

Remote Head P10



User Manual P10



Remote Head P10

CE		Date of issue : 2020 /01

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1. Equipment Information 1.1 Contents of 2-axis unit

1.	1 x Control panel	0	
2.	1 x Base frame	0	
3.	1 x Drive module pan-axis	0	
4.	1 x Drive module tilt Axis	0	
5.	1 x L-handle with base plate	0	
6.	2 x 3/8" long attachment bolts	0	
7.	Cable set for 2 – Axis version	0	
8.	1 x Cable set Zoom/Focus Canon	0	
9.	1 x Cable set Zoom/Focus Canon Digital	0	
10.	1 x Cable set Zoom/Focus Angenieux	0	
11.	1 x set Allen wrench	0	
12.	1 x Main control cable 20m	0	
13.	1x Double battery adapter V-Mount		
14.	1 x User manual	0	
15.	1x AC Adapter 24V	0	
16.		0	
17.		0	
18.		0	

1.1a Additional contents of 3-axis unit

1.	1 x Drive module roll axis	0	
2.	1 x Cable	0	
3.	1 x L- handle with base plate	0	
4.	2 x Attachment bolts 3/8" long	0	
Cont	rols		
5.	One-man control consisting of:		
	1 x Attachment bar with zoom/focus function	0	
	1 x Adapter for crane 120	0	
	1 x Joystick handle	0	
6.		0	
7.		0	
8.		0	
9.		0	
10.		0	
11.		0	
12.		0	
		0	
		0	
	1	1	

Packed on (Date):

Signature :

1.2 Responsibilities of the manufacturer / EC declaration of conformity

EC declaration of conformity for machinery directive 2006/42/EC Annex II 1.A

The manufacturer / distributor MovieTech AG Martin-Kollar-Str. 9 D-81829 Munich

hereby explains, that the following product

Product name:P10Manufacturer:MovieTechSerial number:Series/ type name:Remote head productDescription:P10 is a product for the photography and film industry developed to allow weightless camera movements.

It conforms to all relevant regulations of the above-mentioned directive and the other applied directives (following) – including any current changes thereof at the time of declaration.

The following harmonized standards were applied:

EN ISO 12100-1:2003	Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology (ISO 12100-1:2003)
EN ISO 12100-2:2003	Safety of machinery - Basic concepts, general principles for design - Part 2: technical principles (ISO 12100-2:2003)
EN ISO 14121-1:2007	Safety of machinery - risk evaluation - Part 1: principles (ISO 14121-1:2007)

The following national or international standards (or parts/clauses thereof) and specifications were applied:

Name and address of the person authorized to comply the technical documentation:

Mr. Sigfried Käser Mr. F. Strassmann

Place: Munich

Date: 24.06.2015

1.3 Responsibilities of the operator

Repair requirements

Repair of the P10 is only permitted by the MovieTech AG or authorized contract partners.

Disposal

P10 should not be disposed of in domestic waste. It must be disposed of at a collection site (please check with your municipality) or through your dealer/manufacturer.

The recipient address is given on the product label. This provides for an environmental friendly disposal.

Care

It is recommended to clean P10 with a damp, clean cloth when dirty. Avoid any caustic or corrosive cleaning agents.

1.4 Exploded drawing with numbering

1 2155_155-6 Nut M70 2 2155 155-4 Bolt 3 M6179 Socket 2 14 4 M5811 Hexagon screw 5 M2116 Screw M4x30 6 8472-5702 Stone 3 4 7 M5306 Screw M8x25 Stone 8 8472-3003 9 8472-3004 Camera plate 10 N500 00-4 Screw 3/8" long version 11 N500_00-4 Screw 3/8" long version 13 12 8472-3002 Stone 13 8471-1006 Star handle 14 M6888 Emergency stop

Note Use the indicated numbers to order any spare parts!

1.5 External interfaces

P10 may be mounted hanging or standing (upside down) at a sufficiently stable carrier unit suitable for the load (crane or dolly).

P10 is equipped with a mitchell adapter (or optional on request with an 80mm outer diameter) for attachment to film devices such as dollies or camera cranes.

1.6 Legal Notice

The manufacturer's specified limit values must be strictly adhered to. Any excess should be avoided under all circumstances.

In case of accidents due to negligence or abusive use, the manufacturer will not be held liable for any damage or injuries. The assembly and disassembly sequence specified in the user manual must be observed.

Use exclusively original parts for the product's maintenance.

Accessories of other manufacturer, may limit neither the use nor the safe use of P10!

The people entrusted to operate P10, must have read and understood the original user manual of the manufacturer. In case of questions regarding the safe use, please contact the manufacturer. Contact details may be found among other things on the CE marking on the P10 touch panel.

Service life of the equipment:

Service life span is limited by material wear and tear. Therefore, service life depends on frequency of use and environmental conditions, to which P10 is exposed.

2. User manual

Thank you for choosing P10, we are thankful for your confidence. P10 allows gliding camera movements in horizontal and vertical directions. We wish you much joy and success with your new ABC products P10!

Your P10 has the following main features:

- quiet propulsion system
- direct programming ramps, speed
- Short assembly and disassembly times

Read this user manual carefully before you use your new equipment for the first time. It contains all the information you need to know on the unit operation, so that you avoid personal injury and property damage.

Carefully observe all safety instructions in this user manual.

Keep this user manual carefully. Give this user manual to the new owner, if you sell or otherwise leave the unit.

Inform more users on the necessity of reading and understanding the user manual before the first use.

2.1 To understand the user manual correctly

2.1.1 Marking on the unit

	CE mark:
CE	This mark means that your equipment meets the safety requirements of all applicable EU directives

Dustbin:
This sign means that you must dispose of the unit only at a local collection site

2.1.2 Markings in this user manual

Marking	Meaning
	Draws your attention on the handling and effect of safety information.
WARNING	Makes you aware of a dangerous situation that can cause you significant injury or death, if not avoided.
CAUTION	Makes you aware of a dangerous situation that can cause you mild to moderate injury, if not avoided.
NOTE	Makes you aware of potential property damage and other important information in connection with your equipment.
Foot protection	Safety shoes: Mandatory sign according to ANSI (according to Z 535.3 - 2007) Meaning: Foot protection
Fall down / drop	Fall down/drop: Falling down Warning sign according to ANSI (according to Z 535.3 - 2007) Meaning: Falling down / downward movement – danger to feet
Danger of Crushing	Bruise/ crush: Crushing Warning sign according to ANSI (according to Z 535.3 - 2007) Meaning: Risk of crushing for hands
bruise / crush	

2.2 Service address

MovieTech AG Martin-Kollar-Str. 9 D-81829 Munich E-mail: <u>info@movietech.de</u> www.movietech.de Tel.: +49 (0) 89 43 68 91 3

3. Safety precautions

3.1 General safety precautions - manufacturer

- Before commissioning, ensure that you have read and understood the user manual.
- Do not leave the assembled remote head unattended. Secure against unauthorized use.
- The manufacturer's specified limit values must be strictly adhered to. Any excess should be avoided under all circumstances.
- The remote head may not be assembled under the influence of alcohol, drugs or other narcotics.
- Only qualified persons may be assigned with the assembly and disassembly and operation of the remote head. If necessary, the assignment must be stated in writing.
- Beware of possible bruising during assembly and disassembly and during operation (please see chapter structure and special warnings for each operating phase). Warning labels on the product and the manual must be observed!
- Ensure and guarantee the safe fixing of a camera on the remote head before each use. Use additional straps for safe fixing.
- Electrical equipment like monitors, must always be protected against moisture and humidity.
- Never move the remote head mechanically by hand when switched on!

3.2 General safety precautions - Use

- Follow the instructions on the use of maximum 25 kg camera weight in the 2-axis operation, 15kg camera weight in the 3-axis operation. Note warnings on the unit, special instructions on stability and safe use.
- Do not leave the assembled P10 unattended. Secure against unauthorized use.
- Because of the danger of a lightning strike, adjust the operation when a storm approaches.
- P10 may be used at an ambient temperature of -5 +40°C.
- Do not assemble and disassemble, if the maximal permissible wind velocity exceeds 50 km/h.
- P10 is suited for studio and limited outdoor use. Avoid installing in a sandy, dusty, wet and salty environment.
- Avoid dashing the remote heads against any objects and obstacles, because of possible damages to materials and the drive. Damaged parts, above all safety-related parts, must be replaced by the manufacturer.

3.3 General safety precautions - check

- Before each use, safety must be checked during operation by visual and functional testing (according to DIN15999)
- In particular, pay attention to the following criteria
 - unusual noises during movement,
 - deformations (e.g. bending, twisting),
 - damage (e.g. cracks, corrosion),
 - missing parts (e.g. retaining pins, fasteners)
 - defective clamp functions of the adjustment mechanisms
 - defective cables
- In case of form changes or damages, contact the manufacturer!
- Please observe all other safety instructions in the following chapters!

3.4 Intended use of P10

P10 may only be used according to its "**intended use**". P10 is designed for horizontal and vertical camera movements around the pivot point of the middle section. Therefore, the camera thereby must weigh between 0.5 and 25kg (15kg in the 3-axis operation). Balancing the camera on all three axes is required before each use to avoid damage to the drive units!

3.5 Personnel requirements

The operator of P10 should be able to control both the camera picture and the P10 radius of action. The operation of P10 must be always assessed in terms of the safety-related aspects. The responsibility for safe operation lies with the user. Distances between the camera and objects must always be assessed properly in terms of safety to avoid accidents and damages. You must assume a responsible approach to the product in the respective environment. The user must familiarize himself with and understand the safety-related aspects of the operation using the user manual.

General information for safety at work:

In operation, the P10 entails a risk to dash the head of an actor.



Within the P10 radius of action, only the access to the user, when mounting the camera, is allowed! During the operation of P10, the radius of action should be kept free.

Betreten der Fläche verboten Standing or sitting underneath an extension arm with a remote head P10 assembled thereon is not allowed for safety reasons!

Entering a prohibited area

3.6 Safety-related environmental conditions

The operation of P10 is suitable for the following environmental conditions:

- In-studio operation and limited outdoor operation.
- Avoid installing in a sandy, dusty, salty and wet environment!
- Avoid operation under heavy rain, snowfall and in a strong windy or gusty environment !
- The base should be even and stable for the necessary total weight loading of P10.
- Always keep in mind that the pressure on a crane, dolly, or individual tripod legs under load if P10 is loaded increases on the ground many times.
- Avoid installing P10 on snow, sand and swampy grounds.

3.7 Possible misuse

The following applications are not permitted for the P10:

- Using cameras weighting over 25kg/ 2-axis (15kg/ 3-axis)
- Using with untared and insecure cameras
- Using P10 for holding lighting systems
- Using P10 in sandy conditions
- Using under water
- Assembly and taring of the camera with the unit is turned on
- Adjusting the drive modules with the unit turned on
- Connecting and disconnecting individual cables with the unit turned on
- Adjusting the drive modules with the unit turned on
- The touch module must be protected against humidity

3.8 Residual hazards and protective measures

Transport / Storage:

- When transporting the P10, make sure that no point loads rest on single parts.
- The remote head should be stored in a dry area.
- The remote head may not be stored in direct sunlight.
- The remote head may not be transported or shipped without proper packaging.
- The drive modules of the remote head may not be adjusted under load. Loads are always adjusted prior to disassembly according to instructions.
- All accessories should be disassembled for transport

4. Technical information

4.1 Technical data

Remote head P10 Digital

Activation:	RS232	
Motors:	DC-Motor 24V	
Power supply:	24V DC	
Velocity:	Vmax. 360° Pan 2-Axle ca. 4, 5 Sec.	
Dead weight:	2-Axle Operation 12kg 3-Axle Operation 20kg	
Connection:	Euro mount taps 80mm (Optional: Mitchell adapter)	
Frame dimensions:	2-ply frame 520x380mm	
Payload:	Payload 2-axis Payload 3-axis	25kg 15kg

5.0 Optional accessories

Art. No. 8414-0	Single operator kit P10
Art. No. 8412-500	Power supply box
Art. No. 841210-0	Set of cables zoom/focus "Canon"
Art. No. 841212-0	Set of cables zoom/focus "Canon HD"
Art. No. 841220-0	Set of cables zoom/focus "Fujinon"
Art. No. 841215-0	Set of cables zoom/focus "Angenieux"

6.0 Mounting

Please open the transport case with caution. Use no sharp tools such as cutters, scissors etc that may cause damage to the frame parts or the cable.

Please control the contents delivered with the delivery slip and list. For content list see page 5,6 The contents delivered include only the items illustrated!

In case of missing parts, inform the manufacturer.

6.1 Mounting P10 2 axes - Base frame with drive modules



- The socket (mount) of the remote head has an outer diameter of 80mm.
- Make sure that the Euro mount connection of P10 is inserted vertically into the designated socket Mitchell clamping and that this is securely closed!
- Make sure that the crane or dolly to be operated with the P10 is suitable for the given load!
- · Secure a mounted camera always with additional security straps

6.2 Mounting the P10 base blate



01

Install the base plate.

A: Lay the connection **plate** in the slot

B: Lay the base plate on top.

C: Screw star bolt from the bottom





03

Open the screw for changing the postion of the base plate in two axis.



04

Positioning is depending on the camera body length and width.

The center of grafity of the camera body (length and width) has to be positioned in the middle of the pivot.

6.3 Positioning of the Tilt Drive Module

05



Positioning of the Tilt drive vertically

Open the 4 Allen screws with a wrench of size "3"

Please leave some space for the assembly of the connection cable



06

Tilt drive module may be moved in height.

Tighten the screws afterwards.

Do not remove the screwed stopper of the frame for safety reasons to prevent the sliding of unsecured drive module!

Notice:

The positioning of the tilt module helps you to optimize the size of the frame depending on the camera type you are using. A small frame size is preferred for a reduced mass.

6.4 Positioning of the Tilt Drive Module



07

Positioning gear boxes horizontal

Open the 4 Allen screws with a wrench of size "3"

Please leave some space for the assembly of the connection cable



08

Pan module may be moved in longitudinal position.

Tighten the screws afterwards.

Do not remove the screwed stopper of the frame for safety reasons to prevent the sliding of unsecured drive module!

Notice:

The positioning of the pan module helps you to optimize the size of the frame depending on the camera type you are using. A small frame size is preferred for a reduced mass.

6.5 Positioning of the Tilt Clamp

09



Positioning tilt clamp

The tilt clamp, is adjustable in height for the taring of the camera

Tighten the bolts securely after positioning



10

Lowest position depending on the camera body height.

The center of grafity of the camera body has to be positioned in the middle of the pivot.

Notice:

The positioning of the camera in the center of graphity is very important to reduce the force on the tilt and pan motor and gearing. If the camera is out of balance the circuit breaker will stop the operating when the current flow is to high! (please check pos. xxx circuit breaker)

6.6 Mounting a Snap Plate (not in the delivery included)



11

Mounting snap plate

Mount a snap plate or similar camera plate on the tilt module

Please check the center of gravity (camerabody). before mounting.

There are 2x 3/8" screws for the mounting included.

Notice:

Please **switch off** always the complete system before you mount the camera! The drive must be free in the movement.

6.7 Mounting Pan/Tilt module cable

Note: The connector of the cable has red marks! Please bring these marks to the correct position when plug in the cable!



12 Mount the Pan connection cable



14 Mount Tilt connection cable

16 Mount Main power cable







13

The connection sockets of the Pan module are located on the bottom side of the module

15

The connection sockets of the Tilt module are located on the bottom side of the module





18

Lowest position depending on the camera body height.

The center of grafity of the camera body has to be positioned in the middle of the pivot.



Original user manual

boxes horizontal The basic clamp tilt, is adjustable in height for

Positioning gear

17

the taring of the camera Tighten the bolts securely after positioning

Notice:

The positioning of the camera in the center of graphity is very important to reduce the force on the pan motor and gearing. If the camera is out of balance the circuit breaker will stop the operating when the current flow is to high!

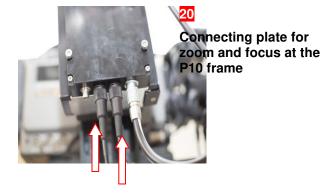
6.8 Mounting of zoom/focus cables



Connector for the focus and zoom function at the lens connecting plate

19 Lens with integrated motors for zoom and focus

For the P10 is a set of cables for zoom/focus for canon/canon HD/Fujinon/Angenieux as an option available



Notice:

For using the zoom and focus function you need a broadcast lens with integrated motors!

- Zoom function of an lens with integrated motor
- Focus function of a lens with integrated motor
- Rec. on/off of a lens with zoom function
- · Ret. function shows the last seconds of footage

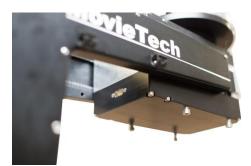
Caution – For the use of the zoom/focus/rec. function a broadcast lens with integrated motors is needed, a cable set for the manufacturer Canon, Canon digital, Fujinon, Angenieux is required!

Art. No. 8470-2700 Canon standard cable set consisting of zoom cable XPin/focus cable XPin Art. No. 8470-2900 Canon digital cable set consisting of XPin/focus cable XPin Art. No. 8470-2800 Fujinon standard cable set consisting of XPin/focus cable XPin Art. No. 8470-2600 Angenieux standard cable consisting of XPin/focus cable XPin

6.9 P10 Emergency breaker

You can interrupt the power of the remote he	ead by switching off the breaker!
a) to balance the camera	
b) in case of an emergency	
Emergency breaker is not active – the system is powered!	Circuit breaker is active "red light" the power is off! Turn button left side to
Turn right and push the button to switch power off!	activate the system again!

6.10 Connection for programming



01 Connector position at Pan module

Zero – modem cable

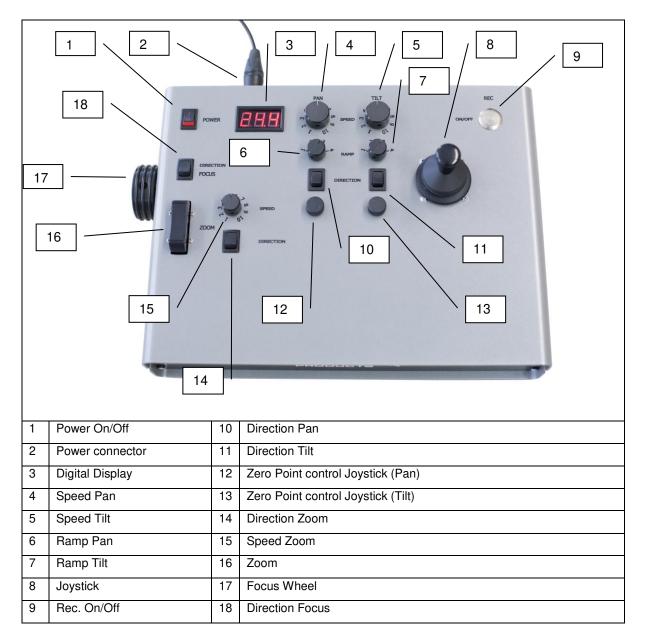


02

Connector position at Tilt module

Zero – modem cable

7.0 P10 Control Panel



7.1 Circuit breaker

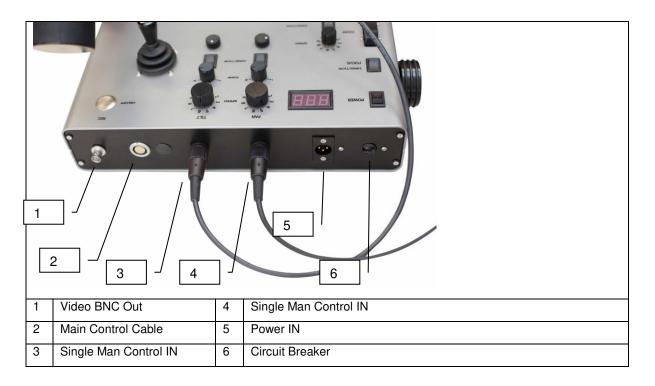


01 Circuit breaker

On Position

The P10 has an integrated circuit breaker system. If the circuit breaker appeals you can reactivate the system bei turning the switch.

7.2 Connecting plate



8.0 Programming the Remote Head

The P10 Remote Head has a programmable motor solution. It allows you to change the parameters of Speed, Ramp and the Joystick Window. A CD with the Faulhaber "Motion Manager that makes you able to change these datas is in the set included. A manual gives you the information how to program the motors step by step.

At both axis of the Remote Head you will find a connector for the computer cable. Please install the Faulhaber software on your computer and follow the instructions in the manual.

9. Zero point function



D1 Zero point position for Pan and Tilt axis

These two knobs allow you to control the zero position for the Pan and Tilt axis. If the head is moving without a direct joystick action you can stop the movement by turning the knobs until the head stops.

An uncontrolled head movement can happen when the programming of the joystick window is to small!

10. Mounting of the 3. axis

	 3. axis module Consisting of: Motor unit L- bracket (camera base plate is not included) 	Fix the 3. axis with two screws. By opening the screws you can change the position of the motor unit for the balancing.
Open the two screws to change the position of the 3 rd axis horiozontal.	1a) Horizontal Balancing: Open the screws for horizontal balancing!	1b) Horizontal Balancing: Move the camera forward and backwards until the camera is in the center of balance. Close the screws again!
	 2a) Height Balancing: Up-down camera You can change the height of the L-bracket by opening the screws. Find the center of gravity when you are balancing the camera. 	2b) Height Balancing: Rotate the camera – change the position of the height if you feel a disbalance of the camera when you rotate the body 360°. The camera should stay in any position of the rotation. Open and close the screws for every changing of the position!

11. Care of the remote heads

To clean the remote head, frame and drive, we recommend a moderately strong air shower to remove dirt particles. Clean with a microfiber cloth damp with detergent.

NOTE Pack the remote head in the system case only when dry.

11.1 General notes and safety information on operation

User:

The user manual must be read and understood by any user before commissioning the equipment

Before operating the equipment, all electrical and mechanical parts such as cable, plugs, modules, fixed and removable parts, screws, mounting plates, clamps and the like must be checked for proper condition.

The environmental condition must be suitable for the unit operation.

Avoid operation with storm, water, humidity, excessive sunlight, extreme cold, etc.

Mains used for power supply must me checked for suitability by professionals, if necessary through measurements.

Mounted accessories such as cameras must be additionally secured by professional security systems like suitable steel ropes or straps from falling!

The manufacturer disclaims any liability resulting from improper and non-complying with the equipment regulation handling and from inadequate environmental conditions.

The same applies for any liability resulting from the use of non-system accessories that cause direct or indirect damages during the use of the remote heads.

The warranty is void when using parts not supplied by the manufacturer and have an impact on the equipment.

For repairs and services, you must contact the manufacturer. Any damage resulting from unauthorized interference to the equipment is excluded from liability.



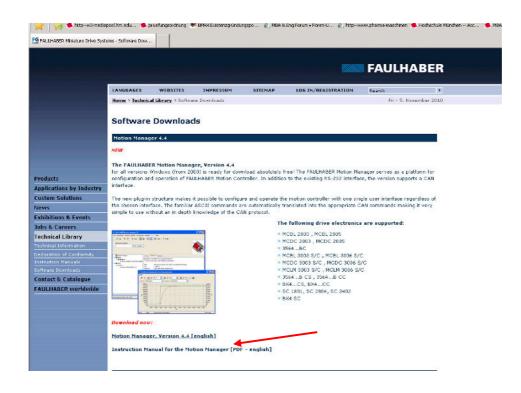


Axis configuration for remote head Pelé / Alex Digital

1- Faulhaber software download

→ "Motion Manager 4.x" download at: <u>http://www.faulhaber.com/n41656/i425657.html</u>

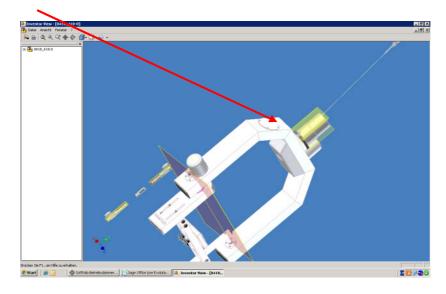
or from the provided CD



→ Connect control panel to remote head (main control cable)

2- Cable connections

 \rightarrow Remove cover



→ Pull out the 9-poled plugs (PAN/TILT) and connect the TILT-connection to the RS232 cable (not included in delivery)



→ Connect the other end of the RS232 cable to the USB-Adapter and connect with the PC

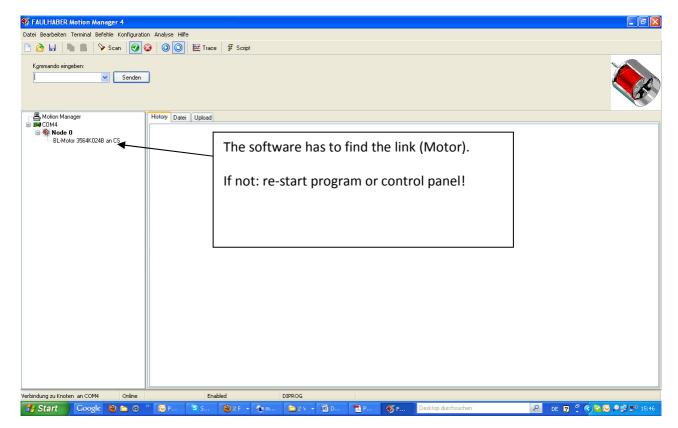


→ Switch on control pannel

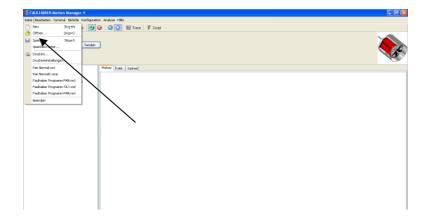


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→ Start Faulhaber software (Motion Manager).



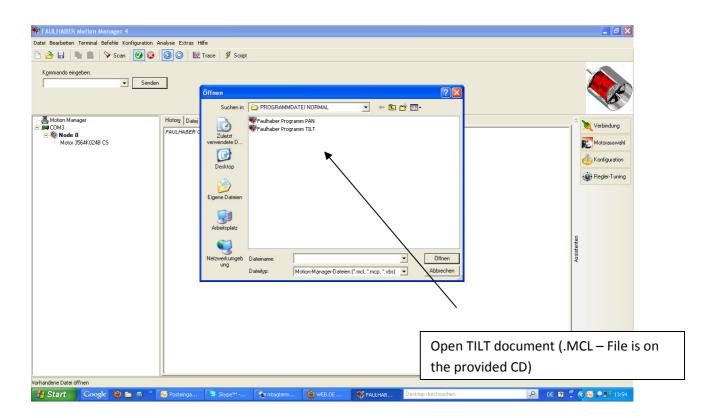
→ Open sequence programe





Axis configuration for remote head Pelé / Alex Digital Pag

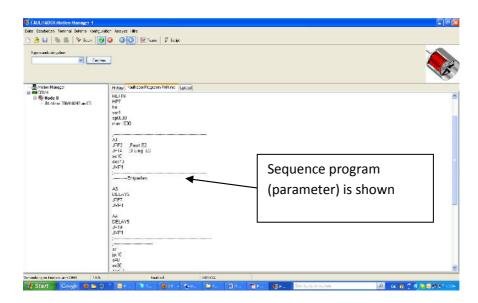
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Axis configuration for remote head Pelé / Alex Digital

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3- Programming the sequence program for the TILT- Axis:

To change the parameters overtype the red marked parameters.

Erfüllungsort und Sitz: München

```
REFIN
HP7
ho
sor1
       Geschwindigkeit - Speed - Vitesse (min: 1, max: 30000)
sp4500
mav1000 ← ; Joystick Ansprechempfindlichkeit - Joystick sensitivity - Sensibilité du Joystick (min: 10000, max: 1)
    _____
:-----
A1
JPF3
      ;Fault E2
JPT4
      ;3 Eing E3
ac10

    - ; Ramp position 1: Beschleunigungsrampe, Acceleration ramp, Rampe d'accélération (min: 1, max 30000)

        -
           Ramp position 1: Abbremsrampe, Bracking ramp, Rampe de Ralentissement (min: 1, max 30000)
dec10
JMP1
;-----
              _____
:----Entprellen
A3
DELAY5
JPF7
JMP1
A4
DELAY5
JPT9
JMP1
  MovieTech AG Germany
  Tel.: +49 (0) 89 / 43 68 91 3
  Fax: +49 (0) 89 / 43 68 91 55
  http://www.movietech.de
  e-mail: info@movietech.de
```

MovieTech

Axis configuration for remote head Pelé / Alex Digital

;	
;a7 jpt10 a40 ac30 dec30 jpf7 jmp1	; Ramp position 2: Beschleunigungsrampe, Acceleration ramp, Rampe d'accélération (min: 1, max 30000) ; Ramp position 2: Abbremsrampe, Bracking ramp, Rampe de Ralentissement (min: 1, max 30000)
a9 jpf10 a30 ac100 dec100 jpt9 jmp1	; Ramp position 3: Beschleunigungsrampe, Acceleration ramp, Rampe d'accélération (min: 1, max 30000) ; Ramp position 3: Abbremsrampe, Bracking ramp, Rampe de Ralentissement (min: 1, max 30000)
;	; Ramp position 4: Beschleunigungsrampe, Acceleration ramp, Rampe d'accélération (min: 1, max 30000) ; Ramp position 4: Abbremsrampe, Bracking ramp, Rampe de Ralentissement (min: 1, max 30000)

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4- Transmission of the Sequence program of the TILT- Axis:

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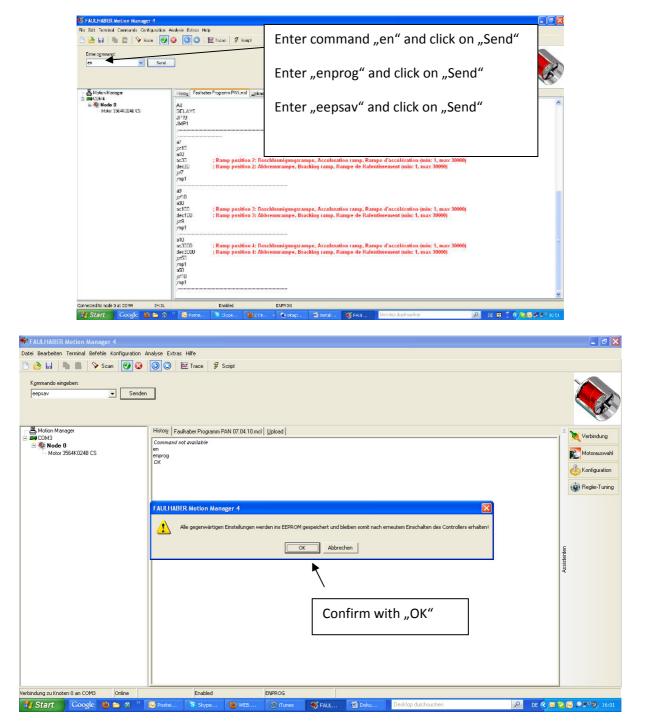
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Transmission of "Faulhaber program TILT" to the motion control confirm with "Ja" (yes).



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→ Sequence program



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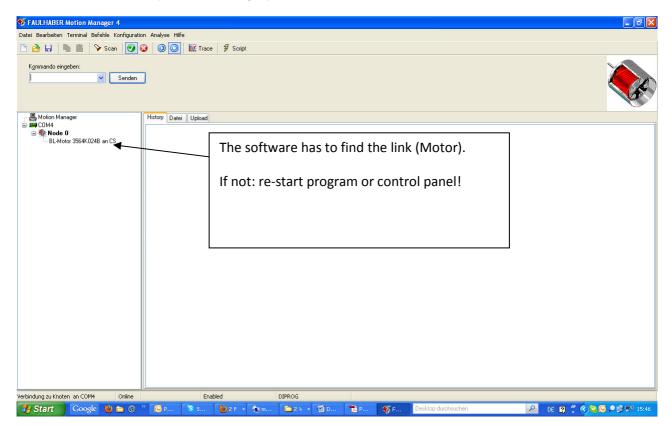
Axis configuration for remote head Pelé / Alex Digital Page 10 of 15

5- Programming of the sequence program for the PAN-Axis:

Pull out the 9-poled plugs (PAN/TILT) and connect the PAN-connection to the computer



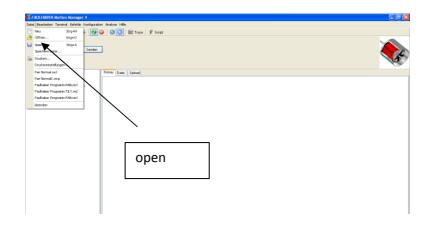
→ Open Faulhaber software (Motion Manager).

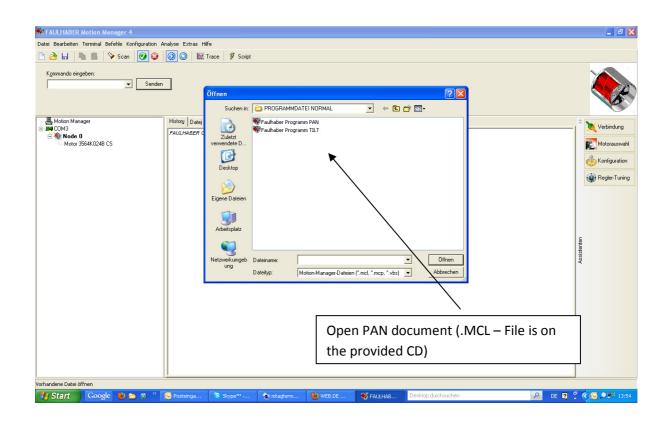


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→ Open sequence programme





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6- Transmission of the Sequence program of the PAN-Axis:

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Axis configuration for remote head Pelé / Alex Digital Pag

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→ Sequence Program

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Die MovieTech AG mit Hauptsitz in München und Tochtergesellschaften in Mailand und Prag produziert und vermarktet als einer der führenden Hersteller Produkte und Lösungen für die Film- und Fernsehindustrie.

Die Produktpalette von MovieTech konzentriert sich auf die Bereiche: Kamerakräne, Dollys, Lichtsysteme, Remote Heads und entsprechendes Zubehör.

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The MovieTech mission is the manufacture of professional film equipment that not simplifies the work of those using it on the set or in the studio, but also faciliates the implementation of creative ideas.



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