



GLIDECAM

The HD Series

1000 / 2000 / 4000

MANUAL

Set-up and Operations Guide

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Customer Service Line 1-781-585-7900

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TABLE OF CONTENTS

SECTION #	PAGE #
1. Introduction	4
2. Glidecam HD-2000 Parts and Components	5
3. Assembling your Glidecam HD-2000	10
4. Attaching your camera to your Glidecam	18
5. Balancing your Glidecam HD-2000	21
6. Handling your Glidecam HD-2000	26
7. Operating your Glidecam HD-2000	27
8. Shooting Tips	29
9. Improper Techniques	30
10. Other Camera Attachment Methods	31
11. Professional Usage	31
12. Maintenance	32
13. Warnings	32
14. Warranty	33
15. Online Information	34

PLEASE NOTE

Since the Glidecam HD-2000 is essentially the same as the HD-1000 and the HD-4000, this manual only shows photographs of the Glidecam HD-2000 being setup and used. The

Glidecam HD-1000 and the HD-4000 are just smaller and larger versions of the HD-2000. When there is an important difference between the HD-2000 and the HD-1000 and HD-4000 you will see it noted with a ***. Also, the words HD-2000 will be used for the most part to include the HD-1000 and HD-4000 as well.

1 INTRODUCTION

Congratulations on your purchase of a Glidecam HD-1000 and/or Glidecam HD-2000/Glidecam HD-4000.

The amazingly advanced and totally re-engineered HD-Series from Glidecam Industries represents the top of the line in hand-held Camera Stabilization.

The lightweight and state-of-the-art Glidecam HD-1000, HD-2000, and HD-4000 hand-held Camera Stabilizers will transform your hard to watch, shaky camera footage into hypnotically smooth, professional footage.

The Glidecam HD-Series offers advanced features and a degree of sophistication never before seen in a line of hand-held Camera Stabilizers.

With the Glidecam HD-Series hand-held Stabilizers your camcorder seems to float, always balanced, isolated from the undesirable motions of your hands. Now you are free to move with your camera – panning, tilting, booming or running without any camera instability or shake.

The Glidecam HD-Series works so well that it allows you to shoot incredibly smooth and graceful shots even while going to extremes like running up and down stairs or traveling over rugged terrain. When it comes to normal shooting, like walking or moving the camera slowly around someone, the results are equally magical.

Each HD-Series Stabilizer's offset, foam-cushioned, Handle Grip is attached to a free floating, three axis Gimbal. This allows your hand to move up and down and side-to-side, thereby isolating your hands' unwanted motions from the camera. This up and down movement alleviates the bouncing, pogo-type action often associated with our competitor's system. This is because their handle is not designed to have the beneficial ability to move up and down. This design feature, coupled with the overall higher inertia of the HD-Series systems, produces superior stabilization when compared with our competition.

A unique and proprietary precision, three-axis Gimbal incorporates several adjustable axis convergence controls. This allows all three axes to intersect for proper operational alignment.

A camera-mounting platform with a quick-release, no-tools drop on camera plate allows you to quickly attach or remove your camera. Ergonomic control knobs allow quick, precise adjustment of the top stage's back and forth, and side-to-side movement. These controls allow you to adjust the camera's horizontal balance.

By varying the amount of Counter Weights on the Base Platform, or by changing the length of the no-tools telescoping Central Post, you adjust the camera's vertical balance. When balanced properly the camera floats, ready for you to move into action.

The Glidecam HD Series Stabilizers offer unparalleled controllability and ease of use with their unique rigid, yet dynamically adjustable, control and weight distribution surfaces. Setting up, controlling and adjusting system balance is now quick and precise.

A unique and proprietary dynamic Base Platform can expand or contract. This allows you to easily adjust the system's dynamic balance or to increase or decrease the systems rotational pan inertia.

Shot after shot, move after move, the Glidecam HD-Series Stabilizers deliver beautifully smooth and professional results. With the Glidecam HD-Series you no longer need a tripod or a dolly. All you need is your creativity, imagination, and innovation!

Glidecam Industries is now becoming the choice of a generation. Glidecam makes your decisions concerning camera stability and movement simple and easy. When you wish for your camera to glide smoothly along your chosen path, simply rely, as so many have and still do, on using a Glidecam Camera Stabilizer. Glidecam Industries, Inc., now in its seventeenth year, offers a wide range of camera stabilizers, each optimized for various camera weights and shooting conditions.

The Glidecam HD-Series requires practice and understanding to achieve professional looking results. We highly recommend that the user read this manual thoroughly before setting up and operating the HD-1000, HD-2000, or HD-4000. Doing so will save you time, and will minimize the risk of damage to your camcorder or the Glidecam HD-1000, HD-2000, or HD-4000. It is important to perform and follow the Set-up and Operation's procedures in the proper sequence, so as to avoid both frustration and a possible accident.

If you have need of any technical assistance, you can call our **Technical Support Line at 1-781-585-7900**, Monday through Friday between the hours of 9:00 am and 5:00 pm, Eastern Time.

We're sure that once you have your Glidecam HD-1000, HD-2000, or HD-4000 up and running, you will find years of enjoyment with it.



#2 GLIDECAM HD-2000 PARTS AND COMPONENTS

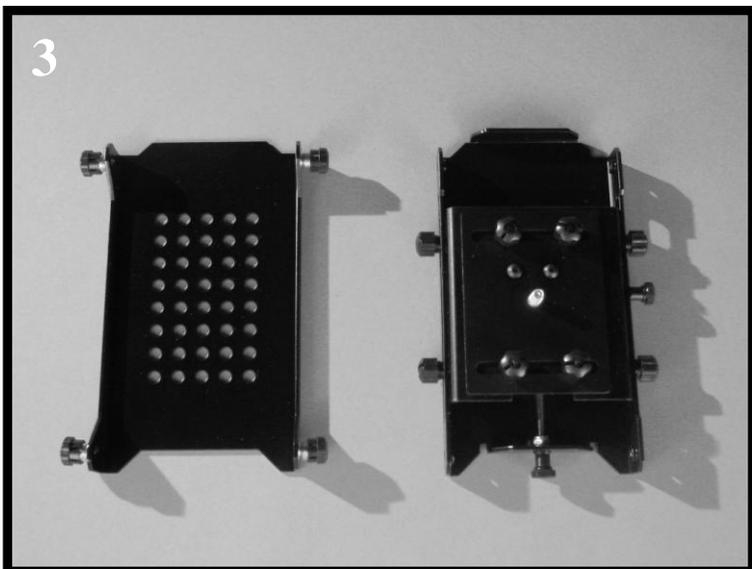
Congratulations on your purchase of a Glidecam HD-2000. When you unpack your Glidecam HD-2000 you will see that it is not completely assembled. Contents of the Glidecam HD-2000 shipping box include: the MANUAL, CENTRAL POST with gimbal assembly, QUICK RELEASE PLATE, CAMERA-MOUNTING PLATFORM, BASE PLATFORM, TELESCOPING POST, HARDWARE bag, and COUNTER WEIGHT PLATES.

TOOLS NEEDED: You will need Standard and Phillips Head Screwdrivers (not included).



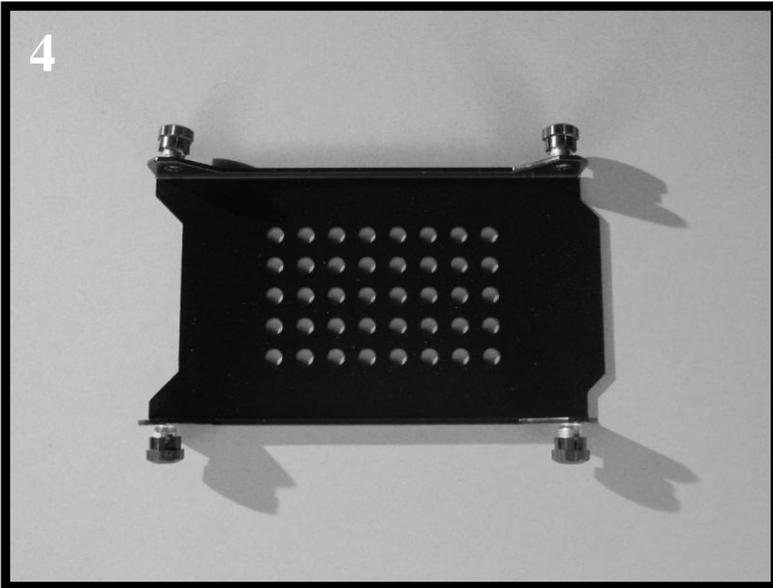
This is the Glidecam HD-2000 CENTRAL POST with attached gimbal assembly. ***The HD-1000 has a smaller CENTRAL POST and the HD-4000 has a longer CENTRAL POST.

Warning – Do not adjust or tighten the factory settings on the gimbal, handle, and yoke. These parts should remain loose and move freely, just as they are shipped to you.



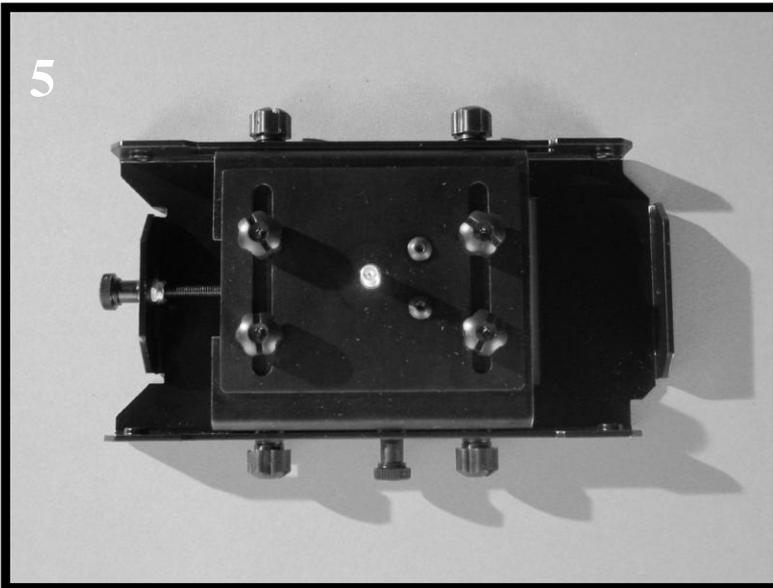
These are the pieces that makeup the HEAD ASSEMBLY of the GLIDECAM HD-2000.

- 1) QUICK RELEASE PLATE
- 2) CAMERA-MOUNTING PLATFORM

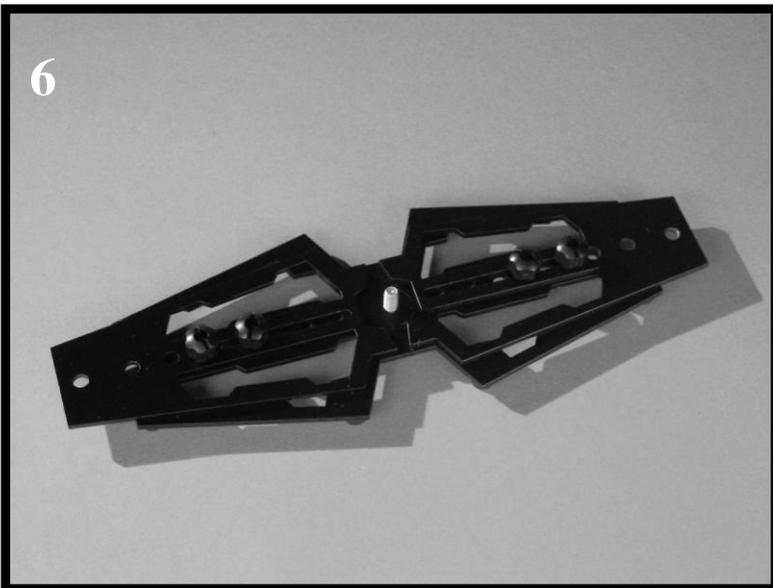


This is the QUICK RELEASE PLATE for the Glidecam HD-2000. This is the plate that you will be mounting your Camera on. **To remove the quick release plate from the head assembly turn the knobs counterclockwise and then pull on the knobs to release.**

***The QUICK RELEASE PLATES for the HD-1000 and the HD-4000 are different.



This is the CAMERA-MOUNTING PLATFORM with front to back and side to side movement adjustment knobs.



This is the expandable BASE PLATFORM.

***The Glidecam HD-1000 has a smaller BASE PLATFORM and the Glidecam HD-4000 has a larger BASE PLATFORM.



This is the TELESCOPING POST.
***The Glidecam HD1000 and HD4000
has slightly different sizes.



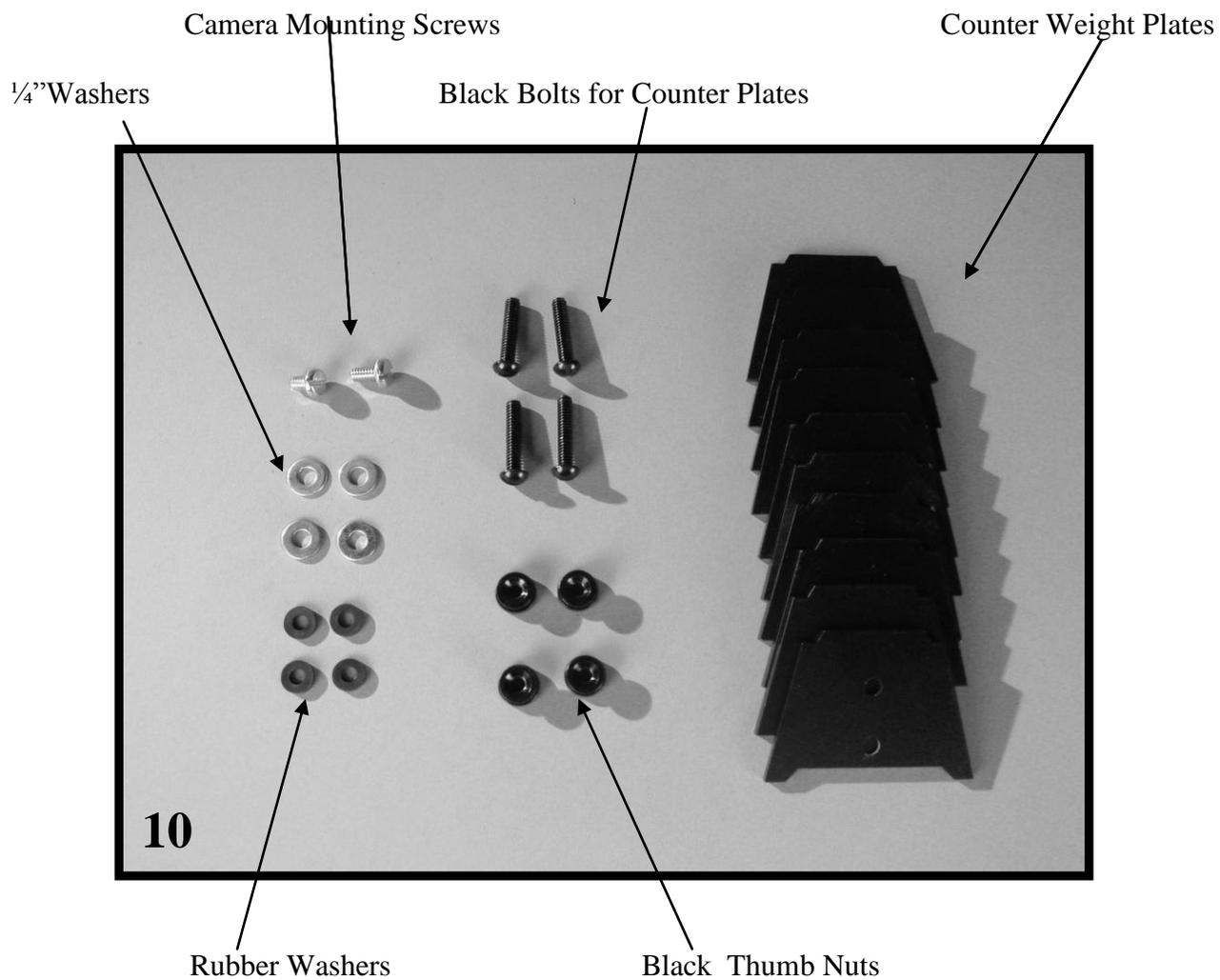
These are the 10 HD2000 and HD4000
COUNTER WEIGHT PLATES (shown
in bag).

The HD1000 has 8 COUNTER WEIGHT
PLATES.

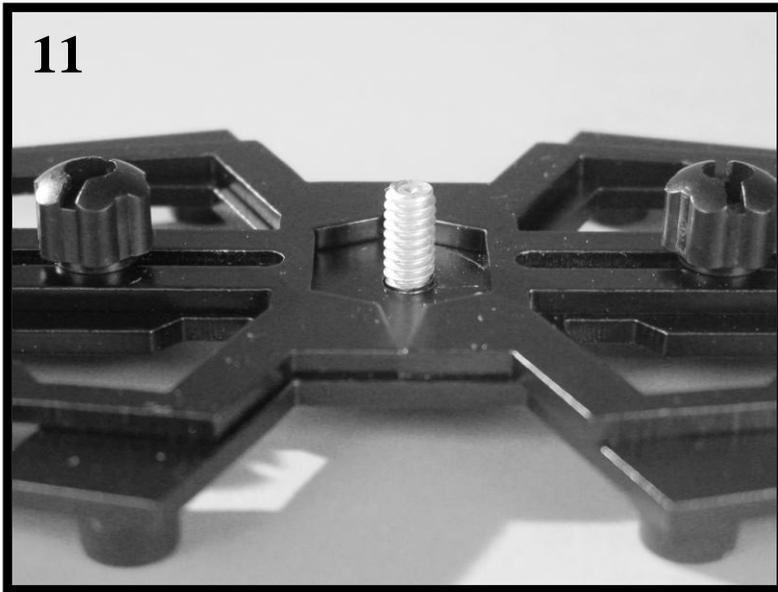


This is the HARDWARE set for the
Glidecam HD-2000.

***The Glidecam HD-1000 and HD-4000
have slightly different HARDWARE.

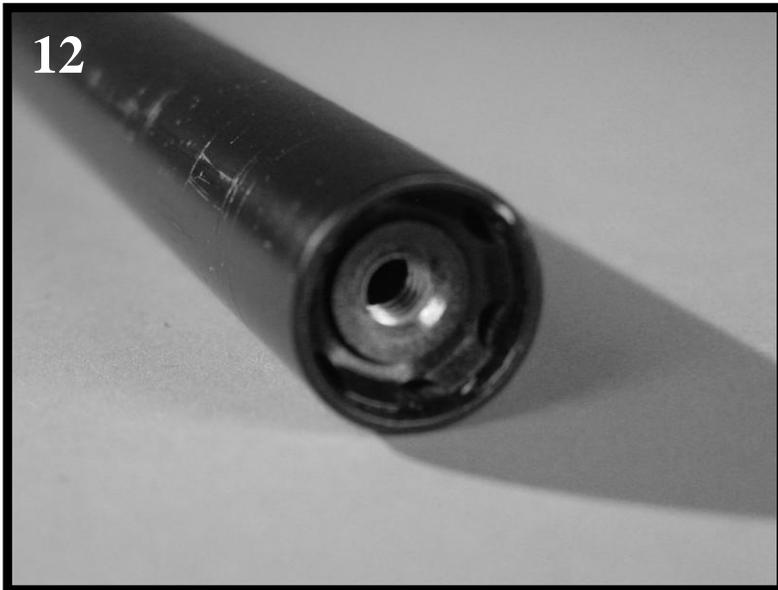


#3 ASSEMBLING YOUR GLIDECAM HD-2000



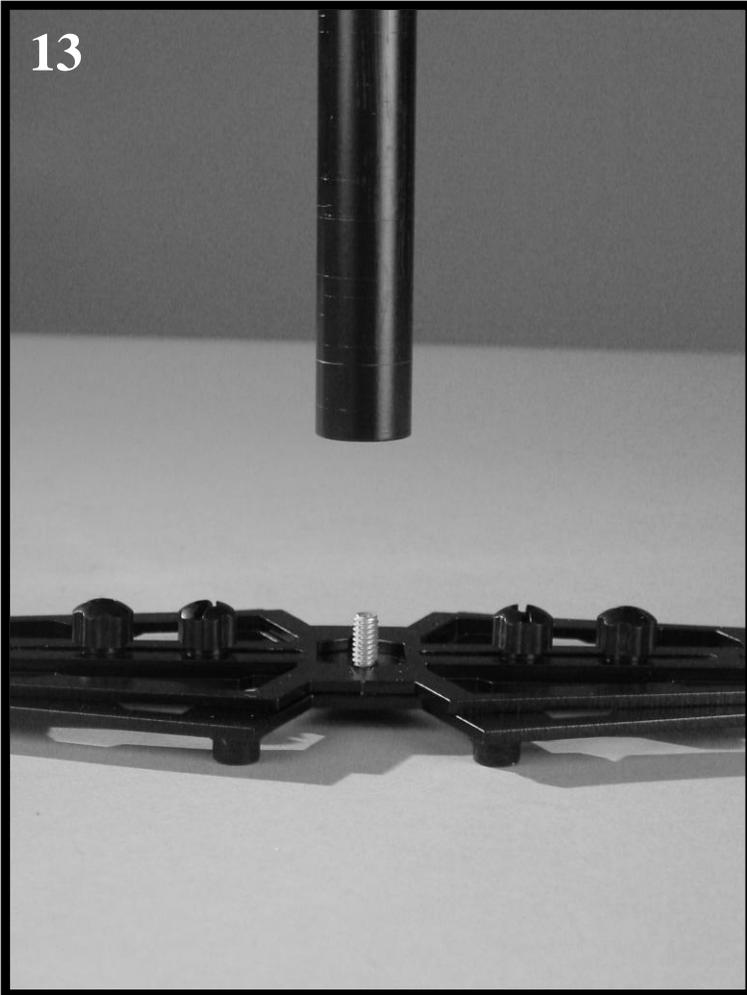
First, get the BASE PLATFORM and the TELESCOPING POST.

See photo #11 for the BASE PLATFORM and photo #12 for the TELESCOPING POST.



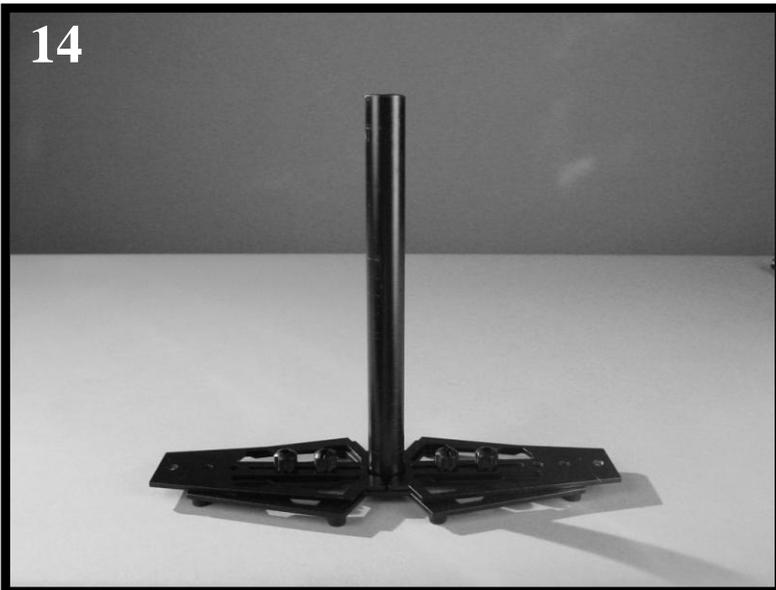
Note the threaded insert located in the bottom of the TELESCOPING POST.

13



Connect the TELESCOPING POST to the BASE PLATFORM by tightly screwing the TELESCOPING POST onto the threaded stud sticking up from the center of the BASE PLATFORM.

14



At this point, your Glidecam HD-2000 should look like photo #14 which is showing the TELESCOPING POST attached to the BASE PLATFORM securely.

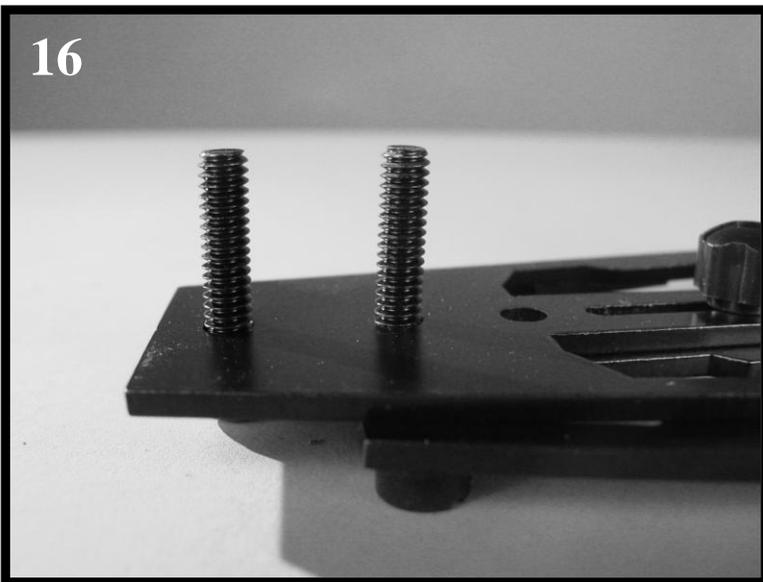
15



Now find a pair of bolts and attach RUBBER WASHERS as shown in the photo to the left.

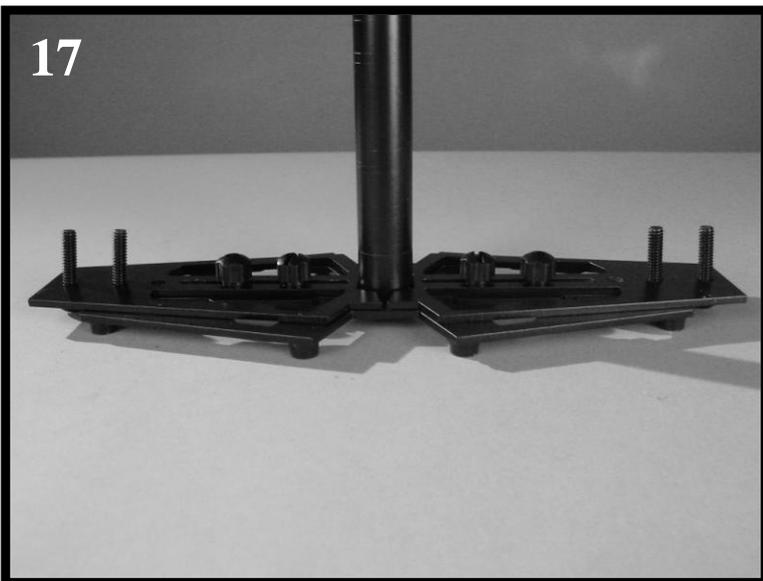
Repeat this step.

16

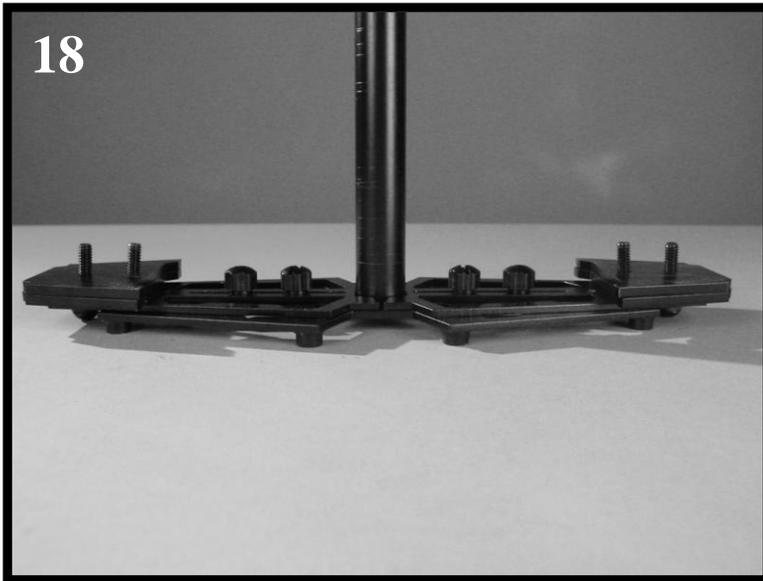


Now, insert the selected bolts with RUBBER WASHERS attached through the slots in the BASE PLATFORM as shown in this picture and repeat this procedure for the slots on the other side of the BASE PLATFORM.

17

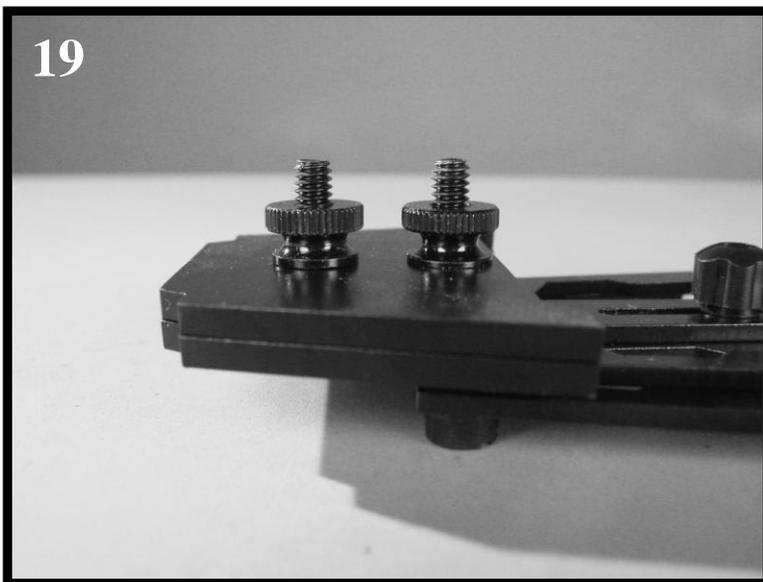


At this point, your Glidecam HD-2000 should look like this photo.

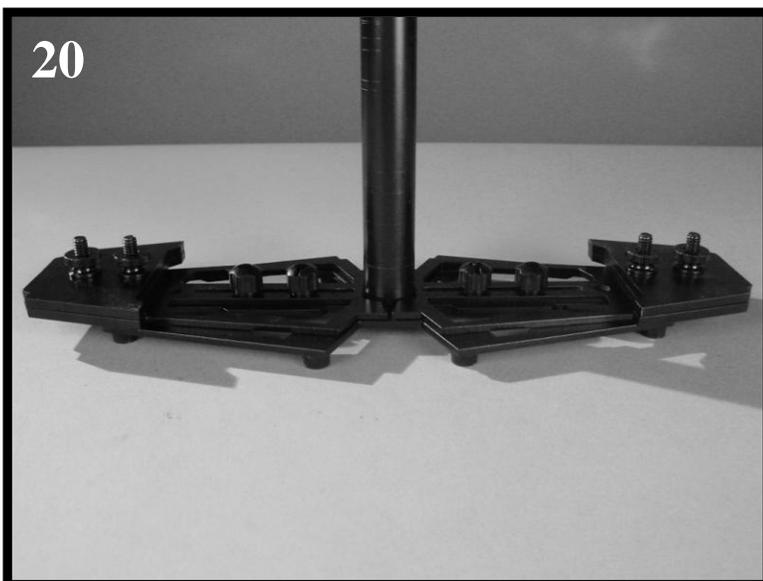


Take COUNTER WEIGHT PLATES and slide them down the bolts on the BASE PLATFORM (the holes in the weights match the placement of the bolts).

NOTE: Heavy Cameras require more COUNTER WEIGHTS than light Cameras do.

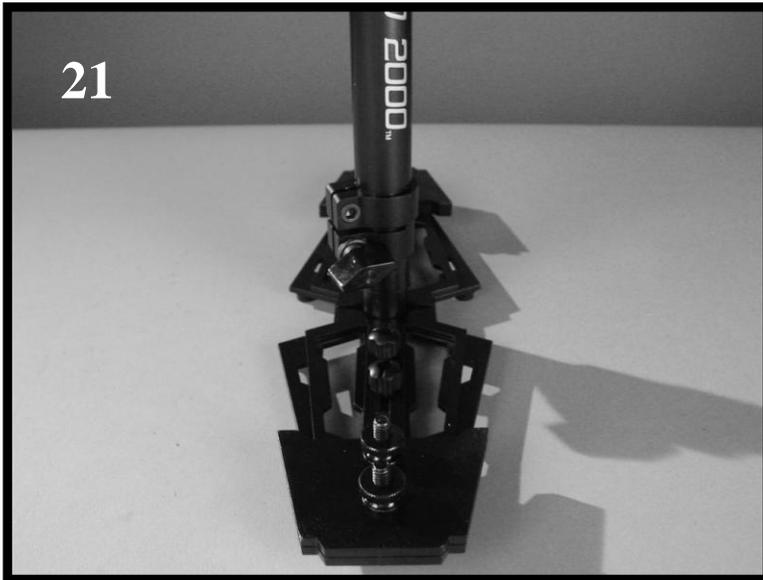


Secure the COUNTER WEIGHT PLATES with the BLACK THUMB NUTS as shown in this photo and repeat this procedure for the COUNTER WEIGHT PLATES on the other side of the BASE PLATFORM.

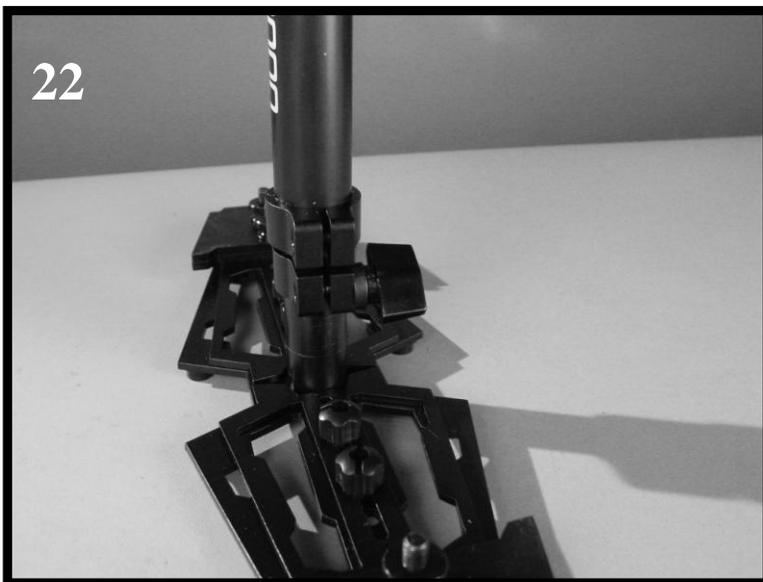


Both COUNTER WEIGHT PLATE stacks should now be secured in place with the BLACK THUMB NUTS as shown in this photo.

NOTE: Expanding the base length and moving the COUNTER WEIGHT PLATES apart will create pan inertia and this will slow down the rotation of the sled and may also reduce side to side movement while moving.



Now, insert the TELESCOPING POST with the attached BASED PLATFORM up into the CENTRAL POST (the Central Post can be seen in photo #21).



The TELESCOPING CLAMP'S "Adjustment Knob" should be aligned so that it looks like it does in photo #22. To align the TELESCOPING CLAMP'S "Adjustment Knob" simply rotate the entire CENTRAL POST into the correct position, and then tighten the "Adjustment Knob." Also leave about 1 inch of TELESCOPING POST showing below the TELESCOPING CLAMP. Having the TELESCOPING CLAMP'S "Adjustment Knob" aligned correctly, although not technically needed to make your Glidecam HD-2000 function correctly, does make it easier to reach the Knob later when you use it.



Securely tighten the “Adjustment Knob” on the TELESCOPING CLAMP by rotating the Knob clockwise as shown in this photo.

The “Adjustment Knob” should only be tightened by hand.

WARNING: DO NOT OVERTIGHTEN THIS KNOB.



At this point, this is what your HD-2000 should look like, which is with the CENTRAL POST and TELESCOPING POST aligned correctly on the TELESCOPING POST and BASE PLATFORM assembly.

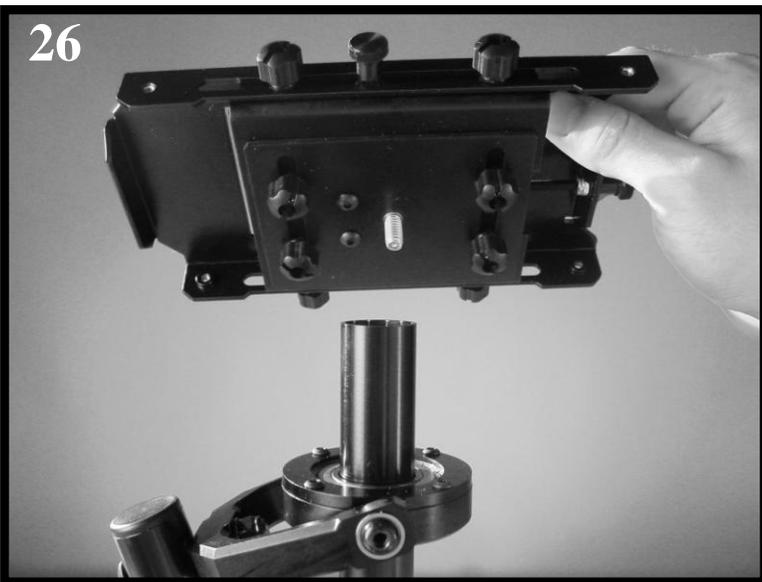
The amount of COUNTER WEIGHTS will vary depending on your Camera weight. Don't worry about this too much, for later you will set the number of COUNTER WEIGHTS to the correct amount required for your specific Camera.

25



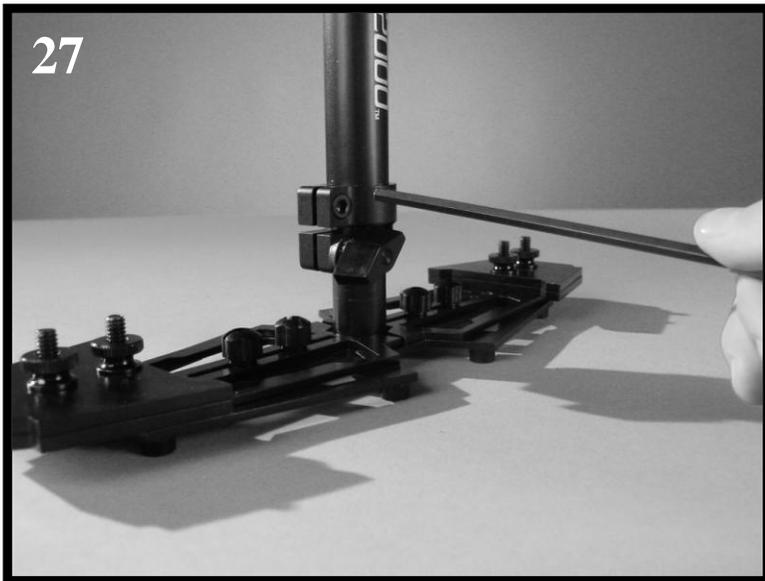
This is a photo of the **THREADED INSERT** in the top of the **CENTRAL POST**.

26

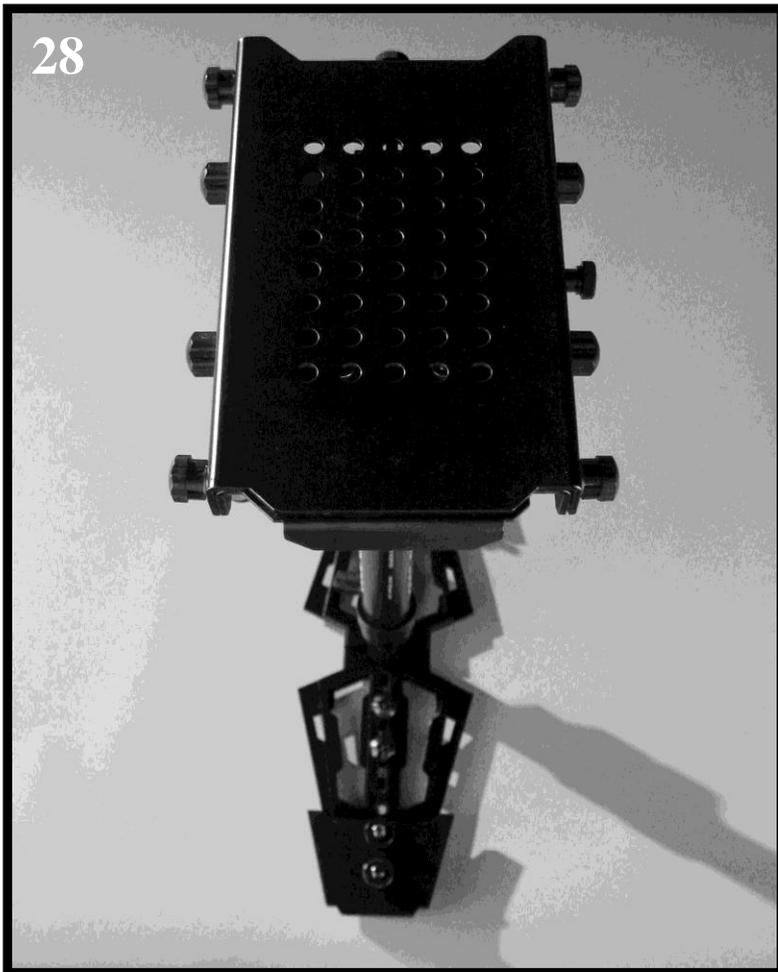


Rotate and screw the **CAMERA MOUNTING PLATFORM** into the **THREADED INSERT** in the top of the **CENTRAL POST**.

In the next procedure you are going to align the **CAMERA MOUNTING PLATE** so that its front edge is parallel to the front edge of the **BASE PLATFORM**. The result of this correct alignment will make your Glidecam HD-2000 look like photo #28.



There are two ways to create this correct alignment. The **first** and easiest is to just loosen the “Adjustment Knob” on the TELESCOPING CLAMP and then rotate the parts until they are correctly aligned as in photo #28. Then simply retighten the “Adjustment Knob.” Remember to leave about 1 inch of TELESCOPING POST showing below the TELESCOPING CLAMP as before.



The **second** way to correctly align the parts (see photo #27) is to use an Allen Wrench or Screwdriver to loosen the “Screw” on the top part of the TELESCOPING CLAMP until you can rotate the parts so they are correctly aligned as in photo #28. Then simply retighten the screw.

NOTE: The second method of alignment is better because it keeps the TELESCOPING CLAMP’S “Adjustment Knob” aligned correctly as previously shown in photo#22. Having the TELESCOPING CLAMP’S “Adjustment Knob” aligned correctly, although not technically needed to make your Glidecam HD-2000 function correctly, does make it easier to reach the Knob later when you use it.

IMPORTANT NOTE: When using cameras that are less than one pound on the HD-1000 you will need to increase the camera weight by adding counter balance weight plates under the camera.

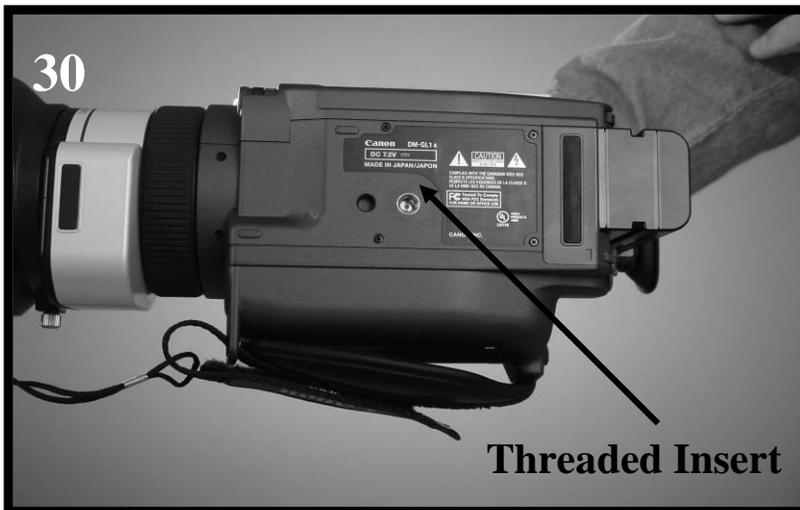
#4 ATTACHING YOUR CAMERA TO THE GLIDECAM HD-2000

PLEASE NOTE These photographs show the GLIDECAM 2000 PRO for illustrative purposes.



Now it is time to attach your Camera to the Glidecam HD-2000's Quick Release Plate.

To remove the quick release plate from the head assembly turn the knobs counterclockwise and then pull on the knobs to release.



First, find the "Threaded Insert" on the bottom of your camera.

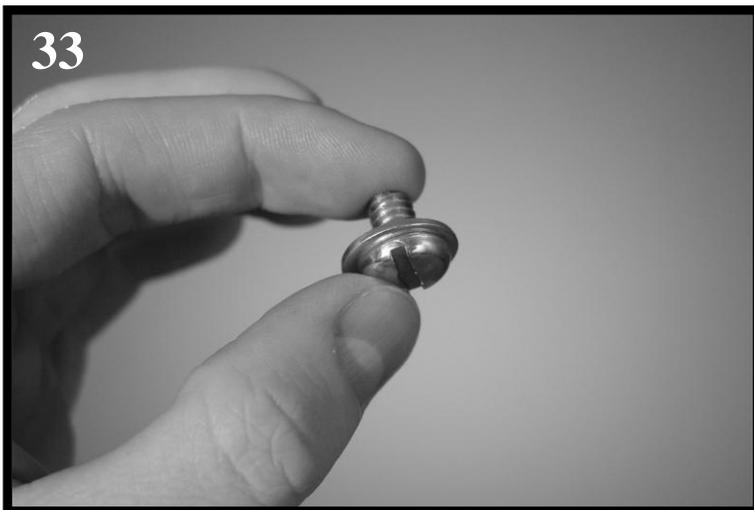


Now preferably sit down in a chair and place your Camera base side up in your lap as shown in Photo #31. Place and center the QUICK RELEASE PLATE on the base side of your Camera as in Photo #32.



Make sure the QUICK RELEASE PLATE is in alignment and square with the bottom of your Camera, and make sure the “Threaded Insert” on the base of your Camera is aligned with one of the “Mounting Holes” in the QUICK RELEASE PLATE.

NOTE: You have a Video Camcorder or Film Camera that is larger than the one used in this Manual, then you might wish to first find the true front to back center of gravity of your camera by rolling the base of your Camera on a pen until it is balanced upon the pen, the mark this point on your Camera’s side with a small piece of tape or a grease pencil, and then use this marking to center the QUICK RELEASE PLATE over your Camera’s center of gravity.



Now use a CAMERA MOUNTING SCREW and a 1/4” WASHER to attach the QUICK RELEASE PLATE to your Camera.

NOTE: If the Shorter CAMERA MOUNTING SCREW does not work then try the slightly larger CAMERA MOUNTING SCREW. Also try using more than one 1/4” WASHER or no 1/4” WASHERS at all if you trouble with the mounting procedure.

***You can use the same MOUNTING SCREWS and WASHERS for the HD-1000 and HD-4000.



With your Camera base side up in your lap and with the QUICK RELEASE PLATE in place, use a flat head screwdriver to secure the QUICK RELEASE PLATE to your Camera using the CAMERA MOUNTING SCREW and 1/4” WASHER combo you have just selected.

NOTE: Do not over tighten this Screw. Over tightening could break the “Threaded Insert” on your Camera Base.



If all is correct, your Camera and QUICK RELEASE PLATE should now be securely attached to each other as shown in Photo #35

NOTE: If you can easily rotate the QUICK RELEASE PLATE on the base of your Camera, even though you have adequately tightened the CAMERA MOUNTING SCREW, and you do not feel comfortable tightening the CAMERA MOUNTING SCREW any more, then you should think about using some sort of a flexible “Gasket” between your Camera base and QUICK RELEASE PLATE. You could use rubber tape, or a square flat piece of rubber (for example, creating one by cutting up an old rubber dishwashing glove).



Now securely place and center your Camera and the attached QUICK RELEASE PLATE on the top of the CAMERA MOUNTING PLATFORM as shown in Photo#36. **Make sure the four knobs are pulled all the way out before installing. Once the plate is installed push the four knobs in and rotate clockwise to securely tighten.**

#5 BALANCING YOUR GLIDECAM HD-2000



Before you begin the balancing process check for the following:

- 1) Camera is securely attached to the QUICK RELEASE PLATE and the four knobs are pushed in and tightened.
- 2) Lens cap has been removed and secure.
- 3) Camera Battery and Video Tape are installed
- 4) Flip out LCD in its operating position (if applicable as in Photo#37)
- 5) Telescoping clamp has been tightened, weights added etc.



BALANCING THE HORIZONTAL AXIS

Now that your Glidecam HD-2000 is setup and assembled properly, you can test and setup the horizontal balance of the system. The objective in achieving correct horizontal balance for the HD-2000 is to allow the Camera to remain level during operation, give you are not applying either a pan, tilt, or roll type of hand pressure to the HD-2000. In other words, if the HD-2000 is horizontally balanced correctly, then the Camera will remain level, and the CENTRAL POST will remain vertical unless you intentionally position the HD-2000 otherwise. Also, if the HD-2000 is horizontally balanced correctly it will always return to a level and vertical position after you release any pan, tilt, or roll pressure on the CENTRAL POST as shown in Photo#38.



When testing for correct horizontal balance you need to make sure that you pick up your HD-2000 from a flat and level surface (a table for example) and that you let the HD-2000 hang freely as you hold it as shown in Photo # 38. If the HD-2000 is balanced correctly on its horizontal axis, then it will be level and upright, with the CENTRAL POST in a virtually perfect vertical position, as pictured in Photos # 38 and #40.

Most likely your HD-2000 will not look like it does in Photo # 38 and #40 and so you will have to adjust it until it does.

WARNING: If you do not have enough COUNTER WEIGHTS on the BASE PLATFORM at this time, the entire Glidecam will flip completely upside down. If this happens add more COUNTER WEIGHTS below until during this test the Glidecam remains right side up.

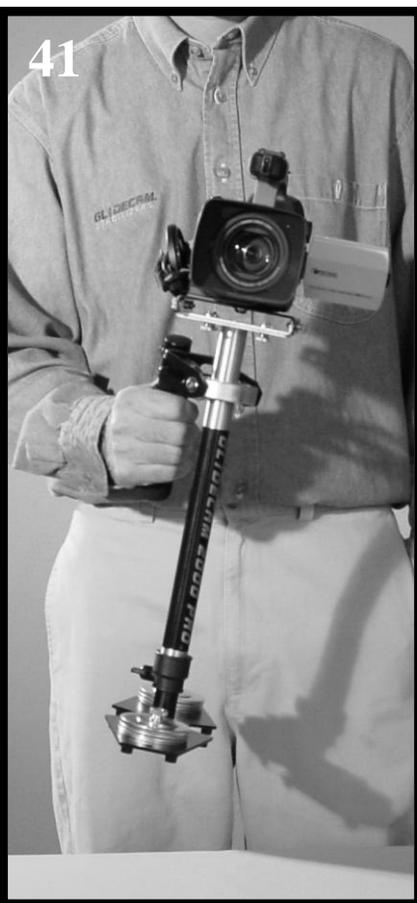
The best way of adjusting the horizontal balance is to move the center of gravity of the Camera. This can be accomplished by either #1) re-bolting the Camera to a different area of the QUICK RELEASE PLATE, or by #2) adjusting the position of the QUICK RELEASE PLATE and CAMERA MOUNTING PLATE either front to back or side to side with the Camera on it. Method #2 is the preferred method.

If the HD-2000 tilts to the front as it does in Photo#39, then you will have to loosen the Thumb Screws on the sides of the CAMERA MOUNTING PLATFORM and turn the adjustment knob counter clockwise. If the HD-2000 still tilts to the front, then move the QUICK RELEASE PLATE more to the back by turning the adjustment knob. If the HD-2000 is tilting to the back, then move the QUICK RELEASE PLATE to the front by turning the adjustment knob clockwise. Always secure the Thumb Screws after any adjustments. If you cannot get the front to back axis balanced with this method then try re-mounting your Camera to a different hole on the QUICK RELEASE PLATE. Once you achieve balance for the front to back axis, tighten the four Thumb Screws on the CAMERA MOUNTING PLATFORM.

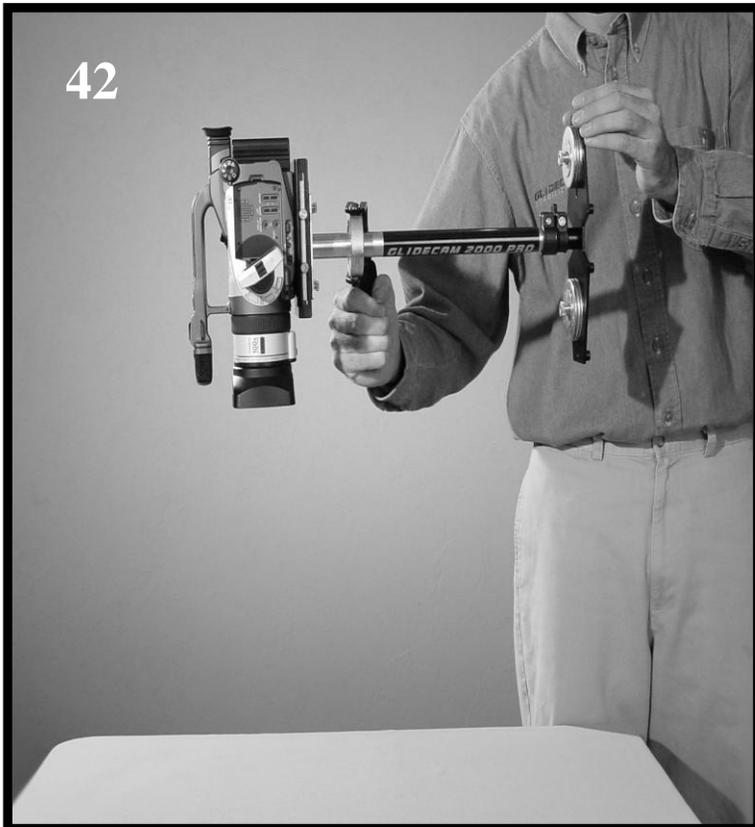


If the HD-2000 leans to the right, then you will have to loosen the THUMB SCREWS on the bottom of the CAMERA MOUNTING PLATFORM and then turn the side to side adjustment knob counterclockwise. If the HD-2000 leans to the left from the operator's point of view as in Photo #41 then move it to the right by turning the side to side adjustment knob clockwise. Always secure and firmly tighten the THUMB SCREWS after any adjustment. The side to side horizontal axis is shown correctly adjusted in Photo #40

After adjusting the side to side balance as mentioned above you might have to go back and readjust the front to back balance to obtain a truly fine balance of the whole system. You can use your eyes to judge for correct horizontal balance, or you can use a small and lightweight bubble level (not included) to ensure the HD-2000 has correct horizontal balance.



NOTE: The Horizontal Balance of the HD-2000 becomes less sensitive as the HD-2000 becomes increasingly bottom heavy, and conversely, the horizontal balance becomes very sensitive, as the HD-2000 progresses towards correct vertical balance (see next section).



NOTE: LATER AFTER YOU ADJUST THE VERTICAL BALANCE OF THE HD-2000 YOU WILL HAVE TO GO BACK AND READJUST THE HORIZONTAL BALANCE AGAIN IN ORDER TO OBTAIN A TRUE FINE BALANCE OF THE WHOLE SYSTEM.

BALANCING THE VERTICAL AXIS

Now that your HD-2000 is horizontally balanced, it's vertical axis can now be tested and properly balanced. The objective in obtaining correct vertical balance of the HD-2000 is to allow the Camera and HD-2000 to remain level during operation, given you are not applying either a pan, tilt, or roll type of hand pressure to the HD-2000, and most importantly that the HD-2000's CENTRAL POST remains vertical even if you are walking, running, or turning while the HD-2000 is in operation. In other words, if the HD-2000 is vertically balanced correctly then the Camera will remain level, and the CENTRAL POST will remain vertical unless you intentionally position the HD-2000 otherwise. If the HD-2000 is not vertically balanced properly, then it will swing about and pendulum when you walk, run or turn.

Again, if the vertical balance is set correctly you will be able to move about quickly, as well as start or stop moving suddenly, and still have the central support post remain vertical. To adjust the HD-2000's vertical balance you can either add, or subtract COUNTER WEIGHTS from the BASE PLATFORM, or telescope the BASE PLATFORM in or out. After you have approximately the right amount of WEIGHT on the BASE, you can then fine tune the VERTICAL BALANCE by using the TELESCOPING POST.

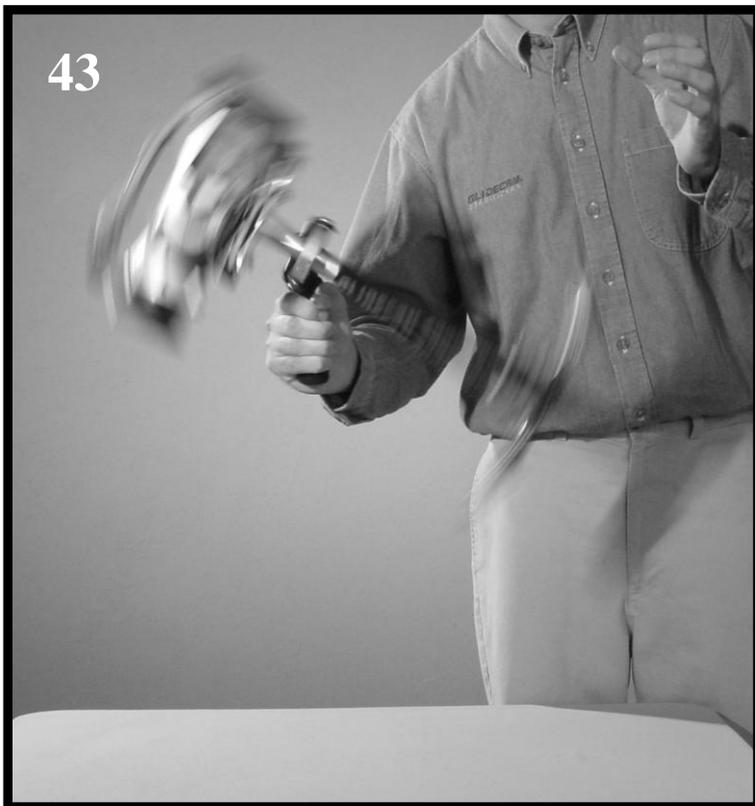


Photo #43 shows the Glidecam HD-2000 swinging between horizontal and vertical during the "Sled Arc Test" (see next page).



This photo shows the Glidecam HD-2000 swinging past an illustrated vertical line. The HD-2000 will pendulum or swing past this line during the “Sled Arc Test,” and the HD-2000 will swing back and forth over a dozen times if left to keep swinging, but it is only the time the HD-2000 **first** swings in an arc from horizontal to vertical that you need to analyze. After you have counted the time it takes for it to go from horizontal until it passes vertical **once**, then simply stop the HD-2000 from swinging, then either put the HD-2000 down or make adjustments to perform the test again.

Adding more weight or telescoping out the base will speed up the drop time. Removing weight or telescoping the base in will slow the drop time.

To test the balance of the vertical axis, perform what is called the SLED ARC TEST. To perform the “Sled Arc Test,” simply hold the HD-2000 by its handle and then grab hold of the back end of the HD-2000’s BASE PLATFORM, then pull the BASE up and back until the HD-2000’s CENTRAL POST is horizontal and motionless (see Photo #42). Then gently let go of the BASE PLATFORM and count how many seconds it takes for the HD-2000 to go from the horizontal position it was just in (Photo #43), to the moment it first passes vertical (Photo #44).

If the HD-2000 is vertically balanced properly, then it should take about TWO to THREE seconds for this to happen (this is called the DROP TIME). Count your seconds with the words “one thousand one, one thousand two,” etc. for accuracy. Adjust the amount of COUNTER WEIGHTS used on the BASE PLATFORM or adjust the length of the TELESCOPING POST up or down, until it only takes TWO to THREE seconds for the HD-2000’s CENTRAL POST to first swing in an arc from horizontal to vertical.

NOTE: The amount of DROP TIME finally set is ultimately up to you to decide. Different DROP TIMES change the vertical balance, and therefore change the results obtainable when shooting.

Another way to check for correct vertical balance, known as the “Movement Test,” is to walk forward with the HD-2000, and the stop suddenly. If the HD-2000’s BASE PLATFORM swings or pendulums away from you, or from the upright vertical position it was just in at the moment you stopped, then you know the HD-2000 is not balanced correctly. Adjust the amount of COUNTER WEIGHTS used on the BASE PLATFORM or adjust the length of the TELESCOPING POST up or down, until the HD-2000 remains vertical during the “Movement Test.”

This “Movement Test” also applies to running or turning around quickly with the HD-2000. Again, if the HD-2000 is balanced properly, then any body movement like running or turning quickly will not effect the basic upright, vertical position of the HD-2000

#6 HANDLING YOUR GLIDECAM HD-2000



Photo #45 shows you the correct way to hold the handle; however, remember that you should always **use both hands** when using the HD-2000 as shown in Photo #46.



Notice how the “Guiding Hand” does not touch the main bearing assembly or yoke, which can be seen just slightly above the fingers of the “Guiding Hand” in Photo #46.



Before you operate and film things with your HD-2000, you will need to know how to handle it. When handling your HD-2000 you will use one hand to hold onto the handle and the other hand to gently guide the Camera in the direction you wish to shoot. We call the hand that holds the handle, the “Holding Hand” and the hand that aims the Camera for tilting and panning etc. the “Guiding Hand.”

When holding the handle of your Glidecam HD-2000 you will need to: 1) hold it firmly, and 2) hold it either in the middle or at the bottom of the handle. Which position you choose will depend on the kind of shots you are shooting. For normal shooting hold the handle in the middle (see Photo #45). For shots that require aiming the Camera either up or down or sideways, hold the handle firmly at the bottom. This will allow the “yoke” part of the gimbal to twist around without hitting your hands or your knuckles.

When you handle your Glidecam HD-2000 you will want to use your “Guiding Hand” to gently hold onto either, the point just below the yoke and bearing assembly, (see Photo #46) or an area down by the BASE PLATFORM (see photo#53). These two areas allow for easy control of the HD-2000 when in use. Which position you choose will depend on the kind of shots you are shooting.

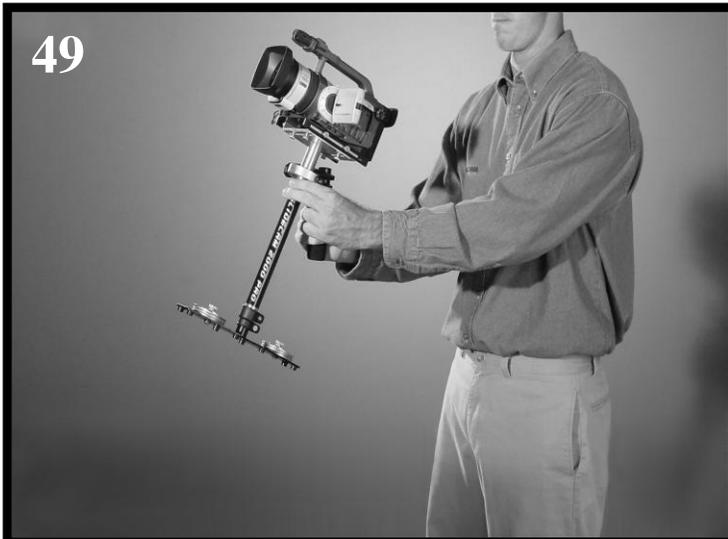
For normal Shooting hold the HD-2000 at the point just below the yoke and bearing assembly (see Photo 46). This will allow you to subtly aim the Camera without disturbing the Camera’s upright position. It is this position that will allow you the smoothest shots when walking or running with the unit during normal shooting.

NOTE: Make sure that your guiding hand and holding hand do not touch either the bearing assembly or the yoke during shooting, for doing so can cause unstable shooting. For unconventional shots, like ones that require aiming the Camera either straight up or down, or sideways, hold onto the HD-2000 on the lower part of the post or down near the weights (photo #53). This will allow your guiding hand to have a greater degree of control over the HD-2000 while shooting very erratic shots.

#7 OPERATING YOUR GLIDECAM HD-2000



The Glidecam HD-2000 is designed to work correctly only when operated with two hands (see Photos 46 and 48). If you try to operate the unit with just your "Holding Hand," the Camera will most likely drift away from its original position. Without your "Guiding Hand" in place, you will be unable to control the direction of the Camera.



When operating the Glidecam HD-2000 you will not be able to put your eye right up to the eyecup on the viewfinder, for doing so will cause the unit to be restricted in its ability to stabilize and eliminate Camera shake. Even though you cannot place your eye directly up to the Camera viewfinder, you can either use the Camera's built-in LCD Monitor (as shown in Photo 54), or attach an external LCD Monitor (not included) directly to the BASE PLATFORM of the HD-2000. A ¼" Monitor "Mounting Hole" is located at both the front and back edges of the BASE PLATFORM (see Photo #47).

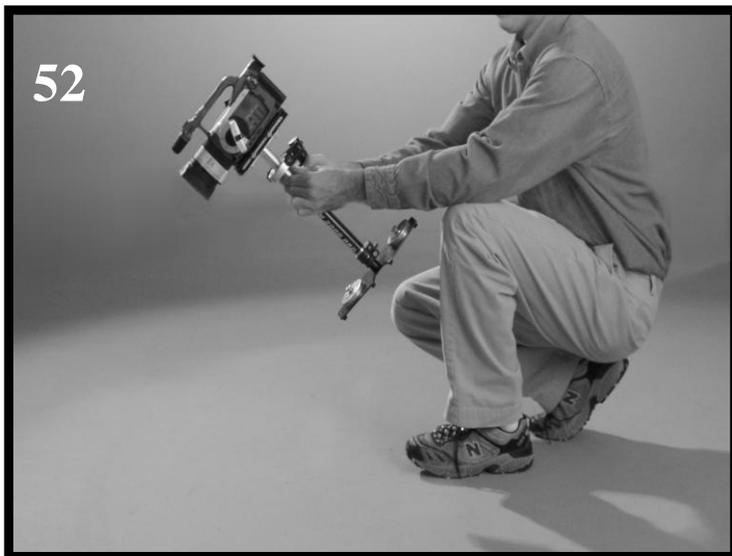


You can also attach an external LCD Monitor to the accessory shoe on top of your Camcorder. We believe that better results are obtained when you attach the Monitor to the HD-2000's base, see photo # 47 because this way you generally have to look slightly down to see the Monitor. In doing so, your feet are more visible to your peripheral vision. This makes negotiating obstacles with the HD-2000 safer.



Photos #51 through #53 show the Glidecam HD-2000 being held and used in different ways.

Operating your Glidecam HD-2000 for extended periods of time can easily tire your "Holding Hand." If fatigue sets in while shooting you can try operating the Glidecam HD-2000 with your other hand. You can also rest for a while by placing the unit upright on a level surface, docking the sled if using the bracket or by laying it down on the ground.



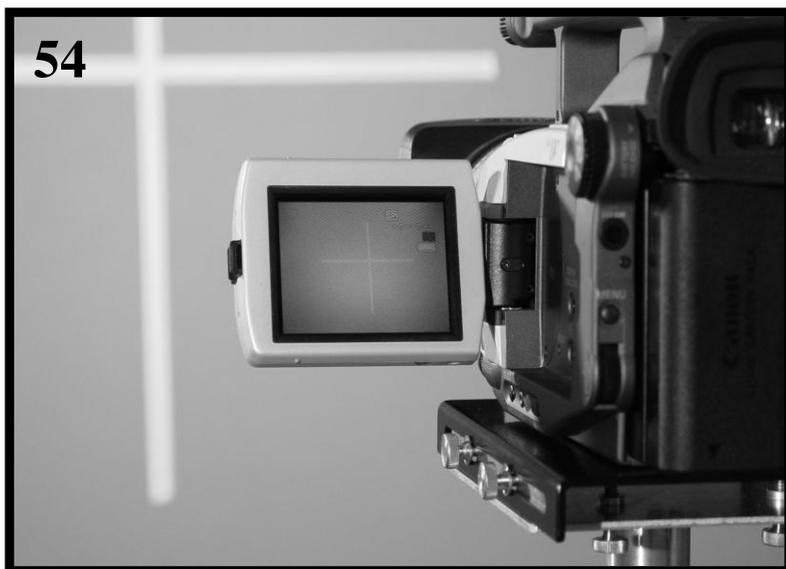
Glidecam Industries, Inc. also sells accessories for the Glidecam HD-2000 that can help you use the HD-2000 for extended periods of time. Call us, or one of our authorized dealers, or visit our website at www.Glidecam.com on the internet to find out more. The Glidecam Smooth Shooter, Glidecam X-10, Glidecam BodyPod and the Glidecam Forearm Brace make excellent support accessories for the HD-2000.



When handling and operating your Glidecam HD-2000, always avoid violent, jerking arm and/or body movements. Doing so could cause damage to the unit or cause your Camera to pull loose from the QUICK RELEASE PLATE.

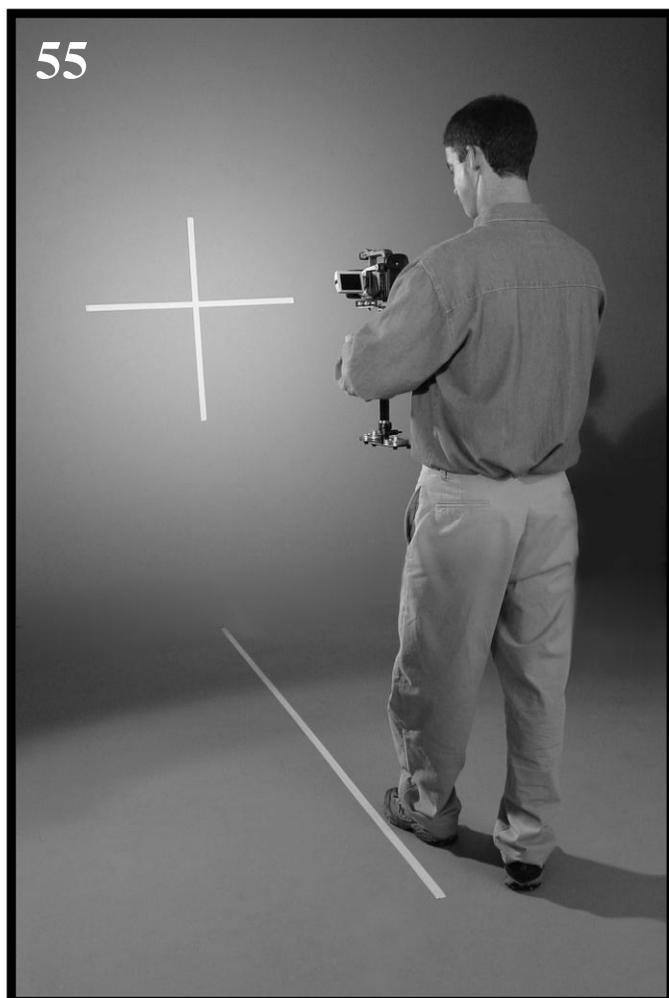
The Glidecam HD-2000 does not work underwater, nor is it waterproof (meaning the bearings and of course your Camera), so avoid direct exposure to rain or water spray. Also, the bearings are not sand proof, so avoid getting dirt or sand into them (see bearing maintenance section).

#8 SHOOTING TIPS



Use of a Wide Angle Lens Converter

If you have a common consumer Camcorder you will probably discover that the widest focal length setting on its lens is not very wide. You might find that this wide setting is not adequate enough to give you the look produced by professional Hollywood dollies, cranes, and stabilizers. To achieve this kind of look you might have to place a **wide angle lens converter** (not included) on the front of your existing camcorder lens. We highly recommend that you use one on your camcorder when shooting.



Walking the Line

This is a training exercise that is designed to help you operate your HD-2000 more accurately. Using masking tape, camera or gaffer's tape, create a cross mark on a flat and even wall (see Photo #55). This cross mark will be used for framing purposes. Now, on the floor leading up to the cross mark, tape a straight line, about 10 to 20 feet long. The idea behind this exercise is to walk the line that you have taped on the floor, while keeping the cross mark centered in the LCD Monitor (see Photo # 54). Practicing this exercise will teach you how to frame a shoot with precision.

#9 IMPROPER TECHNIQUES



When shooting with the Glidecam HD-2000, do not grab the CENTRAL POST as in Photo #56. This defeats the purpose and isolation that the three axis gimbal provides. Instead, handle your Glidecam HD-2000 as shown in Photo #46 and #48.



Do not allow the Handle of the Glidecam HD-2000 to come in contact with CAMERA MOUNTING PLATFORM as in Photo #57. If the Handle comes into contact with the CAMERA MOUNTING PLATFORM it will limit your range of motion, and will result in “jerky” and unpleasant footage. Instead, position the Handle as shown in Photo #45.

10 OTHER CAMERA ATTACHMENT METHODS

Creating a gasket - If when attaching your camera to the QUICK RELEASE PLATE you find that the bottom of your camera isn't flat enough to allow for a good solid attachment, try making and adding a paper/cloth or rubber gasket to the QUICK RELEASE PLATE. (Try using a piece of a rubber dishwashing glove.) Simply cut the material to the size of the top of the QUICK RELEASE PLATE and then create a hole in it to allow the CAMERA MOUNTING BOLT to fit through it and into the base of your Camcorder.

11 PROFESSIONAL USAGE

If you are using the Glidecam HD-2000 to shoot professional looking shots, and you plan on incorporating them into a short movie or some sort of commercial project, we suggest that you preplan the shot out in advance, perhaps rehearse the move a few times before shooting, and that you use an assistant to help you during complex shots. This will give you optimum results and will make your movies look more professional.

Good luck with your shooting.

12 MAINTENANCE

Bearing Maintenance: The main bearing on your Glidecam HD-2000 is attached to the Central Support Post about two inches down from the top. It is metal and is partially enclosed by the Bearing Assembly. If after some period of time your bearing doesn't turn smoothly, you can oil it lightly with light lubricating oil. We recommend that you use very little oil. Very little, because this is all that is needed, plus anything more than a little will end up coming out of the bearing and onto the rest of your Glidecam HD-2000. Light lubricating oil may also be used if needed on the Yoke and Handle Bearings. Be sure to keep the oil away from your Camera, and clean up any over spill when done.

Cleaning: Do not use solvents or harsh cleaners of any kind on your Glidecam HD-2000. If the unit becomes dirty, use only a cloth or sponge with water to gently rub the unit clean.

Storage: If you are going to store your Glidecam HD-2000 for a long period of time then please store the unit upright in a dry or low to normal humidity area whenever possible. If you are unable to find an environment like this, then we suggest you store the unit in an air tight plastic container or bag. Standing the unit upright helps to alleviate stress on the system.

13 WARNINGS

You should make sure that you are very careful when using the Glidecam HD-2000 at night or in low light conditions. Do not make the mistake of focusing so much on what you are shooting that you trip or fall over something, or wander into something dangerous like a swimming pool or automobile traffic. Be extra careful when shooting on stairs, uneven terrain, etc. These cautions pertain to daytime shooting as well. Make sure that all children using this product have adult supervision. If you plan on shooting while moving fast, or while moving on uneven terrain, then be sure to wear knee and elbow pads, eye protection and a helmet.

1 4 WARRANTY

For ninety (90) days from the date of shipment, we will repair or replace your Glidecam HD-2000, free of charge, in the event of a defect in materials or workmanship (the shipment date appears on your purchase receipt) which occurs during normal use in accordance with the Glidecam HD-2000's instruction manual. Shipping, packing, and insurance costs to and from the factory are your responsibility. This limited warranty extends only to the original purchaser, and you will need your purchase receipt. This warranty does not cover, by way of example, damage caused by products not supplied by us or damage resulting from mishandling in transit, accident, misuse, vandalism, neglect, modification, lack of reasonable care (or commercial use, including rentals to others) of the Glidecam HD-2000 or service by anyone other than us. There are no express warranties except as listed above. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

WE ARE NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE UNIT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE NINETY (90) DAY WARRANTY PERIOD.

To obtain service during (or after) the warranty period: Contact Glidecam Industries' Customer Service Department by calling 1-781-585-7900 or write to us at: 23 Joseph St., Kingston, MA 02364, and explain the problem.

DO NOT SEND THE UNIT TO US WITHOUT FIRST OBTAINING A RETURN AUTHORIZATION NUMBER.

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on **GLIDECAM** product
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