

BX51WI • BX61WI**SYSTEM A: Standard BX51WI setup with IR-DIC (770nm) and Attached X/Y Stage:**

BX51WI microscope for electrophysiology applications is equipped with a newly designed swing-out dual nosepiece. System includes a trinocular observation tube which provides an erect image for easy manipulator alignment. Optics include the slim design UMPLFL10X (NA 0.3) and LUMPLFL40X/IR-2 (NA 0.8) water immersion objectives both with 3.3mm of working distance. The LUMPLFL40XW/IR-2 objectives have high transmission from 340nm to 1100nm for FURA-2 and IR applications. Sample movement via a 3 plate x-y stage that attaches directly to the microscope frame. The microscope is configured for IR-DIC (770nm) and includes a 1/2-inch IR sensitive CCD camera, 1x-2x-4x Video Magnification Changer, and 13-inch monitor.

SYSTEM B: Standard BX51WI setup with IR-DIC (900nm) and Attached X/Y Stage:

BX51WI microscope for electrophysiology applications is equipped with a newly designed swing-out dual nosepiece. System includes the trinocular observation tube which provides an erect image for easy manipulator alignment. Optics include the slim design UMPLFL10X (NA 0.3) and LUMPLFL40X/IR-2 (NA 0.8) water immersion objectives both with 3.3mm of working distance. The LUMPLFL40XW/IR-2 objectives have high transmission from 340nm to 1100nm for FURA-2 and IR applications. Sample movement via a 3 plate x-y stage that attaches directly to the microscope frame. The microscope is configured for IR-DIC (900nm) and includes a 1/2-inch IR sensitive CCD camera, 1x-2x-4x Video Magnification Changer, and 13-inch monitor.

SYSTEM C: Standard BX51WI setup with Gibraltar stage, IR-DIC (770nm), & fluorescence capability:

BX51WI microscope equipped with Gibraltar fixed stage and microscope x-y translation plate. The BX51WI mounts directly to the translation plate which allows the microscope to move, while manipulators and specimen remain stationary. The BX51WI frame is equipped with a swing-out dual nosepiece. The trinocular observation tube provides an erect image for easy manipulator alignment. The fluorescence illuminator accepts up to six fluorescence filter cubes. Optics includes the UMPLFL10X and LUMPLFL60X/IR-2 water immersion objectives. The microscope is configured for visible and IR-DIC (770nm), 1/2-inch IR sensitive CCD camera, 1x-2x-4x Video Magnification Changer, and 13-inch monitor.

SYSTEM D: Standard BX51WI setup with Gibraltar stage, IR-DIC (900nm), fluorescence capability:

BX51WI microscope equipped with Gibraltar fixed stage and microscope x-y translation plate. The BX51WI mounts directly to the translation plate which allows the microscope to move, while manipulators and specimen remain stationary. The BX51WI frame is equipped with a swing-out dual nosepiece. The trinocular observation tube provides an erect image for easy manipulator alignment. The fluorescence illuminator accepts up to six fluorescence filter cubes. Optics includes the UMPLFL10X and LUMPLFL60X/IR-2 water immersion objectives. The microscope is configured for IR-DIC (900nm), 1/2-inch IR sensitive CCD camera, 1x-2x-4x Video Magnification Changer, and 13-inch monitor.

SYSTEM E: Economical BX51WI Oblique Illumination set up:

BX51WI microscope for electrophysiology applications is equipped with a swing-out dual nosepiece. System includes a trinocular observation tube which provides an erect image for easy manipulator alignment. Optics include the slim design UMPLFL10X (NA 0.3) and LUMPLFL40X/IR-2 (NA 0.8) water immersion objectives both with 3.3mm of working distance. Sample movement is via a 3 plate x-y stage that attaches directly to the microscope frame. System includes a simple oblique illumination condenser.

SYSTEM F: Macro Fluorescence BX51WI setup:

BX51WI microscope for electrophysiology applications is equipped with a unique two position sliding macro nosepiece. System includes the trinocular observation tube which provides an erect image for easy manipulator alignment. Optics include the slim design UMPLFL10X (NA 0.3) and large diameter XLFLUOR4X/340 (NA 0.28) objectives. The XLFLUOR4X/340 objective has high transmission from 340nm – to 1100nm for FURA-2 and near-IR applications. System includes fluorescence raypath and special macro GFP filter cube. Sample movement is via a 3 plate x-y stage that attaches directly to the microscope frame. This configuration does not include transmitted light.

SYSTEM G: InVivo Fluorescence only setup:

BX51WI Microscope equipped with an additional nosepiece riser for increasing the clearance between the objectives and stage. Advantageous for whole animal applications. Optics includes the UMPLFL10X and LUMPLFL40X/IR-2 water immersion objectives. The fluorescence illuminator accepts up to six fluorescence filter cubes. Sample movement is via a 3 plate x-y stage that attaches directly to the microscope frame. This configuration does not include transmitted light.

SYSTEM H: Advanced Electrophysiology setup with Gibraltar, Senarmont IR-DIC (770nm), fluorescence Capability:

BX51WI microscope equipped with Gibraltar fixed stage and microscope x-y translation plate. The BX51WI mounts directly to x-y translation plate which allows the microscope to move, while manipulators and specimen remain stationary. The BX51WI frame is equipped with single position nosepiece and unique dual camera port observation tube. The rear camera port includes an internal 4x eyepiece that can be optioned with either a 0.25x or 0.35x eyepiece. Note: Eyepiece is required for proper image formation, no eyepiece = no image. The rear imaging port is a C-mount designed for IR-DIC and the front port as a standard dovetail for any BX2 camera adapters. System is designed around the outstanding high NA (0.95), Long WD (2mm) XLUMPLFL20x/W water immersion objective. This objective has high transmission from 340nm – above 1100nm for FURA-2 and near-IR applications. The microscope is configured for Senarmont IR-DIC (770nm), fluorescence, 1/2-inch IR sensitive CCD camera and 13-inch monitor.

SYSTEM I: High Advanced Electro Physiology setup with Gibraltar, Senarmont IR-DIC (900nm), fluorescence Capability:

BX51WI microscope equipped with Gibraltar fixed stage and microscope x-y translation plate. The BX51WI mounts directly to x-y translation plate which allows the microscope to move, while manipulators and specimen remain stationary. The BX51WI frame is equipped with single position nosepiece and unique dual camera port observation tube. The rear camera port includes an internal 4x eyepiece that can be optioned with either a 0.25x or 0.35x eyepiece. Note: Eyepiece is required for proper image formation, no eyepiece = no image. The rear imaging port is a C-mount designed for IR-DIC and the front port as a standard dovetail for any BX2 camera adapters. System is designed around the outstanding high NA (0.95), Long WD (2mm) XLUMPLFL20x/W water immersion objective. This objective has high transmission from 340nm – above 1100nm for FURA-2 and near-IR applications. The microscope is configured for Senarmont IR-DIC (900nm), fluorescence, 1/2-inch IR sensitive CCD camera and 13-inch monitor.

Catalog #	Configuration	A	B	C	D	E	F	G	H	I
BX51WIF	BX51WIF; Microscope stand with front fine/coarse focus	1	1	1	1	1	1	1	1	1
5-UR705	BX-ARM; Transmitted light arm for BX2 frames	1	1			1				
U-R1000	WI-NPA; Focusing arm for nosepiece on BX51WIF and BX62WIF	1	1	1	1	1	1	1	1	1
5-UL113	U-LH100L-3; 12V/100W Halogen lamphouse, long cord	1	1	1	1	1	1		1	1
9-U961	45SCF; 45mm Round Heat reflection filter from 1000nm	1	1	1	1				1	1
5-UT400	TH4-100; 12V/100W power supply, 120V input	1	1	1	1	1	1		1	1
5-UT405	TH4-HS; Hand switch for TH4 with intensity control dial	1	1	1	1	1	1		1	1
UYCP-11	UYCP-11; US style 3-prong power cord	1	1	1	1	1	1		1	1
5-UL701	U-RMT; Extension cable for halogen lamphouse, 2M	1	1	1	1	1	1		1	1
4-U221	IX-SVL2; Three plate mech. Stage, Left short handle,	1	1			1	1	1		
4-U231	WI-FSH; Fixed stage adapter for IX-SVL2 and WI-STAD	1	1			1	1	1		
3-U157	U-ETR-3; Trinocular observation tube, erect image, 100% eyepiece or 100% camera.	1	1	1	1	1	1	1		
2-U1003	WH10X-3; 10X Eyepiece widefield, high eyepoint, FN22	1	1	1	1	1	1	1	1	1
2-U100H2	WH10X2-H; 10X Focusing eyepiece, widefield high eyepoint, FN22	1	1	1	1	1	1	1	1	1
U-R171	WI-SRE2; Swing revolving nosepiece	1	1	1	1	1		1		
U-P245	WI-DICTHRA; High resolution DIC slider	1	1	1	1				1	1
1-UM583	UMPLFL10XW;U M PLAN FL 10X WI OBJ, NA 0.30, WD 3.30MM	1	1	1	1	1		1		
1-UM568	LUMPLFL40XW/IR2;U M PLAN FL 40X WI IR OBJ, NA 0.80, WD3.3 MM	1	1			1		1		
1-UM572	LUMPLFL60XW/IR2;U M PLAN FL 60X WI IR OBJ, NA 0.90, WD 2.0MM			1	1					
6-U541	WI-UCD; Long WD universal 4 position condenser WD5.7	1	1	1	1					
6-U542	WI-DICD; Long working distance single DIC condenser WD5.7								1	1
6-U543	WI-OBOD; Long WD single oblique condenser, WD5.7					1				
U-CD230	U-LDPW10H;NOMAR PRISM 10X U MPLFL10XW OBJ,LWD UN COND,BX50WI	1	1	1	1					
U-CD232	U-LDPW40H;NOMAR PRISM 40X LUMPLFL40XW OBJ,LWD UN COND,BX50WI	1	1							
U-CD233	U-LDPW60H;NOMAR PRISM 60X LUMPLFL60XW OBJ, LWD UN COND,BX50WI			1	1					
9-U753	32PO; 32mm Round Polarizer for 775nm	1		1					1	1
9-U754	32POIR; 32mm Round IR polarizer for 900nm		1		1					
9-U755	32BP 775/100nm Bandpass Filter	1		1					1	1
9-U759	32IR900; 900nm bandpass filter		1		1					
U-P115	U-ANT; Analyzer for transmitted light, fits in nosepiece slider slot	1								
U-P117	WI-ANTIR; IR analyzer for transmitted light for 900nm		1							
U-P802	U-KPA; Intermediate adapter with slider slot for U-ANT analyzer	1	1	1	1					
5-UR710	BX-RFA; Fluorescence illumin, BX2, for REXBA, 6 cube turret			1	1		1	1	1	1
U-SL200	WI-RSH; Reflected light shutter for shock less operation			1	1		1	1	1	1
U-P215	U-AN;Analalyzer Slider for U-URA, U-RLA			1						
U-P217	WI-ANIR; IR analyzer for reflected light for 900nm				1					
5-UL150	U-LH100HG; 100W Mercury lamphouse, w/collector, cent mirror			1	1		1	1	1	1
5-LB256	BH2-RFL-T3; Power supply for 100W mercury lamphouse			1	1		1	1	1	1

Catalog #	Configuration	A	B	C	D	E	F	G	H	I
U-V260	U-TVCAC; VIDEO MAGNIFICATION CHANGER 1X,2X,4X	1	1	1	1					
OLY-150IR	Olympus 1/2" CCD camera, IR optimized, with gain/black level controller	1	1	1	1				1	1
S-M100	13" PVM B&W Sony Monitor, 1000 TV Lines	1	1	1	1				1	1
PCSG-BX2-SS	GIBALTAR-BX2-SS; PLATFORM & X-YMOVER FOR AIR TABLE MOUNTING			1	1				1	1
U-R100	WI-SNPXLU; Single nosepiece for XLUMPLFL20xW								1	1
U-R101	WI-RMSAD; RMS objective adapter on WI-SNPXLU								1	1
U-CD331	U-LDPXLU20HR; DIC prism for XLUMPLFL20xW								1	1
1-UB965	XLUMPLFL20XW; NA0.95, WD=2mm								1	1
3-U210	WI-DPMC; Double port magnification change unit								1	1
3-U211	DPMC0.25X; 0.25x adapter lens for WI-DPMC									
3-U212	DPMC0.35X; 0.35x adapter lens for WI-DPMC								1	1
3-U213	DPMC4X; Internal 4x adapter lens for WI-DPMC								1	1
U-P247	DPMC-AN; Analyzer for WI-DPMC								1	
U-P248	DPMC-ANIR; IR Analyzer for WI-DPMC									1
1-UB950	XLFLUOR4X/340;4X Macro Objective, M34X1 thread, NA 0.28						1			
U-R175	U-SLRE; Two-position slider nosepiece, front thread M34X1, back thread RMS						1			
U-M568	U-MGFPAXL,FL-CUBE, GFP Bandpass, large for Macro						1			
1-UM222	MPL5X; M Plan 5X Objective, NA 0.10, WD 19.6MM						1			
U-IT300	WI-ARMAD; Raising Adapter for Illuminator with WI-NPA							1		

MICROSCOPE FRAME (SEE END FOR 61 FRAME)

- BX51WIF** BX51WIF; Research Microscope Frame for electrophysiology applications. Focusable nosepiece (25mm stroke) requires rigid detachable horizontal arm designed for use with the U.I.S Universal Infinity System optics. NiChrome plated steel rack and pinion focus gears. Includes coarse focus tension adjustment and adjustable focus stop. Front mounted coarse and fine focus controls allow easy access. Y-shaped vibration-resistant design provides high stability. Includes four-position 32mm filter wheel, two positions rotatable, with slide in IR band pass filter pocket. Low position front and rear bridge-shape stage mounts allow stage attachment directly to microscope frame for maximum stability. Frame does not contain a transformer and is therefore compatible with low electrical noise setups for micromanipulators, patchclamping and electrophysiology. Built-in Koehler illumination with graduated field iris diaphragm. Rack and pinion condenser adjustment with centerable dovetail mount. Includes frosted filter mounted in base and 32mm IR-CUT hot mirror for normal transmitted light observation. Includes 3mm hex driver, 5cc-immersion oil, instruction manual and warranty card.
- 5-UR705** BX-ARM; Transmitted light arm for microscope frame. Required only when no fluorescence or reflected light illuminator is selected.
- U-R1000** WI-NPA; Nosepiece attachment arm for BX51WIF frame.
- 4-U221** WI-FSH; Fixed stage adapter for IX-SVL2 (Cat# 4-U221) or WI-STAD (Cat# 4-U233).
- U-IT300** WI-ARMAD; 40mm adapter to raise illuminator arm for InVivo applications. Mounts between frame and BX-ARM (Cat# 5-UR705), BX-RFA (U-R710) or BX-URA2 (Cat# U-R700). Hardware and mounting tool included.

TRANSMITTED LIGHT COMPONENTS

- 5-UL112** U-LH100-3; Lamphouse for 12V/100W Halogen Bulb; precentered; attaches to BX51 microscopes frames. Built-in louvers for convection cooling. Includes aspherical collector lens assembly for highly even illumination.
- 5-UL113** U-LH100L-3; Lamphouse for 12V/100W Halogen Bulb with long 80cm cord; precentered; attaches to BX51 microscopes frames. Built-in louvers for convection cooling. Includes aspherical collector lens assembly for highly even illumination.
- 5-UL112I** U-LH100IR; Lamphouse for 12V/100W Halogen Bulb with IR transmission; precentered; attaches to BX51 microscopes frames. Built-in louvers for convection cooling. Includes aspherical collector lens assembly for highly even illumination. Requires supplemental IR cut filter with C-clip for IR-DIC (Cat# 9-U961).
- 8-C406** 12V/100W tungsten halogen bulb.
- 5-UT400** TH4-100; Low voltage transformer, variable DC output with (0-12V) regulating knob, on/off switch and power light. No fan. Capable of powering either 12V/50W or 12V/100W lamphouse (requires UYCP-11 power cord, not included). 110V input. Optional handswitch.
- 5-UT405** TH4-HS; Hand switch for TH4 with intensity control dial and on/off switch.
- UYCP-11** UYCP-11; Power cord, three-prong U.S. style.
- 5-UL701** U-RMT; Extension cable for halogen lamphouse, 1.7m. Connects halogen lamphouse to BX-UCB and TH3 or TH4 power supply.

OBSERVATION TUBES

- 3-U210** WI-DPMC; Dual Port Trinocular Observation Tube dedicated for IR-DIC and fluorescence imaging with internal magnification flexibility; FN 22 capable; Siedentopf-type dust-free non-

erect image design. Accepts 30mm diameter WH series eyepieces. High transmission coated prisms; antifungal treatment. Graduated interpupillary distance adjustment 50mm-76mm; right eyepiece tube with rotation stop to maintain orientation of reticle eyepiece. Rear port includes 4x internal magnification lens designed for IR-DIC which can be supplemented with optional DPMC0.25x (Cat# 3-U211) or DPMC0.35x (Cat# 3-U212) lenses for standard video applications. Rear port accepts IR-DIC accessories including the DPMC-AN analyzer (Cat# 3-U247) for 770nm and DPMC-ANIR analyzer (Cat# 3-U248) for 900nm applications. Three position light path selector: 100% observation, 100% front port, or IR dichroic mirror. IR position contains a 690nm dichroic mirror that reflects light above 690nm to the rear port while allowing the shorter wavelengths to pass to the front port. Front port is standard dovetail requiring adapters (Cat# U-V105, U-V111) for CCD cameras or adapter U-SPT (Cat# 3-U801) for 35 mm photomicrography. Rear port is a built-in c-mount. The dual port, variable magnification configuration is designed to take full advantage of the XLUMPLFL20x/W (Cat# 1-UB965) long working distance water objective.

ACCESSORIES FOR WI-DPMC

- 3-U211 DPMC0.25X; 0.25X magnification changer lens for WI-DPMC.
- 3-U212 DPMC0.35X; 0.35X magnification changer lens for WI-DPMC.
- U-P247 DPMC-AN; Analyzer for rear camera port of WI-DPMC.
- U-P248 DPMC-ANIR; Analyzer for rear camera port of WI-DPMC, for 900nm IR-DIC.

ERECT IMAGE OBSERVATION TUBES

- 3-U140 U-ETBI; Erect Image Tilting/Telescoping Binocular Observation Tube, continuously variable eyepiece inclination from 0° to 25°, telescoping eyetubes extend 45mm toward user. Erect, unreversed image accurately reproduces specimen movement; FN 22 capable; Siedentopf-type dust-free design. Accepts 30mm diameter WH series eyepieces. High transmission coated prisms; antifungal treatment. Graduated interpupillary distance adjustment 50mm-76mm; left eyepiece tube with +/- 5 diopter control. Accepts two intermediate attachments with BX45 and four intermediate attachments with BX41 and BX51 microscopes.
- 3-U157 U-ETR-3; Erect Image Trinocular Observation Tube with 25 degree eyepiece inclination; dust protected design; FN 22 capable; Siedentopf-type. For Olympus UIS Universal Infinity corrected optical System, using 30mm diameter WH series eyepieces. High transmission coated prisms, antifungal treatment. Graduated interpupillary distance adjustment: 50mm to 76mm; right eyepiece tube with rotation stop to maintain orientation of reticle eyepiece. Two position light path selector: 100% observation or 100% photo. Requires use of Video Adapter (Cat# U-V105, U-V111), Photo tubes U-SPT (Cat# 3-U801) or U-DPTS Dual Photo Tube (Cat# 3-U806), plus appropriate video/photo mount adapters.
- 3-U185 U-SWETR; Super Widefield Erect Image Trinocular Observation Tube with 24 degree eyepiece inclination; dust protected design; FN 26.5 capable; Siedentopf-type. For Olympus UIS Universal Infinity corrected optical System; using 30mm diameter SWH series eyepieces. High transmission coated prisms, antifungal treatment. Graduated interpupillary distance adjustment: 50mm to 76mm; right eyepiece tube with rotation stop to maintain perpendicularity of reticle eyepiece. Two position light path selector: 100% observation or 100% photo. Supplied tube lens is replaceable with custom lenses for specialized UV and IR research applications.

BINOCULAR OBSERVATION TUBES

- 3-U124 U-BI30-2; Binocular Observation Tube, 30° eyepiece inclination; FN 22 capable; Siedentopf-type dust-free design. Accepts 30mm diameter WH series eyepieces. High transmission coated prisms; antifungal treatment. Graduated interpupillary distance adjustment 50mm-76mm; left eyepiece tube with +/- 5 diopter control.

- 3-U136 U-TBI-3; Tilting Binocular Observation Tube, continuously variable eyepiece inclination from 5° to 35°; FN 22 capable; Siedentopf-type dust-free design. Accepts 30mm diameter WH series eyepieces. High transmission coated prisms; antifungal treatment. Graduated interpupillary distance adjustment 50mm-76mm; right eyepiece tube with +/- 5 diopter control. Accepts two intermediate attachments with BX41 and BX51 microscopes.

TRINOCULAR OBSERVATION TUBES

- 3-U134 U-TR30-2; Trinocular Observation Tube, 30° eyepiece inclination; FN 22 capable; Siedentopf-type dust-free design. Accepts 30mm diameter WH series eyepieces. High transmission coated prisms; antifungal treatment. Vertical camera port. Three position light path selector: 100% observation, 20%/80% observation/camera, or 100% camera. Graduated interpupillary distance adjustment 50mm-76mm; left eyepiece tube with +/- 5 diopter control. Right eyepiece tube with rotation stop maintains orientation of eyepiece reticle with interpupillary distance adjustment. Requires use of Video Adapter (Cat# U-V105, U-V111), Photo tubes U-SPT (Cat# 3-U801) or U-DPTS Dual Photo Tube (Cat# 3-U806), plus appropriate video/photo mount adapters.
- 3-U134IR U-TR30-2IR; Trinocular Observation Tube for IR. Transmission to 1500nm, parfocal from visible to IR wavelengths. 30° eyepiece inclination; FN 22 capable; Siedentopf-type dust-free design. Accepts 30mm diameter WH series eyepieces. High transmission coated prisms; antifungal treatment. Vertical camera port. Three position light path selector: 100% observation, 20%/80% observation/camera, or 100% camera. Graduated interpupillary distance adjustment 50mm-76mm; left eyepiece tube with +/- 5 diopter control. Right eyepiece tube with rotation stop maintains orientation of eyepiece reticle with interpupillary distance adjustment. Requires use of Video Adapter (Cat# U-V105, U-V111), Photo tubes U-SPT (Cat# 3-U801) or U-DPTS Dual Photo Tube (Cat# 3-U806), plus appropriate video/photo mount adapters.
- 3-U184 U-SWTR-2; Super Widefield Trinocular Observation Tube, 24° eyepiece inclination; FN 26.5 capable; Siedentopf-type dust-free design. Accepts 30mm diameter SWH superwidefield or WH widefield series eyepieces. High transmission coated prisms; antifungal treatment. Vertical camera port. Three position light path selector: 100% observation, 20%/80% observation/camera, or 100% camera. Graduated interpupillary distance adjustment 50mm-76mm. Each eyepiece tubes includes rotation stop to maintain perpendicularity of reticle eyepiece with interpupillary distance adjustment. Requires use of Video Adapter (Cat# U-V105, U-V111), Photo tubes U-SPT (Cat# 3-U801) or U-DPTS Dual Photo Tube (Cat# 3-U806), plus appropriate video/photo mount adapters. On BX51WI systems, use only FN 22 eyepieces to avoid vignetting.

SINGLE PORT TUBES (NON VISUALIZATION)

- 3-U840 U-TLU; Single Port Tube, Tube Lens Unit, accepts UIS photo/CCD adapters, for camera observation only.
- 3-U840I U-TLUIR; Tube lens unit for near IR, accepts UIS photo/CCD adapters, for camera observation only. Mounts directly to microscope frame.

STAGES

- 4-U221 IX-SVL2; Left Hand Mechanical Stage; tension adjustable coaxial X-Y controls on short stalk. Mounting holes allow stage to be installed in two positions: 1) with x-y controls in left hand forward or 2) right hand rearward orientation. Stage plate size: 260mm x 201mm; Traverse: 50mm x 43mm. Removable 110mm diameter stage plate with 25mm center opening included. WI-FSH (Cat# 4-U231) stage mount required.
- 4-U931 IX-SUSP; Stainless Steel Plate for attaching manipulators to IX-SVL or IX-SFR mechanical stage.
- 4-U291 IX-SCL; Stage Clips (2 pieces) for IX Series stages.

- 4-U290 IX-CP50; Circular stage plate insert (OD=110mm) with 50mm center opening.
- 4-LC305 CK40-CPG30; Glass Stage Insert Plate.
- 4-U231 WI-FSH; Fixed stage adapter required for frame mounted stages. Provides front support and tapped holes for stage mounting.
- 4-U233 WI-STAD; Stage adapter for BX2 stages.

NOSEPIECES

- U-R171 WI-SRE2; Swing-out (35 degrees) Dual Objective Nosepiece; with a DIC prism pocket. Provides increased access for manipulator setups due to front-back swing motion and slim design. Requires WI-NPA (Cat# U-R1000).
- U-R100 WI-SNPXLU; Single nosepiece for XLUMPLFL20xW, with a DIC prism pocket. M28 thread size. Requires WI-NPA (Cat# U-R1000).
- U-R101 WI-RMSAD; RMS adapter for WI-SNPXLU. Allows the use of an RMS objective with the WI-SNPXLU nosepiece.
- U-R175 U-SLRE; Two-Position Slider nosepiece for Macro Lens. Large diameter front thread is M34x1, back thread is standard RMS (UIS Objectives). Requires WI-NPA (Cat# U-R1000). Nosepiece does not accommodate DIC accessories.
- U-R173 WI-SSNP; Swing/Slide nosepiece with nosepiece attachment arm. Features two position nosepiece and mounting arm that attaches directly to BX2WI frame. Nosepiece features front to back swing and retract Dual RMS objective sliding design to minimize air pockets in water/objective interface. Includes a DIC prism pocket.
- U-P240 WI-DICT; Senarmont DIC nosepiece insert. Special large diameter Senarmont DIC insert for WI nosepieces with DIC prism pocket (Cat# U-R171, Cat# U-R100, Cat# U-R173). Will not fit in analyzer slider included with BX nosepieces.
- U-P245 WI-DICTHRA; Senarmont DIC High Resolution nosepiece insert. Special large diameter Senarmont DIC insert for WI nosepieces with DIC prism pocket (Cat# U-R171, Cat# U-R100, Cat# U-R173). Will not fit in analyzer slider included with BX nosepieces.

CONDENSERS

- 6-U541 WI-UCD; Long Working Distance Universal Turret Condenser for brightfield, polarized light and DIC utilizing water immersion optics. Strain-free achromatic/aplanatic correction with NA 0.80 top lens element and 5.7mm working distance. Built-in 360 degree rotatable quarter wave plate for DIC microscopy is IR compatible. Four position turret accepts the DIC (U-LDPW series) prisms for use with water immersion lenses. Turret positions one and two are 31.5mm diameter and accept the U-LDPW10H and U-LDPW20H DIC prisms and positions three and four are 44mm diameter and accept the U-LDPW40H and U-LDPW60H DIC prisms.
- 6-U542 WI-DICD; Long Working Distance Single Turret Condenser for brightfield, polarized light and DIC utilizing water immersion optics. Strain-free achromatic/aplanatic correction with NA 0.80 top lens element and 5.7mm working distance. Built-in 360 degree rotatable quarter wave plate for DIC microscopy is IR compatible. Accepts one 31.5mm or 44mm diameter DIC (U-LDPW series) prisms for use with the water immersion lenses.
- 6-U543 WI-OBCD; Long Working Distance Oblique Condenser for brightfield and oblique observation utilizing the water immersion optics. Strain-free achromatic/aplanatic correction with NA 0.80 top lens element and 5.7mm working distance. Built-in 360 degree rotatable quarter wave plate for DIC microscopy, IR compatible.

- 6-U528 U-UCD8; Universal Turret Condenser for transmitted light brightfield, darkfield, phase contrast, polarized light and Nomarski Differential Interference Contrast. Strain-free achromatic/aplanatic lens elements, with swing-out top lens mount to accept 0.90 NA dry top lens U-TLD (Cat# 6-U526) or 1.4 NA oil top lens U-TLO (Cat# 6-U525), neither included. Accepts up to 8 inserts for phase contrast, darkfield and Nomarski DIC. Three small insert positions accept "S" phase annuli and/or 10X DIC prism U-DP10S; five large insert positions accept standard phase annuli and DIC prisms. Includes aperture diaphragm and built-in polarizer slider, rotatable 360°. Built-in radially mounted centering wrenches allow easy alignment of phase annuli. Includes accessory slot above polarizer for optional compensator plate. Illuminates full field-of-view for 10X-100X objectives with U-TLD top lens, 20X-100X with U-TLO top lens, 2X-4X with top lens swung out, all at FN=26.5. Illuminates specimen for 2X-100X objectives for brightfield and polarized light, 10X-100X for phase contrast, DIC, and darkfield. Includes removable 1.5mm allen wrench. Senarmont DIC applications require the replacement of built-in polarizer with WI-TP137 (Cat# 6-U523).
- 6-U526 U-TLD; Dry Top Lens Element, WD 1.2mm. NA 0.9, dry lens. For swing-out lens mount on U-UCD8 (Cat# 6-U528) universal condenser. Illuminates entire field for 10X–100X objectives.
- 6-U525 U-TLO; Oil Top Lens Element, NA 1.4, immersion lens. In threaded mount for swing-out lens mount on U-UCD8 (Cat# 6-U528) and AX-UCDM (Cat# 6-U530) Universal Turret Condensers. Illuminates entire field for 20X–100X objectives.
- 6-U523 WI-TP137; Quarter wave tint plate. Required replacement of built-in polarizer of U-UCD8 for Senarmont DIC applications.

DIC ACCESSORIES

DIC PRISM INSERTS FOR WI-UCD (CAT# 6-U541) AND WI-DICD (CAT# 6-U542)

- U-CD230 U-LDPW10H; Nomarski DIC Prism (31.5mm diameter) for UMPLFL10XW for use with the U-LWUCD condenser (Cat# 6-U540); IR-DIC compatible.
- U-CD231 U-LDPW20H; Nomarski DIC Prism (31.5mm diameter) for UMPLFL20XW for use with the U-LWUCD condenser (Cat# 6-U540); IR-DIC compatible.
- U-CD232 U-LDPW40H; Nomarski DIC Prism (44mm diameter) for LUMPLFL40XW for use with the U-WUCD condenser (Cat# 6-U540); IR-DIC compatible.
- U-CD233 U-LDPW60H; Nomarski DIC Prism (44mm diameter) for LUMPLFL60XW or LUMPLFL100X for use with the U-LWUCD condenser (Cat# 6-U540); IR-DIC compatible.
- U-CD331 U-LDPXLU20HR; Nomarski DIC Prism (44mm diameter) for XLUMPLFL20xW for use with the WI-UCD (Cat# 6-U541) or WI-DICD (Cat# 6-U542); IR-DIC compatible.

DIC PRISMS FOR DRY TOP LENS UNIVERSAL CONDENSER U-UCD8

- U-CD111 U-DP10; Nomarski DIC Prism (31.5mm diameter) for UMPLFL10xW for use with the U-UCD8 condenser (Cat# 6-U528); IR-DIC compatible.
- U-CD122 U-DPA20; Nomarski DIC Prism (31.5mm diameter) for UMPLFL20xW for use with the U-UCD8 condenser (Cat# 6-U528); IR-DIC compatible.
- U-CD264 U-DPO40S; Condenser DIC prism for 40X BFP1 objectives UPLAPO40XOI, UAPO40XO/340 and UAPO40XW/340. For use with U-DICTS top prism slider and U-TLD dry top lens.
- U-CD267 U-DPO60S; Condenser DIC prism for UPLFL60XOI, UPLAPO60XW and PLAPO60XO-2 (in BFP1 position) objectives. For use with U-DICTS top prism slider and U-TLD dry top lens.
- U-CD119 U-DP100; Nomarski DIC Prism (31.5mm diameter) for UMPLFL100xW or IR for use with the U-UCD8 condenser (Cat# 6-U528); IR-DIC compatible.

DIC PRISMS FOR OIL TOP LENS UNIVERSAL CONDENSER U-UCD8

- U-CD212 U-ODPA20; Nomarski DIC prism for UPLAPO20X, and UPLAPO20XO objectives. For use with Universal Turret Condenser with NA 1.4 Oil Immersion Top Lens Element.
- U-CD265 U-ODPO40S; Condenser DIC prism for 40X BFP1 objectives UPLAPO40XOI, UAPO40XO/340 and UAPO40XW/340. For use with U-DICTS top prism slider and U-TLO oil top lens.
- U-CD268 U-ODPO60S; Condenser DIC prism for UPLFL60XOI, UPLAPO60XW and PLAPO60XO-2 (in BFP1 position) objectives. For use with U-DICTS top prism slider and U-TLO oil top lens.
- U-CD219 U-ODP100; Nomarski DIC Prism (31.5mm diameter) for UMPLFL60xW or IR for use with the U-UCD8 condenser (Cat# 6-U528); IR-DIC compatible.

FILTERS FOR TRANSMITTED LIGHT ILLUMINATOR

HEAT CUT FILTERS FOR IR MICROSCOPY

- 9-I200 45CM1050; IR-Cold Mirror 45mm diameter, for use in universal lamphouse U-LH100-3 (Cat# 5-UL112)/ U-LH100L-3 (Cat# 5-UL113) or filter holder. Transmission from 450nm to 1050nm. Suitable for 900nm IR-DIC.
- 9-I201 45CM850; IR-Cold Mirror 45mm diameter, for use in universal lamphouse U-LH100-3 (Cat# 5-UL112)/ U-LH100L-3 (Cat# 5-UL113) or filter holder. Transmission from 380nm to 850nm. Suitable for 770nm IR-DIC.
- 9-U961 45SCF; IR-Super Cold Mirror 45mm diameter, for use in universal lamphouse U-LH100-3 (Cat# 5-UL112), U-LH100L-3 (Cat# 5-UL113), U-LH100IR (Cat# 5-UL112I) or filter holder. Includes retention C-clip. Transmission from 450nm to 1100nm. Suitable for 900nm IR-DIC.

BANDPASS FILTER FOR IR MICROSCOPY

- 9-U755 32BP775; 775/100nm bandpass filter. Narrow IR-interference bandpass filter for IR microscopy. Ideal for Video Enhanced IR-DIC application. Designed for the BP position of the filter wheel included with BX51WIF and FV-BX61W stands.
- 9-U759 32IR900; 900nm longpass filter. Wide IR-interference longpass filter for IR microscopy. Ideal for Video Enhanced IR-DIC application. Designed for the BP position of filter wheel included with BX51WIF and FV-BX61W stands.

POLARIZED LIGHT ACCESSORIES

ANALYZERS FOR POLARIZED LIGHT WITH FLOURESCENCE CONFIGURATIONS

- U-P215 U-AN; Analyzer Slider for visible and 775nm IR-DIC on BX-RFA (Cat# U-R710) or BX-URA2 (Cat# U-R700). Utilizes open slider position in BX-RFA and BX-URA2. Allows simultaneous DIC and fluorescence images.
- U-P217 WI-ANIR; Analyzer Slider for 900nm IR-DIC on BX-RFA (Cat# U-R710) or BX-URA2 (Cat# U-R700). Utilizes open slider position in BX-RFA and BX-URA2. Allows simultaneous DIC and fluorescence images.

ANALYZERS FOR TRANSMITTED LIGHT ONLY APPLICATIONS

- U-P115 U-ANT; Analyzer for visible and 775nm IR-DIC. Allows polarized light and DIC observation on transmitted light only configurations. U-KPA (Cat# U-P802) required.
- U-P117 WI-ANTIR; IR Analyzer for 900nm IR-DIC. Allows IR-DIC observation on transmitted light only configurations. U-KPA (Cat# U-P802) required.
- U-P802 U-KPA; Analyzer holder. Mounts between observation head and microscope stand. Includes empty slider.

POLARIZERS

- 9-U753 32PO; 32mm round polarizer for visible and 775nm DIC. Mounts into any position of the filter wheel included with BX51WIF and BX61WIF stands.
- 9-U754 32POIR; 32mm round polarizer for 900nm IR-DIC. Mounts into any position of the filter wheel included with BX51WIF and FV-BX61W stands.

OBJECTIVES

STANDARD OBJECTIVES

- 1-UM222 MPL5X; M Plan Achromat 5X Objective, infinity-corrected, RMS thread. FN 22; NA 0.10; WD 19.60mm.
- 1-UM583 UMPLFL10XW; 10X Water Immersion Universal M Plan Fluorite objective, infinity-corrected, FN 26.5; NA 0.30; WD 3.3mm. Polybutylene Terephthalate (PBT) resin coated front objective barrel with 44 degree access angle for manipulator microtool.
- 1-UM585 UMPLFL20XW; 20X Water Immersion Universal M Plan Fluorite objectives, infinity-corrected, FN 26.5; NA 0.50; WD 3.3mm. Polybutylene Terephthalate (PBT) resin coated front objective barrel with 44 degree access angle for manipulator microtool.
- 1-UM587 LUMPLFL40XW; 40X Long Working Distance Water Immersion Universal M Plan Fluorite objective, infinity-corrected, FN 26.5; NA 0.80, WD 3.3mm. Transmission wavelength is from 340nm to more than 850nm. Polybutylene Terephthalate (PBT) resin coated front objective barrel with 43 degree access angle for manipulator microtool.
- 1-UM592 LUMPLFL60XW; 60X Long Working Distance Water Immersion Universal M Plan Fluorite objective, infinity corrected, FN 26.5; NA 0.90; WD 2.0mm. Transmission wavelength is from 340nm to more than 850nm. Polybutylene Terephthalate (PBT) resin coated front objective barrel with 35 degree access angle for manipulator microtool.

IR OPTIMIZED OBJECTIVES (FOR 340NM TO ABOVE 1100NM)

- 1-UB965 XLUMPLFL20XW; 20X Long Working Distance Water Immersion Universal M Plan Fluorite Infinity corrected near-infrared objective; FN 26.5; NA 0.95, WD 2.0mm. Transmission wavelength is from 340nm to above 1100nm. M28X thread size. Polybutylene Terephthalate (PBT) resin coated front objective barrel with 32 degree access angle for manipulator microtool.
- 1-UM568 LUMPLFL40XW/IR-2; 40X Long Working Distance Water Immersion Universal M Plan Fluorite infinity corrected near-infrared objective; FN 26.5; NA 0.80, WD 3.3mm. Transmission wavelength is from 340nm to above 1100nm. Polybutylene Terephthalate (PBT) resin coated front objective barrel with 43 degree access angle for manipulator microtool.
- 1-UM572 LUMPLFL60XW/IR-2; 60X Long Working Distance Water Immersion Universal M Plan Fluorite infinity corrected near-infrared objective; FN 26.5, NA 0.90, WD 2.0mm. Transmission wavelength is from 340nm to above 1100nm. Polybutylene Terephthalate (PBT) resin coated front objective barrel with 35 degree access angle for manipulator microtool.
- 1-UM575 LUMPLFL100XW/IR; 100X Long Working Distance Water Immersion Universal M Plan Fluorite infinity corrected near-infrared objective; FN 26.5, NA 1.0, WD 1.5mm. Transmission wavelength is from 340nm to above 1100nm. Polybutylene Terephthalate (PBT) resin coated front objective barrel with 34.5 degree access angle for manipulator microtool.

MACRO OBJECTIVES

- 1-UB947 XLFLuor2X/340; 2X Macro fluorite Lens; FN 26.5, NA 0.14, WD 16.27mm. Optimized for UV transmission from 340nm. Also suitable for near IR applications. The thread size is M34X1 and requires special nosepiece: U-SLRE (Cat# U-R175). Note: Full field observation of fluorescence specimens requires the special macro fluorescence cube, Cat# U-M509, utilizing 32mm diameter emission filters.
- 1-UB950 XLFLuor4X/340; 4X Macro fluorite Lens; FN 26.5, NA 0.28, WD 29.5mm. Optimized for UV transmission from 340nm. Also suitable for near IR applications. The thread size is M34X1. U-SLRE (Cat# U-R175) required for nosepiece. Note: Full field observation of fluorescence specimens requires the special macro fluorescence cube U-MF/XL (Cat# U-M509) utilizing 32mm diameter emission filters.

MACRO OBJECTIVE ACCESSORIES AND FLUORESCENCE CUBES

- 9-U330 XL-CAP; Water immersion cap for XLUMPLFlour4x340 (Cat# 1-UB950) or XLUMPLFlour2x/340 (Cat# 1-UB947). Polybutylene Terephthalate (PBT) resin and glass snap on cap for 2X and 4X macro lenses allowing water immersion observation. WD= 2.7mm.
- U-M509 U-MF/XL; Blank Fluorescence cube, large size. Accepts 25mm excitation and 32mm emission filter sets. Unique dichromatic mirror is available from Chroma Technology and Omega Optical.
- U-M567 U-MGFP/XL; Fluorescence cube, GFP longpass with large diameter emission filter for XL macro objectives. EX 460-490, DM 505, BA510IF.
- U-M568 U-MGFPA/XL; Fluorescence cube, GFP bandpass with large diameter emission filter for XL macro objectives. EX 460-490, DM 505, BA510-550.

EYEPIECES

10X WIDEFIELD FN 22

- 2-U1003 WH10X-3; Widefield 10X Eyepiece, high eyepoint, FN 22, 30mm diameter; with shelf for $\Phi=24\text{mm}$ $t=1.5\text{mm}$ reticle.
- 2-U100H2 WH10XH-2; Widefield 10X Focusing Eyepiece, high eyepoint, FN 22, 30mm diameter; with shelf for $\Phi=24\text{mm}$ $t=1.5\text{mm}$ reticle.
- 2-U1022 CROSSWH10X-2; Widefield 10X Crosshair Eyepiece, high eyepoint, FN 22; 30mm diameter, focusable top lens with crosshair reticle and alignment pin.
- 2-U1032 35WH10X-2; Widefield 10X Photomask Eyepiece, high eyepoint, FN 22; 30mm diameter, focusable top lens with photomask reticle for 35mm film and alignment pin.
- 2-U1052 P-WH10X-2; Widefield 10X Photomask Eyepiece, high eyepoint, FN 22; 30mm diameter, focusable top lens with photomask reticle for Polaroid film $3\frac{1}{4} \times 4\frac{1}{4}$ and alignment pin.

OTHERS

- 2-U120 WH12.5X; 12.5X Eyepiece, high eyepoint widefield, FN 18, 30mm diameter; with shelf for 24mm reticle.
- 2-U120H WH12.5X-H; 12.5X Focusable Eyepiece, high eyepoint widefield, FN 18, 30mm diameter; with shelf for 24mm reticle.
- 2-U150 WH15X; 15X Eyepiece, high eyepoint widefield, FN 14, with shelf for 24mm reticle.
- 2-U930 U-CT30; Centering Telescope for aligning condenser phase annuli with objective phase rings.

FLUORESCENCE ILLUMINATORS AND ACCESSORIES

- 5-UR700 BX-URA2; Universal Reflected Light Illuminator for BX² series microscopes. Includes dovetail slider nosepiece mount. Includes 6-position cube turret, accepting up to six BX² series or three BX series filter cubes. Cube position indicated by self-luminous labels (included). Cube rotation click-stop adjustable strong to zero click for vibration-free operation. Built-in aperture and field diaphragms are pre-focused and centerable via included 3mm allen driver. Includes two 32x7mm filter slots for ND and color filters, with similar sized polarizer and analyzer slider slots. All filter slots extend completely through illuminator housing. Shutter control knob located on front of illuminator for easy access. Shutter engages when cube cassette is removed. Universally capable of all fluorescence and reflected light illumination, singly or in combination with any transmitted light illumination. FURA capable. Accepts all BX and BX² 100W mercury, 75W xenon and 100W halogen lamphouses. Includes 4mm allen key for frame mounting.
- 5-UR710 BX-RFA; Reflected Light Fluorescence Illuminator for BX² series microscopes. Includes dovetail slider nosepiece mount. Includes 6-position cube turret, accepting up to six BX² series or three BX series filter cubes. Cube position indicated by self-luminous labels (included). Cube rotation click-stop adjustable strong to zero click for vibration-free operation. Removable aperture and field diaphragms are pre-focused and centerable via included 3mm allen driver. Aperture and field stops are removable, providing access to these planes via right side of the illuminator. When field stop is removed, rectangular field stop BX-RFSS (Cat# 5-UR810) can be mounted. Includes two accessory slots for Olympus REXBA excitation balancers: slot 1 accepts UV/blue balancer U-EXBAUB (Cat# 5-UR922) or blue/green balancer U-EXBAG (Cat# 5-UR921), slot 2 accepts UV/green balancer U-EXBAUG (Cat# 5-UR923). Includes one 32x7mm filter slot for ND and color filters, with similar sized polarizer analyzer slider slots. All filter slots, except REXBA slots, extend completely through illuminator housing. Shutter control knob located on front of illuminator for easy access. Shutter engages when cube cassette is removed. Universally capable of all fluorescence and reflected light illumination, singly or in combination with any transmitted light illumination. FURA capable. Accepts all BX and BX² 100W mercury and 75W xenon lamphouses. Includes 4mm allen key for frame mounting.

MERCURY LAMPHOUSES

- 5-UL150 U-LH100HG; 100W Mercury Lamphouse, complete with socket for 100W mercury burner and aspherical collector lens. Socket and mirror are both centerable and focusable.
- 5-UL155 U-LH100HGAP0; 100W Mercury Lamphouse, complete with socket for 100W mercury burner and aspherical collector lens with apochromatic correction. Socket and mirror are both centerable and focusable.
- 5-LB256 BH2-RFL-T3; Power supply for 100W mercury lamphouse, 115V input. Combined on/off and starter switch with pilot light; elapsed burning time meter. Includes UYCP-11 power cord.
- 8-B1920 HB0103W/2; 100W Osram mercury burner, 300hr. rating.
- 8-B192U USH-102D; 100W Ushio mercury burner, 200hr. rating.

XENON LAMPHOUSE

- 5-UL160 U-LH75XEAP0; 75W Xenon Lamphouse, complete with socket for 75W mercury burner and aspherical collector lens with apochromatic correction. Socket and mirror are both centerable and focusable.
- 5-LB261 AH2-RS-T; Power supply for 75W xenon lamphouse. Combined on/off and starter switch; elapsed time meter. Includes UYCP-11 power cord.
- 8-B198 UXL-75XE; 75W Xenon burner, short gap, ozone free.

ACCESSORIES AND FILTER SLIDERS

- U-SL200 WI-RSH; Shock-free reflected light shutter for fluorescence illuminators.
- U-SL301 U-RSL6; Reflected light filter slider for U-URA2 and BX-RFA(A) illuminators, excitation side. Six filter positions with retaining rings and spanner tool. Accepts filters $\Phi=25\text{mm}$, up to $t=6\text{mm}$.
- U-SL302 U-RSL6EM; Reflected light filter slider for U-URA2 and BX-RFA(A) illuminators, emission side. Six filter positions, with 5° tilt to eliminate reflections. Accepts filters $\Phi=25\text{mm}$, up to $t=6\text{mm}$.
- 9-U743 U-25ND6; 6% trans. neutral density filter slider for U-URA2 and BX-RFA(A) illuminators.
- 9-U745 U-25ND25; 25% trans. neutral density filter slider for U-URA2 and BX-RFA(A) illuminators.
- 5-UR921 U-EXBABG; REXBA excitation balancer for blue/green excited multi-labeled fluorescence specimen. Allows adjustment of excitation bandwidth and thus corresponding emission signal strength in green and red emitting fluorescence specimen. For use with BX-RFA(A) fluorescence attachment (Cat# 5-UR710) slot 1 only.
- 5-UR922 U-EXBAUB; REXBA excitation balancer for UV/blue excited multi-labeled fluorescence specimen. Allows adjustment of excitation bandwidth and thus corresponding emission signal strength in blue and green emitting fluorescence specimen. For use with BX-RFA(A) fluorescence attachment (Cat# 5-UR710(A)) slot 1 only.
- 5-UR923 U-EXBAUG; REXBA excitation balancer for UV/green excited multi-labeled fluorescence specimen. Allows adjustment of excitation bandwidth and thus corresponding emission signal strength in blue and red emitting fluorescence specimen. For use with BX-RFA(A) fluorescence attachment (Cat# 5-UR710(A)) slot 2 only.
- 5-UR810 BX-RFSS; Rectangular field stop slider. Four-sided adjustable stop allows setting of field stop to match detection area of film and CCD cameras, reducing unnecessary photo bleaching and increasing contrast. Each side adjusts with a 3mm allen driver. Includes two 3mm allen keys. For use with BX-RFA(A) fluorescence attachment (Cat# 5-UR710(A)) only.
- 5-UL710 U-LHAD; Adapter to mount U-DP dual port between lamphouses and incident light illuminators BX-URA2 and BX-RFA(A). Two piece set includes lamphouse mount and U-DP mount adapters.
- 5-UR750 U-ILLAD; Side illuminator adapter for BX-RFA(A) fluorescence illuminator. Replaces removable aperture and field stops for introduction of auxiliary illumination source. Special order product.
- U-A910 U-CLA; Collector lens focus adjustment extension handle.
- U-A920 U-CST; Ground glass slide with centering target for burner alignment.

MICROMANIPULATORS AND ACCESSORIES

BURLEIGH MICROMANIPULATOR SYSTEM

- PCS520 PCS-520; Micromanipulator Assembly. The PCS-520 Micromanipulator Assembly consists of three linear stages, a headstage pivot, a base pivot, one set of angle brackets and a headstage mounting plate. It also includes a rotation plate adapter to kinematically mount a micromanipulator at any angle. Each linear stage, using cross roller bearings, provides 25 mm of coarse travel through a 32 thread per inch lead screw.
- PCS503 PCS-503 Axis Control Unit (ACU) Each of the three linear stages with PZT fine control has a cable that connects directly to any one of the three ports on the Axis Control Unit. Three full rotations of each potentiometer knob correspond to the full range of the PZT travel.

- PCSPS-60 PCS-PS-60 Power Supply provides a regulated, very low noise, constant 60 volt output for the Axis Control Unit. The power supply can be shared by two micromanipulator systems to minimize cost and space consumption when multiple manipulators are required on the same microscope.
- PCS5000 PCS-5000; 1-axis Piezo driven fine micromanipulators with 3-axis mechanical micromanipulator includes control unit and two channel power supply. Fine movement is 150um in one dimension.
- PCS5000N PCS-5000-N; 1-axis Piezo driven fine micromanipulators with 3-axis mechanical micromanipulator includes control unit. Fine movement is 150um in one dimension. Power supply is not included.
- PCS5100 PCS-5100; 1-axis Piezo driven fine micromanipulators with 3-axis mechanical micromanipulator include control unit and two channel power supply. Fine movement is 300um in the approach dimension.
- PCS5100N PCS-5100-N; 1-axis Piezo driven fine micromanipulators with 3-axis mechanical micromanipulator include control unit. Piezo movement is 300um in the approach dimension. Power supply is not included.
- PCS5200 PCS-5200; 3-axis Piezo driven fine micromanipulators with 3-axis mechanical micromanipulator include control unit and two channel power supply. Piezo movements are 150um each in the x,y, and z dimensions.
- PCS5200N PCS-5200-N; 3-axis Piezo driven fine micromanipulators with 3-axis mechanical micromanipulator include control unit. Piezo movements are 150um each in x,y, and z dimensions. Power supply is not included.
- PCS5300 PCS-5300; 3-axis Piezo driven fine micromanipulators with 3-axis mechanical micromanipulator include control unit and two channel power supply. Piezo movements are 300um in the x dimension and 150um each in the y and z dimensions.
- PCS5300N PCS-5300-N; 3-axis Piezo driven fine micromanipulators with 3-axis mechanical micromanipulator include control unit. Piezo movements are 300um in the x dimension and 150um each in the y and z dimensions. Power supply is not included.
- PCS5400 PCS-5400; 3-axis Piezo driven fine micromanipulators with 3-axis mechanical micromanipulator include control unit and two channel power supply. Piezo movements are 300um each in the x,y, and z dimensions.
- PCS5400N PCS-5400-N; 3-axis Piezo driven fine micromanipulators with 3-axis mechanical micromanipulator include control unit. Piezo movements are 300um each in the x,y, and z dimensions. Power supply is not included.

BURLEIGH GIBRALTAR STAGES

- PCSG-BX2 Gibraltar-BX-2; Electrophysiology fixed stage with X-Y translation for BX51WI frame. Mounts directly to vibration isolation table. Stage top is black plated aluminum, non-magnetic.
- PCSG-BX2-SS Gibraltar-BX-2SS; Electrophysiology fixed stage with X-Y translation for BX51WI frame. Mounts directly to vibration isolation table. Stage top is stainless steel honeycomb design with tapped holes.
- PCSG-SP1 Gibraltar-SP-1; Stage Insert Plate for Gibraltar stage top: 110mm diameter with 32mm opening.

ACCESSORIES FOR GIBRALTAR STAGES

- PCSG-RPA PCS-500RP; Rotation plate adapter.
- PCSG-BAS Gibraltar-base; BX-1 to BX-2 conversion.
- PCSG-SAP Gibraltar-SA; stage adapter plate, BX1 to BX2 conversion.

OLYMPUS/NARISHIGE SERIES MICROMANIPULATORS

- N-MHW-3 MHW-3; 3 axis water hydraulic micromanipulator.
- N-ITS-O ITS-O; The integrated XY mover and a stable isolation table. XY mover travel 22mm. Thick magnetical stainless top.
- ONU-100 ONU-TAM; Three axis ultrasonic actuator micromanipulator. The traveling distance is 25mm for fine and coarse movement. 0.1-micron resolution for fine movement. Zero drift.
- ONU-110 ONU-TOP; Three axis operation.
- ONU-120 ONU-31PO; The control box for two set of ONU-TAM (Cat# ONU-100).
- N-AP-12A AP-12A; Axon headstage adapter for MHW-3 (Cat# N-MHW-3) and ONU-TAM (Cat# ONU-100).
- N-AP-13 AP-13; Axon 200B headstage adapter for MHW-3 (Cat# N-MHW-3) and ONU-TAM (Cat# ONU-100).

VIDEO CAMERAS SUITABLE FOR IR-DIC

- OLY150IR OLY-150IR; 1/2" B&W IR sensitive Camera w/Auto/manual gain & black levels, auto exposure, spectral response to 1000nm, included system setup test signal. C-mount.
- OLY-110 OLY-110; 1/2" B&W Cooled CCD Camera with Control Unit, Auto/manual gain and fixed/variable black level controls, spectral response to 850nm. C-mount. Need to remove heat-cut filter from sensor head. C-mount.

VIDEO MONITOR

- S-M100 Sony PVM-137 13" Black and White Monitor. Horizontal resolution 1000 TV lines. 2 composite video/audio inputs. Built-in speaker. Includes power cord.

CCD CAMERA ADAPTERS

- U-V1025 U-TV0.25XC; 0.25X CCD Camera Adapter with C-mount. Telecentric lens design. 0.25X magnification allows projection of full FN22 field onto 1/3" chip. For C-mount cameras only, chip size 1/3" or less.
- U-V1035C U-TV0.35XC; 0.35X CCD Camera Adapter with C-mount. Direct image projection. For C-mount cameras only, chip size 1/2" or less.
- U-V105C U-TV0.5XC; 0.5X CCD Camera Adapter with C-mount. Direct image projection. For C-mount cameras only, chip size 2/3" or less.
- U-V111 U-TV1X-2; 1X CCD Camera Adapter. No lens elements for direct image projection. Accepts camera mounts U-CMAD, U-BMAD, U-SMAD, or U-TMAD. For all CCD camera chip sizes.
- U-V260 U-TVAC; Camera adapter magnification changer. Includes dovetail mount for trinocular observation tubes. 1X, 2X, 4X and shutter positions. Adjustable click stop tension. Includes c-mount.
- U-V311 U-CMAD3; C-Mount Adapter, narrow design. Attaches C-mount camera to adapters U-TV0.5X, U-TV1X, U-TVZ, U-PMTV and U-PMTV1X.

BX61WI MOTORIZED ELECTROPHYSIOLOGY MICROSCOPE

- FV-BX61W FV300/500 BX61WIF; Research Microscope Frame with fixed stage for physiology applications. Motorized focusable nosepiece. Rigid cast aluminum frame includes internal z-drive motor with 0.01µm step increment. NiChrome plated steel rack and pinion focus gears. Built-in swing out 45mm frosted filter for transmitted light. 4 position 32mm transmitted light filter wheel with 2 positions rotatable. Eight programmable frame buttons control lamp voltage

- on/off, up/down and preset value; and stage up/down, fine/coarse focus, and stage escape. LED voltage indicator lights for transmitted or reflected light source, includes photo preset button. Accepts U-LH100-3 (Cat# 5-UL112) lamphouse for 12V/100W tungsten halogen bulb (Cat# 8-C406). Y-shaped vibration-resistant design provides high stability. Includes four-position 32mm filter wheel, two positions rotatable, with slide in IR band pass filter pocket, two positions rotatable. Low position front and rear bridge-shape stage mounts allow stage attachment directly to microscope frame for maximum stability. Frame does not contain a transformer and is therefore compatible with low electrical noise setups for micromanipulators, patchclamping and electrophysiology. Built-in Koehler illumination with graduated field iris diaphragm. Rack and pinion condenser adjustment with centerable dovetail mount. Includes frosted filter mounted in base and 32mm IR-CUT hot mirror for normal transmitted light observation. Includes 3mm hex driver, 5cc-immersion oil, instruction manual and warranty card.
- 5-UR710A BX-RFAA; Motorized Reflected Light Fluorescence Illuminator for BX² series microscopes. Includes dovetail slider nosepiece mount. Includes motorized 6-position cube turret, accepting up to six BX² series or three BX series filter cubes. Cube position indicated by self-luminous labels (included). Removable aperture and field diaphragms are pre-focused and centerable via included 3mm allen driver. Aperture and field stops are removable, providing access to these planes via right side of the illuminator. When field stop is removed, rectangular field stop BX-RFSS (Cat# 5-UR810) can be mounted. Includes two accessory slots for Olympus REXBA excitation balancers: slot 1 accepts UV/blue balancer U-EXBAUB (Cat# 5-UR922) or blue/green balancer U-EXBABG (Cat# 5-UR921), slot 2 accepts UV/green balancer U-EXBAUG (Cat# 5-UR923). Includes one 32x7mm filter slot for ND and color filters, with similar sized polarizer analyzer slider slots. All filter slots, except REXBA slots, extend completely through illuminator housing. Includes motorized shutter with 0.1s access time. Safety shutter engages when cube cassette is removed. Universally capable of all fluorescence and reflected light illumination, singly or in combination with any transmitted light illumination. FURA capable. Accepts all BX and BX² 100W mercury and 75W xenon lamphouses. Includes 4mm allen key for frame mounting.
- U-IF180 U-ZPCB-2; Z-drive control board for BX61(62)TRF frames. Mounts in BX-UCB expansion slot, DIP switches factory set to 14mm stroke. Required for all non-autofocus z-drive control. BX2WI requires changing dip switch settings on board.
- U-B110 BX-UCB; Universal controller and power supply for BX2A motorized components. Required for BX61(62)TRF frames, BX-RFAA illuminator, BX-RLAA illuminator, U-UCD8A universal condenser, U-FWT,FWR,FWO filter wheels and motorized nosepieces. Includes connection for two 12V/100W halogen lamphouses. Accepts U-HSTR2 handset only. Includes RS-232C port and DIP switches for communication protocol control. Requires 9-pin female/female direct serial cable for PC connection, not included. Requires UYCP power cord.
- 5-UL701 U-RMT; Extension cable for halogen lamphouse, 1.7m. Connects halogen lamphouse to BX-UCB or TH3, TH4 power supply.
- U-B100 BX2BSW; Software for automated microscope control. Serves as stand-alone control program for all BX2A motorized functions, and as installation program for third party software.
- U-R701 U-REMMT; Motorized nosepiece cable, connects motorized nosepiece to BX-UCB. Required only when no motorized reflected light illuminator is selected.
- U-R914 U-HSTR2; Handset for BX2 motorized components. For use with BX-UCB controller only. Handset pushbuttons control selection of objectives, fluorescence and brightfield filter cubes, reflected light shutter, condenser aperture stop, condenser turret position and condenser top lens. All keys are programmable when using BX2-BSW software.
- U-R941 BX-FH; Remote focus control handle for BX61WIF. Allows course and fine microscope focus control via remote control knob and 5 button handset. Handset also allows transmitted/reflected light switching and nosepiece escape/return. Connects to required BX-IFFH (Cat# U-IF185).

U-IF185 BX-IFFH; Interface Card for BX-FH. Interface card and housing with two ports that accept interface cables from BX61 frame and BX-FH control handle. Rear cable port links interface card to BX61 frame port on BX-UCB. Includes cable to connect BX-IFFH to BX-UCB.

FILTER WHEELS

U-F100 U-FWO; Observation side filter wheel, 6-position. Mounts below observation tube. Includes six positions to mount 25mm or 32mm filters. Requires BX-UCB controller. Includes spanner wrench.

U-F110 U-FWR; Reflected light side filter wheel, 6-position. Mounts between lamphouse and illuminator. Includes six positions to mount 25mm or 32mm filters. Requires BX-UCB controller. Includes spanner wrench.