

Specifications for HDTV Zoom Lens

Specifications No.: SD 21/2010

Dated: 15.07.2010

1. SCOPE:

These specifications lay down the performance requirement of HDTV Zoom Lens to be used in Doordarshan for outdoor applications.

2. GENERAL:

The Zoom lens should be compact and designed for mechanical ruggedness & quality performance. It should be capable of being used with Sony XDCAM HD422 Camcorder model No. PDW-700 having 16:9 aspect ratio.

3. ESSENTIAL FEATURES:

- 1) **The offered equipment should be from a reputed manufacturer and the quoted model should be field proven and in use by leading broadcasters. The bidder should essentially submit the list of the broadcasters to whom the quoted model has been supplied. The tenders without the proper user list are liable to be rejected.**
- 2) The offered lens should have B type mounting to fit on 2/3" CCD HD Camera. The lens should be of 22x or better zoom ratio with built in 2x extender and should meet the bandwidth frequency requirement of the HD camera.
- 3) The lens should provide excellent quality pictures with high MTF, High Resolution, and high contrast throughout the picture.
- 4) The offered lens should provide suitable data for Automatic Lens Aberration Correction (ALAC) through Sony XDCAM HD422 Camcorder model No. PDW-700.
- 5) It should have Ergonomic Design for ease of operations such as control of zoom, iris, and focus. It should be precise, lightweight and compact. Design of the lens should be dust proof and fog proof to avoid fungus and other aberrations.
- 6) It should have low geometric distortion, minimum chromatic aberrations and better corner resolution.
- 7) It should have facility of memorizing any two focal lengths and should shuttle between these two points by the simple push of a button.

- 8) It should have facility of memorizing the set of parameters of a particular shot and the lens should come to these parameters of the shot at highest/ preset zoom speed by the simple push of a button.
- 9) It should have zoom servo with variable zoom speed. It should memorize a desired zoom speed and recall it as and when required by pushing a simple button.
- 10) The focus operation should not change the angle of view i.e. image size.
- 11) All the accessories like lens hood etc. should be essentially offered. The firm has to ensure the completeness of the offered system.
- 12) The bill of material is given in **Appendix-I**.
- 13) The list of Doordarshan centres for which the equipment are being procured is available at **Appendix-II**.

4. TECHNICAL SPECIFICATIONS:

I.	FORMAT	2/3 inch
II.	ASPECT RATIO	16:9
III.	ZOOM RATIO	22 X or better
IV.	ZOOM EXTENDER	2 X Built in
V.	FOCAL LENGTH (Minimum)	7.6 mm (1 X) or better 15.2 mm (2 X) or better
VI.	MAX. RELATIVE APERTURE	1:1.8 or better (7.6 mm to approx. 15X or better) 1:2.6 or better (at 22X)
VII.	MIN. OBJECT DISTANCE from Lens front	0.80 meter or better
VIII.	ZOOM AND FOCUS	The lens is to be operated in "manual focus servo zoom mode".

5. COMPLIANCE:

- a) Any substandard equipment included in the offer may cause rejection of the complete offer with the sole responsibility of the bidder.
- b) The firm should provide the offered un-priced bill of material in electronic form also in addition to the hard copy for ease of technical evaluation.
- c) **A point-by-point compliance statement from the principal manufacturer in respect of all the points laid down in these specifications is to be enclosed along with the offer in the format**

given below. Mere signature on the copy of the specifications shall not be accepted as a compliance statement.

The figures so mentioned should be supported by record of these in the technical literature enclosed with the tender and reference to the page number of enclosed literature for all features and technical specifications should be mentioned in the relevant column. Offers without the compliance statement or with incomplete compliance statement will liable to be rejected with the sole responsibility of the bidder. Any deviation from the specifications detailed in the compliance statement is to be highlighted separately.

Sr. Nos. of DD	DD specs.	Compliance (Yes/No)	Performance Fig. of the equipment Offered.	Reference to the Page Number of the enclosed literature	Deviations, in case of non-compliance	Optional items if any required to make the system Compliant to DD specs.	Features in the offered Product which exceeds DD specs.

6. ACCESSORIES:

All the accessories required for application of the lens should be quoted by the bidder and bidder should certify for the completeness of the offered lens system. All necessary accessories for operating the lens should be included in the offer. All the optional items should be quoted separately. The bidder must provide enough details about such optional items to decide its utility.

7. DOCUMENTATION:

One set of printed technical and operation & maintenance manuals for all the equipment is to be provided on non-returnable basis along with the tender to facilitate the technical evaluation, otherwise the tender is liable to be ignored. The successful bidder will have to supply one set of printed operation, service and maintenance manuals with respect to each equipment.

8. GUARANTEE:

- a) The system should be guaranteed for two years of trouble free operation from the date of supply. In case of any equipment failure including software and hardware within this period, the same shall be rectified or replaced free of cost to Doordarshan.
- b) The guarantee should cover all hardware, software and modules of the complete system.

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9. DEMONSTRATION:

If necessary, the firm may be asked for demonstration of the offered system as part of the technical evaluation. In such case the firm will have to make suitable arrangement for the demonstration of the offered system at Doordarshan Bhawan, New Delhi, on notice of 21 days. Accordingly the firm should be in readiness for demonstration on a notice of 21 days.

10. INSPECTION:

The equipment shall be subjected to inspection by authorized Doordarshan officials at New Delhi.

11. ENCLOSURES:

The bidder must necessarily submit the following enclosures along with the technical bid:

- a. Compliance statement with respect to all the points of the specifications duly signed by the OEM.

The reference to the page number of enclosed literature for all features and technical specifications should be essentially mentioned in the relevant column of the compliance statement.

- b. Technical manuals/Detailed technical literature/catalogues for all the offered products for substantiating the model no. and technical specification.
- c. **Model specific User list of the offered product.**
- d. Any other document mentioned elsewhere in the tender document.

The tender is liable to be rejected in the absence of the above enclosures with the sole responsibility of the bidder.

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[Handwritten signatures]

Bill of Material Required

Sl. No.	Details of Item	Quantity
1.	22 x or better HDTV Zoom Lens with all accessories for manual focus servo zoom mode operation	20 Sets
2.	Operation manual/User Guide/ Technical Manual/ Installation Manual etc.	20 Sets
3.	Service & Maintenance Manuals	20 Sets

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Appendix-II

LIST OF DOORDARSHAN CENTRES

Sl. No.	Zone	Location of Doordarshan Centre	Qty.
1.	North Zone	Delhi	5 sets
2.	East Zone	Kolkata	5 sets
3.	South Zone	Chennai	5 sets
4.	West Zone	Mumbai	5 sets
TOTAL			20 sets

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