motor, if connected properly the PT+z Controller's green power LED should be lit. If the LED is not lit:

- 1. Check the green LED on the back of the Bescor motor and make sure it is lit. If not check the motor's power supply, the power outlet or check and replace the batteries if needed. Unplug the power supply if you are running the motor on AA batteries. When the LED on the Bescor motor is lit, continue with the troubleshooting procedure below otherwise call Bescor for support.*
- 2. Make sure all extension cables are tight and secure between the motor and the PT+z Controller™. Do not use any powered devices between the motor and the PT+z Controller.*
- 3. Remove all the extensions and plug the short RJ45 to 7-pin DIN cable originally supplied with the PT+z Controller directly between the controller and the Bescor motor.*
- 4. Try resetting the PT+z Controller using the reset switch.*

If the LED is not lit either a connection from the motor to the PT+z Controller is not established or power is lost along the way.

- 1. Disconnect the PT+z Controller and plug in the motor an original Bescor MP-Remote. If this works then the motor is OK and the interface cable or the PT+z Controller is faulty.*
- 2. If the PT+z Controller's LED is not lit, controller or cable may be defective. When sending the unit back for repair, please send the interface cable and the joystick if you suspect it faulty since this helps in troubleshooting the issue.*

Record Issues

Camera does not record but LED ring turns red. Because LANC commands are sent to the cameras without feedback, the controller does not know if the camera is out of hard drive space or no media available to record. Please ensure a media card or enough hard drive space is available, reset the PT+z Controller and try again.

Camera Compatibility*

The PT+z Controller™ LANC remote commands such as power on, zoom in/out and the record start/stop function should be compatible with most Canon, Sony and JVC cameras (no Panasonic camera support):

Sony HDR-HC1 HDR-FX1 FX5 VX2000 VX2100 VX2200 PD150 PD170 HDR-UX1 HC5 UX7 SR7 GVD-1000 GHV-D700 HDR-FX1000 HDR-FX7 HDR-PJ710v HC7 DRC-PC1000 HDR-HC9, DCR-HC52, HDR-SR11, HDR-UX20, DCR-DVD610, DCR-DVD710, HDR-SR12, HDR-SR10, DCR-SR220, DCR-SR45, DCR-SR65, DCR-SR85, SCR-DVD810, DCR-HC62, DCR-SR220D, HDR-SR10D, HDR-TG1, HDR-CX12, DCR-DVD910, HDR-UX10

Canon XH A1S Vixia HF G10, G20 , G30, XF100 and others

**Separate adapters (not included) may be required for the cameras listed above.*

Warranty and End User Agreement

This is the Warranty for your new PT+Z Controller a.k.a (“Product”). Purchase of the product constitutes acceptance of the terms outlined below. If you do not agree, return the Product for a full refund in 30 days. Damaged products or products that are disassembled, are not returnable.

Your Product has been designed to give many years of trouble-free performance. Nonetheless, failures do sometimes occur even with equipment as well-built as ours. Subject to the terms and conditions stated below, RF Consulting Ltd., warrants to the original owner that this Product shall be free from defects in workmanship or materials for a term of **three (3) years** from the date when it was purchased.

Limitations on Persons and Products Covered by this Warranty.

This Warranty and all rights provided here under are limited to the original owner. In the event that the original owner transfers ownership of the Product prior to expiration of the three-(3) year term, this Warranty shall terminate in its entirety upon the date of such transfer. In addition, RF Consulting Ltd., does not warrant in any way Products which are purchased from anyone who is not an authorized RF Consulting Ltd., dealer, or which have had their Serial Numbers altered or defaced. This product is designed to interface with other products not under our direct control therefore if the manufacturer of said devices changes design of their products we are not responsible for damage to our product or other damages by our product to other manufactures products by these factors beyond our control. The owner of the Product therefore assumes all risks related to the use of products provided by anyone other than RF Consulting Ltd. itself. RF Consulting Ltd., cannot and does not warrant against, and shall have no liability of any kind for any of the following that are attributable to non-RF Consulting Ltd., providers or services: (i) interruption, discontinuance, or other unsatisfactory performance of service; (ii) reduced Product functionality that is so attributable; or (iii) any other loss or damage of any kind that is so attributable. What RF Consulting Ltd., will do under the Warranty In the event of any defect covered by this Warranty, RF Consulting Ltd., shall without charge provide all parts,

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materials, and labor necessary to restore the Product to its original specifications. After repair, RF Consulting Ltd., shall return the Product to its owner at the owner's expense. In the alternative, RF Consulting Ltd., may at its sole option either replace the Product without charge, or if replacement is not commercially practicable or repair or replacement cannot be accomplished within a reasonable time, RF Consulting Ltd., may refund the purchase price of the Product, subject where appropriate to reasonable depreciation for actual use in accordance with applicable laws, in full satisfaction of its warranty obligations. RF Consulting Ltd., or its Authorized Service Agency will undertake to complete the repair and return of the Product as soon as circumstances permit, unless prevented by causes beyond their reasonable control. RF Consulting Ltd.'s sole Obligation under this Warranty shall be to repair or replace the Product, or at its option refund the purchase price, as provided for hereinabove. RF Consulting Ltd., does not warrant against, nor shall it be liable for, any of the following: removal or installation charges; shipping expenses either to or from RF Consulting Ltd., or its Authorized Service Agency; loss of use; property damage of any kind; or other incidental or consequential damages or losses of any kind.

What the Owner must do to obtain service under this Warranty?

To obtain warranty service, the owner must, at their own expense, arrange for any necessary de-installation of the Product, and deliver or ship the Product to RF Consulting Ltd., at the address below, properly packaged, prepaid, and insured at the owner's expense. In addition, the owner must provide evidence that the Product is at the time of delivery within the scope of his Warranty, by including the original sales receipt, with the Product when it is delivered for repair. You may telephone RF Consulting Ltd., at 866-RFCNSLT (866-873-6758), write to RF Consulting Ltd., at address below or visit the "Contact Us" area of the RF Consulting Ltd., web at www.rf-consulting.net

RMA

The RMA procedure is straightforward, please send us an e-mail or call describing the problem along with the serial number located on the rear of the PT+z Controller™. We would like to first try to diagnose the problem over the phone or e-mail so we can save you the shipping costs. If an RMA is issued, please write it on the outside of the box when returning the product to us. On request proof of purchase may be required so hold on to your receipt for the warranty period.

¹Bescor, LANC, Control-L, Sony, JVC and Canon and eBenk are registered trademarks and the property of their respective owners. PT+z Controller™ is trademark of Radio Frequency Consulting Ltd.

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