



EXTECH HDV7C-A2-45-15 Two Way Articulating Camera Probe User Manual

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EXTECH HDV7C-A2-45-15 Two Way Articulating Camera Probe



Thank you for selecting the Extech two-way articulation camera probe. The probe is intended for use with the HDV700 VideoScope. Obtain the HDV700 user manual and additional translations of this user manual on the support site.

Product Information

The Extech Two-Way Articulating Probe (Model HDV7C-A2-45-15) is a camera probe designed for use with the HDV700 VideoScope. It features an articulating neck that can be controlled using a dial, allowing the user to adjust the angle of the camera head. The probe is equipped with worklights to improve visibility in low-light conditions and has an image enhancement button to add clarity to darker areas of the camera image. The control buttons can be locked for safe and easy use, and the probe is designed to withstand accidental submersion in liquids such as brake and transmission fluid, diesel fuel, unleaded gasoline, engine oil, and CPC hydraulic oil (46AWS).

Product Usage Instructions

Before using the Extech Two-Way Articulating Probe, please read and understand all safety cautions listed in the user manual. To connect the probe to the HDV700 monitor, follow these steps:

1. Turn off the HDV700 power.
2. Align the white dot on the probe connector with the white dot on the monitor connector.
3. Plug the probe into the monitor unit, ensuring proper alignment and full insertion.
4. Tighten the collar nut to secure the connection. Do not overtighten.

To control articulation:

1. Straighten the neck before inserting and removing the probe from the inspection area for safety and ease of

use.

2. Turn the control dial to adjust the angle of the camera head. Do not use excessive force when turning the control dial, as it may damage the camera probe. Stop turning the control dial when the maximum angle is reached.

To enhance image clarity:

- Press the image enhancement button to add clarity to darker areas of the camera image.

To lock/unlock the control buttons:

1. Move the locking switch to the right to lock the buttons or move the switch to the left to release the lock.

For storage and maintenance, please follow these guidelines:

- Store the probe in a dry, cool location.
- Avoid exposing the probe to extreme temperatures or direct sunlight.
- Do not attempt to disassemble or repair the probe yourself.
- Only use approved liquids for probe submersion.

Please note that the Extech Two-Way Articulating Probe comes with a two-year warranty from FLIR Systems, Inc. Defects in parts and workmanship are covered for two years from the date of shipment, with a six-month limited warranty applying to sensors and cables.

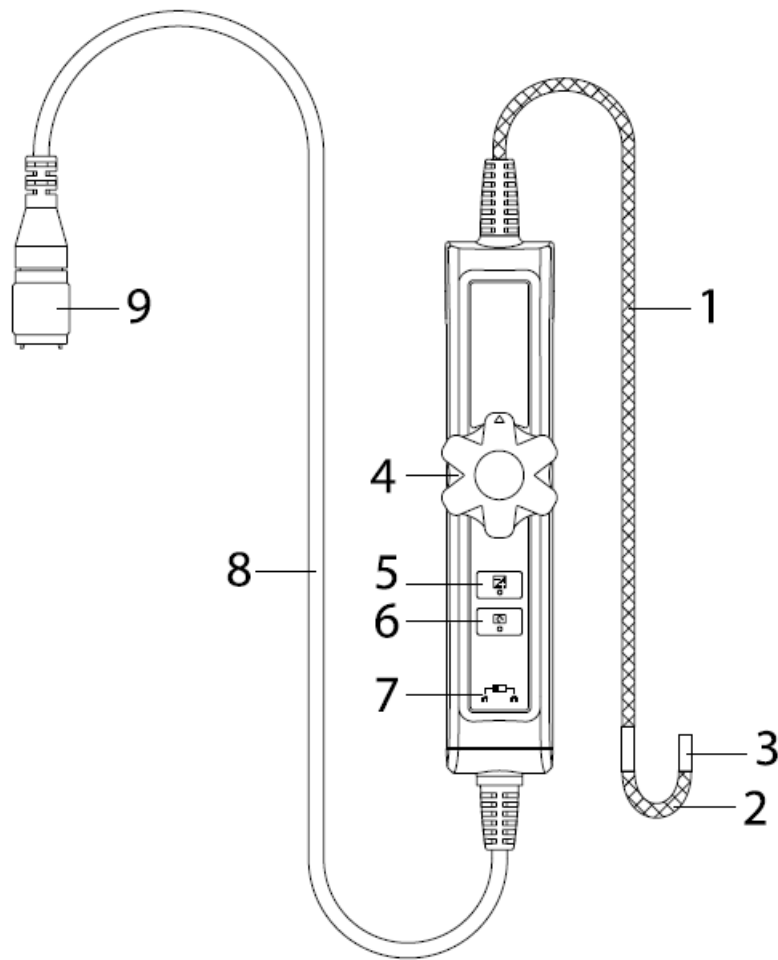
Safety

Please read and understand all safety cautions before use.

CAUTION

- Do not insert the probe into flammable liquid or gas.
- Before inspecting a vehicle, shut off the engine. Allow the metal and liquids in the vehicle to cool before inspection.
- This product is designed for industrial use only. It is not intended for use in human or other biological inspection.
- Do not disassemble the product, damage to the product and electrical shock may occur.
- Do not allow the camera head to come in contact with acidic, corrosive or heated material, serious damage to the equipment can occur.

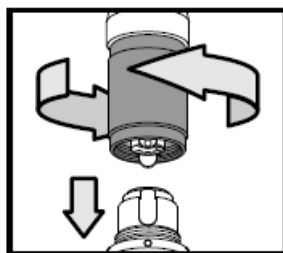
Product Description



1. Probe to guide camera head to inspection area.
2. Articulating probe neck.
3. Camera head with worklights.
4. Articulation control dial.
5. Image enhancement button.
6. Rotation button (90°) with red LED
7. Switch to lock/unlock buttons (5) and (6).
8. Connecting cable.
9. HDV700 connector.

Connecting the Probe

The steps below explain how to safely connect the probe to the HDV700 monitor. Always turn the HDV700 power off before replacing the probe.



1. Align the white dot on the probe connector with the white dot on the monitor connector.
2. Plug the probe into the monitor unit, ensuring proper alignment and full insertion.

3. Tighten the collar nut to secure the connection. Do not overtighten.

Operation

Controlling Articulation


CAUTION Do not use excessive force when turning the control dial, damage to the camera probe can result. Do not attempt to force the flexible neck past its maximum angle. Stop turning the control dial when the maximum angle is reached.

Turn the control dial (4) clockwise to bend the probe neck to the right; turn the dial counter-clockwise to bend the neck to the left, as shown in the image below. The articulation range is 180° maximum, do not attempt to force the control dial past the bend limit.




For safety and ease of use, straighten the neck before inserting and removing the probe from the inspection area.

Image Enhancement Button

Use the image enhancement button (5)  to add clarity to darker areas of the camera image.

Rotation Button

Use the rotation button (6)  to rotate the image 90°. The button's red LED is on when an image is rotated and off when rotation is not applied.

Button Lock

To lock/unlock the control buttons, move the locking switch (7) to the right to lock the buttons or move the switch to the left to release the lock.

Measurement Considerations

- The probe contains small circuitry that controls the optics and electronics of the camera. To ensure reliability, do not bend the probe more than 90°.
- Do not coil the probe < 6 in. (15 cm) in diameter in use.
- To avoid camera damage, please straighten the neck before removing it from the inspection area. Failure to do so may cause the camera to become stuck in the inspection area.
- The neck, near tip of the probe, is particularly sensitive to excessive force. Never bend the neck by hand; use only the control dial.
- Please keep the probe's alignment as straight as possible while in use.
- Do not force the control dial when resistance to movement is felt; Damage to the camera can result.
- Do not allow the probe to forcefully impact an object.
- Do not put excessive weight on any area of the probe.
- Never use the probe as a hammer, hook, or other tool.
- Never use the probe tip to clear pathways or to unclog a pipe.

Storage and Maintenance

- To clean the probe, wipe with a soft cloth dampened with a mild detergent and clean water. Do not use abrasive detergents. Do not use corrosives or solvents to clean the probe. Use a high quality lens cleaning fluid and a lint-free swab to clean the camera and worklight lenses.
- To protect the camera, keep the lens cap, and other supplied protective coverings, attached when not in use. Store in the original case.
- Straighten the neck angle before placing in storage.
- Avoid direct sun exposure. Store in a cool, dry, and well-ventilated area.
- Do not coil the probe < 6 in. (15 cm) in diameter when storing, damage to the probe may result.

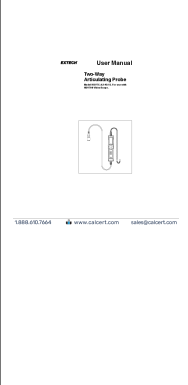
Specifications

- **Camera resolution** 640(H) x 480(V) pixels
- **Frame rate** 30 frames per second (fps)
- **Probe diameter** 0.15 in. (3.9 mm)
- **Probe head diameter** 0.2 in. (4.5 mm)
- **Probe head length** 0.5 in. (14 mm)
- **Probe length** 4.9 ft. (1.5 m)
- **Articulation angle** 180° maximum (the angle may decrease if the probe is looped)
- **Probe head** material Stainless steel
- **Probe body** material Braided mesh stainless steel
- **Worklights** Five (5) LED lamps
- **Field of View (FOV)** 90°
- **Depth of Field (DOF)** 0.4 to 4.0 in. (1 to 10 cm)
- **Operating and Storage temperature** 14°F to 140°F (–10°C to 60°C)
- **Liquids approved for probe submersion** Brake and transmission fluid, diesel fuel, unleaded gasoline, engine oil, and CPC hydraulic oil (46AWS)
- **Ingress protection Probe tip and body:** IP 67 (IEC 60529) Protected from submersion in water up to 3.3 ft (1 m) for 30 minutes maximum. In use: rain, splashes, and accidental submersion

Two-Year Warranty

FLIR Systems, Inc. warrants this Extech brand instrument to be free of defects in parts and workmanship for two years from date of shipment (a six-month limited warranty applies to sensors and cables).

Documents / Resources

	<p>EXTECH HDV7C-A2-45-15 Two Way Articulating Camera Probe [pdf] User Manual HDV7C-A2-45-15 Two Way Articulating Camera Probe, HDV7C-A2-45-15, Two Way Articulating Camera Probe, Articulating Camera Probe, Camera Probe</p>
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References

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