



# SMD INSPECTION SYSTEM MICROSCOPE

The Meiji Techno SMD Inspection System has been specifically designed for the inspection of miniature electronic components and assemblies such as surfacemounted electronic devices on printed circuit boards. The SMD system is ideally suited for quality-control applications and the rework and repair of solder connections of various electronic devices.



**ISSCO**

Ph.(02) 9743 2588

Fax.(02) 9736 2835

The SMD attachment allows the user to quickly change between vertical and oblique viewing methods by a simple one-touch slide movement of the SMD attachment. The oblique viewing angle is adjustable and can also be rotated through a full 360° range. Components and solder joints are easily inspected using the oblique viewing method without having to tilt or turn the circuit board.

A 103mm working distance allows for easy access to defective components and facilitates quick repair.

## MODEL SMD-B INSPECTION SYSTEM MICROSCOPE

### Complete set comprises:

- EMZ-5** Binocular zoom stereo body, 0.7X to 4.5X
- MA503** SWF15X super widefield eyepiece (paired)
- MA504** SWF20X super widefield eyepiece (paired)
- MA571** SMD attachment (Includes built-in 0.3X lens for oblique observation and 0.44X for vertical observation)
- F** Focus block
- UL** Universal stand with rotatable stand for light source
- MA574** Sliding stage with 350mm X 270mm X-Y travel
- FL151** Dual arm 150W fiber optic illumination system 110/115



SMD-B

## MODEL SMD-5TR INSPECTION SYSTEM MICROSCOPE

### Complete set comprises:

- EMZ-5TR** Trinocular zoom stereo body, 0.7X to 4.5X  
*(EMZ-5TR directs light to right eyetubes and video tube simultaneously)*
- MA503** SWF15X super widefield eyepieces (paired)
- MA504** SWF20X super widefield eyepieces (paired)
- MA571** SMD attachment (Includes built-in 0.3X lens for oblique observation and 0.44X for vertical observation)
- F** Focus block
- UL** Universal stand with rotatable stand for light source
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- FL151** Dual arm 150W fiber optic illumination system 110/115

*(Note: CCD Color video camera, video "C" mount and monitor are optional)*



SMD-5TR

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SMD-8TR

### MODEL SMD-8TR INSPECTION SYSTEM MICROSCOPE

**Complete set comprises:**

- EMZ-8TR** Trinocular zoom stereo body, 0.7X to 4.5X  
*(EMZ-8TR directs light to both eyetubes and video tube simultaneously)*
- MA503** SWF15X super widefield eyepieces (paired)
- MA504** SWF20X super widefield eyepieces (paired)
- MA797** SMD attachment for EMZ-8TR only.  
(Includes built-in 0.35X lens for oblique observation and 0.58X for vertical observation)
- F** Focus block
- UL** Universal stand w/rotatable stand for light source
- MA574** Sliding stage with 350mm X 270mm X-Y travel
- FL151** Dual arm 150W fiber optic illumination system  
110/115

*(Note: CCD Color video camera, video "C" mount and monitor are optional)*

## ISSCO

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MODEL	Magnification of zoom objective	Magnification on 13" monitor with 1/2" CCD	Magnification on 13" monitor with 1/3" CCD
EMZ-8TR with MA797 and MA151/5N	0.7X	28.89X	38.52X
	1.0X	41.27X	55.03X
	1.5X	61.91X	82.54X
	2.0X	82.55X	110.06X
	2.5X	103.18X	137.58X
	3.0X	123.82X	165.09X
	3.5X	144.46X	192.61X
	4.0X	165.10X	220.13X
	4.5X	185.73X	247.64X

### VIDEO MAGNIFICATION CHART

MODEL	Magnification of zoom objective	Magnification on 13" monitor with 1/2" CCD	Magnification on 13" monitor with 1/3" CCD
EMZ-5TR with MA571 and MA151/5N	0.7X	28.89X	38.52X
	1.0X	41.27X	55.03X
	1.5X	61.91X	82.54X
	2.0X	82.55X	110.06X
	2.5X	103.18X	137.58X
	3.0X	123.82X	165.09X
	3.5X	144.46X	192.61X
	4.0X	165.10X	220.13X
	4.5X	185.73X	247.64X

MODEL	Magnification of zoom objective	Magnification on 13" monitor with 1/2" CCD	Magnification on 13" monitor with 1/3" CCD
EMZ-8TR with MA797 and MA151/8TR	0.7X	17.33X	23.11X
	1.0X	24.76X	33.01X
	1.5X	37.14X	49.52X
	2.0X	49.53X	66.03X
	2.5X	61.91X	82.54X
	3.0X	74.29X	99.05X
	3.5X	86.67X	115.56X
	4.0X	99.06X	132.07X
	4.5X	111.44X	148.58X

### EMZ-5TR ZOOM STEREO BODY

- Trinocular zoom body for use in photographic and video applications. When the beamsplitter is engaged 100% of the light from the left optical path is directed to the phototube. The image can still be viewed through the right eyetube.
- Crisp, high resolution, precision optics provide an excellent, erect, unreversed stereoscopic image.
- Rugged all metal body designed to last a lifetime.
- Zoom Range: 0.7X to 4.5X
- Zoom Ratio: 6.5:1
- Binocular eyetubes inclined at 45° for fatigue free viewing.
- Dual dioptic adjustment ( $\pm 5$  diopters) allows the specimen to remain in focus throughout the entire zoom magnification range.
- Interpupillary distance adjustment from 54mm to 75mm.



EMZ-5TR

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EMZ-5

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### EMZ-8TR ZOOM STEREO BODY

*Trinocular zoom body for use in training, video and photographic applications. The image can be viewed through both eyetubes and photo/video tube simultaneously without engaging a beam splitter. Ideally suited for training, monitoring and teaching situations.*

- Crisp, erect high resolution images with excellent stereoscopic effect.
- Rugged all metal body designed to last a lifetime.
- Zoom range : 0.7X to 4.5X
- Zoom ratio 6.5 : 1
- Binocular eyetubes inclined at 45° for fatigue free viewing.
- Dual diopter adjustment ( $\pm 5$  diopters) allows the specimen to remain in focus throughout the entire zoom magnification range.
- Interpupillary distance adjustment from 54mm to 75mm.



EMZ-8TR

### MAGNIFICATION AND FIELD OF VIEW FOR EYEPIECES

MODEL	Magnification with SWF 15X eyepieces	Magnification with SWF 20X eyepieces	Field of view with SWF 15X eyepieces	Field of view with SWF 20X eyepieces	Working Distance in	
					Oblique	Vertical
EMZ-5 EMZ-5TR with MA571	3.15X~20.25X	4.62X~29.7X	11.4mm~73.0mm	8.5mm~54.7mm	103mm	103mm
EMZ-8TR with MA797	3.67X~23.62X	4.9X~31.5X	9.7mm~62.8mm	7.3mm~46.9mm	103mm	103mm

## SMD ATTACHMENT

Catalog No.MA571 Catalog No.MA797

Designed specifically for the inspection of solder connections, rework and repair of electronic circuits and for mounting small electronic components. One-touch sliding movement allows the user to quickly change from vertical to oblique viewing. Rotatable 360°. Vertical working distance 103mm. Oblique working distance 103mm.

**Note: MA571:For use with Zoom Stereo EMZ- 5, EMZ-5TR, EMZ-2 and EMZ-2TR bodies only.**

**MA797:For use with Zoom Stereo EMZ-8TR body only.**



MA571 or MA797



## UNIVERSAL STAND

UL

Model:UL

Special universal-type stand with pillar, crossarm, mounting post, and rotatable tray to hold optional fiber optic light source. Provides flexible horizontal and vertical movement for large specimens. 20mm diameter short mounting post accepts optional F, FX or FC holders.

**Base:** 580mm x 500mm x 38mm.

**Dimensions:**

Horizontal pole/Length : 480mm,Diameter : 25mm

Vertical pole/Length : 365mm,Diameter : 29mm



## SBU STAND

SBU

Model:SBU

Special universal-type stand with pillar, crossarm and mounting post mounted directly over a large flat laminate work surface. Provides flexible horizontal and vertical movement for large specimens. 20mm diameter short mounting post accepts optional F, FX or FC holders.

**Base:** 580mm x 500mm x 38mm.

**Dimensions:**

Horizontal pole/Length : 480mm,Diameter : 25mm

Vertical pole/Length : 365mm,Diameter : 29 mm



F

## HOLDER Model:F

Focusing slide block designed to hold the stereo microscope body on machines or for special OEM applications. Rack and pinion mount allows smooth, precise focusing over 55mm of travel. Coarse focus mechanism incorporates a slip clutch and tension adjustment. Fits 20mm mounting post, 84.2mm diameter opening accepts 84mm stereo microscope body.

## LARGE SLIDING STAGE

Catalog No.MA574

Large 395mm x 395mm (15.5" x 15.5") roller bearing stage with 350mm x 270mm (13.78" x 10.63") x-y travel. Black anodized with x-y lock down screws.



MA574

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## FL151/115

Dual arm fiber optic illumination system -includes:150 Watt quartz halogen light source with variable intensity control, self-supporting dual arm light guides and 2 focusing lenses. 115VAC 50/60 Hz

## FL151/200

Dual arm fiber optic illumination system -includes:150 Watt quartz halogen light source with variable intensity control, self-supporting dual arm light guides and 2 focusing lenses. 230VAC 50/60 Hz

## CCD COLOR VIDEO CAMERA

Model:CK3100N 1/3" CCD Color Video Camera, NTSC

Model:CK3100P 1/3" CCD Color Video Camera, PAL

Model:CK3900N 1/2" CCD Color Video Camera, NTSC

Model:CK3900P 1/2" CCD Color Video Camera, PAL

## FEATURES

- 450TV lines of horizontal resolution
- CCD sensor 768H x 494V NTSC, 752H x 582V PAL
- Electronic CCD-Iris for auto light control
- Electronic shutter speed up to 1/10,000sec.
- TTL auto tracking white balance (ATW) or preset
- C and CS mountable
- CE Approved

## Comprises:

- Color TV camera .....1pc
- AC Adapter ..... 1pc
- BNC Cable, 3M long ..... 1pc
- S Cable, 3M long..... 1pc

## SPECIFICATIONS

Model	CK3100N	CK3100P	CK3900N	CK3900P
	High resolution			
CCD	1/3" Interline-Transfer type		1/2" Interline-Transfer type	
Elements	758 (H) x 494 (V)	752 (H) x 582 (V)	768 (H) x 494 (V)	752 (H) x 582 (V)
TV system	NTSC	PAL	NTSC	PAL
Lens mount	C/CS-Mount			
White balance	3200°K / 4600°K / 5600°K / ATW			
AGC	0 dB ~ 18 dB			
Shutter	1/50 (1/50) ~ 1/10,000			
Serial interface	RS232C			
Power	12V DC ± 10%			
H.resolution	450 TV Lines			
S/N	50 dB			
Video output	VBS (γ=0.45)			
Min.Sensity (AGC ON)	0.3 lux on CCD surface			
External sync	HD/VD, Composite Sync			
Power consumption	4.5W			
Storage temperature	-25°C ~ 60°C			
Operating temperature	-5°C ~ 45°C			
Dimensions	55 (W) x 45 (H) x 110 (L) mm			
Net Weight	350g (TV Camera)			



FL151 Dual Arm Fiber Optic Illumination System



CK3900



CK3900, AC Adapter and Cables

Agent **ISSCO**

Industrial & Scientific Supply Co.P/L  
SYDNEY · MELBOURNE · BRISBANE

[www.issco.com.au](http://www.issco.com.au)

Ph.(02) 9743 2588 Fax.(02) 9736 2835

MEIJI TECHNO AMERICA

2186 Bering Drive

San Jose, CA., 95131, USA

Phone : 408-428-9654 Fax : 408-428-0472

Toll free : 800-832-0060



MEIJI TECHNO CO.,LTD.

6, OI-670, OI-machi, Iruma-gun

Saitama 356-0053, Japan

Phone : 492-67-0911

Fax : 492-69-0691, 492-69-0692

<http://www.meijitechno.com>