



User Guide

Fundamentals of Laparoscopic Surgery™ Trainer System & Accessories



Learn More at
fls-products.com

Limbs & Things Inc.
P.O. Box 15669,
Savannah, GA 31416, USA

Fundamentals of Laparoscopic Surgery™ Trainer System & Accessories

Limbs & Things, a leader in medical and surgical simulation for the past 25 years, has worked closely with the SAGES-ACS FLS Committee to update the FLS Trainer and is pleased to present a new series of Laparoscopic training products designed exclusively for the FLS Program.

The new versatile and exciting design meets the need for gaining fundamental skills at an affordable cost. Limbs & Things offers three purchasing options for the FLS Trainer, which allow for parts such as the camera and light source to be easily replaced by the customer.



The Limbs & Things FLS Trainer comes with a TV Camera (RCA-NTSC), plus LED lighting.



The FLS Skin Frame is constructed from durable neoprene and uses clips to attach to the frame securely. It has 2 pre-incised holes for the Trocars.

Rubber strips provide the FLS Trainer Box with a sturdy platform for training.

The white acrylic and open ends of the trainer allow for ambient light to enter the training area.



A variety of manual skills products are available for use with the FLS Trainer Box. Designed to develop the skills necessary to perform Laparoscopic Surgery.

Components: Trainer System

1



Trainer Box Top

2



Trainer Box Base

3



Skin Frame

4



Trocars

5



Camera

6



Monitor cable

7



Power Cable and Adaptors

8



String and Alligator Clips

Components: Consumables

Note: The following FLS Trainer Systems do not include consumables: Part No's: 50301, 50303, 50305

Task One: Peg Transfer



1 Peg Board with 6 Triangles

Task Two: Precision Cutting



1 Jumbo Clip Retainer

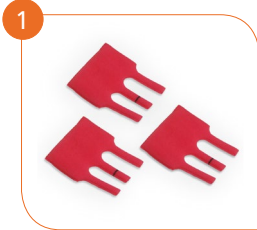


25 Gauze Pads with
Single Circle



25 Gauze Pads with
Double Circle

Task Three: Ligating Loop



3 Foam Organs

Tasks Four & Five: Knot Tying



1 Suture Block with
50 Penrose Drains

Additional Equipment Available for Purchase

Instruments, Single/Multi Use Ligating Loops and Sutures can be purchased in multi-packs from the FLS website - www.fls-products.com

Note: Ligating Loops are required for Task Three and Sutures are required for Tasks Four and Five.



8 Piece
Instrument Set



Single Use
Ligating Loop



Multi Use
Ligating Loop



Suture 2/0 Silk
90cm, 26mm
1/2 Circle Taper-
point Needle

Attaching New Trocars

1



Before attaching the frame to the unit, insert the trocars through the holes in the black neoprene

2



Turn the frame upside down and place on a hard surface. Attach the trocar rings so that the trocar is secure

Attaching the Frame

1



Align the two holes either side of the frame with the black clips on either side of the unit to fit the frame in place

2



Once the frame is in place, twist the black clips to secure

Assembling the Trainer Box

1



The Trainer will arrive in two halves

2



Ensure the trainer is aligned correctly (power points and alligator clips should be at the front of the trainer)

3



Line up the holes on the top half of the model with the connecting points on the rubber sleeve on both sides of the model

4



Gently press the top half of the model down onto the rubber connecting points on both sides. The two halves of the model are now securely fixed

Connecting a Monitor

Note: If you are connecting a different monitor than the one provided with the FLS system, please refer to your monitor's instruction manual for connection instructions.

The positioning of the yellow connector may vary depending on the monitor being used as illustrated in photos 3 and 4

1



Attach the power cable to the power connection point and plug into a power source

2



Attach the cable with the yellow connector to the remaining connection point

3



The TV comes with the adaptor in the picture. Plug this into the top socket on the left hand side of the TV and then plug the long cable with yellow ends into the yellow socket on that adaptor

4



If you are connecting a different monitor than the one provided, plug the other end of the yellow connector into the relevant connection on the back of the monitor

Configuring the Monitor

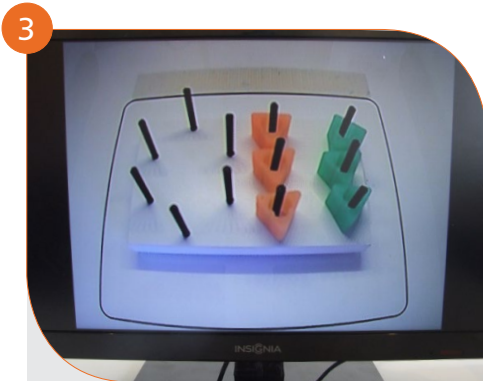
Note: If you have connected a different monitor than the one provided with the FLS system, please refer to your monitor's instruction manual for configuration instructions.



Once the trainer is linked to the monitor, the power light on the bottom right will show that the TV has power going to it and is in standby mode



Press the standby button on the remote control



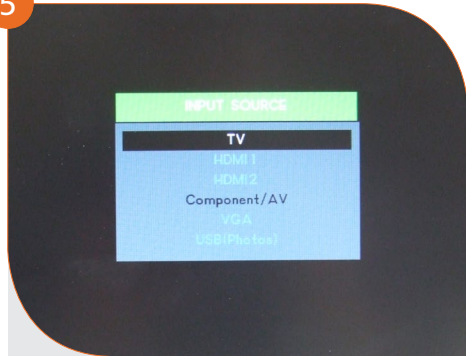
The monitor should now display the camera view



IF THE MONITOR IS NOT DISPLAYING THE CORRECT CHANNEL, Press the INPUT button on the remote control

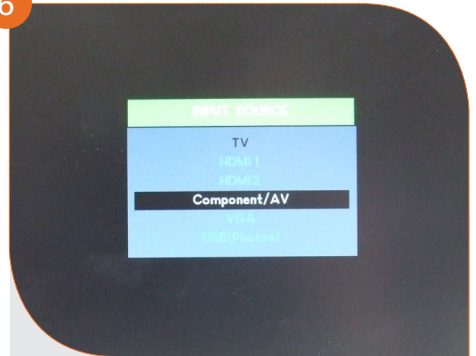
Configuring the Monitor (Continued)

5



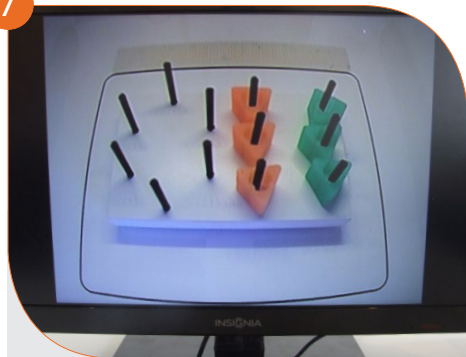
The Input Source menu will display. If TV is selected, use the arrows on the remote to scroll down the menu

6



Select Component/AV on the Input Source Menu, and press enter on the remote control

7



After a few seconds the AV channel will display the camera view

8

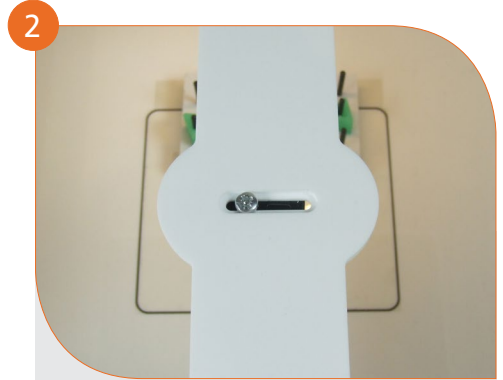


Press the Aspect button on the remote control to change the aspect ratio. There are 4 options to choose from: Normal, wide, cinema and zoom

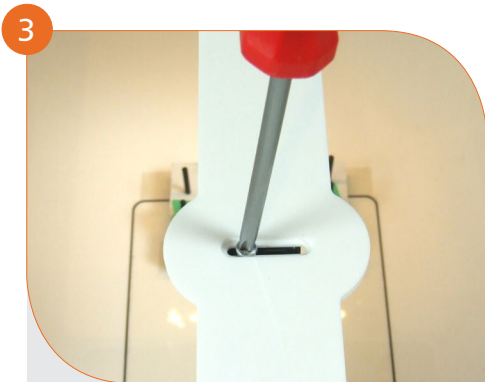
Adjusting the Camera (Slider) to Center the Image



1
Twist the two black clips and detach the frame from the top of the trainer



2
Locate the single screw that holds the camera in place on the trainer box



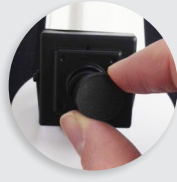
3
Using a Phillips screwdriver (not included), loosen the screw in order to realign the camera



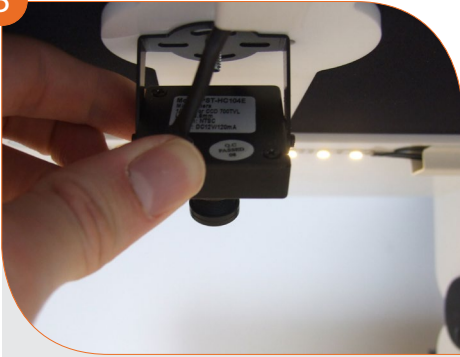
4
Slide the screw to the preferred position (looking at the monitor to check the camera view)

IMPORTANT:

Please, ensure that the plastic cap covering the camera lens is removed before use

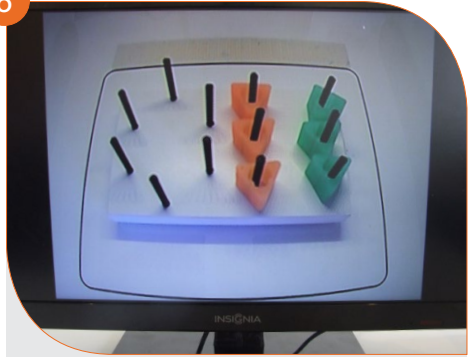


5



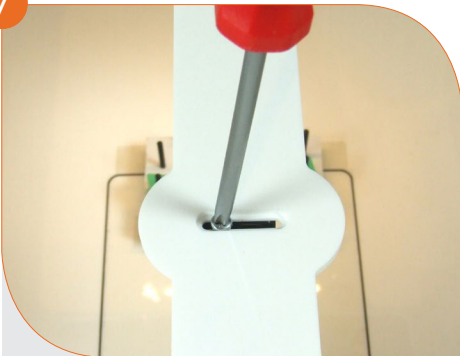
The monitor view can also be adjusted by gently moving the camera unit up or down

6



Check on the monitor that the image is displaying as required

7



Once the camera is in the correct position, tighten the screw to hold the camera in place

8



Re-attach the frame to the top of the trainer

Notes
