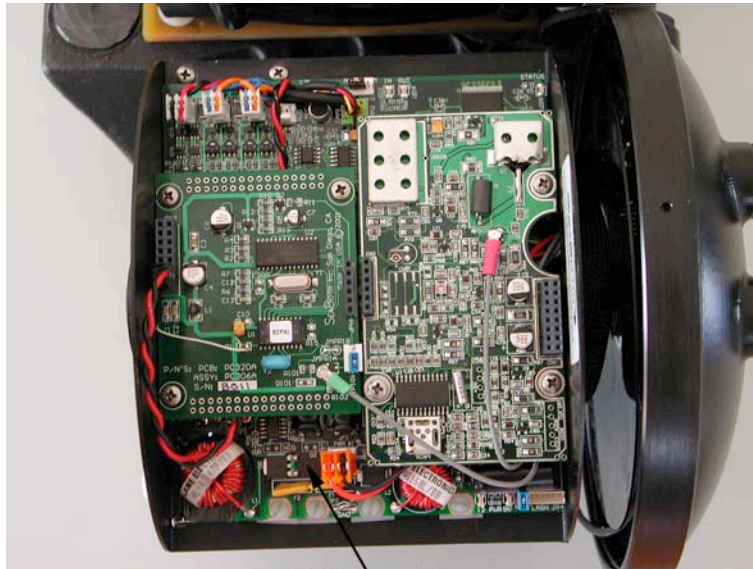


Motherboard

Introduction

The LBV² has a primary control board called the motherboard. Other small daughter boards are connected to it such as the RF Modulator and the Video Overlay. The motherboard is the main interface board.



Motherboard

Work Environment

Prior to beginning ensure you have a clean and dry workspace. Locate the required tools and parts and have paper towels available. It is a good idea to have a container to keep fasteners in as they are removed. Read through the instructions fully prior to beginning and make sure you understand what they are asking you to do.

Be very careful when handling electronics. Use a grounding strap and avoid any static that may damage the boards.

Reading Manual




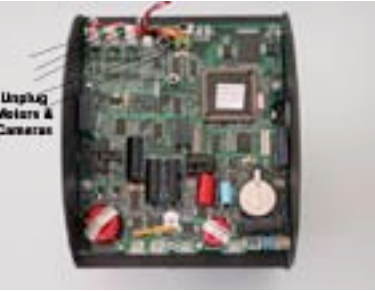
Below is a list of the required tools, estimated time to complete and level of difficulty. Next to each step where a tool is required the tool is listed. Some of the steps have special notes that must be observed.




Tools Required	Time to complete	Level of Difficulty
<ul style="list-style-type: none"> • 3/16th Socket Driver • Small Straight Blade Screwdriver 	<ul style="list-style-type: none"> • 10 minutes • 30 minutes including other procedures 	<ul style="list-style-type: none"> • Moderate • Electronics Care Required




Prior to working on the LBV make sure the power is off and the umbilical is DISCONNECTED.

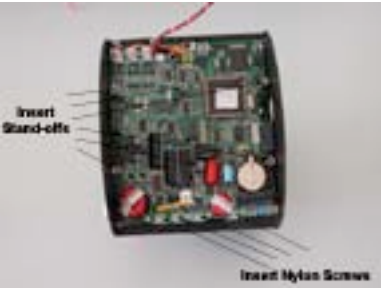


Removal

	<p>Prior to performing this procedure you must first follow these procedures:</p> <ul style="list-style-type: none"> • View port removal • RF modulator removal • Video overlay removal
	<p><u>Step 1</u></p> <p>Place LBV with electronics facing you.</p>
	<p><u>Step 2</u></p> <p>Carefully unplug power connector, and two small green JST connectors from motherboard.</p>
	<p><u>Step 3</u></p> <p>Remove camera chassis from center rod feeding service loop through hole in camera chassis.</p>
	<p><u>Step 4</u></p> <p>Unplug motors and camera connectors.</p>

 <p>Remove Stand-offs</p> <p>Remove Nylon Screws</p>	<p><u>Step 5 – Small Straight Blade Screwdriver</u></p> <p>Remove 4 white nylon screws securing motherboard and 6 standoffs.</p>
	<p><u>Step 6</u></p> <p>Unplug light from motherboard.</p>
	<p><u>Step 7</u></p> <p>Carefully remove motherboard.</p>

Installation

 <p>Connect Wire</p>	<p><u>Step 1</u></p> <p>Carefully fit new motherboard. Feed motor and camera wires into cut out on motherboard in this order and connect.</p> <ol style="list-style-type: none"> 1. Tilt motor 2. Focus motor camera 1 3. Focus motor camera 2 4. Camera 1 5. Camera 2
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	<p><u>Step 2 – Small Straight Blade Screwdriver</u></p> <p>Insert and tighten 4 nylon screws and 6 standoffs. Careful not to over tighten nylon screws and pinch any wires.</p>
	<p><u>Step 3</u></p> <p>Connect light to outside connector for camera one.</p>
	<p><u>Step 4</u></p> <p>Reconnect power connector and two small green JST connectors. One green connector is for motor control and the other is for the sensor board. They are a different number of pins.</p>
<p>Calibrate</p>	<p>Calibrate camera angle indicator prior to installing camera housing end cap.</p>
	<p>Once complete follow the procedures to:</p> <ul style="list-style-type: none"> • Install view port • Install RF modulator • Install Video Overlay