MAIN OPERATING INSTRUCTIONS

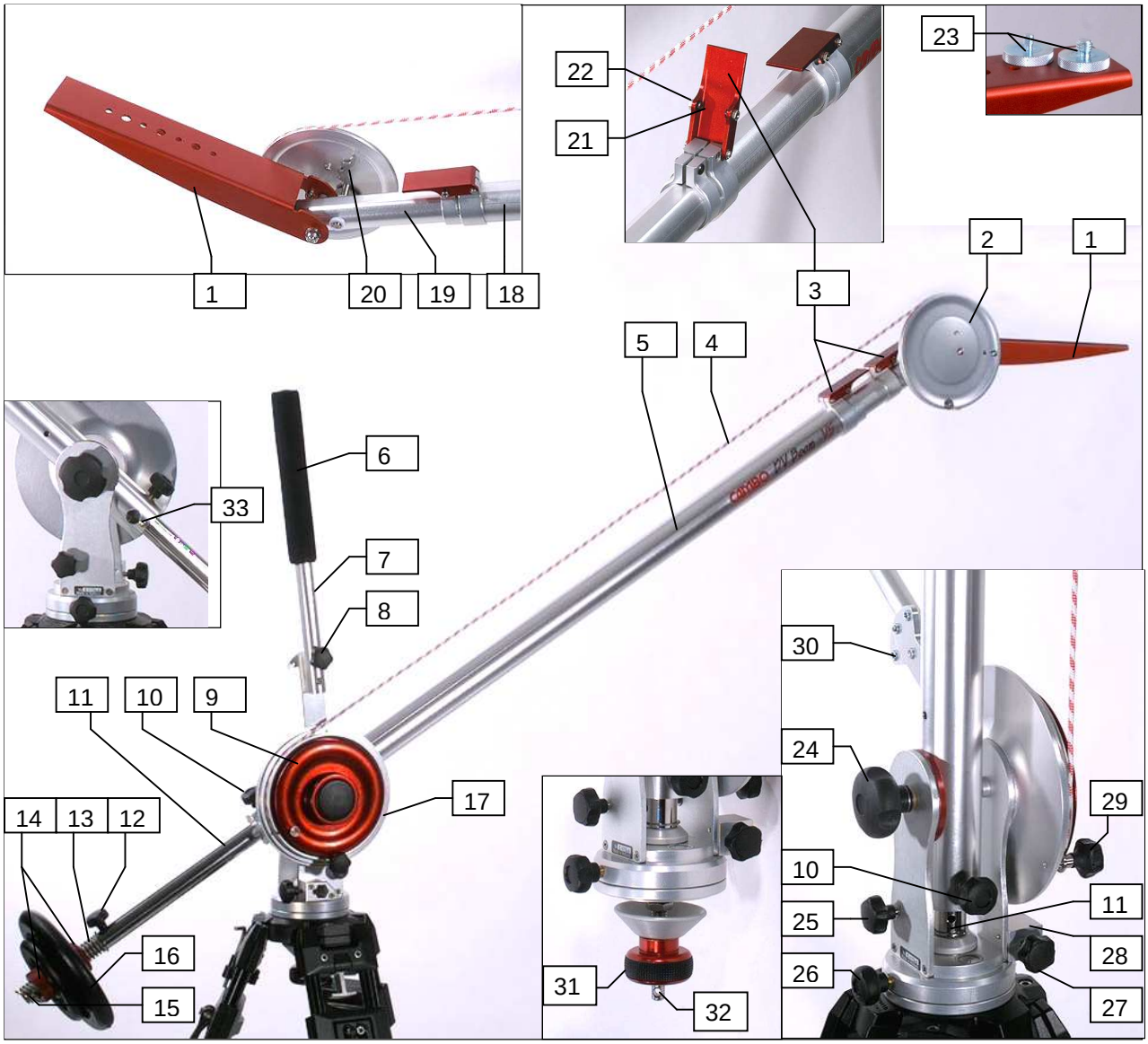
CAMBO

1. INTRODUCTION

You have bought the new V5 Lightweight Telescopic DV Boom out of the wide range of Cambo Video products. We expect that you will achieve very good results and performance using this equipment. These instructions give short information about the main functions of the V5 DV Boom. The flexible system of the telescopic V5 Videoboom adds new dimensions to your camera performance. The V5 is very quickly set up and fits into a compact soft case that will be available from your Cambo dealer.

2. LIST OF FUNCTIONS AND PARTS

1. Camera Platform
2. Cable Disc Front
3. Clamp Handle
4. Steering Cable
5. Main Tube
6. Foam Grip
7. Steering Handle
8. Handle Attachment Knob
9. Cable Pulley
10. Tail Locking Knob
11. Tail
12. Weight System Knob
13. Weight System Shaft
14. Weight Locking Nuts
15. Weight Safety Spring



16. Weights
17. Cable Disc Central
18. First Extension Tube
19. Second Extension Tube
20. Safety Catch
21. Clamp Screw
22. Locking Nut
23. 1/4” and 3/8” studs
24. Central Boom Lock
25. Tilt Lock
26. Boom Rotation Lock
27. Stud Adapter Lock
28. Stud Adapter Block
29. Cable Lock
30. Handle Adapter
31. Fastening Knob DV Boom
32. Fastening Thread
33. End Stop Boom Rotation

INSTRUCTIONS ASSEMBLY & SETTING UP

The V5 Videoboom is pre assembled and supplied in a box. The boom should be mounted on a standard video tripod with a 75 or 100mm bowl size. Set up your tripod according to the appropriate instructions. The tripod should support your V5 (5,5kg), your camera weight and your necessary counterweights, depending on camera weight and use of reach of the V5 Videoboom. Normally a tripod with a specified load capacity up to 20 kg will be sufficient and there are situations that make the use of an even lighter video tripod possible. Mount the weight system shaft (13) to the backside of the tail (11) and lock it with the locking knob (12).

Remove the Fastening Knob (31) from the mounting thread (32) of the video boom and be sure that locking knobs 10, 24, 25 and 26 are tight. Place the central unit of the video boom on top of the tripod with the thread (32) going through the bowl cup. The edge underneath the rotating platform positions the boom on the 75 or 100-mm bowl cup. Take the fastening knob (31) and put it back on the mounting thread. Make sure that the rotation platform is positioned correctly and lock the knob by hand. Level the Boom / Tripod using the spirit level in the rotation platform. See to it that the cable is going the right way going over the cable discs (2, 17, see also pictures above). Unroll the cable releasing the Cable Lock (29, several turns counter-clockwise) and pulling the cable. Then use the Clamp Handles (3) to give the boom your optimum length. If you do not use full extension length divide the boom extension approximately over the two extension sections to get the most stable set-up. The camera platform (1) should be approximately horizontal when the Steering Handle (7) is vertical up. This gives most freedom of movement but there could be a certain situation that requires a different set up.
The camera platform angle is adjusted releasing the Cable lock (29) again while holding and adjusting the Cable Pulley (9) by hand. Keep the Steering Handle (7) and Cable Disc (17) locked by the Tilt Lock (25).

MOUNTING THE DV CAMERA

Your camera including accessories should not be heavier than 3kg totally.
Be sure that locking knobs 10, 24, 25 and 26 are tight. When using a quick lock plate, mount the bottom part on the camera platform (1) using the 1/4” and / or 3/8” studs (23). Mount the other quick lock plate to the camera. Place the camera on the platform using this quick lock system. The camera can also be mounted directly to the camera platform (1) using the 1/4” and / or 3/8” studs (23).

COUNTER BALANCING

The boom is used with standard ‘fitness’ weights that are available in sport shops. After first set-up on the tripod place, If possible, your camera platform with camera on a table or chair and slide the Tail (locking knob 10) to approximately 70% of its reach keeping the boom more or less horizontal. Remove the safety Spring (15) and the first Weight Locking Nut (14) from the weight shaft (13). Position the second locking Nut far enough on the weight shaft. Take your counterweight(s) and slide them on the weight shaft. Lock them using the first locking Nut and check the balancing unlocking the Central Boom Lock (24). Unlock the tail (10) and adjust the weight system position. If the reach of the tail is not large enough you need to use more or less counterweights and adjust the weight system position again.
If the weight system is far away from the end-position of the tail, it is recommended to use less weight and a new weight system position. This reduces the total carrying weight. When balancing is done replace the safety Spring (15).

Counter balancing in non-vertical use of the V5 is always necessary but if the set up is always approximately the same you normally use the same pre assembled weight system. Then the weight system including weights is mounted and removed from the tail using the weight system knob (12) and only the tail extension (10) has to be adjusted.

FURTHER SET UP

The **Steering Handle** (7) is adjusted in angle to personalise the boom set-up. By changing the cable length the Steering handle position is adjusted compared to the camera platform. Be sure that the camera is mounted correctly and place the camera with platform on the ground. When the Tilt Lock (25) and the Cable lock (29) are loose you can adjust the steering handle compared to the camera pointing direction holding the camera platform on the ground. Use the grip in the cable pulley (9) if the cable tension is too high. The handle is also adjustable at the Handle adapter position using the Handle attachment knob (8). Then the Cable Disc (17) position is not modified but the steering handle angle is adjusted +45° or –45°.

The **Safety Catch** (20) prevents the camera from falling too far backward when you apply too much tilt upwards. It catches the Front Cable disc at a position that is depending on the boom angle. There is no catch for the tilt going downward because this is a movement that can be controlled by the cable steering handle.

The **Tilt Movement** features a fluid friction method at the Central Cable disc (17). If necessary this friction can be adjusted, removing the black cap from the Cable Pulley (9) and adjusting the Pressure Nut that becomes visible. It is recommended to do none or very small changes to this friction system because it is optimised for the use of DV camera's.

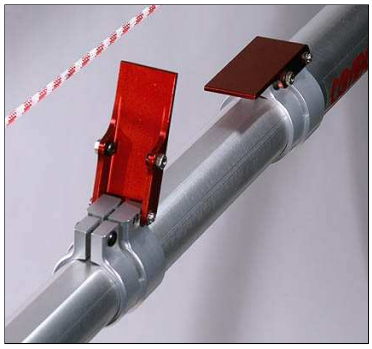
The **Signal and Power cables** have to be attached to the video boom using the straps that are supplied with the system. Be sure that the cables have enough play for all boom- and tilt movements to prevent cables and camera from damaging.

ADJUSTING EXTENSION CLAMPS

The boom extensions (18,19) have two clamp handles (3) that have an adjustable clamp force. Changing this clamp force is for both clamp handles the same.
Small adjustments can be applied to one clamp screw (21) at one side of the handle. More adjustment should be applied on both of the screws.

A. Place the boom horizontally
B. Slide in the extensions to decrease the cable tension by using the extension clamps (3)
C. Place the camera platform on a chair or table if possible.
D. Unlock the extension clamp you want to adjust.
E. Unlock the Locking Nut (22) of the clamp screw that is going to be adjusted (use the supplied tools).
F. Adjust the Clamp screw (21) with approximately half a turn counter-clockwise to increase Clamping Force and lock with the Nut (22) again.
G. Check the Clamping Force and repeat from D. if necessary to do a second adjustment.

VERTICAL SET-UP OF THE V5 VIDEO BOOM



In order to get a very compact set-up in for example a corner of a room or hall the vertical set-up could be the best way to use the V5.

A. The way to set up the boom is the same as the horizontal set-up until the camera has been placed on the platform. Be sure that the altitude of the room you are in is high enough for the extension you have set on the V5. Counter balancing is not needed but the signal and power cables should now be connected and fixed to the boom with the cable straps.

B. The Steering handle can be set as shown in the picture. It can also be set the opposite way if the person who applies the pan and tilt movements is standing or sitting behind the boom and tripod. In order to get the situation that is shown on the picture the handle has to be set pointing the same direction as the camera platform when the boom is still horizontal. In the situation of steering from behind the handle has to point the opposite way.

C. Remove the End Stop of the boom rotation (33) turning this knob counter-clockwise. To prevent from loosing this part it can be screwed into the Handle Adapter (30).
D. Remove the Weight system from the tail (12).
E. Slide the tail in the boom and lock it (10).
F. Unlock the Central Boom Lock (24) and take the boom and camera platform, rising it up until the vertical position has been reached.
G. Unlock the tail (10) while holding it and place it over the stud on the rotation platform. This holds the boom vertically. Lock the tail again (10).
H. If necessary adjust the camera angle compared to the steering handle. Lock the handle (25) and unlock the Cable (29) while holding the cable pulley (9, camera is pulling the cable). Adjust the angle of the camera platform and lock the cable again (29).

The vertical set-up is now completed. The tilt movement functions exactly the same as during the horizontal set-up. The pan movement now is more direct for the weight of the boom and camera is very close to the rotation axis.

NOTE: DO NOT USE THE CLAMP HANDLES DURING VERTICAL SET-UP.

In order to change the altitude of the camera platform the boom should be placed horizontally again.
Taking the vertical boom down should be done with care, locking the central boom lock (24), unlocking the tail (10), pushing up the ring at the end of the tail while holding the vertical boom to prevent it from falling. Fasten the tail (10), unlock the boom (24) and gently bring the boom to a horizontal position. Now the V5 can be adjusted in length or packed up for transport.

USING THE VIDEO BOOM V15

The boom has a low friction rotation platform, which enables you to make very fluid pan movements. The closer to the tripod you hold the boom, the smoother are the movements. The further away from the tripod you hold the boom, the better you control speed and position. So depending on what you are shooting the boom is controllable in more than one way.
The vertical boom movement works the same apart from the end stops. Movements can start from an end stop but using it as a movement stop is not recommended. The central locking knob (24) is not a friction control but for certain purposes it is usable as one.
Combined pan and vertical movements are easy to do because they do not affect each other. When only vertical or pan movement is required, use the locking knob 24 or 26 to eliminate the other movement.
Boom and Tilt movements can be applied simultaneously using one hand for the boom and one for the Steering handle. When no tilt is applied and the steering handle is locked (25), the camera platform keeps the same angle with the horizon throughout the vertical boom movement.

CAMBO VIDEO PRODUCTS & ACCESSORIES

The V5 Lightweight telescopic DV Boom is standard prepared to adapt flexible arm systems for LCD screens and other accessories. The flex arm is fixed in the Stud adapter (28) with the Stud Lock (27).

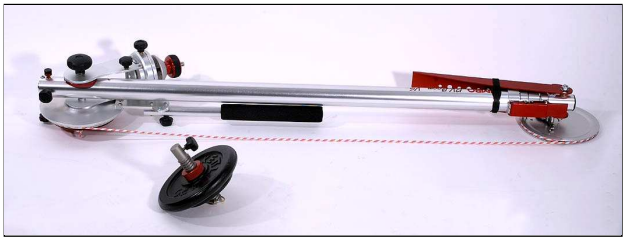
For more Cambo Video Products and Accessories we refer to your dealer and the www.cambo.com site.

SPECIFICATIONS V5

- **Boom reach:** Horizontal set-up — 135 to 275cm (horizontal from tripod to end camera platform); 226 to 366cm horizontal total length
- **Boom reach:** Vertical set-up — 122 to 262cm (from tripod up to camera platform)
- **Boom vertical range:** +/- 90cm without extension; +/- 151cm with 70cm extension; +/- 211cm with 140cm extension; Neutral Position: 18cm above tripod
- **Tilt Range:** +/- 60° , horizontal middle position
- **Pan Range:** Full 360° , rotation platform
- **Weight:** 5,5 kg (without counter weights)
- **Packed Size:**

  (without weight system): 117x22x16cm (lxhxw)

  (with weight system): 128x22x16cm (lxhxw)



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