

Enhancements for the SKYCRANE

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The SKYCRANE (<http://www.SKYCRANE.com/>) is a great crane for DV videographers. I have been using one for nearly two years now. Based on this usage I developed some additions to it to enhance its performance and ease of use. These are described in the following paragraphs and images.

Azimuth Lock

There are many situations in which one would like to maintain the same azimuth (horizontal rotation) position while changing the elevation. I did this by having a plate and locking brace fabricated that enabled me to lock the crane from horizontal rotation. These are shown in figures 1 and 2. The plate was

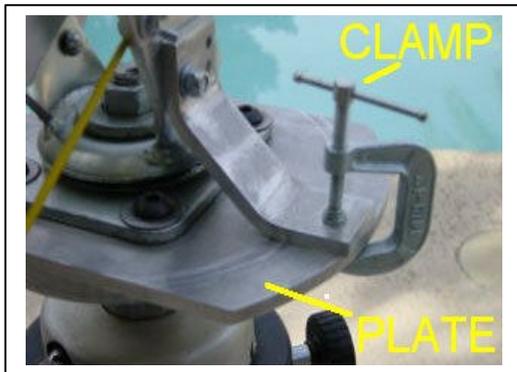


Figure 1

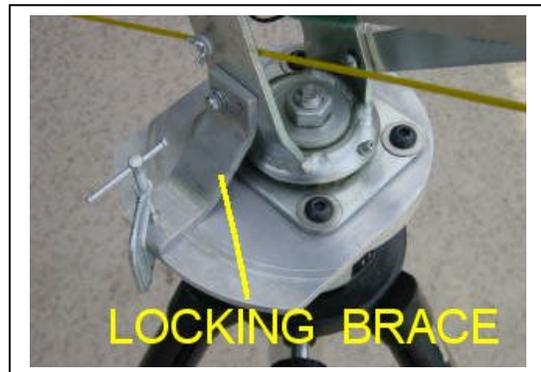


Figure 2

fabricated from 1/4" aluminum plate as was the "locking brace". The plate extends about 2" beyond the circular mounting plate that comes with the SKYCRANE and is mounted between that circular mounting plate and the base of the crane's pivot yoke. The added plate itself does not extend beyond the SKYCRANE's plate on all sides – just for one quadrant. This is so the extended plate will not limit the crane's maximum tilt capability.

The locking brace is mounted to the SKYCRANE's yoke and is clamped to the added plate to lock the azimuth position of the boom. I just use a small C-clamp for this.

Elevation Lock

To be able to rotate the boom without its tilt changing an adjustable bar was added between the boom and



Figure 3

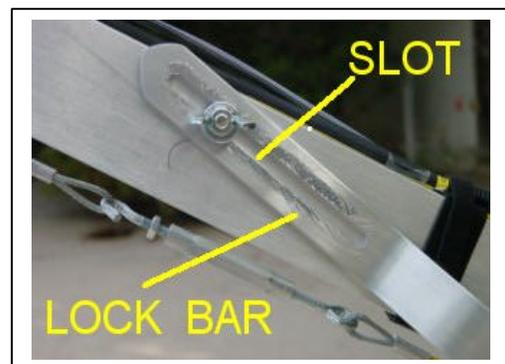


Figure 4

the crane's yoke. This is shown in Figures 3 and 4. The lock bar was fabricated from a piece of 1/8" thick

aluminum strap with one end secured to the crane's yoke and the other end secured to the boom itself. There is a 4" slot in the boom end of the lock bar to allow the tilt of the boom to be adjusted as desired then locked in place by tightening a wing nut. (Note: the boom should be approximately in balance at time of locking.)

Pitch Lock

This modification maintains the camera platform's pitch angle *approximately* constant as the boom's tilt is changed. This is done by clamping the camera platform cable to the the boom yoke. This is accomplished

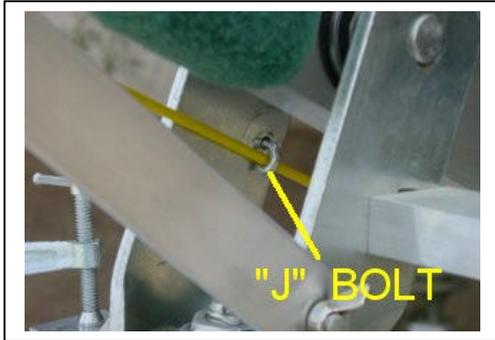


Figure 5



Figure 6

by a "J" bolt that hooks around the cable on the inside of the yoke as shown in Figures 5 and 6. The J-bolt tightened around the cable with a wing nut on the outside of the yoke. The boom should be approximately in balance when using this feature to minimize the strain on the cable and its coating.

Camcorder Control

I use a digital camcorder with my SKYCRANE. To provide control of several camera functions (on/off, zoom, focus) from the operator's position at the opposite end of the boom from the camera, I use a Canon ZR-1000 lanc controller that is attached to the top of the boom as shown in Figure 7. I used some "hook and loop" fasteners to attach the control to the boom. There are other lanc controllers available other than the Canon model. I had to acquire a lanc extension cable to reach from the short cord of the ZR-1000 to the camcorder.



Figure 7

Remote Camcorder Display

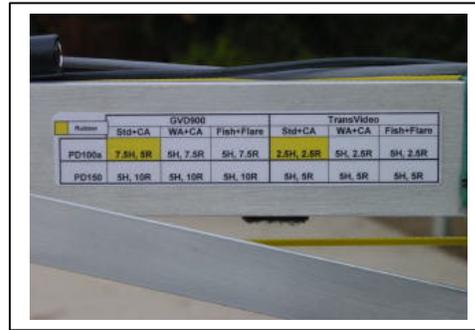
To provide a display of the camcorder's output at the operator's position I use a Sony GV-D900 digital tape recorder/player/display. It is mounted on a small platform I added to the end of the display support arm that comes with the SKYCRANE as shown in Figure 8. The video output from my DV camcorder can be either via Firewire or YC cabling. An advantage of using the GV-D900 is that one can use it as the prime (or backup) recorder of the camcorder's output.



Figure 8

Configuration Data Display

I use the SKYCRANE with a couple of different camcorders of different weight and both with a variety of lens adapters. To help me with setup of a particular configuration I printed a table that gives the particular weights and their location for approximately balancing the particular camcorder/lens combination being used. Saves lots of time during setup. I attached the printed table to the side of the boom for ready reference as shown in Figure 9.



Number	GVD900			TransVideo		
	Sid+CA	WA+CA	Flsh+Flare	Sid+CA	WA+CA	Flsh+Flare
PD190a	7.5H, 5R	5H, 7.5R	5H, 7.5R	2.5H, 2.5R	5H, 2.5R	5H, 2.5R
PD150	5H, 10R	5H, 10R	5H, 10R	5H, 5R	5H, 5R	5H, 5R

Figure 9

Allen Wrench Holder

The final item I added was a holder for the variety of Allen wrenches that are needed to adjust or disassemble the SKYCRANE. I got tired of searching for them each time so I found a small extruded aluminum box at an electronics store and screwed it (without its top in place) to the side of the boom near the operator's position as shown in Figure 10. The open side of the box is next to the boom. I then drilled appropriately-sized holes vertically through the horizontal faces of the box and inserted appropriately-sized rubber grommets into the holes. I sized the holes and grommets to have a snug fit for each of the four Allen wrenches needed.



Figure 10

Summary

I have found that the additions described make my operations with the SKYCRANE much more efficient and precise. I hope you do also.

I can be contacted at <mailto:cassie@dakotacom.net> if you have any questions.