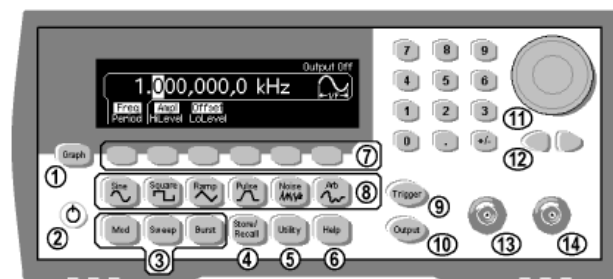# Video Capture : Quick Guide

Introduction

This document is a step-by-step guide for capturing video using the simulated surgical setup. It describes how to properly capture video that will later be processed using the instrument tracking algorithm. For a more detailed overview of the video capture process, see the document *Video_Capture_Guide.pdf*.

How to Capture Video

1) Prepare the Signal Generator

   a. Power on the signal generator. A circular button (2) with a circular green symbol is located on the left hand side of the signal generator's front panel. After pressing this, the screen of the generator will turn on.

   b. Enter the store/recall menu. One of the white square buttons (4) is labeled "Store/Recall". Press this button.

   c. Enter recall state menu. Press the blue button beneath the text "Recall State" on the display panel.

   d. Select STATE_1. Press the blue button beneath the text "State 1" on the display panel. Then press the blue button under the text "RECALL STATE". At this point the signal generator is properly configured for video capture.

1 Graph Mode/Local Key
2 On/Off Switch
3 Modulation/Sweep/Burst Keys
4 State Storage Menu Key
5 Utility Menu Key
6 Help Menu Key
7 Menu Operation Softkeys
8 Waveform Selection Keys
9 Manual Trigger Key (*used for Sweep and Burst only*)
10 Output Enable/Disable Key
11 Knob
12 Cursor Keys
13 Sync Connector
14 Output Connector

Figure 1 : Signal Generator Front Panel

2) Start vidCaptureGUI Software Application

Open the vidCatpureGUI application. If no windows are open when the vidCaptureGUI application is started, there is a communication issue with the application and the cameras. The cameras are restarted by disconnecting and reconnecting the power on the PoE switch. After doing this, try to open the application again.

3) Enable Lighting

Enable all lighting. This consists of the microscope light, underside LED array light, and the background light. Verify from the live video streams displayed in the large window that all lighting is properly setup and enabled.

4) Set Filename

Press the capture button and the dialog in **Figure 2** should appear. Note, the live video stream no longer updates when this dialog is open. Press the "File" button, a file save browser will open. Navigate to the folder you want to save the captured video files in. A new folder can be created by right clicking and selecting New->Folder. Once in the desired folder, set the file prefix by typing a name in the "File Name" box and pressing the "Save" button.
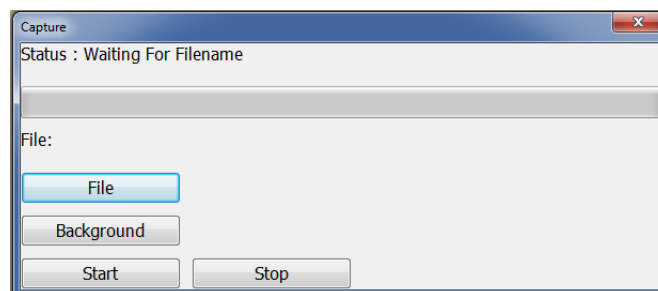

Figure 2 : Capture Dialog

5) Capture Background

With all lighting enabled and no instruments in the simulated setup, press the "Background" button. This will capture the background video, which is used by the instrument tracking algorithm. A dialog will appear indicating successful capture of the background video.

6) Start Capture in Software Application, Enable Trigger, Start Exercise

Ensure the output of the signal generator is off. Prepare the subject for the trial, but do not have them start. It is good idea to have them insert the instruments into the simulated setup. Press the "Start" button, then press the "output" button on the signal generator, then instruct the subject to start the exercise.

7) End Exercise and Disable Trigger

Once the subject has completed the exercise, disable the trigger signal by pressing the "Output" button on the signal generator.

8) Wait for Capture Completion

The software application is now saving video files. A dialog will appear when the saving is complete. Video capture is complete at this point.