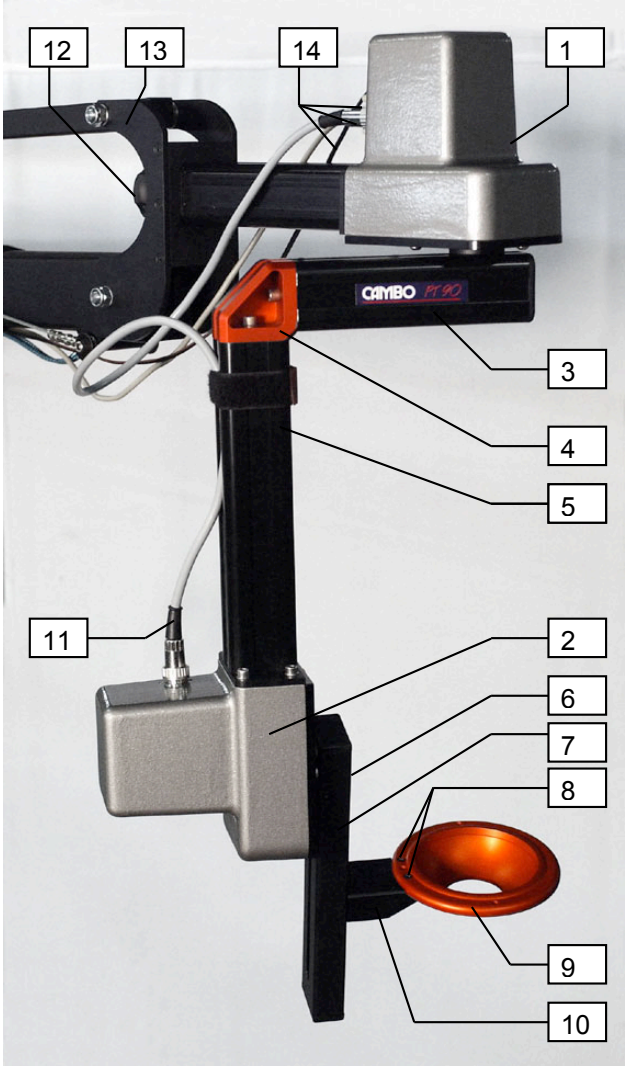
MAIN OPERATING INSTRUCTIONS

PT-90Pan Tilt Unit

CAMBO

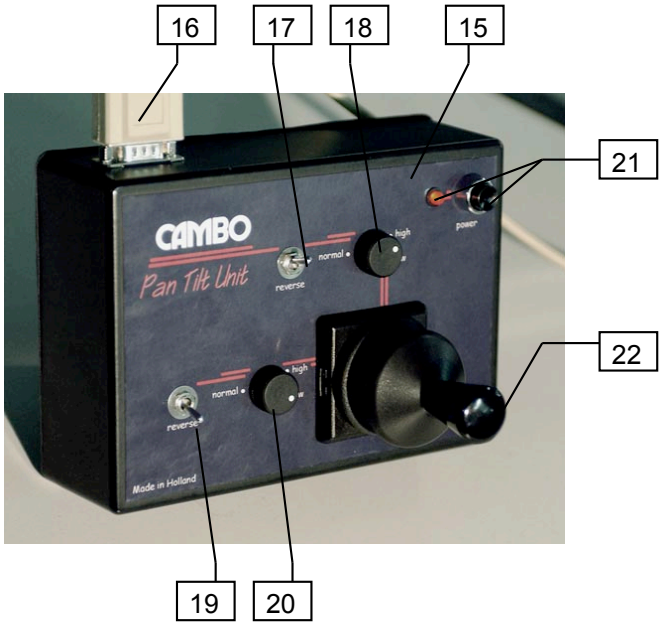
1. INTRODUCTION

The Cambo PT-90 is a high quality motorised Pan Tilt Unit. You have bought a product out of the new Cambo Video range. We expect that you will achieve very good results and performance using this equipment. These instructions give you information about the main functions of the new Cambo Pan Tilt Unit.
The PT-90 is especially made to fit the Cambo V40 Video Boom. An adapter is available that makes 'up side down' mounting possible.



2. LIST OF FUNCTIONS AND PARTS

1. Motor Unit 1
2. Motor Unit 2
3. Horizontal Arm
4. 90° Bracket
5. Vertical Arm
6. Tilt Bush with screws
7. Tilt Profile
8. Bowl Screws
9. 100mm Bowl
10. Bowl Arm
11. Din Cable (in between Motor Units)
12. Attachment Knob PT-90
13. V40 Front End
14. Sub-D Cable (from Joystick Unit), Power Supply Cable, Din Cable



15. Joystick Unit
16. Sub-D Cable (to Motor Unit 1)
17. Tilt Reverse Direction Switch
18. Tilt max. Speed Knob
19. Pan Reverse Direction Switch
20. Pan max. Speed Knob
21. On/Off Switch with Led indication
22. Joystick

INSTRUCTIONS

MOUNTING THE PT-90 UNIT

When you have a PT-130 accessory plate to mount the PT-90 up-side-down first remove the Bowl Arm using the Attachment Knob (12). Then remove the old adapter plate from your Cambo V-40 Video Boom using the hexagon key and mount the PT-130. Use the V-40 instructions to set-up the Video Boom. If you want to mount the PT-90 up-side-down without the PT-130 mount the old adapter plate up-side-down.
Take your PT-90 and place it on the adapter plate. Fix the Unit with the Attachment Knob (12). Adjust the counter balance of the V40 if necessary. Bring the Tilt profile (7) and the Horizontal Arm (3) to their click position. This is the working position, the connection to the gears. The click provides extra safety to prevent the motor, gearing or cables from damaging and it is a great help to get you camera's centre point of gravity at the right position. If you have placed the PT-90 Unit up-side-down you have to adjust the position of the Tilt Profile (7) 180°. Use a screwdriver to remove the four cross-recessed screws that fix the Tilt Profile to the Tilt Bush (6). Rotate the Tilt Profile 180° and fasten the four screws again. The PT-90 now has the right range of movement for the up-side-down position.
If you have a short version of the Vertical Arm for a small camera you can replace the longer one using the hexagon key. Remove the Motor Unit 2 (2) from the Arm and unlock the bolt that is in the centre of this plate holding the axis that goes through the vertical Arm. Put the axis into the new shorter Vertical Arm and remount the plate. Remove the old Vertical Arm form the 90° Bracket using the hexagon key holding the axis in the profile and remount the new Vertical Arm the same way. Now you have the more compact solution for smaller cameras.

CABLE ATTACHMENTS

Take the Joystick Unit (15) and attach it to the V40 Boom or place it where you want it to be. There are very long Sub-D Cables available. The 5 meter PT-112 cable is standard with the PT-90 Unit and a 10 meter PT-114 cable is available as an accessory.
Attach the cable to the Motor Unit 1 (1/14) using the two screws to fix it. Use the straps to attach the cable to the boom leaving enough play for the boom movement. Connect the other end to the Joystick Unit (15/16).
Take the Din Cable (11 to14) that connects the two motor units to each other. Use straps to give the cable the right play to give the system full freedom of movement. Check this during operation. Finally plug in the power supply extension cable PT-98 and attach it to the same straps as the Sub-D Cable. Place the 18V Power supply PT-94 somewhere near the tripod and use the appropriate mains cable to connect it to 100-240V. Then attach the power extension cable to the power supply.

MOUNTING THE CAMERA

Switch on the Joystick unit and check if the PT-Unit has free movement. Bring the Tilt Arm (7) with the joystick to the lowest position after checking that the arm is in the click position. The 100mm Bowl (9) is replaceable by a flat camera plate if necessary (optional). The 100mm Bowl is fastened to the Bowl Arm (10) by two cross-recessed screws. Remove them with a screwdriver and mount the camera plate. Mount the quick-lock camera plate to the camera plate or to a 100mm half Bowl in the 100mm Bowl of the PT-90.
After fastening the upper quick-lock plate to the camera slide the camera on the PT-90.
The camera needs to be positioned with its centre of gravity at the rotating point of the Tilt Arm. This increases the range of possible camera weight and the smoothness of the movements.
Do the horizontal adjustment with the sliding range of the quick adapter, checking the camera weight position by rotating the camera outside the click-position. The vertical adjustment is done using a hexagon key to unlock the Bowl Arm (10) with camera. The hexagon bolt is positioned

in the Tilt Arm (7) behind the Bowl Arm. Shift the camera, lock the Bowl Arm again and check the new position by rotating the camera. Repeat this adjustment till the camera weight is at the centre point of rotation.

SPECIFICATIONS PT-90 Pan Tilt Unit

Unit Dimensions:
741x332x130mm (hxbxd)

Packed size:
590x332x130mm

Weight:
6,0kg (without joystick unit and power adapter)

Maximum Camera Weight:
10kg (including battery etc.)

Pan range:
350° (2x180°)

Tilt range:
350° (2x180°)

PT-190 Flight Case for PT-90

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

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