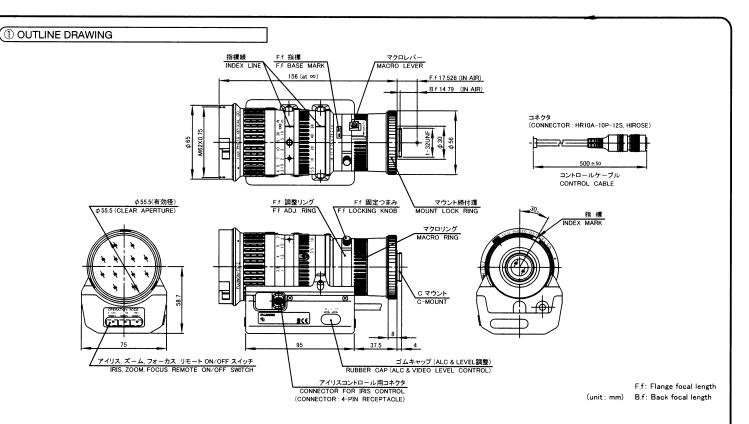
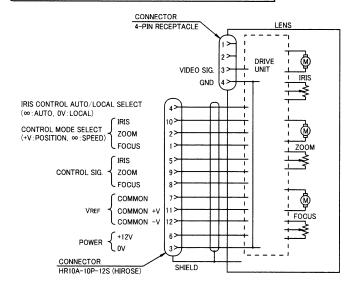
FUJINON CCTV LENS OPERATION MANUAL

T16x5.5DA-R11



② WIRING DIAGRAM



(3 MOUNTING THE LENS

- Before mounting the lens, check for any loosening in the mount lock ring, if there is any, tighten the ring securely.
- 2) Press the threaded portion of the lens mount against the threaded portion of the camera mount, slowly rotate the lens clockwise, and screw in the lens mount to be installed on the camera.

Note: To change the position of the lens in the direction of rotation, first loosen the mount lock ring by rotating it about 90° in the counterclockwise direction, as viewed from the camera side.

Then, after slowly rotating the lens to adjust its position, retighten the mount lock ring securely.

(4) IRIS, ZOOM, FOCUS, REMOTE ON/OFF SWITCH

These switches can be seen inside the rubber cap. If it is required to operate the iris, zoom or focus ring by hand in adjustment procedure etc., set each switch to "M" before operation. In normal operation, the switches must be set to "A".

Note: If the iris, zoom or focus ring is operated by hand with the associated switch set to

"A," a part of mechanism in the drive unit may be damaged.

(5) CONTROLLER (OPTION)

To make full use of this zoom lens, it is recommended that the lens be used together with exclusive FUJINON CONTROL BOX RMD-10, 20, 30.

When using the control box, cable relay unit CCB-1 and DC power source CPS-401A-01A are needed.

Be sure to refer to the operation manual for each accessory, concerning how to correctly operate each accessory.

CONTROL BOXES AND THEIR FUNCTION

	IRIS	FOCUS	ZOOM
RMD-10	ON/OFF CONTROL	ON/OFF CONTROL	ON/OFF CONTROL
	BY PUSH BUTTON	BY PUSH BUTTON	BY PUSH BUTTON
RMD-20	POSITION CONTROL	POSITION CONTROL	SPEED CONTROL
	BY OPERATION KNOB	BY OPERATION KNOB	SEESAW BUTTON
RMD-30	ON/OFF CONTROL BY PUSH BUTTON	PRESET CONTROL & ON/OFF CONTROL	PRESET CONTROL & ON/OFF CONTROL

(6) LEVEL ADJUSTMENT

The iris control level is set to the standard level before shipping, and no readjustment is needed in normal use.

If readjustment is required to match the level to the camera's characteristics and/or the object conditions, carry out the following procedure.

- 1) Remove the rubber cap on the side of the lens.
- 2) Rotate the inside of level control VR with a small screwdriver so that the optimum condition is obtained.

MONITOR BRIGHTNESS	ROTATING DIRECTION OF LEVEL CONTROL VR
TO BRIGHTER	H (CLOCKWISE)
TO DARKER	L (COUNTERCLOCKWISE)



Note: Adjustment should be performed under sufficient illumination using a less contrasty object.

3) Replace the rubber cap.

① ALC ADJUSTMENT

The ALC mode is set before shipping to "Average control mode", which is extensively applicable and so no readjustment is needed in normal use.

If "Peak control mode" is required, reset the ALC mode as explained below.

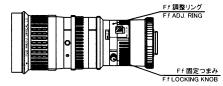
- 1) Remove the rubber cap on the side of the lens.
- 2) Rotate the inside of ALC VR with a small screwdriver so that the optimum condition is obtained.

ALC MODE	ROTATING DIRECTION OF ALC VR
TO PEAK CONTROL	Pk (CLOCKWISE)
TO AVERAGE CONTROL	Av (COUNTERCLOCKWISE)



- 3) Readjust the iris level control VR through the procedure of "Level Adjustment" to be in an optimum condition.
 - Note: Repeat steps 2) and 3) until the optimum setting is obtained.
- 4) Replace the rubber cap.

(8 FLANGE FOCAL ADJUSTING



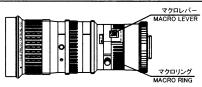
■ CONDITIONS OF OBJECT AND DIAPHRAGM

- 1. Object: an object large enough to provide clear and easy focusing
- 2. Distance of Object: about 3 meters
- 3. Diaphragm: open or as near to open as possible

■ ADJUSTMENT

- Loosen the F.f locking knob.
- 2) With the zoom at the wide end, rotate the F.f adjusting ring using the F.f locking knob to bring the object into focus.
- 3) With the zoom at the tele end, operate the focus to bring the object into focus.
- 4) To precisely adjust, repeat the above steps 2) and 3) two or three times.
- 5) Finally tighten the F.f locking knob firmly.

(9 MACRO OPERATION



■ OPERATION

Carry out the following steps for macro operation(close shot).

- 1) Rotate the macro ring toward the arrow as far as it goes while pulling the macro lever
- 2) Set the focus at the M.O.D.
- 3) Focus the lens by controlling the zoom.

Note: It is also possible to shoot an object while the macro ring is in the middle position.

In this case, the M.O.D. and the object area at M.O.D. should be the middle values of those between normal and macro shot.

■ PROCEDURE TO CANCEL

Rotate the macro ring in the opposite direction of the arrow until it clicks.

(10) OPTICAL & MECHANICAL SPECIFICATIONS

L ABBUS ATION		505 4 (6" 505) 4 7 500 504 65 64 45 64 45 64 45 64 45 64 45 64 45 64 45 64 45 64 45 64 45 64 64 64 64 64 64 64 64 64 64 64 64 64
1. APPLICATION		FOR 1/3" FORMAT 3CCD COLOR CAMERA
2. FOCAL LENGTH		5.5 mm - 88 mm
3. ZOOM RATIO		16×
4. MAXIMUM RELATIVE APER	TURE	1:1.4
5. IRIS RANGE		F1.4 - F16
6. IMAGE SIZE		ϕ 6 mm (4.8 mm × 3.6 mm)
7. BACK FOCAL LENGTH		14.79 mm (IN AIR)
8. FLANGE FOCAL LENGTH		17.526 mm (IN AIR)
9. FOCUS RANGE		∞ - 1 m (FROM FRONT OF LENS)
10. SHIFT OF FRONT LENS		4.7 mm
11. FIELD ANGLE		
	a) HORIZONTAL	WIDE 47°09′ TELE 3°34′
	b) VERTICAL	WIDE 36°15′ TELE 2°41′
	c) DIAGONAL	WIDE 57°13′ TELE 4°28′
12. FIELD OF VIEW AT M.O.D.		
	a) HORIZONTAL	WIDE 819 mm TELE 59 mm
	b) VERTICAL	WIDE 614 mm TELE 44 mm
13. CLEAR APERTURE		
	a) FRONT	φ 55.5 mm
	b) REAR	Φ21.0 mm
14. EXIT PUPIL POSITION		251 mm (FROM IMAGE PLANE)
15. MOUNT		C-MOUNT
16. FILTER SCREW SIZE		M62 × 0.75 mm
17. MASS		APPROX. 0.9 kg

FUJI PHOTO OPTICAL CO., LTD.

1-324 UETAKE, SAITAMA CITY, SAITAMA 330-8624, JAPAN TEL : 81-48-668-2152 FAX : 81-48-651-8517 URL http://www.fujinon.co.jp/

Design and specifications are subject to change without notice.

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FUJINON INC.

10 HIGH POINT DRIVE, WAYNE, NJ 07470, U.S.A. TEL: 1-973-633-5600 FAX: 1-973-633-5216 E-mail: lens.sales@fujinon.com URL http://www.fujinon.com/

F.P. FOCUSING PTY 1 TD

UNIT-18, 52 HOLKER STREET, SILVERWATER N.S.W. 2128, AUSTRALIA TEL: 61-2-9748-2744 FAX: 61-2-9748-2428 E-mail: fpfocus@dot.net.au

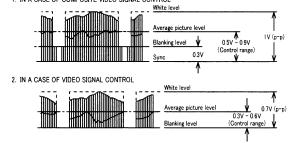
(1) ELECTRICAL SPECIFICATIONS

POWER CONSUMPTION		
<u>a)</u>	RATING VOLTAGE	+12V DC (+10.5V TO +16V)
ь)	CURRENT CONSUMPTION	250mA (MAX.)
2. IRIS CHARACTERISTICS		
a)	CONTROL	AUTO OR SERVO (EXTERNAL CONTROL)
b)	AUTO	*
	INPUT SIGNAL	COMPOSITE VIDEO SIGNAL (1V(p-p))
		OR VIDEO SIGNAL (0.7V(p-p))
	INPUT IMPEDANCE	10 kΩ (TYP.)
	LEVEL CONTROL RANGE	SEE FIG. A
	ACCURACY	±3.5% (AT 0.5V A.P.L. ※)
c)	EXTERNAL CONTROL	
	CONTROL SIGNAL	VREF (5.0V) ± 2.5V DC
<u>d)</u>	OPERATING TIME	APPROX. 3s/FULL TRAVEL
3. ZOOM CHARACTERISTICS		
a)	CONTROL	SERVO (EXTERNAL CONTROL)
b)	CONTROL SIGNAL	VREF (5.0V) ± 2.5V DC
c)	OPERATING TIME	APPROX. 3s/FULL TRAVEL
4. FOUCS CHARACTERISTICS		
a)	CONTROL	SERVO (EXTERNAL CONTROL)
b)	CONTROL SIGNAL	VREF (5.0V) ± 2.5V DC
c)	OPERATING TIME	APPROX. 3s/FULL TRAVEL

* A.P.L.: AVERAGE PICTURE LEVEL

FIG. A

1. IN A CASE OF COMPOSITE VIDEO SIGNAL CONTROL



(1) ENVIRONMENTAL CONDITIONS

1. TEMPERATURE	OPERATING	-10 °C TO +50 °C
	STORAGE	-20 °C TO +60 °C
2. RELATIVE HUMIDITY		35 % TO 90 %

(13 MAINTENANCE OF THE LENS

Special coating has been applied on the lens surface in order to prevent light reflection. Dirty lens surface due to "dust", "oil" or "finger print" causes harmful flare which results in degenerating lens property.

Besides, the dirt on the lens may gather molds or scorch on the lens.

Whenever the lens is found to be dirty, clean the lens as instructed below.

Note: Be careful not to damage the lens surface in cleaning.

(1) To remove dust on the lens

Brush "trash" or "dust" off with an oil-free soft brush or a blower-brush (for photography use).

(2) To remove oil on the lens

Wipe water drops or oil off the lens with a clean soft cloth and dry the lens surface. Then prepare oil-free and washed-out cotton cloth or lens cleaning paper with either alcohol, benzine or lens cleaning liquid. Wipe the rest of the dirt off gently with the cloth or paper by moving spirally from the lens center towards its rim. Repeat wiping with another wet cloth or paper until the lens becomes completely clean.

(14 PRODUCT COMPONENTS

1. Lens 1
2. Front lens cap
3. Rear lens cap
4. Operation manual······ 1

FUJINON (EUROPE) GmbH

HALSKESTRASSE 4, 47877 WILLICH, GERMANY TEL: 49-2154-924-0 FAX: 49-2154-924-290 E-mail: Fujinon@fujinon.de/ URL http://www.fujinon.de/

HONG KONG FUJI KOKI I IMITED

UNIT 2605-2607, LEVEL 26, METROPLAZA, TOWER 1, 223 HING FONG ROAD, KWAI FONG N.T., HONG KONG TEL: 852-2311-1228 FAX: 852-2724-1118 E-mail: fujinon@netvigator.com

FUJI KOKI SINGAPORE PTE. LTD.

211 HENDERSON ROAD, #10-04 HENDERSON INDUSTRIAL PARK, SINGAPORE, 159552 TEL: 8-65-6276-4988 FAX: 8-65-6276-6911 E-mail: fujinon@fujinon.com.sg







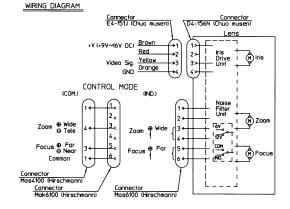
OPTICAL & MECHANICAL SPECIFICATIONS

ENVIRONMENTAL CONDITIONS

1. Application	For 1/3" Format 3CCD Color Camera
2. Focal Length	5.5 mm - 88 mm
3. Zoom Ratio	16x
4. Maximum Relative Aperture	1 : 1.4
5. Iris Range	F1.4 - T400 (Equivalent to F400)
6. Image Size	Ø6 mm (4.8 mm X 3.6 mm)
7. Back Focal Length	14.79 mm (in gir)
8. Flange Focal Length	17.526 mm (in air)
9. Focus Range	∞ - 1 m
10. Shift of Front Lens	4.7 mm
N11. Field Angle	
a) Horizontal	Wide 47°09' Tele 3°34'
b) Vertical	Wide 36°15' Tele 2°41'
c) Diagonal	Wide 57°13' Tele 4°28'
12. Field of View at M.O.D.	
a) Horizontal	Wide 819 mm Tele 59 mm
b) Vertical	Wide 614 mm Tele 44 mm
13. Lens Construction	Groups 13, Elements 19
14. Clear Aperture	
a) Front	Ø55.5 mm
b) Rear	Ø21.0 mm
15. Exit Pupil Position	251 mm (from Image Plane)
16. Mount	C-Mount
17. Filter Screw Size	M62X0.75 mm
18. Mass	Approx. 0.9 kg

ELECTRICAL SPECIFICATIONS

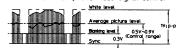
1. Iris Characteristics	
a) Control	Auto
b) Rated Voltage	+12V DC (+9V to +16V)
c) Input Signal	Composite Video Signal (1V (p-p))
	or Video Signal (0.7V(ρ-ρ))
d) Input Impedance	10k Q (Typ.)
e) Level Control Range	See Fig. A
f) Accuracy	±3.5% (at 0.5V A.P.L.) (*1)
g) Current Consumption	Operating Current 35 mA (Max.)
	Idling Current 10 mA (Typ.)
h) Response Time	Approx. 3 s / Full Travel
2. Zoom Characteristics	
a) Control	Motor Drive
b) Rated Voltage	6V /12V /±6V /±12V DC (Switchable)
c) Current Consumption	Operating Current 35 mA (Typ.)
	90 mA (Max.)
d) Operating Time	Approx. 5 s / Full Travel
3. Fo <u>cus Characteristics</u>	
a) Control	Mator Drive
b) Rated Voltage	6V /12V /±6V /±12V DC (Switchable)
c) Current Consumption	Operating Current 35 mA (Typ.)
	90 mA (Max.)
d) Operating Time	Approx. 7 s / Full Travel
Fig A / Lovel Control Bangs)	(*1) A.P.L. ; Average Picture Level



fass Approx 0.9 kg Fig.A (Level Control Range)

1. Temperature	
 a) Operating 	-10°C to +50°C
b) Storage	-20°C to +60°C
2. Relative Humidity	35% to 90%

1. In a Case of Composite Video Signal Control



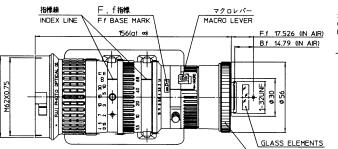
2. In a Case of Video Signal Control

White level

Average picture level

0.7V(p-p)

Banking level (Control Strong)



コネクタ
(DIN CONNECTOR:
Mas 4100 , Hirschmann) Mak 6100 , Hirschmann)

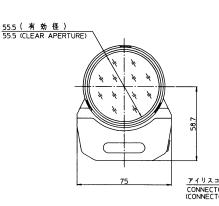
ア検ケーブル
CONVERSION CABLE

600 ±30 フィリスコントロールケーブル IRIS CONTROL CABLE コネクタ (DIN CONNECTOR: Mas 6100, Hirschmann)

(MINI PLUG : E4-151J , Chuo Musen)

ズーム・フォーカスコントロールケーブル ZOOM & FOCUS CONTROL CABLE

コネクタ



RUBBER CAP (ALC & VIDEO LEVEL CONTROL)

