

## Ultra-Pulse 5000C Domestic

### MAJOR SUB ASSEMBLIES

UV LIGHT POWER SUPPLY 4001-0189  
FOOTSWITCH 0619-370-01  
2 WAY DASHPOT 2207-0003  
YELLOW HENE TUBE 5701-0054  
YELLOW HENE P/S 5701-0055  
HENE TUBE (RED) 5701-0048  
HENE P/S (RED) 4001-0154  
"C" POWER SUPPLY 4001-0146  
48VDC POWER SUPPLY ASSEMBLY 0615-807-01  
ARTICULATING ARM 0619-960-01 (new style arm)  
48 VDC POWER PANEL 0615-807-01 (208 VAC ETL version)  
SL600 TUBE/EXCITER 0162-410-01  
SL611 TUBE/EXCITER 0163-336-00  
SL600 "00" TO "01" REPLACEMENT FRU 0618-049-01

### ELECTRICAL COMPONENTS

CIRCUIT BREAKER 5108-0120  
ISOLATION TRANSFORMER:  
NON-ETL (not tapable for 117 mains) 0615-042-01  
ETL (tapable for 117 mains) 0616-759-01  
200 WATT SENSOR 0210-796-00  
ROTARY SOLENOID 2204-0127  
LOCKING PHONE JACK 0614-008-01  
BUS PLATE MOSFET 4801-0385  
BUS PLATE DIODE 0615-089-01  
BRIDGE RECTIFIER 0615-967-01  
SS RELAY 240 VAC/ 40A 4501-0392  
SS RELAY 120 VAC/ 10A 5601-0153  
24 VAC TRANSFORMER (T2) 5601-0153  
POWER CONVERSION KIT, NON-ETL 0617-329-01  
POWER CONVERSION KIT, ETL 0618-166-01

### SOFTWARE

- Systems without the millijoule display on the control panel:  
UltraPulse 4000 0616-290-01  
UltraPulse 5000 0616-294-01  
Use the following service software for these systems:  
Loop Gain 0615-830-01  
Power Detector 0615-831-01  
Light Off 0615-832-01
- Systems with the millijoule control panel and safety shutter circuit, but the safety shutter circuit is jumpered out (does not operate):  
UltraPulse 4000 (60W) 0617-135-01  
UltraPulse 4000 (100 W) 0616-900-01  
UltraPulse 5000 0616-901-01  
Use the following service software for these systems:  
Loop Gain 0617-114-01  
Power Detector 0617-115-01

Light Off 0617-116-01

- Systems with the millijoule control panel and the safety shutter circuit produced with the old style milliwatts

mode (attenuator moves into place only in milliwatts mode) should be upgraded as outlined in FSB #

21R2, retrofit 2Z02. Once upgraded, these systems will use the software as provided below.

- Systems with the millijoule control panel, operational safety shutter circuit, the new style milliwatts mode

(attenuator moves into place at 2 Watts or below, attenuator has two attenuator lenses), but **does not** use the

new Controller CPU (p/n 0615-880-01):

UltraPulse 1000/XL 1000 0618-234-01

UltraPulse 3000 117 VAC 0618-237-01

UltraPulse 3000L 0618-237-01

XL-2000 0618-237-01

UltraPulse 3000 208 VAC 0618-240-01

XL-3000 0618-240-01

UltraPulse 5000 208 VAC 0618-243-01

UltraPulse 5000 117 VAC 0618-249-01

UltraPulse 5000L 208 VAC 0618-246-01

UltraPulse 5000L 117 VAC 0618-252-01

Use the following service software for these systems:

Loop Gain 0617-194-01

Power Detector 0617-195-01

Light Off 0618-254-01

- Systems produced with the new Controller PCB p/n 0615-880-01 (these units have the millijoule control panel, safety shutter circuit, new style milliwatts mode, as well as the new controller PCB):

UltraPulse 5000 117 VAC 0623-569-01

UltraPulse 5000 208 VAC 0623-570-01

UltraPulse 5000L 117 VAC 0623-571-01

UltraPulse 5000L 208 VAC 0623-572-01

UltraPulse 3000 117 VAC 0623-573-01

UltraPulse 3000 208 VAC 0623-574-01

UltraPulse 3000L 0623-575-01

Use the following service software for these systems:

Loop Gain 0617-194-01

Power Detector 0617-195-01

Light Off 0618-254-01

### **PRINTED CIRCUIT BOARDS**

POWER DETECTOR PCB 0615-843-01

TEMPERATURE SENSE PCB 0616-467-01

MAST DISPLAY PCB:

no millijoule display 0615-856-01

millijoule display 0616-284-01

MAIN CONTROL PANEL PCB:

no millijoule display 0612-934-01

millijoule display (no pulse width display) 0615-959-01

millijoule display (and pulse width) 0615-959-02

AUX CONTROL PANEL PCB:

no millijoule display 0003-2282

with millijoule display 0616-149-01

OPTICS BENCH PCB:

Old style (discontinued, will work with

with any UltraPulse) 0615-374-01

Current production (will work with

any UltraPulse) 0617-523-01  
LAMP HANDLE PCB 0003-2867  
DC CONTROLLER PCB 0614-944-01 ( water cooled P/S)  
AUDIBLE INDICATOR PCB 0616-252-01  
Safety Shutter PCB Jumpered Model 0615-655-01  
Active Model 0617-355-01

FAN SPEED CONTROL PCB 2601-0025

CONTROL PANEL OVERLAY:

XL-1000, 2000, 3000 0616-240-01

UltraPulse, no millijoule display 0614-996-01

millijoule display (no pulse width display) 0616-092-01

millijoule display (with pulse width) 0615-889-01

AUX CONTROL PANEL OVERLAY:

UltraPulse with no millijoule display 0614-966-01

UltraPulse with millijoule display 0616-397-01

XL-1000, 2000, 3000 W/O yellow 0616-451-01

XL-1000, 2000, 3000 with yellow 0616-397-01

CONTROLLER PCA:

0615-703-01: Used with systems that do not have the millijoule display. It is essentially the XA/XL system "strip line" controller PCB modified to support control of the added yellow HeNe and with the "A" and "B" supply overvoltage inputs wired out.

0616-352-01: Used with systems that have the millijoule display but do not have the enabled safety shutter circuit. It differs from the "703" PCB above in that it uses an 8032 controller chip instead of 8031.

0617-040-01: Used with systems that have the millijoule display and safety shutter circuit but do not have the

"synchronized firing" capability. It differs from the "352" PCB above in that it supports the external audible indicator board and external safety shutter circuit.

0615-880-01: Used in systems that support "synchronized firing". It differs from the "040" PCB in that it has the safety shutter circuit and audible indicator circuits built into it and adds two enable signals sent to the RF Amplifier to enable the synchronous firing. Note that the PCB has different component numbering and layout.

## **INTEGRATED CIRCUITS**

2114A 3133-0195

26LS31 3135-0055

26LS33 3135-0050

8031 microprocessor 3133-0190

MC1488P 3135-0020

MC1489LP 3135-0025

X2444 NVRAM 3133-0185

OPTICAL INTERRUPTOR 3703-0020

PHOTOSENSOR CABLE Assy 0620-078-01

## **FRAME, MAST**

SWIVEL CASTOR 1407-0141

FIXED TRACK LOCK CASTOR 1407-0140

CORD WRAP 0001-8160

ARM CAP COVER 0003-2247

CONTROL PANEL LOWER COVER 0612-921-01

CONTROL PANEL UPPER COVER 0003-2286

FRONT COVER 0615-047-01

EMERGENCY OFF SWITCH GUARD 0615-500-01

ARM RETAINER (old) 0615-170-01

VELCRO STRAP 0614-128-01

REAR COVER 0614-946-01

REAR LOUVERED COVER 0615-168-01  
LEFT SIDE COVER (DC Supply side) 0614-170-01  
RIGHT SIDE COVER (RF Supply side) 0614-169-01  
TOP COVER (the one with emergency off switch) 0614-945-01  
STORAGE DOOR 0615-169-01  
CONTROL PANEL WELL COVER 0003-2230  
MANUAL SHUTTER KNOB 0619-711-01  
KEY 5105-0050  
WHITE COVER SCREWS (8-32x5/16") 2801-0149  
HANDLE, HENE ATTEN ASS'Y 0614-824-01  
ARM RETAINER 0619-561-01 (new style)  
SHARK FIN CLIP 0613-703-01 (old style arm)  
ARM DIRECTION LABEL (up arrow) 0618-761-01

### **COOLING SYSTEM**

MAG DRIVEN PUMP 3501-0025  
FAN SPEED CONTROLLER PCB 2601-0127  
.5 GPM FLOW SWITCH 5106-0074 (larger flowswitch, black)  
.5 GPM FLOW SWITCH 5106-0068 (blue green flowswitch)  
PLUMBING FRU 0616-449-01 ("00" upgrade)  
FITTING ADAPTOR 2519-0186 (for the smaller flowswitch)  
PLASTIC HOSE BARB 2518-0054

### **OPTICS**

HENE COMBINER 0615-510-01  
HENE COLLIMATOR 0615-512-01  
HENE DIVERGENCE LENS 0615-511-01  
HENE DUST COVER 0621-739-01  
HENE & CO2 COMBINER 0615-560-01  
HENE ATTENUATOR FRU 0622-869-01