



Remote Head ALEX DIGITAL



MANUAL ALEX DIGITAL

Original - English

Remote Head ALEX DIGITAL


			Date: 2019 /12

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1. Information about the device

1.1 Scope of delivery Alex Digital

1.	1 x Remote Head	<input type="radio"/>	
2.	1 x Camera base plate (wedge plate) incl. 1/4" & 3/8".	<input type="radio"/>	
3.	1 x Panel	<input type="radio"/>	
4.	1 x Single man control - Panel	<input type="radio"/>	
5.	1 x Handle Joystick	<input type="radio"/>	
6.	1 x Handle Zoom & Focus		
7.	1 x Cables Zoom/ Focus Fujinon SD/HD	<input type="radio"/>	Optional: 841220-0
8.	1 x Cables Zoom/Focus Canon SD	<input type="radio"/>	Optional: 841210-0
9.	1 x Cables Zoom/Focus Canon HD	<input type="radio"/>	Optional: 841212-0
10.	1 x Cables Zoom/Focus Canon HDS	<input type="radio"/>	Optional: 841213-100
11.	1x Adapter V-Mount Batteries	<input type="radio"/>	
12.	1x CD-ROM (Software Faulhaber)	<input type="radio"/>	
13.	1 x Allen key	<input type="radio"/>	
14.	1 x Main cable Bus 20m	<input type="radio"/>	
16.	1 x Manual	<input type="radio"/>	
17.	1x Power Supply 24V	<input type="radio"/>	Optional: 8412-500

Gepackt am (Datum):

Unterschrift:

1.2 Responsibilities of the manufacturer / EC Declaration of Conformity

EC Declaration of Conformity according to Machinery Directive 2006/42/EC Annex II 1.A

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

hereby declares that the following product

Product name: ALEX DIGITAL
Fabrikat: ABC-Products
Serial number:
Serial-/Type: Remote Head
Description:

The ALEX DIGITAL is a product developed for the photo and film industry to enable motor controlled camera movements.

complies with all relevant provisions of the above-mentioned Directive and the other Directives applied (hereafter referred to as the "Directives"), including their amendments in force at the date of this declaration

The following harmonised standards have been 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 assessment - Part 1: Principles (ISO 14121-1:2007)

The following national or international standards (or parts/clauses thereof) and specifications have been applied.

The name and address of the person authorised to compile the technical file

MovieTech AG, Martin-Kollar-Str. 9, 81829 Munich

www.movietech.de / info@movietech.de

Mr Sigfried Käser Mr Ch. Käser

Place: Munich

Date: 16.11.2019

1.3 Responsibilities of the operator

Regulations Repair

Repair of the ALEX DIGITAL is only permitted by MovieTech AG or authorized contractors.

Disposal

The ALEX DIGITAL must not be disposed of in the household waste. It must be disposed of at a collection point (please contact your local authority) or by your dealer/manufacturer.

Care

It is recommended to clean the ALEX DIGITAL with a damp, clean cloth when dirty. Avoid caustic or aggressive cleaning additives.

1.4 Exploded drawing with numbering

Note	Please use the indicated numbers for ordering spare parts! Please see page 27, point 8. spare parts
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1.5 External interfaces

The ALEX DIGITAL can be mounted hanging or standing (upside down) on a sufficiently stable carrier (crane or dolly) suitable for the load.

The ALEX DIGITAL is equipped with a Euromount adapter (80mm outer diameter) for attachment to film equipment such as dollies or camera cranes.

1.6 Legal information

The limit values specified by the manufacturer must be strictly observed. Any exceeding of these limits must be avoided under all circumstances.

In the event of accidents due to negligent or improper use, the manufacturer is not liable for any damage or injury. The order of assembly and disassembly specified in the operating instructions must be observed.

Only original parts must be used for the maintenance of the product.

Accessories from other manufacturers must not restrict the use or safe operation of the ALEX DIGITAL!

The persons entrusted with the use of the ALEX DIGITAL must have read and understood the manufacturer's original operating instructions. The manufacturer must be contacted for any questions regarding safe use. The contact can be found in these operating instructions, among others.

MovieTech AG
Martin-Kollar-Str. 9
81829 Munich
49 (0) 89 43 68 91 3
e-mail: info@movietech.de

Lifetime of the device:

The service life is limited by material wear and material fatigue. Therefore, the service life depends on the frequency of use and the environmental conditions to which the ALEX DIGITAL is exposed.

2. Manual - operating instructions

Thank you for choosing ALEX DIGITAL, thank you for your confidence.

The ALEX DIGITAL enables you to make gliding motorized camera movements in horizontal and vertical directions.

We wish you much pleasure and success with your new ABC-products ALEX DIGITAL!

Your ALEX DIGITAL has the following main features:

- quiet drive concept
- Access to the programming
- 360° swivel radius over the horizontal (Pan) and vertical (Tilt) axis
- short assembly and dismantling times

Read this manual carefully before using your new appliance for the first time. It contains all the information you need to know about the application in order to avoid personal injury and damage to property.



Please observe all safety instructions in this operating manual!

Keep these operating instructions in a safe place. Pass this operating manual on to the new owner if you sell or otherwise transfer the unit.





Inform other users that it is essential that they read and understand this operating manual before using the unit for the first time.

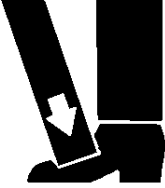


2.1 How to understand the operating instructions correctly

2.1.1 Marking on the device

	<p>CE mark:</p> <p>This symbol means that your device meets the safety requirements of all applicable EU directives</p>
	<p>Garbage can:</p> <p>This symbol means that you may only dispose of the device at a local disposal centre</p>

2.1.2 Marking in these operating instructions

Identification	Meaning
	<p>Draws your attention to the handling and impact of safety information.</p>
 WARNING	<p>Draws your attention to a dangerous situation that could result in serious injury or death if not avoided.</p>
 ATTENTION	<p>Alerts you to a hazardous situation that could result in minor to moderate injury if not avoided.</p>
NOTE	<p>Draws your attention to possible damage to property and other important information in connection with your device.</p>
 Foot protection	<p>Safety shoes:</p> <p>Command sign according to ANSI (according to Z 535.3 - 2007)</p> <p>Meaning: Foot protection</p>

 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
  SQUEEZING bruise / crush	Bruise/ crush: Squeezing Warning sign according to ANSI (according to Z 535.3 - 2007) Meaning: Squeezing - danger to hands

2.2 Service address

MovieTech AG

Martin-Kollar-Str. 9

D-81829 München

E-Mail: info@movietech.de

www.movietech.de

Tel.: +49 (0) 89 43 68 91 3

3. Safety instructions

3.1 General safety instructions Manufacturer

- Before initial commissioning, ensure that the operating instructions have been read and understood.
- Do not leave the assembled remote head unattended. Secure against unauthorized use.
- The limit values specified by the manufacturer must be observed. Any exceeding of these limits must be avoided under all circumstances.
- The remote head must not be assembled under the influence of alcohol, drugs or other narcotics.
- Only competent persons may be entrusted with the assembly, disassembly and operation of remote heads. If necessary, the assignment must be made in writing.
- Take care to avoid possible pinching during assembly and disassembly and during operation (please refer to the chapter on assembly and special warnings for each operating phase). Warning signs on the product and in the operating instructions must be observed!

The secure fixing of a camera on the remote head must be checked and guaranteed before each use. Use additional tension straps for secure fixing.

- Electrical equipment such as monitors must always be protected from moisture and humidity.
- Never move the remote head mechanically by hand while it is switched on!

3.2 General safety instructions use

- Please note the instructions for maximum use of 15kg camera weight in 2-axis operation. Observe the warnings on the unit, special notes on stability and safe use.
- Do not leave the mounted ALEX DIGITAL unattended. Secure against unauthorized use.
- Due to the danger of lightning strike, stop operation in case of an approaching thunderstorm.
- The ALEX DIGITAL may be used at an ambient temperature of -5 - +40°C.
- No assembly or disassembly if the maximum permissible wind speed of 50 km/h is exceeded.
- The ALEX DIGITAL is suitable for studio and limited outdoor use. For the installation site, a sandy, dusty, salty and wet environment should be avoided.
- Impact of the remote head on objects and obstacles must be avoided because of possible damage to the materials and the drive. Damaged, especially safety-relevant parts must be replaced by the manufacturer.

3.3 General safety instructions testing

- Before each use, the safety in use must be checked by visual and functional inspection (according to DIN 15999)

Particular attention should be paid to the following criteria

- Noise during movements
- Deformations (e.g. bending, twisting),
- Damage (e.g. cracks, corrosion)
- Missing parts (e.g. safety pins, fastening parts)
- defective clamping functions of the adjustment units
- defective cables

- Please contact the manufacturer if the shape is changed or damaged!
- Please observe all further safety instructions in the following chapters!

3.4 Intended use of the ALEX DIGITAL

The ALEX DIGITAL may only be used according to its "intended use". The ALEX DIGITAL is intended for horizontal and vertical camera movements around the centre of rotation of the centre section. The camera has a weight between 0.5 and 15kg. The balancing of the camera over all Rotary axes are required before each use to avoid damage to the drive units.

3.5 Staff requirements

The operator of the ALEX DIGITAL should be able to control both the camera image and the operating range of the ALEX DIGITAL. The use of the ALEX DIGITAL should always be assessed with regard to safety aspects. The responsibility for safe use lies with the user. Distances between the camera and objects must always be assessed correctly with regard to safety in order to avoid accidents and damage. A responsible handling of the product in the respective environment is to be assumed. The user must be familiar with and have understood the safety-relevant aspects of operation via the operating instructions.

General work safety instruction:

During operation of the ALEX DIGITAL there is a risk that the head may hit an actor.

Within the action radius of the ALEX DIGITAL only the user's access is permitted during camera mounting! When operating the ALEX DIGITAL, the radius of action must be kept clear.



For safety reasons, it is not permitted for persons to stand below an extension arm with the ALEX DIGITAL remote head mounted! General work safety instruction:

During operation of the ALEX DIGITAL there is a risk that the head may hit an actor.



Do not stand on this area

Within the action radius of the ALEX DIGITAL only the user's access is permitted during camera mounting! When operating the ALEX DIGITAL, the radius of action must be kept clear.

For safety reasons, it is not permitted for persons to stand below an extension arm with the ALEX DIGITAL remote head mounted!

3.6 Safety relevant environmental conditions

The ALEX DIGITAL is suitable for use in the following environmental conditions:

- Studio operation and limited outdoor operation.
- For the installation site, a sandy, dusty, salty and wet environment should be avoided!
- Heavy rain, snowfall and a very windy or gusty environment must be avoided for use!
- The ground should be level and of a stable nature suitable for the required total load of the ALEX DIGITAL.
- Always remember that the pressure on a crane or dolly or individual tripod legs under load - when the ALEX DIGITAL is loaded - increases many times over.
- Avoid setting up the ALEX DIGITAL on snow, sand and swampy ground.

3.7 Possible misuse

The following applications are not permitted for the ALEX DIGITAL

- The use of cameras with a weight over 15kg/ 2 axes
- Use with unbalanced and unsecured cameras
- The use of ALEX DIGITAL for holding lighting systems
- The use of ALEX DIGITAL in a sandy environment
- Use under water
- Mounting and taring of the camera when the device is switched on
- Connecting and disconnecting individual cables when the device is switched on
- Adjustment of the camera base plate and L-bracket (tilt) when the unit is switched on

3.8 Residual risks and protective measures

Transport/ Storage:

When transporting the ALEX DIGITAL, care must be taken to ensure that there is no point load on individual parts.

- The Remote Head should be stored in a dry room
- The Remote Head must not be stored in direct sunlight
- The remote head must not be transported or shipped without suitable packaging
- The drive modules of the remote head must not be adjusted under load.
- Loads must always be removed before adjustment in accordance with the operating instructions.
- All accessories must be dismantled for transport

4. Technical information





4.1 Technical data

Remote Head ALEX DIGITAL Digital

Control:	RS485
Motor:	DC-Motor 24V
Power Supply:	24V DC
Control panel:	2 axis joystick, controller for speed, ramp and direction Zoom Speed and Direction, "0" point "Pan" and "Tilt" controls Focus wheel and Direction, Power On/ Off, Button for REC ON/OFF
Speed:	Vmax. 360° Pan 2-Axes approx. xx sec
Own weight:	2-axis operation xx kg
Connection:	Euromount diameter 80mm optional with Mitchell adapter
Frame size:	2-axle frame xx mm
Payload:	Load capacity 2-axes 15kg

5. Set up and operation

5.1 Main components

	<p>RemoteHead Frame 2-Axis</p> <p>The remote head has two drive units, "Pan" describes the horizontal direction of rotation. "Tilt" describes the vertical movement.</p> <p>Connections for:</p> <ul style="list-style-type: none"> Main control cable Video signal Zoom cable (not included) Focus cable (not included) Programming tilt motor/ pan motor (0 modem cable required) Download/ Installation, the Faulhaber software "Motion Manager" required. CD Rom included in delivery.
	<p>Basic bracket 2-axes</p> <p>with mounting plate, 2x 3/8" screws, clamping lever for locking the height adjustment and for releasing the connection bracket/gearbox.</p>
	<p>Drive module pan-axis with Euromount adapter 80mm</p> <p>The drive is provided by a drive belt.</p> <p>When taring the remote head, make sure that the device is disconnected from the mains. The gears must run "freely" when taring, otherwise there is a risk of overstretching the drive belt if the axis is moved against the gear resistance.</p>
	<p>Drive module Tilting axis</p> <p>with height adjustment and connecting axle</p>

5.2 Optional accessories

	<p>Joystick panel with control unit, power on/off, safety, zoom, focus, speed, ramp, direction</p> <p>For description see please: p. xx</p>
	<p>one-man operation SET Item No. XXX SET</p>
	<p>Art. No, Main control cable 20m</p>
	<p>Art. Nr. 8412-500 Power Supply Alex Digital</p>

5.3 Assembly

For mounting the camera in the 2-axis version two 3/8" screws are included in delivery!



Caution!

Mounted accessories such as cameras must be additionally secured against falling down by professional safety systems such as suitable steel cables or tension belts!

Further safety instructions on page: 41

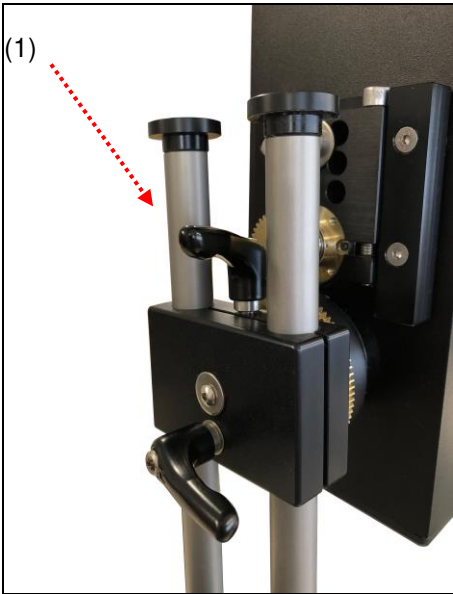
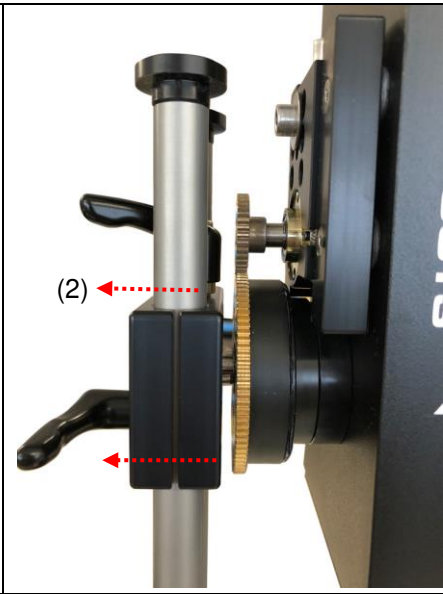
The remote head must be electrically switched off for the levelling procedure!
The axles of the Remote Head must never be moved under electrical tension; drive belts, gears or motors can be damaged!
Make sure that the bracket of the tilt axles does not touch the base frame when turning.
Performing test runs at slow speed

5.3.1 Assembly ALEX DIGITAL 2 axes - base frame with drive unit



Caution!

- The mount of the remote head has an outer diameter of 80mm.
- Make sure that the Euromount connector of the ALEX DIGITAL is inserted vertically into the 80mm clamp and that it is securely closed!
- Make sure that the crane or crane dolly with which the ALEX DIGITAL is to be operated is suitable for the given load!
- Always secure a mounted camera with additional safety straps

	
<p>(1) Open the clamping screw for decoupling the drive axle</p>	<p>(2) Pull the L-bracket away from the frame, thereby decoupling the L-bracket from the gearbox. (A metal pin is pulled out of a hole) Tare the camera as described under xx. When finished, push the pin back into one of the drill holes. Then close the clamping lever (1) securely again.</p>

5.3.2 Mounting the camera on a base plate



The camera base plate of the Alex Digital is included. Please make sure that the camera is mounted with its centre of gravity approximately above the middle of the wedge plate. This allows approximately the same adjustment travel for fine taring in the horizontal axis.

5.3.3 Connection Main Cable

(Page 25) 5.6.1.

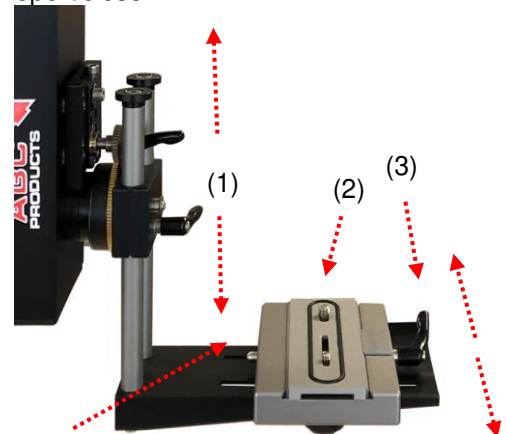
5.3.4 Taring the camera in 3 axes (Pan/Tilt/Height)



Positioning of the tilt axis

Position the camera so that a level situation in the tilt axis is created, the camera is in "balance".

The adjustment is made in the longitudinal axis via the camera base plate (2) or and in the height via L-brackets (1). (3) Clamping lever for camera base plate open/close.

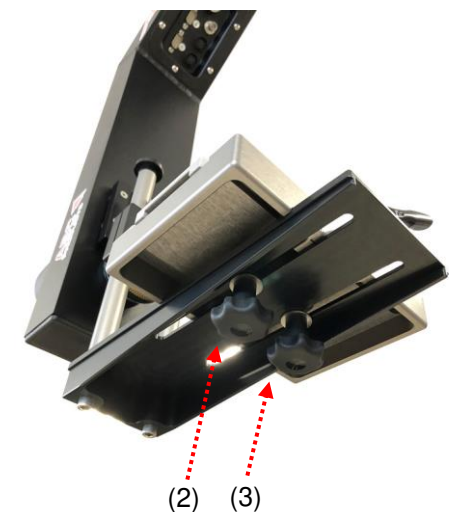


Button for unlocking the safety device for the camera base plate.

To remove the button, keep it pressed

Positioning of the camera center in the rotation axis (Pan) (1)

Position the camera so that the center axis is vertically below the pivot point (pan).



Open the fixing screws (2) and (3) for displacement. After moving the camera, open the Tighten the screws again securely.

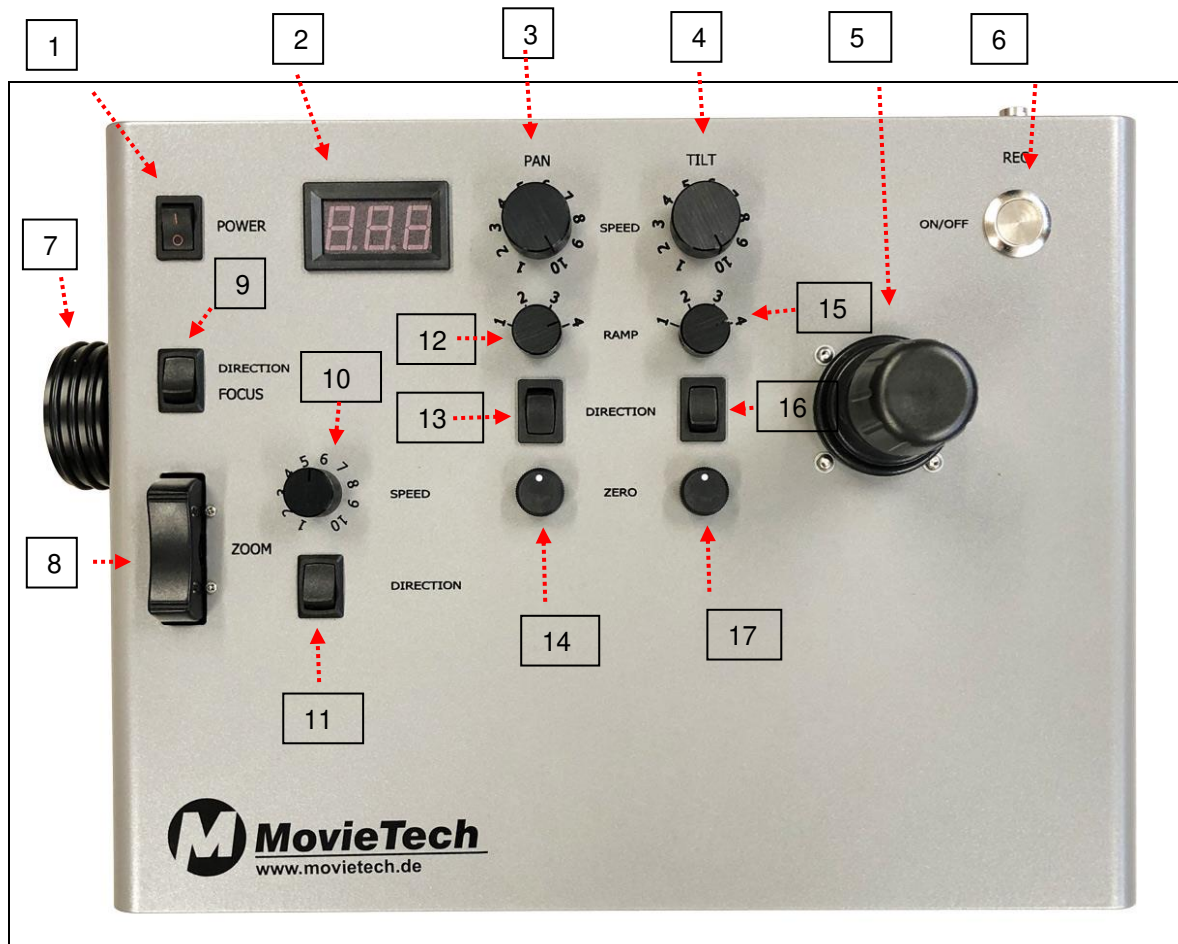


Caution!

Avoid a too small distance of the camera to all frame parts!

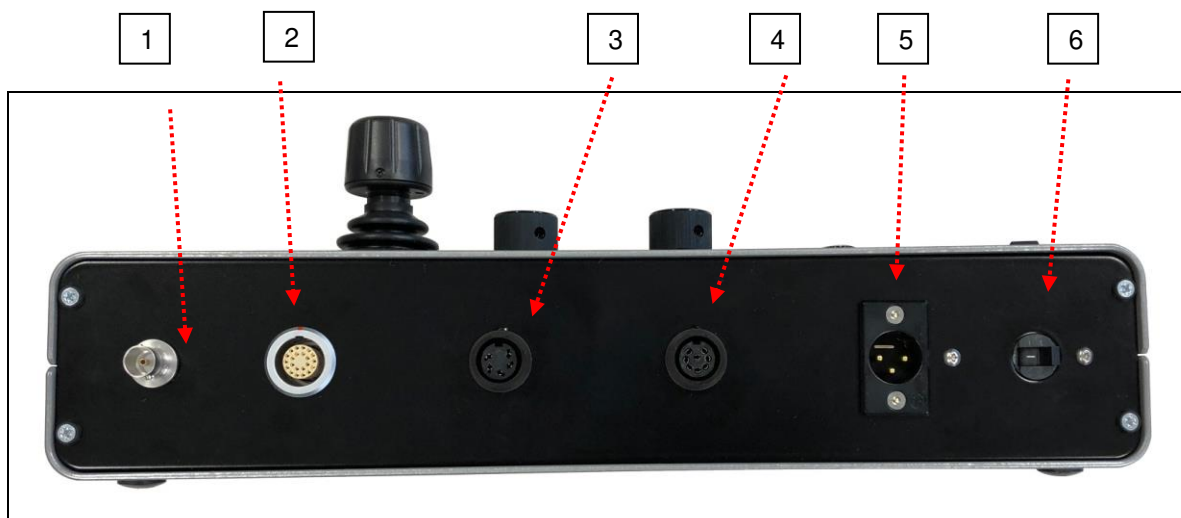
Slowly test move the axes to determine distances. Move the axes by hand only when the device is switched off

5.4 Control panel



1	Power On/ Off	9	Direction Focus
2	Display	10	Speed Zoom
3	Speed Pan Direction	11	Direction Zoom
4	Speed Pan Direction	12	Ramp Pan
5	Joystick	13	Direction Pan
6	Rec. On/ Off	14	Zero Point Function Pan
7	Focus Wheel	15	Ramp Tilt
8	Zoom	16	Direction Tilt
		17	Zero Point Funktion Tilt

5.4.1 Connections of the Control Panel



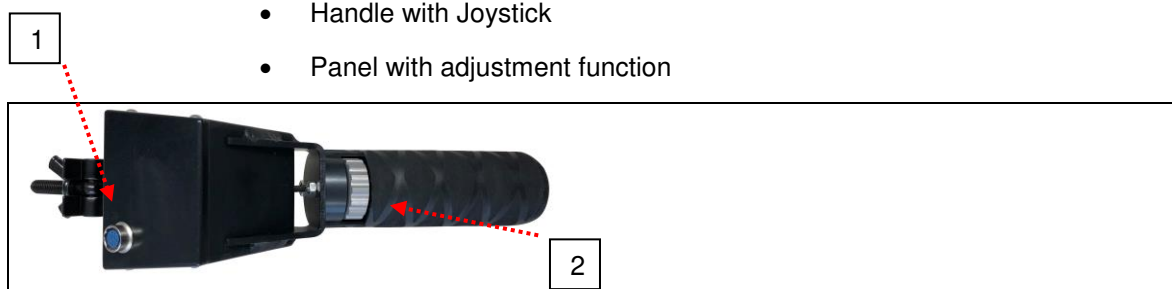
1	BNC Video output
2	Connection main cable Remote Head
3	Connection single man control
4	Connection single man control
5	Power supply XLR Power IN/ 24V DC (Max 30V DC)
6	Power/ (Fuse)

5.5 Single man control

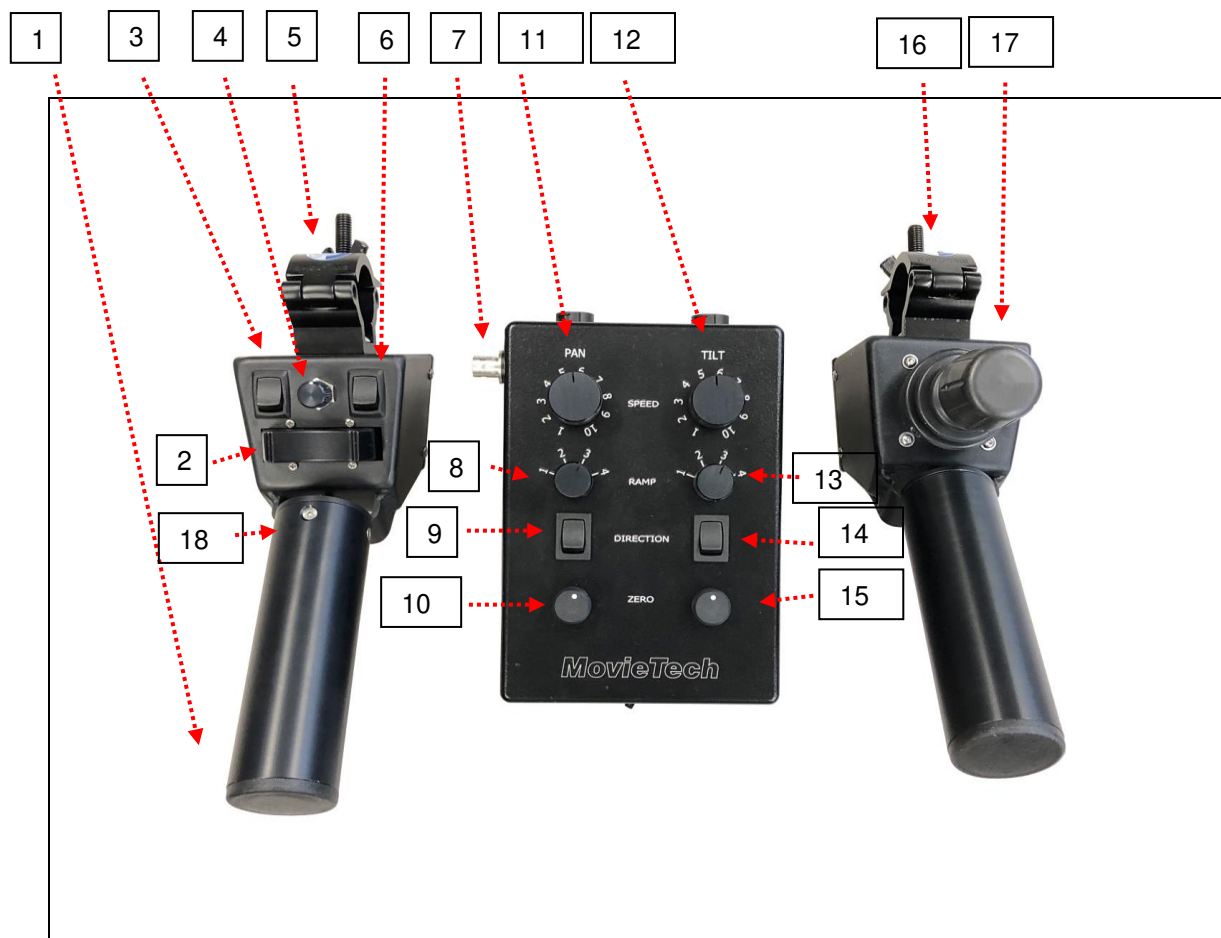
The one-man operation makes it possible to swivel the camera crane with simultaneous operation of the remote head by one person.

Components:

- Handle with zoom and focus operation
- Handle with Joystick
- Panel with adjustment function

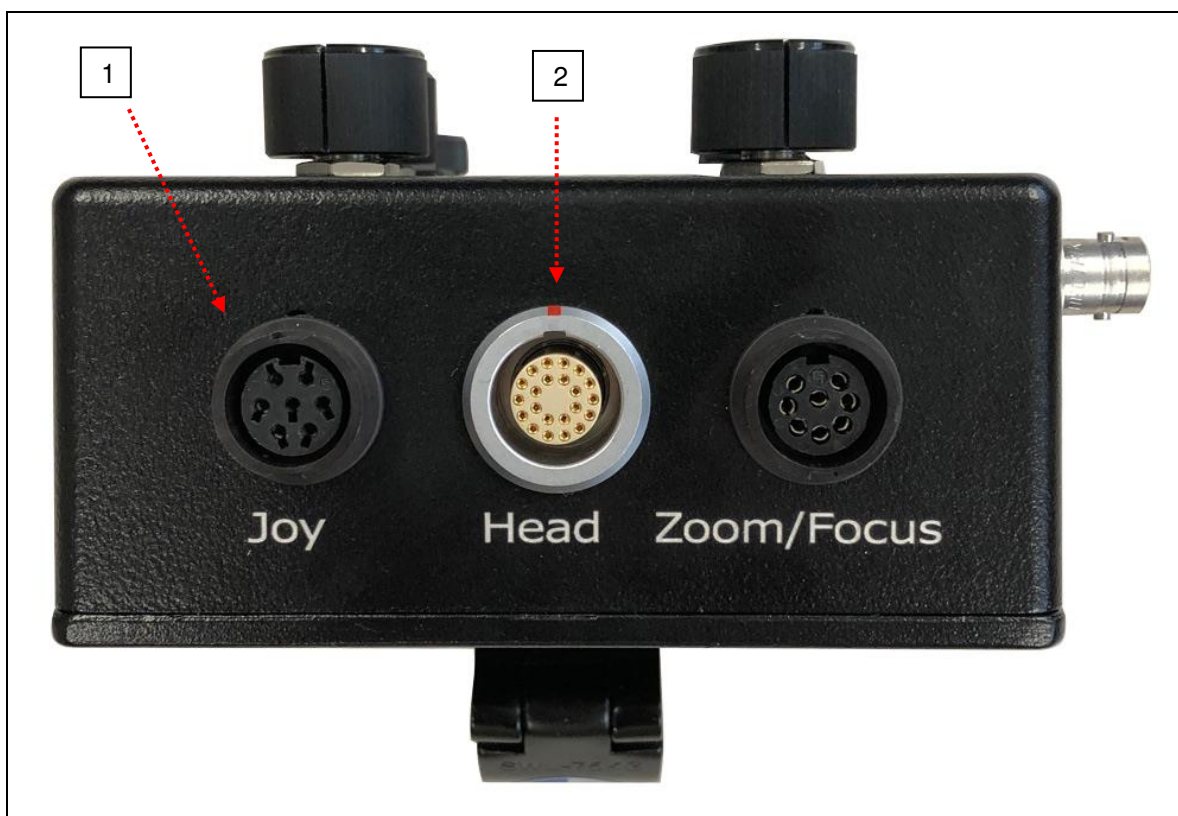


1	Connecting cable Panel
2	Focus Wheel



1	Handle Zoom	9	Switch Direction Pan
2	Zoom rocker	10	Controller for 0-Point Pan
3	Focus direction	11	Controller Speed Pan
4	Zoom speed	12	Controller Speed Tilt
5	Mounting clamp	13	Controller Ramp Tilt
6	Zoom direction	14	Switch Direction Tilt
7	BNC Video out	15	Controller for 0-Point Tilt
8	Controller Ramp Pan	16	Mounting clamp
		17	Joystick
		18	Focus wheel

5.5.1 Panel single man control - front side



1	Joystick connection (connecting cable to handle)
2	Main control cable connection Remote Head
3	Connection Zoom/Focus cable (connecting cable to handle)

5.5.2 Panel single man control - left side



1	BNC Video out Monitor
2	Power supply 24V DC (Max. 30V DC)

5.5.3 Panel single man control - right side



1	On/ Off Fuse
2	

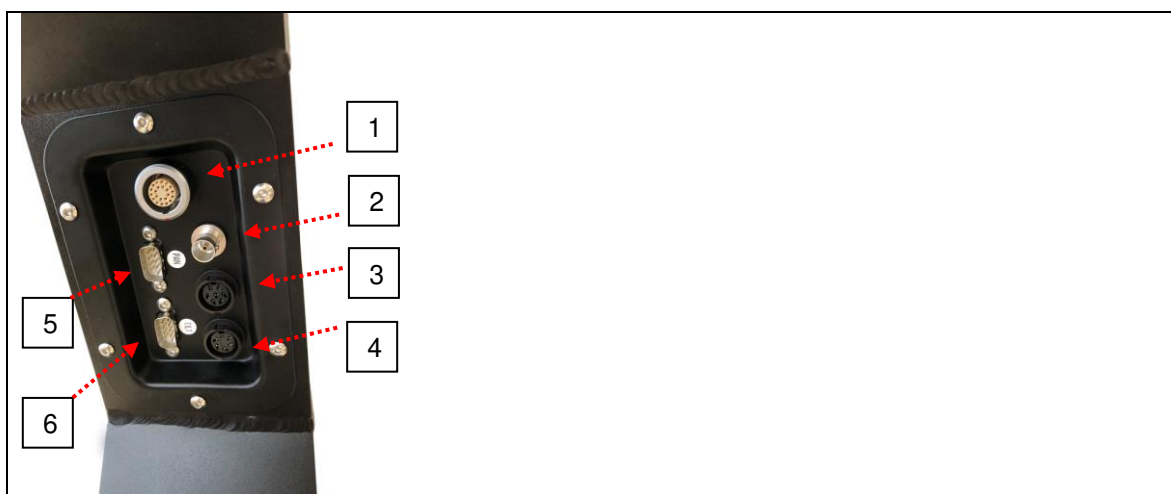
If protective coatings against moisture or dust are used, make sure that the device heat can escape sufficiently to avoid overheating of the electronics!

5.6 Mounting Zoom/Focus cable

The Remote Head Alex Digital offers via the control unit "panel" or "one-man operation

- Zoom function of a lens with integrated motor
- Focus function of a lens with integrated motor
- Rec. On/Off of a lens with zoom function
- Ret. Function Camera moves to bleed and shows the last seconds of footage

5.6.1 Connection plate Remote Head Alex Digital



1	Connector Main Cable
2	BNC Video In Monitor
3	Connection Lens Motor Zoom
4	Connection Lens Motor Focus
5	Serial port for -0 modem cable Programming Pan axis
6	Serial port for -0 modem cable Programming tilt axis

Attention!

To use the zoom and focus function of broadcast lenses with integrated motors, a cable set for the manufacturers Canon, Canon HD, Canon HDS, Fujinon, is required!

Art. No. 8470-2700 Canon standard cable set consisting of zoom cable XPin/Focus cable XPin

Art. No. 841212-0 Canon HD cable set consisting of XPin/Focus cable XPin

Art. No. 841212-300 Canon HDS cable set consisting of XPin/Focus cable XPin

Art. No. 841220-0 Fujinon standard cable set consisting of XPin/Focus cable XPin

6. Maintenance of the remote head

To clean the Remote Head frame and actuator we recommend a moderately strong air shower to remove dirt particles. Clean with a microfibre cloth moistened in dishwashing detergent.

To protect the control units, observe the following points to prevent damage:

- **Direct solar radiation**
- **Moisture/ spray water**
- **Extreme cold**
- **Dust/ sand**

Note: Only pack the remote head in the system case when dry.

7. General notes and safety instructions for operation

Users:

The operating instructions must be read and understood by every user before putting the device into operation

Before operating the device, all electrical and mechanical parts such as cables, plugs, modules, fixed and removable parts, screws, brackets, clamps and similar must be checked for proper condition.

The environmental conditions must be suitable for use of the device.

Avoid use in storms, water, humidity, excessive sunlight, excessive cold, etc.

Power supply networks that are used for power supply must be checked for suitability by professional inspection, if necessary by measurements.

Mounted accessories such as cameras must be additionally secured against falling down by professional safety systems such as suitable steel cables or tension belts!

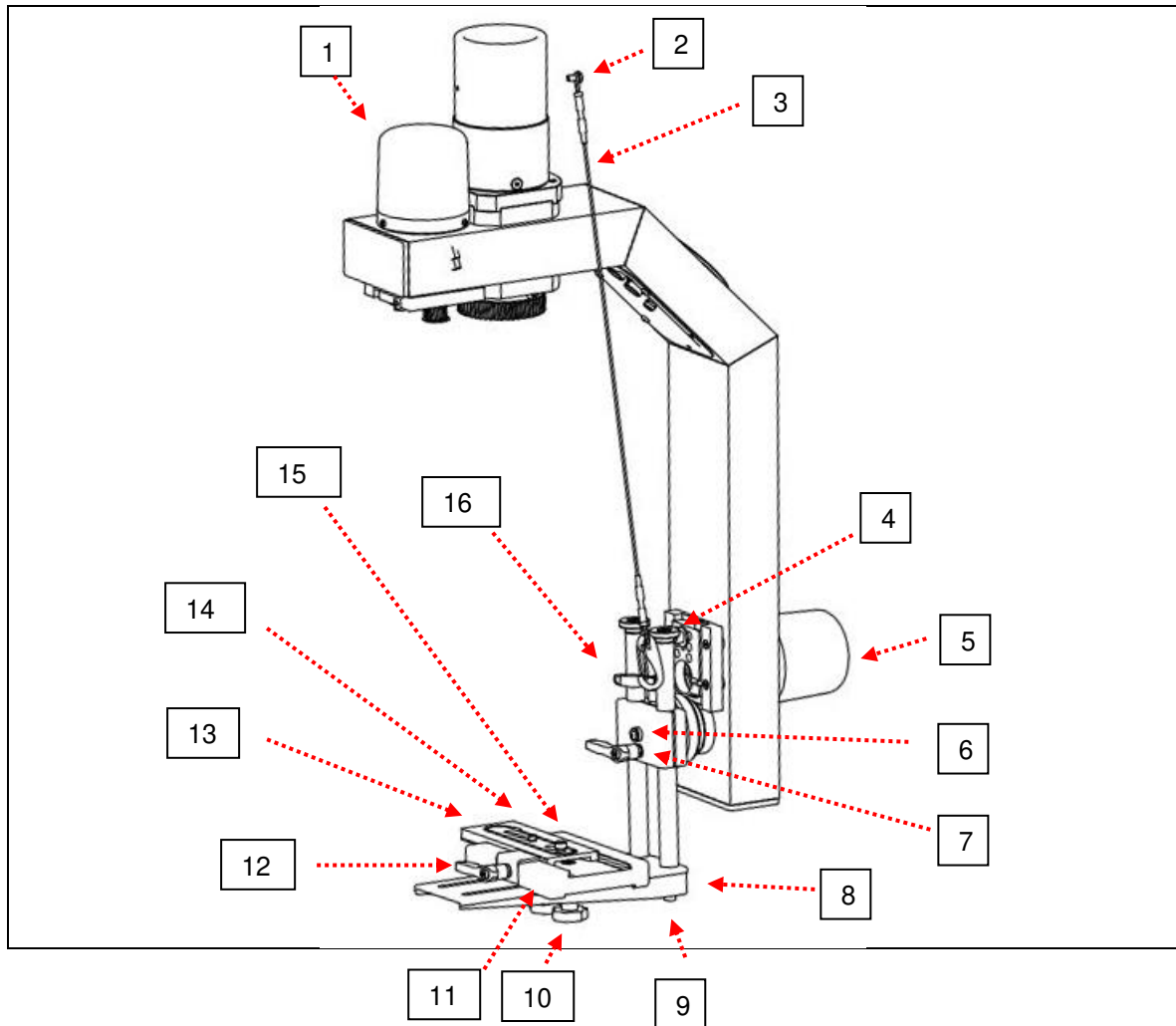
The manufacturer excludes all liability for improper handling of the device other than for its intended use and for unsuitable environmental conditions.

Likewise, any liability for the use of accessories not belonging to the system which are directly or indirectly damaged during the use of the remote head.

The warranty does not apply if parts are used which do not originate from the manufacturer and which influence the device.

The manufacturer must be commissioned for repairs and service. Damage resulting from improper intervention in the devices is excluded from liability.

8. Spare Parts Alex Digital



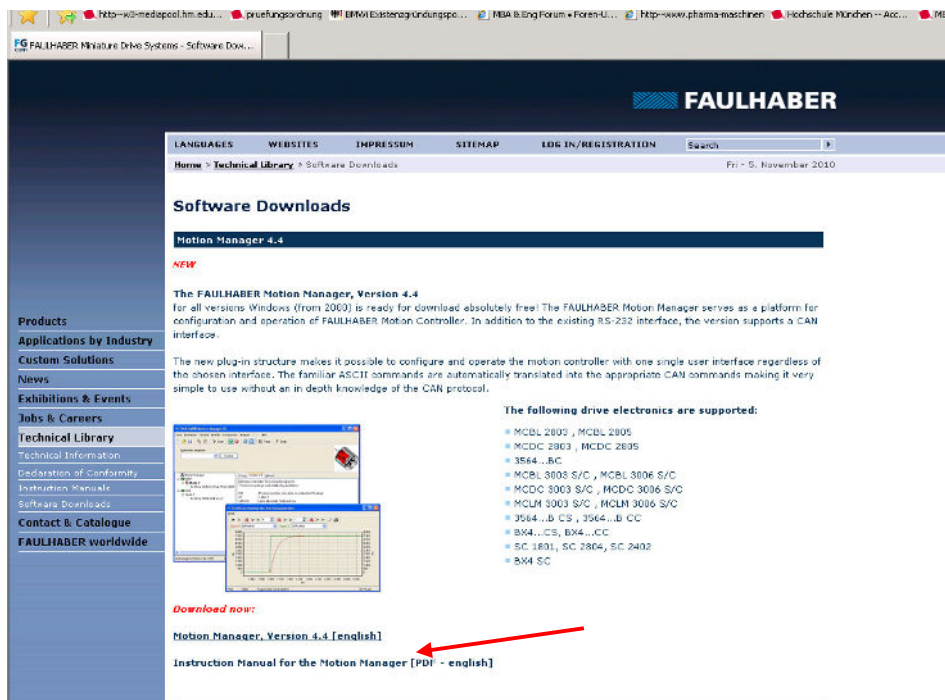
1	8418-421 Motor cover	9	M5185 Screw
2	M3363 Screw/ M3128 Washer	10	M5251 Star handle+ M4014 washer
3	8418-300 Safety cable	11	8418-50 Sliding device
4	8413-81 Cover/ M3334 Screw	12	M3526 Clamping lever
5	8418-420 Motor cover	13	8418-550 Plate
6	M3048 Screw M3548 Washer	14	N500-2 Screw 1/4"
7	M4356 Clamping lever	15	N500-4 Screw 3/8"
8	8416-70 Sliding device	16	M3526 Clamping lever

Axis configuration for remote head Pelé / Alex Digital

1- Faulhaber software download

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

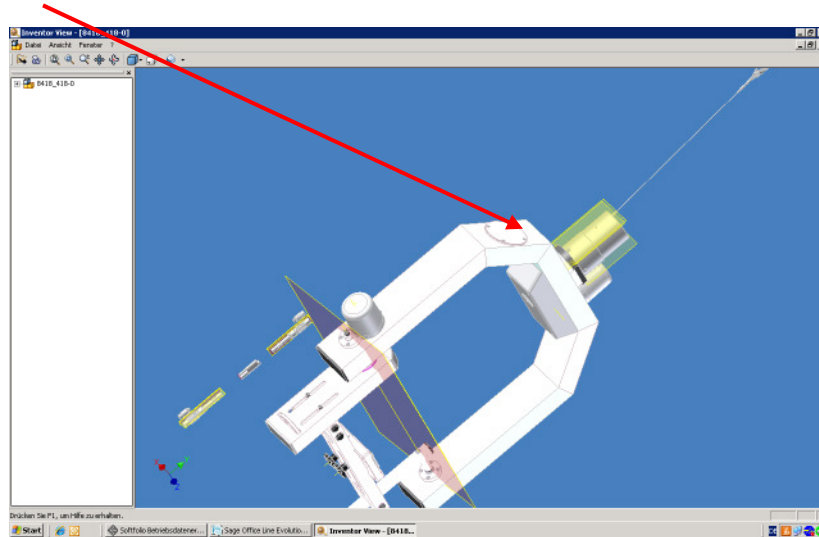
or from the provided CD



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

2- Cable connections

→ Remove cover



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

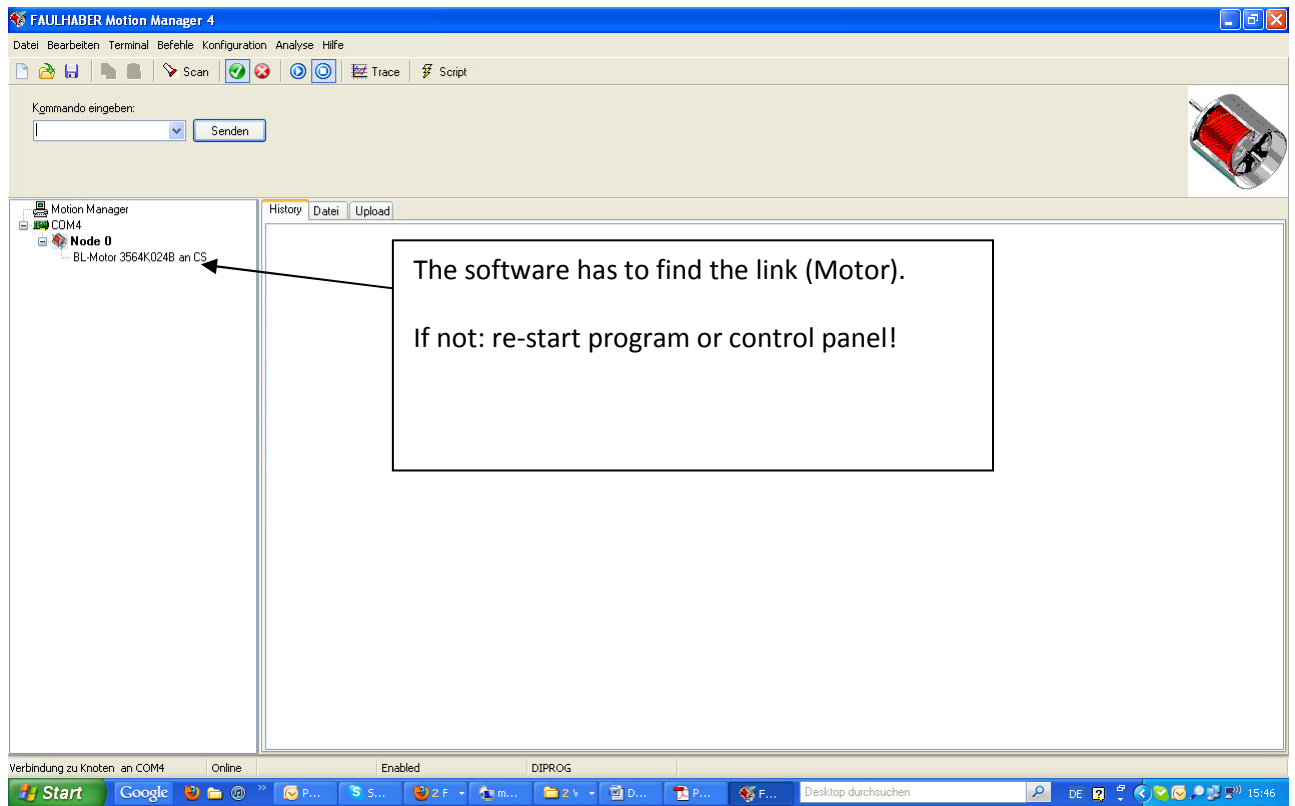


→ Connect the other end of the RS232 cable to the USB-Adapter and connect with the PC

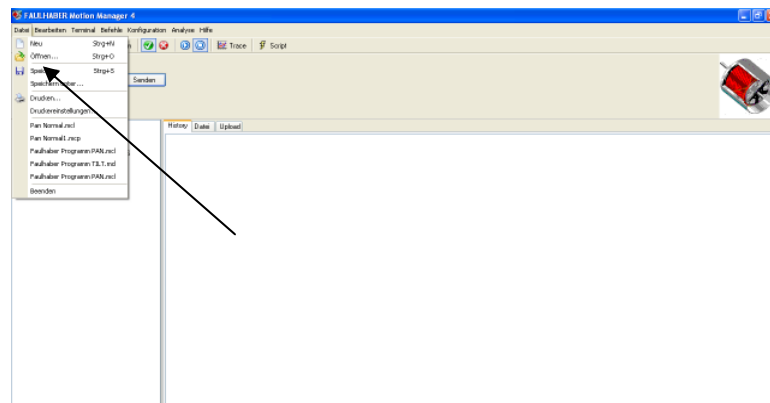


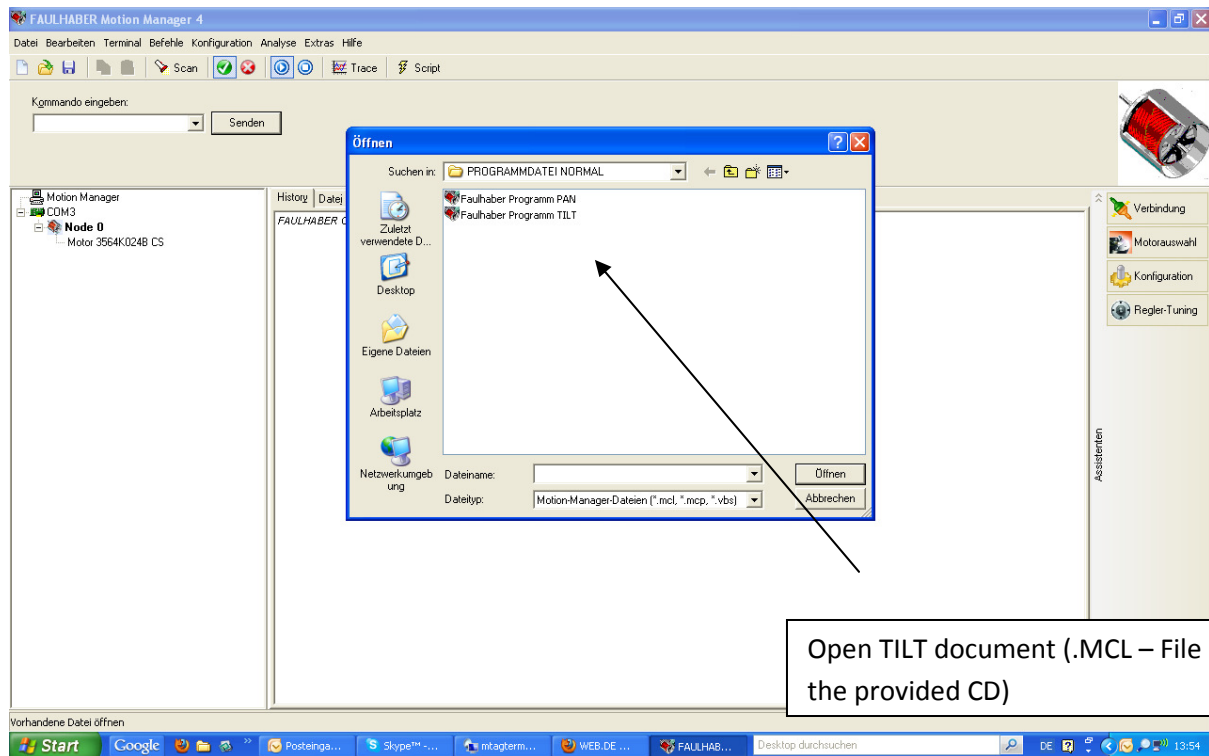
→ **Switch on control pannel**

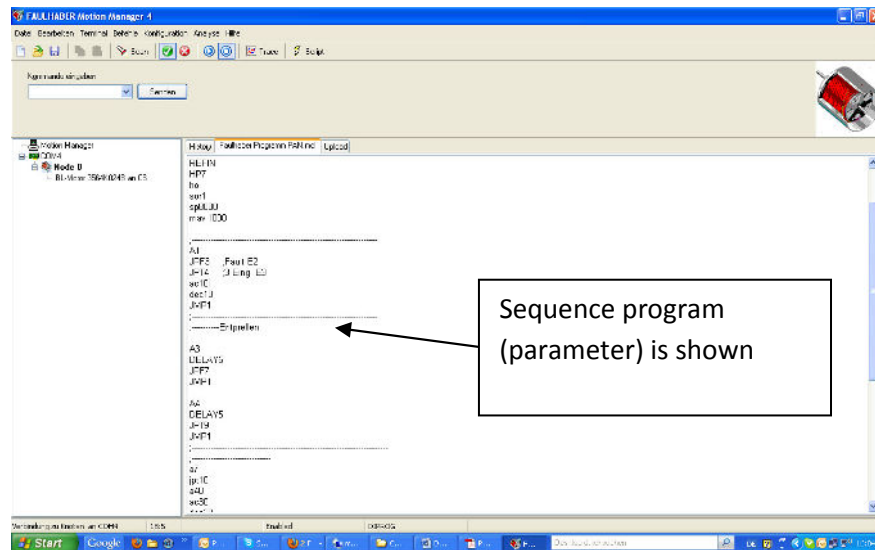
→ Start Faulhaber software (Motion Manager).



→ Open sequence programme







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

To change the parameters overwrite the red marked parameters.

```

REFIN
HP7
ho
sor1
sp4500 ← ; Geschwindigkeit - Speed - Vitesse (min: 1, max: 30000)
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)
dec10 ← ; Ramp position 1: Abbremsrampe, Bracking ramp, Rampe de Ralentissement (min: 1, max 30000)
JMP1
;-----
;-----Entprellen

A3
DELAY5
JPF7
JMP1

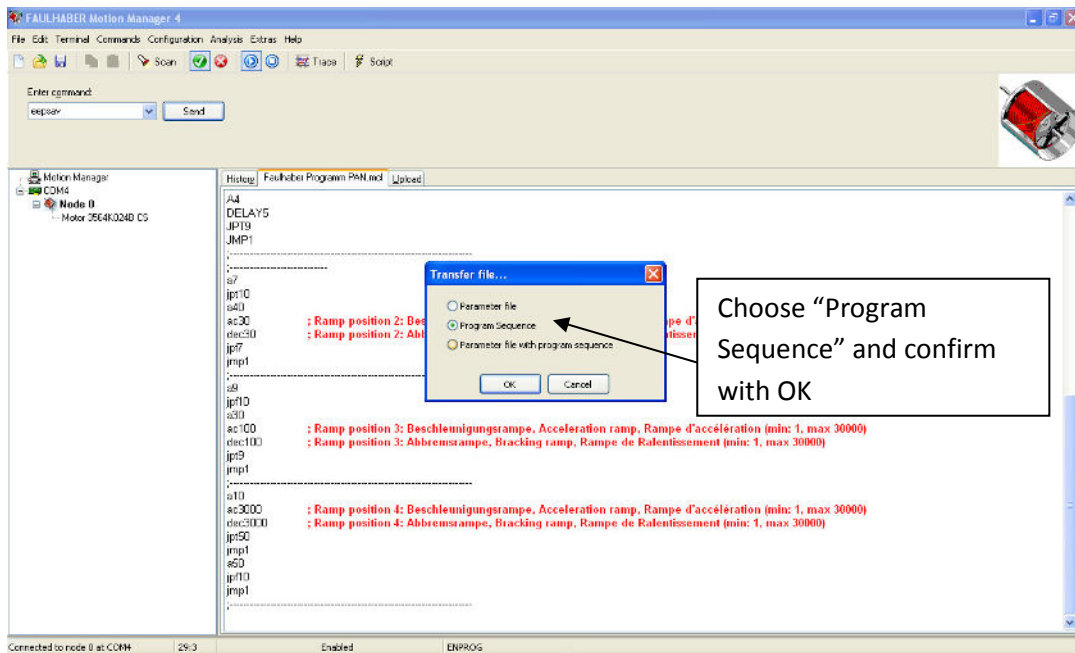
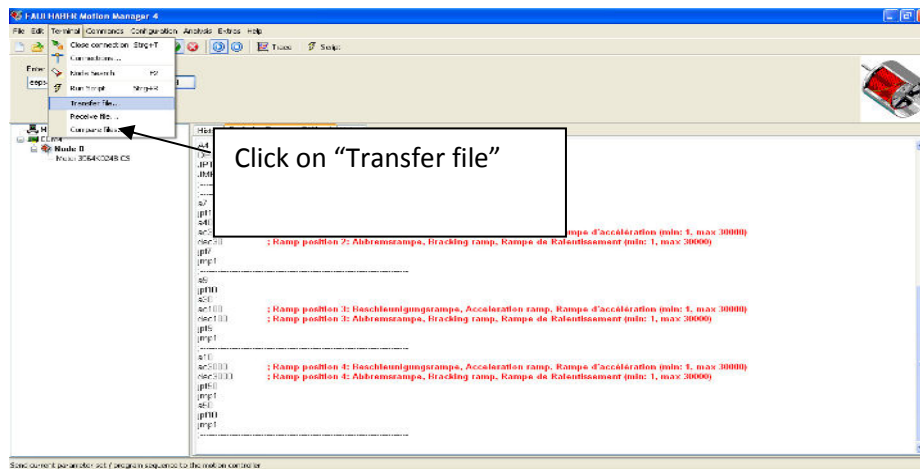
A4
DELAY5
JPT9
JMP1

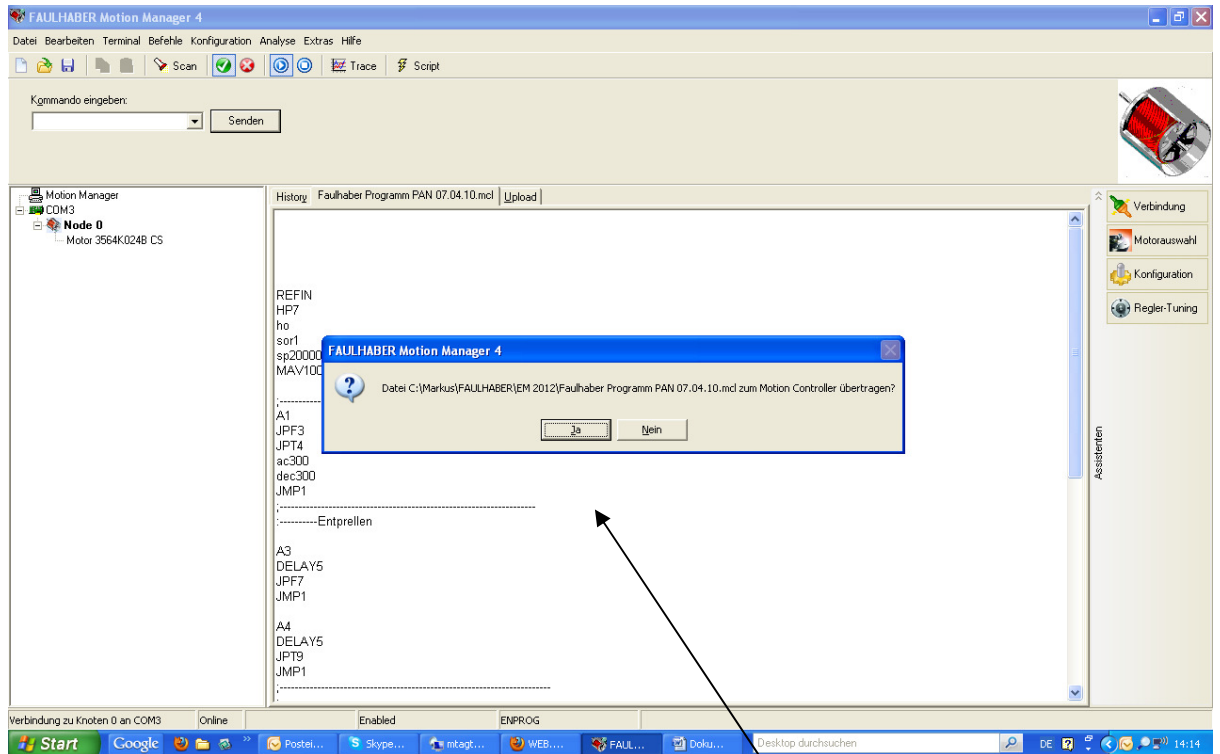
```



```
;-----  
;  
;  
a7  
jpt10  
a40  
ac30 ← ; Ramp position 2: Beschleunigungsrampe, Acceleration ramp, Rampe d'accélération (min: 1, max 30000)  
dec30 ← ; Ramp position 2: Abbremsrampe, Bracking ramp, Rampe de Ralentissement (min: 1, max 30000)  
jpf7  
jmp1  
;  
;  
a9  
jpf10  
a30  
ac100 ← ; Ramp position 3: Beschleunigungsrampe, Acceleration ramp, Rampe d'accélération (min: 1, max 30000)  
dec100 ← ; Ramp position 3: Abbremsrampe, Bracking ramp, Rampe de Ralentissement (min: 1, max 30000)  
jpt9  
jmp1  
;  
;  
a10  
ac3000 ← ; Ramp position 4: Beschleunigungsrampe, Acceleration ramp, Rampe d'accélération (min: 1, max 30000)  
dec3000 ← ; Ramp position 4: Abbremsrampe, Bracking ramp, Rampe de Ralentissement (min: 1, max 30000)  
jpt50  
jmp1  
a50  
jpf10  
jmp1  
;  
;
```

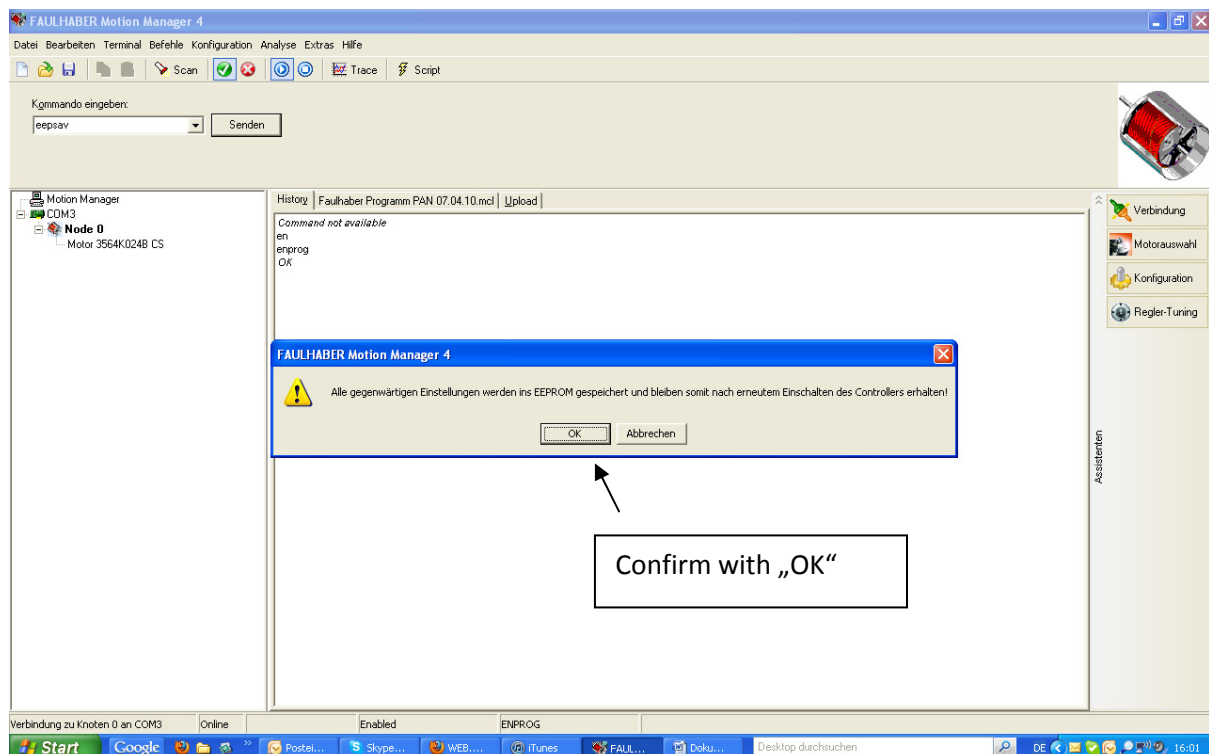
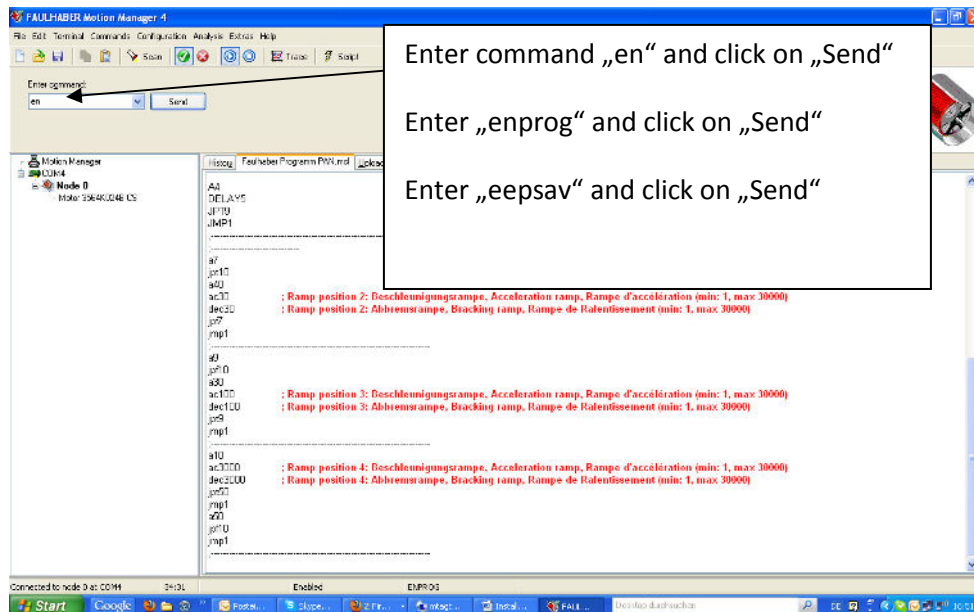
4- Transmission of the Sequence program of the TILT- Axis:





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

→ Sequence program

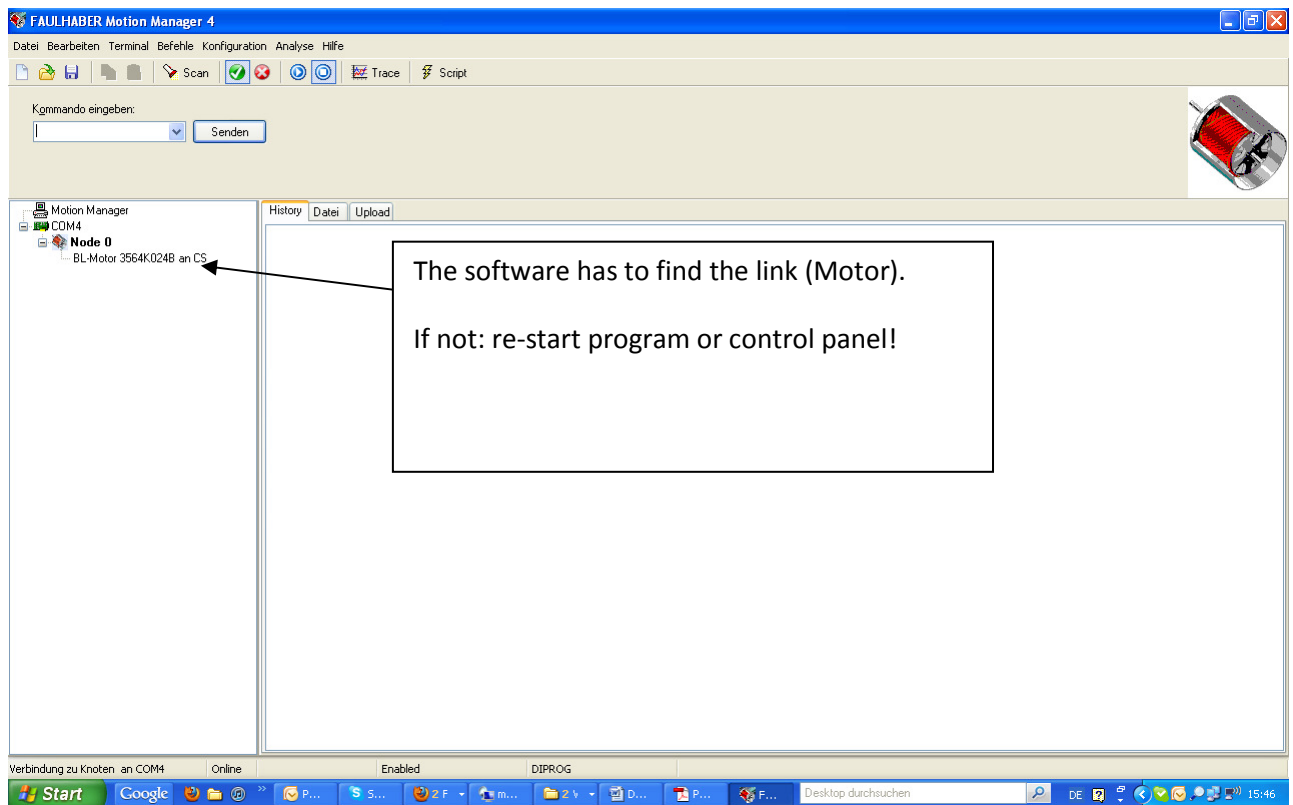


5- Programming of the sequence program for the PAN-Axis:

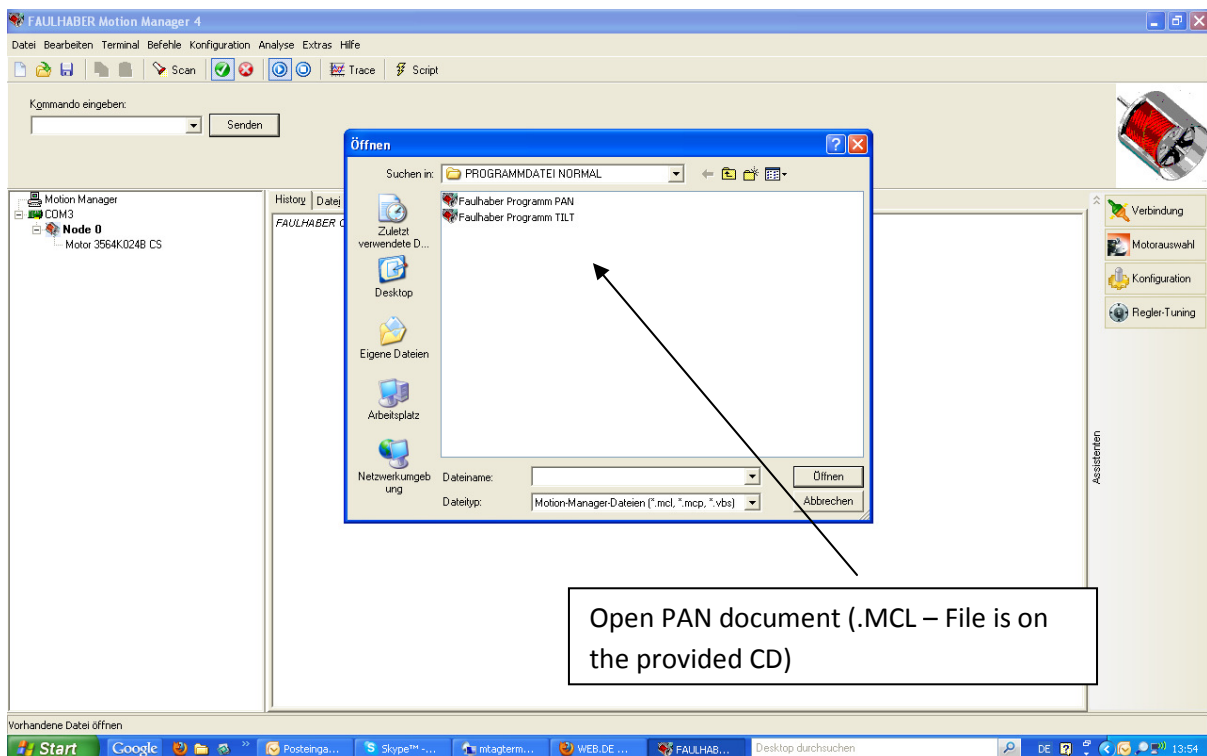
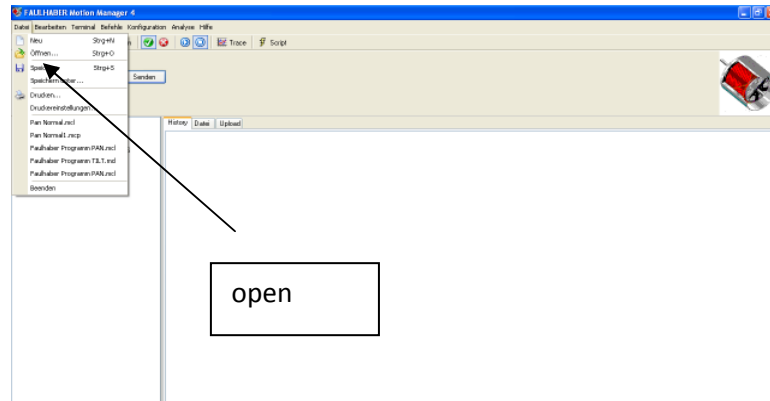
Pull out the 9-poled plugs (PAN/TILT) and connect the PAN-connection to the computer

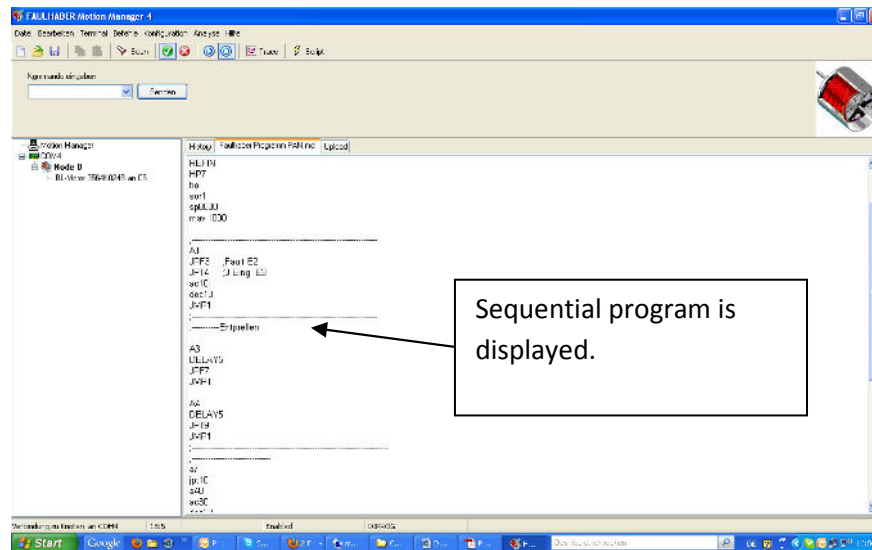


→ Open Faulhaber software (Motion Manager).



→ Open sequence programme





To change the parameters overwrite the redmarked parameters.

```

REFIN
HP7
ho
sor1
sp8000 ← ; Geschwindigkeit - Speed - Vitesse (min: 1, max: 30000)
mav 1000 ← ; 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)
dec10 ← ; Ramp position 1: Abbremsrampe, Bracking ramp, Rampe de Ralentissement (min: 1, max 30000)
JMP1
;-----
:-----Entprellen

A3
DELAY5
JPF7
JMP1

A4
DELAY5
JPT9
JMP1
;-----
;-----
a7
jpt10

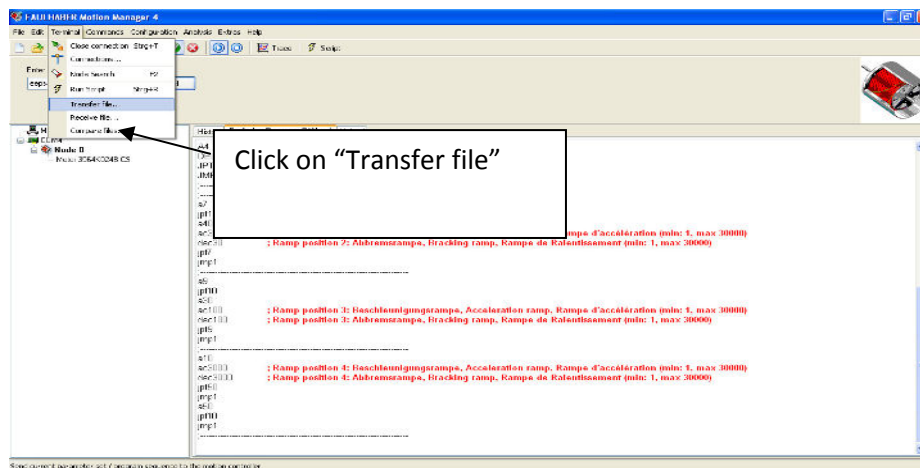
```

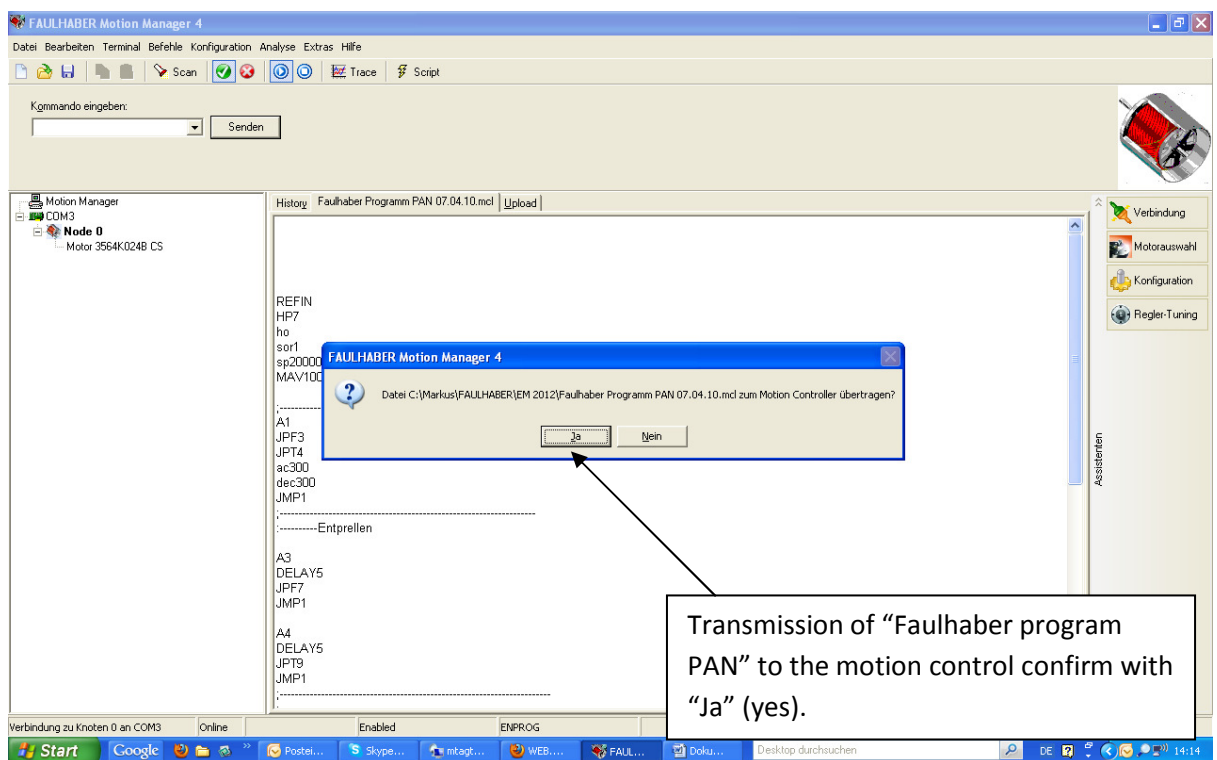
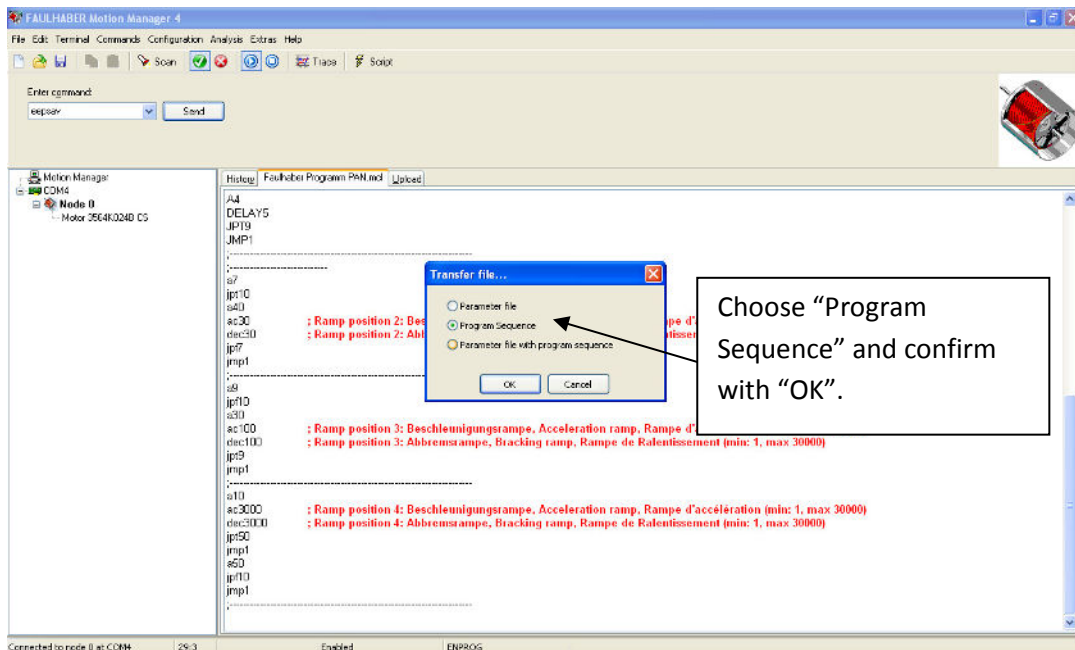
```

a40
ac30 ← ; Ramp position 2: Beschleunigungsrampe, Acceleration ramp, Rampe d'accélération (min: 1, max 30000)
dec30 ← ; Ramp position 2: Abbremsrampe, Bracking ramp, Rampe de Ralentissement (min: 1, max 30000)
jpf7
jmp1
;-----
a9
jpf10
a30
ac100 ← ; Ramp position 3: Beschleunigungsrampe, Acceleration ramp, Rampe d'accélération (min: 1, max 30000)
dec100 ← ; Ramp position 3: Abbremsrampe, Bracking ramp, Rampe de Ralentissement (min: 1, max 30000)
jpt9
jmp1
;-----
a10
ac3000 ← ; Ramp position 4: Beschleunigungsrampe, Acceleration ramp, Rampe d'accélération (min: 1, max 30000)
dec3000 ← ; Ramp position 4: Abbremsrampe, Bracking ramp, Rampe de Ralentissement (min: 1, max 30000)
jpt50
jmp1
a50
jpf10
jmp1
;-----

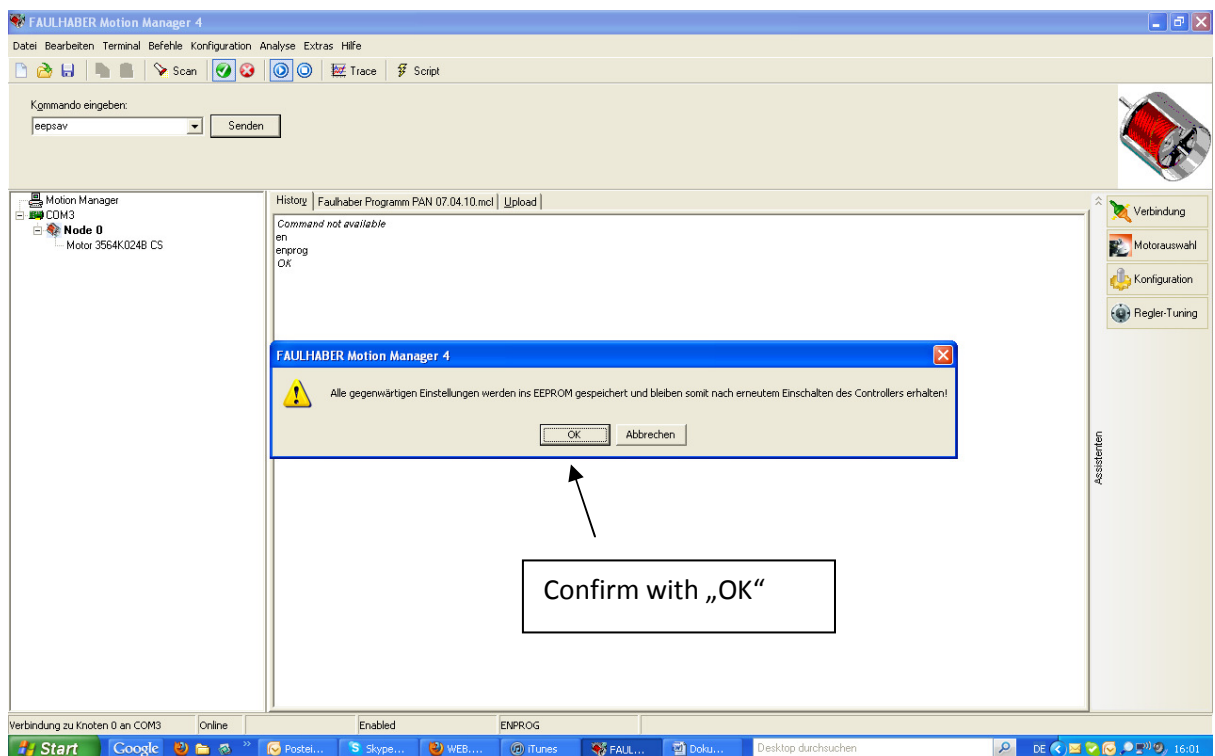
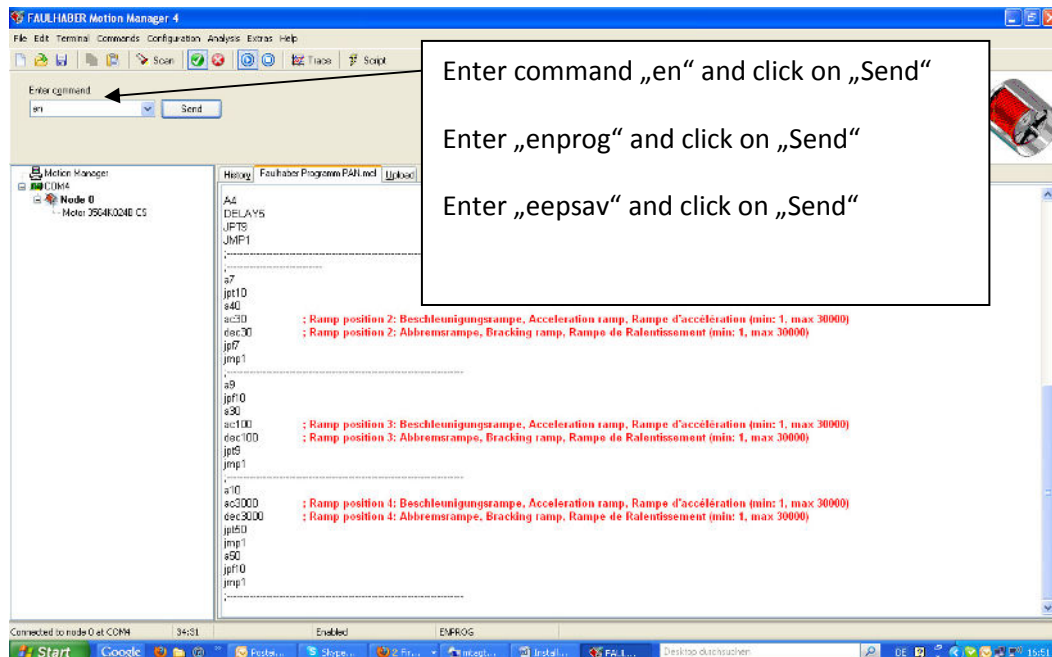
```

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





→ Sequence Program





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.

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