INDEX

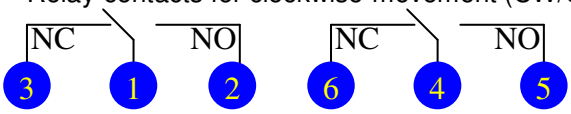
General information according the installation:

Depending on the type of rotator there are 6 to 12 connections to be made between the ERC and the rotor-controller. All connections are available on the ERC with screw-terminals.
The needed connections are in some cases available through an external connector at the rotor-controller. In this case the ERC might be put in an external housing.
In all other cases the connections have to be made inside the rotor-controller and the ERC may fit into the housing of the rotor-controller due to the small size of the ERC.
For some installations additional work has to be done inside the rotor-controller, like for example cutting or adding a wire. This will be explained in the individual installation-sheet of the rotor-controller.
In the rotator-specific installation-sheets the connections to be made are shown with colour-coded and numbered dots.
The connections are:

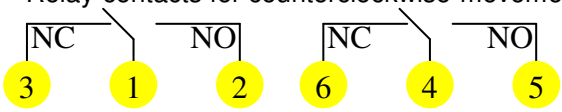
1 Rotor-feedback-voltage (positive voltage between 0..15V)

1 Reference for the rotor-feedback-voltage

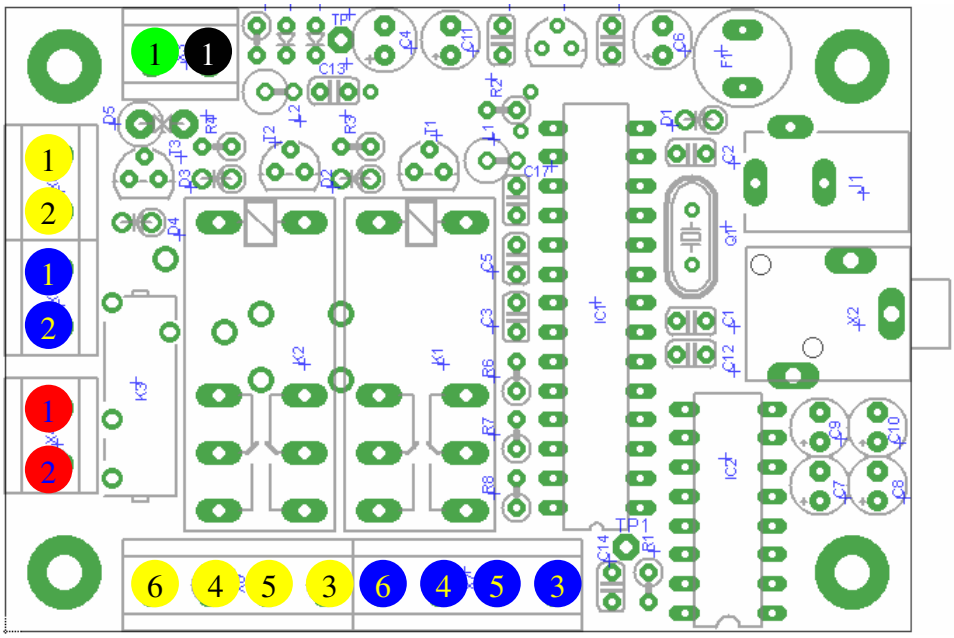
1 - 6 Relay-contacts for clockwise-movement (CW/UP)



1 - 6 Relay-contacts for counterclockwise-movement (CCW/DWN)



1 - 2 Relay-contacts for a brake or speed-control (if applicable with your rotator).



Only tighten the screw-terminals lightly. If you tighten them too much, it may happen that the solder-pins share off!

Contacts 4,5 and 6 are not available in HEAVY-DUTY-ERC

Power-Supply for the ERC :

- Never use the internal power-supply of the rotor-controller to supply the ERC unless you are told to do so.
- The usage of the internal supply of the rotor-controller may have a negative influence on the indication-system of the rotor-controller.
- For some rotor-controllers a separate power-supply (e.g. wall-mount) is needed, that is not connected to stations ground. You will find specific instructions in the individual installation sheet.

Safety-Instructions:

- Don't continue using the product if fit is damaged.
- Keep electronic assemblies and components away from children!
- Products that carry electric voltages must be handled by taking care about the valid instructions and regulations.
- If the product must be repaired, only use original spare parts! Using different parts may cause property damage and personal injury! The repair has only to be done by an expert!
- Before applying main-voltage the product must be securely build into a housing to provide protection against accidental contact!
- The installation has to be done by a skilled expert.
- Cables that carry dangerous voltages (e.g. main-voltage) must be installed according to the valid instructions and regulations. The needed safety-distances have to be maintained.
- Connection-cables have to be chosen according to the needed diameter.
- Before working on the product all supply-voltages have to be securely cut of.
- The product is designed to work in clean and dry areas inside buildings.
- Prevent the product of humidity, water and heat.
- Don't use the product in areas where explosive gases, vapour or dust are or may occur.
- Don't let the product fall or apply mechanical stress as the product may be damaged.

Follow the instructions in this installation-guide carefully. Ing.-Buero Alba de Schmidt cannot be held liable for damage of other equipment (e.g. rotor-control-boxes) due to wrong connections or handling.

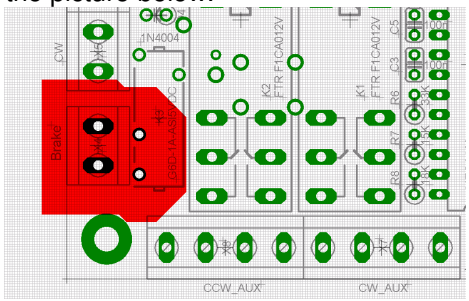
The following rotators use main-voltage (230 VAC or 115 VAC) for their brake-circuits:

- CDE/Hygain : HAM M - HAM II – HAM III – HAM IV – CD44 – CD45 – T2X – TR44
- WALMAR : ML, MU-1, MU-3, MH

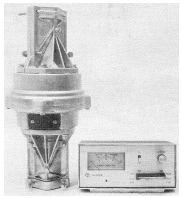
The design of Easy-Rotor-Control (ERC) is made to provide the needed safety-distances between the brake-circuit and the remaining part of the electronic circuit or the housing of the rotor-controller. These safety distances must be maintained also during installation of the ERC.

Take care about the following issues:

- Only use the wires provided with your ERC.
- The distance between the PCB and the housing is given by the mounting-bolts of 8mm delivered with the ERC and must not be reduced.
- The area between PCB and housing must be kept free, especially in the red marked area in the picture below.

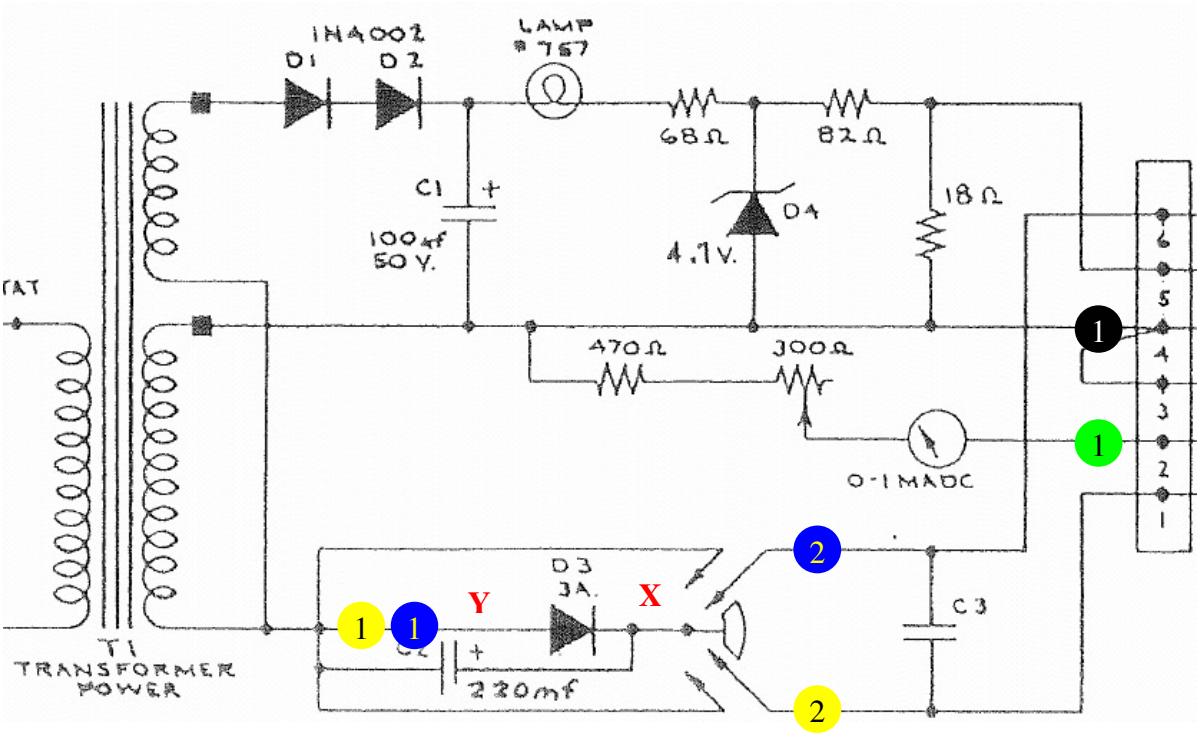


Alliance : HD73



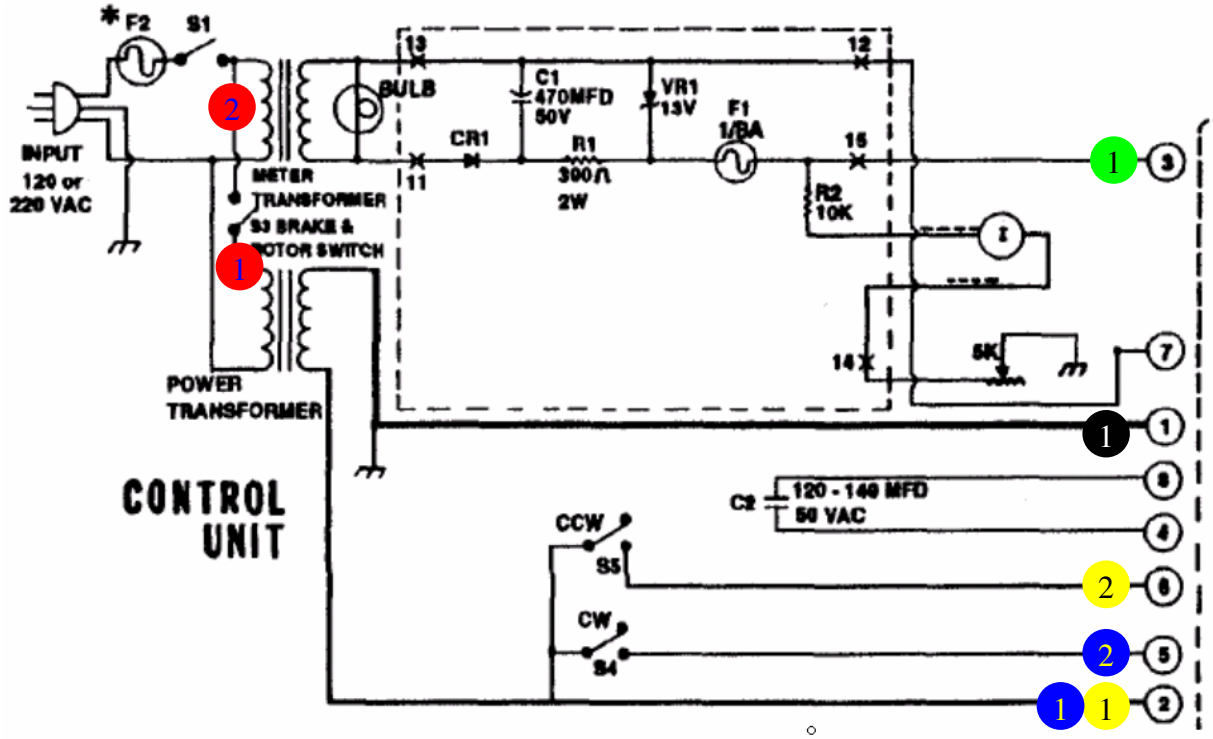
Type of installation: inside the rotor-controller
AUX-Relay : None

Hint: This rotor-controller supports two rotation speed. In the drawing below, ERC is connected to drive the rotor with the higher speed. You could choose the lower speed by reconnecting the contacts from **Y** to **X.**

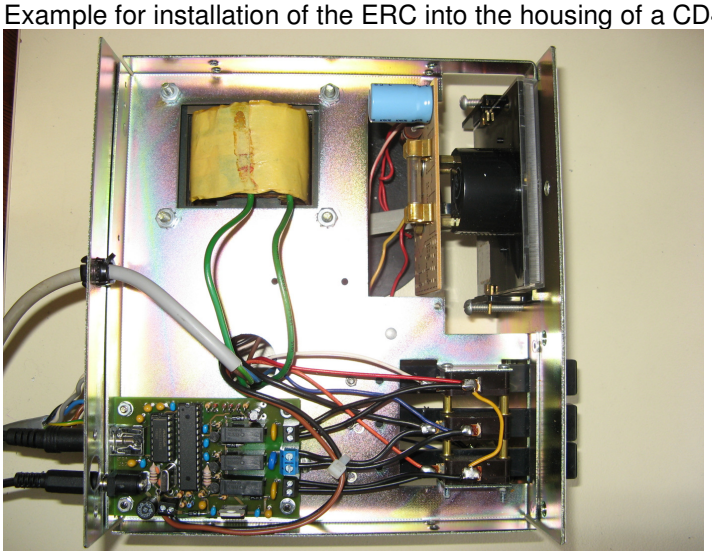


CDE/HyGain : HAM II – HAM III – HAM IV – CD44 – CD45 – T2X


Type of installation: inside the rotor-controller
AUX-Relay : Brake



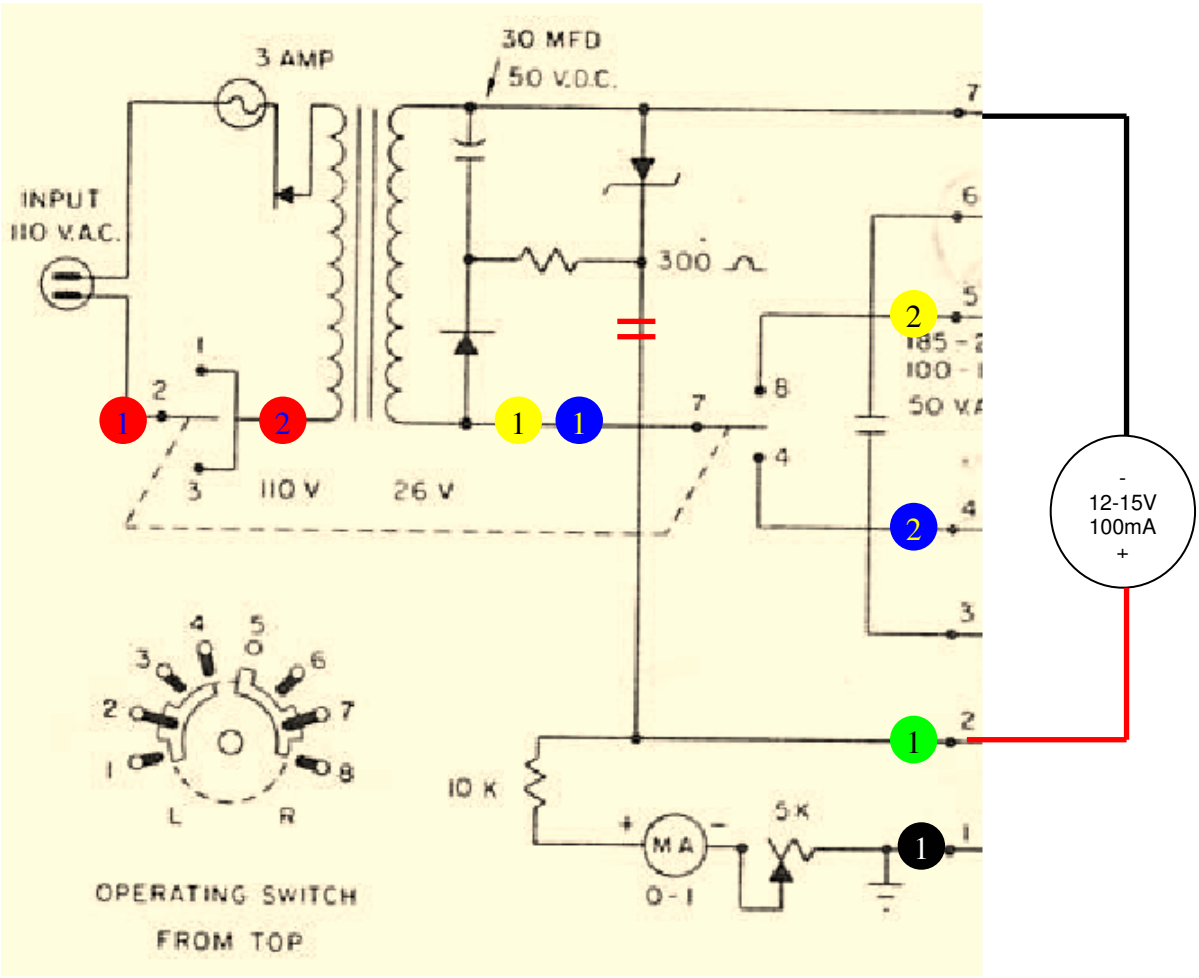
Example for installation of the ERC into the housing of a CD45



CDE : HAM M – TR44 (series 2 control-box)

Type of installation: inside the rotor-controller
AUX-Relay : Brake

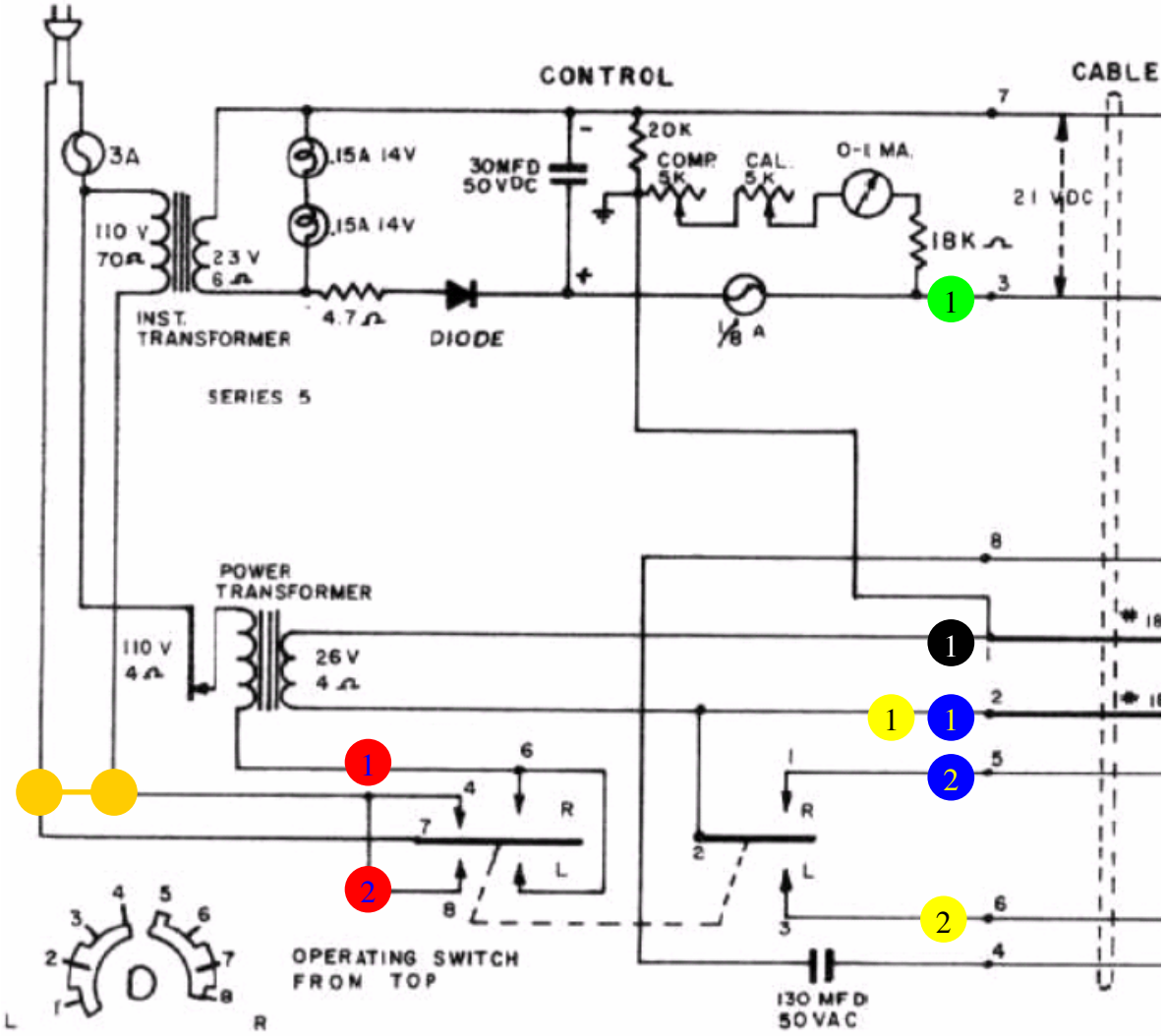
Additional work:
This control-box uses the same transformer for motor-current and for the instrumentation section. We need to supply the instrumentation section permanently but cannot use the transformer of the control-box as this is going to be overheated when permanently supplied.
An external regulated DC-supply of 12-15V which is isolated from the ERCs supply (e.g. an extra wall-mount-supply) is to be added to the pins 2 (pos.) and 7 (neg.) of the control-box and the instrumentation section has to be isolated from the internal supply of the control box. Cut the connection where indicated with this symbol: ||



CDE : HAM M – TR44 (series 3 control-box)

Type of installation: inside the rotor-controller
AUX-Relay : Brake

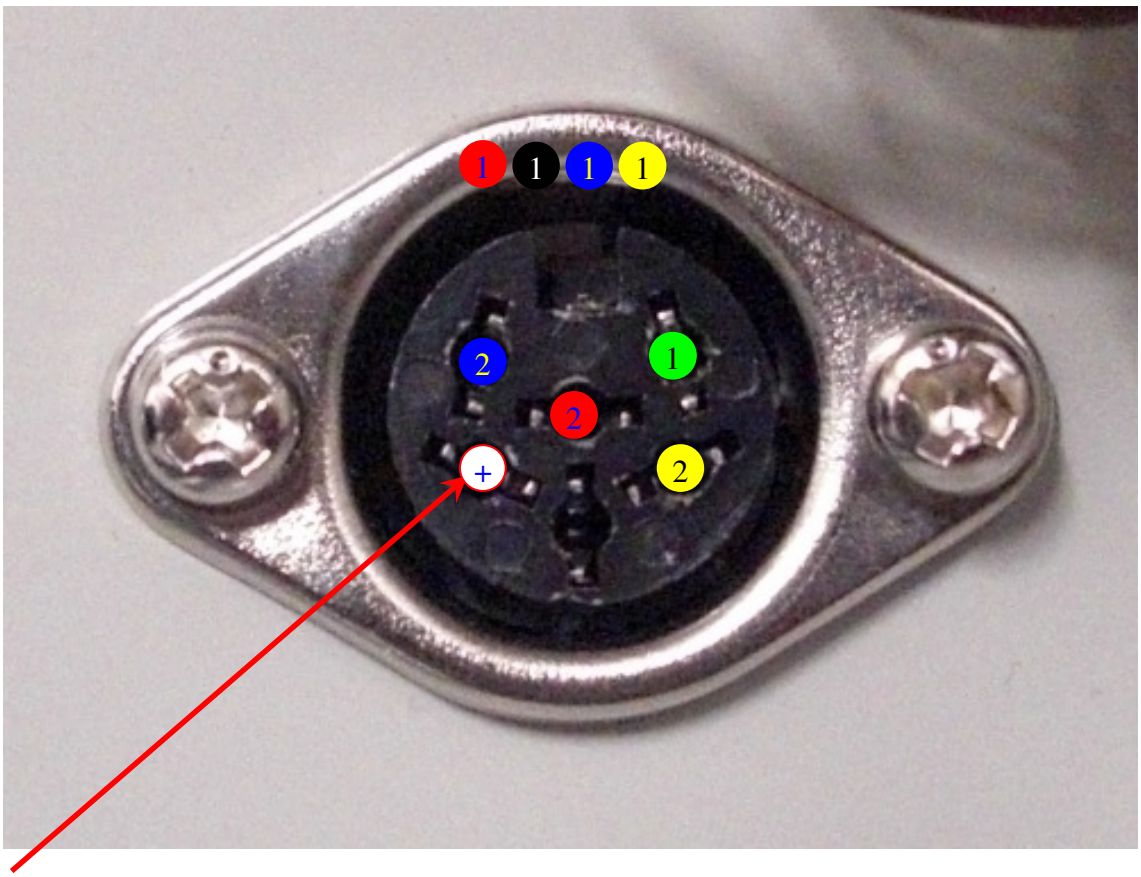
Additional work: A connection has to be made (orange connection in the schematics) in order to supply the instruments-transformer permanently with main-voltage. **Attention:** this cable is carrying main-voltage. Take care about proper isolation and positioning of the cable!



Create : ERC5A-P (Elevation)

Type of installation: externally via the 6-pole DIN-jack J1.
AUX-Relay : Speed Rev.

Hint: The rotator only works with the remote-connector J1, if the switch S1 on the backside of the rotor-controller is in the lower position and if the switch on the front-panel is set to P.SET.

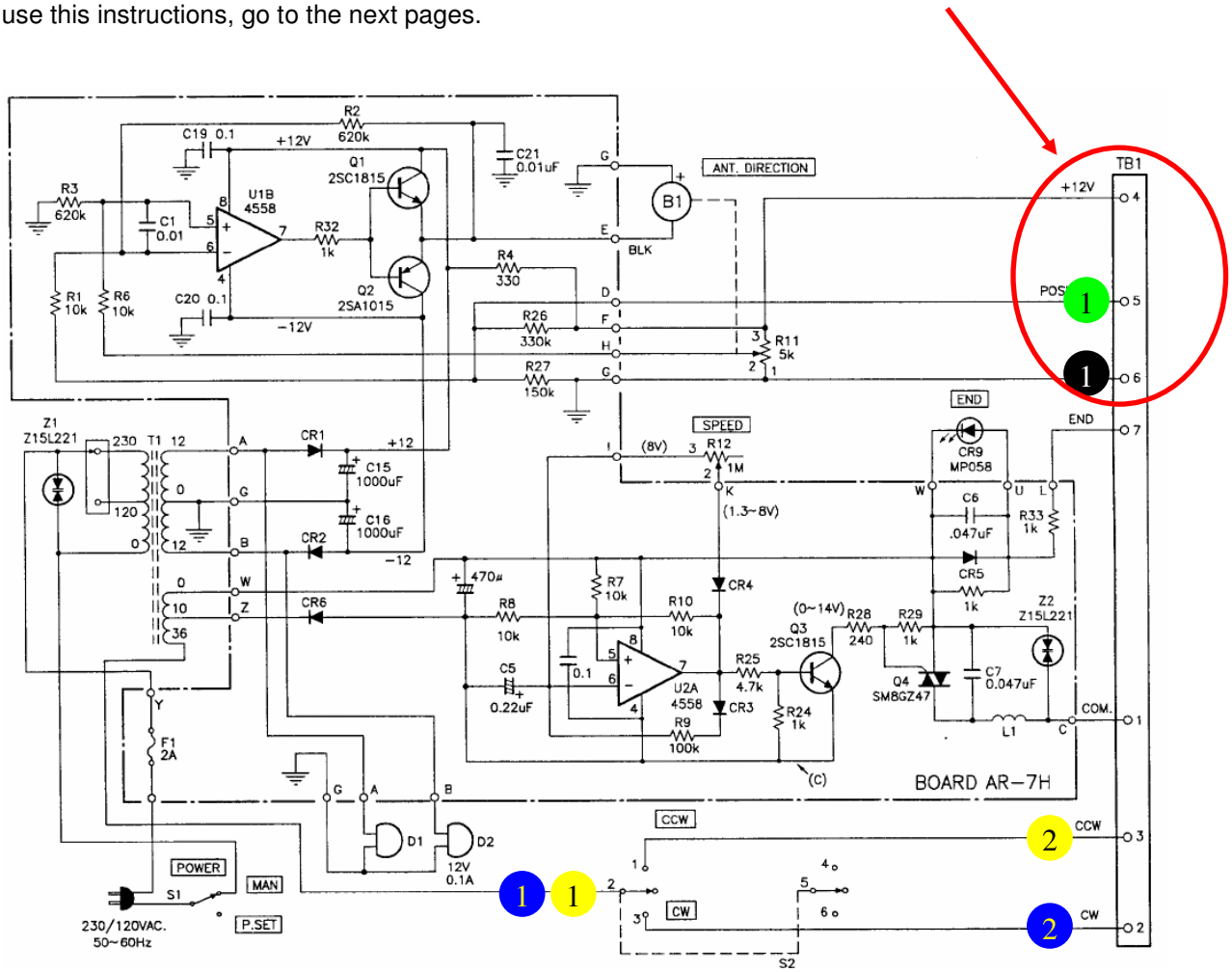


On this pin are +11V / 400mA available to supply the ERC

Create : RC5-1 (AR-7H)

Type of installation: inside the rotor-controller
AUX-Relay : None

There are alternative schematics of the RC5-1 out there which can be identified when looking to the terminals 4 and 6. If terminal 4 is not connected to +12V and terminal 6 is not connected to GND, don't use this instructions, go to the next pages.

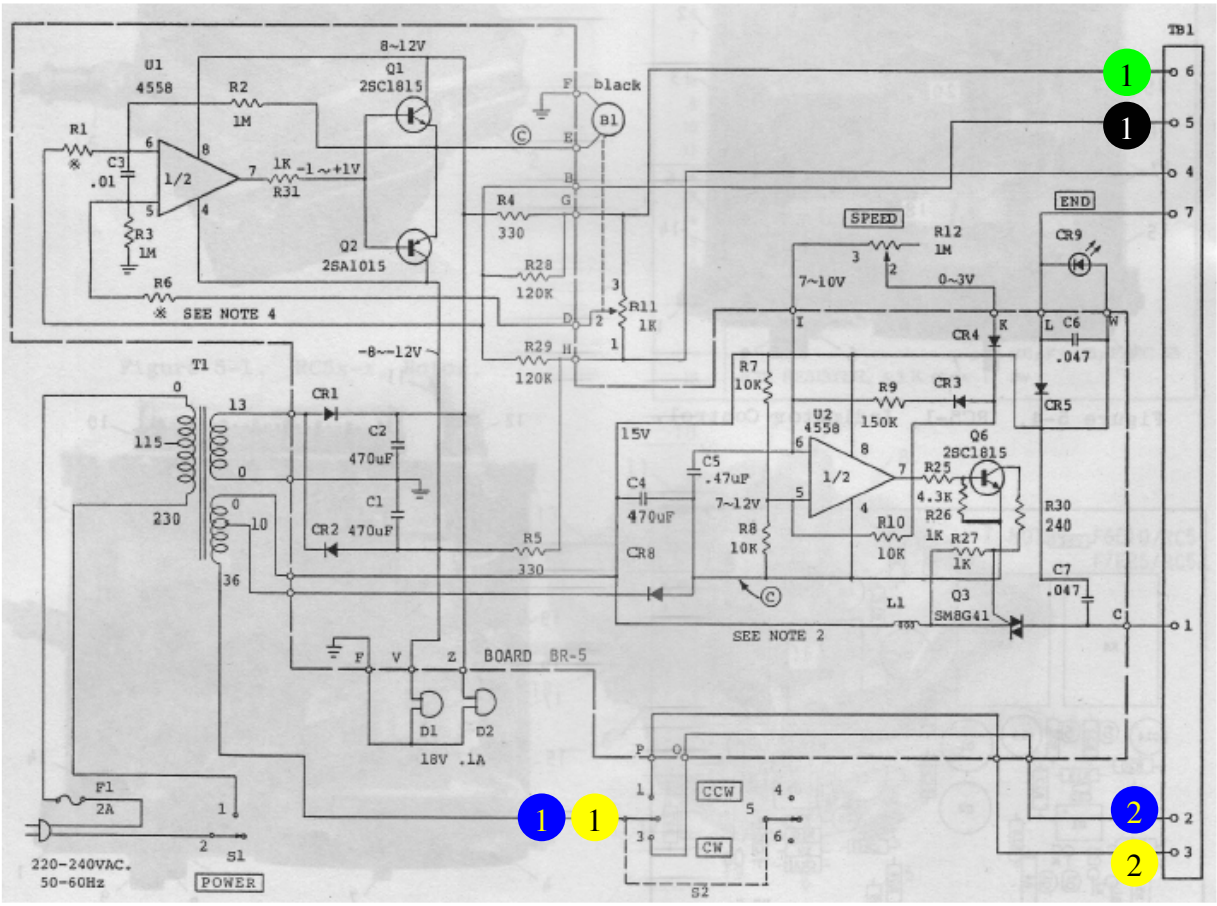


Create : RC5-1 (BR-5)

Type of installation: inside the rotor-controller
AUX-Relay : None

As none of the terminals of the rotator-feedback-potentiometer is tightened to the ground of the rotor-controller, take care about the following issue:

- Use a separate power-supply (e.g. wall-mount), that is not connected to stations ground.

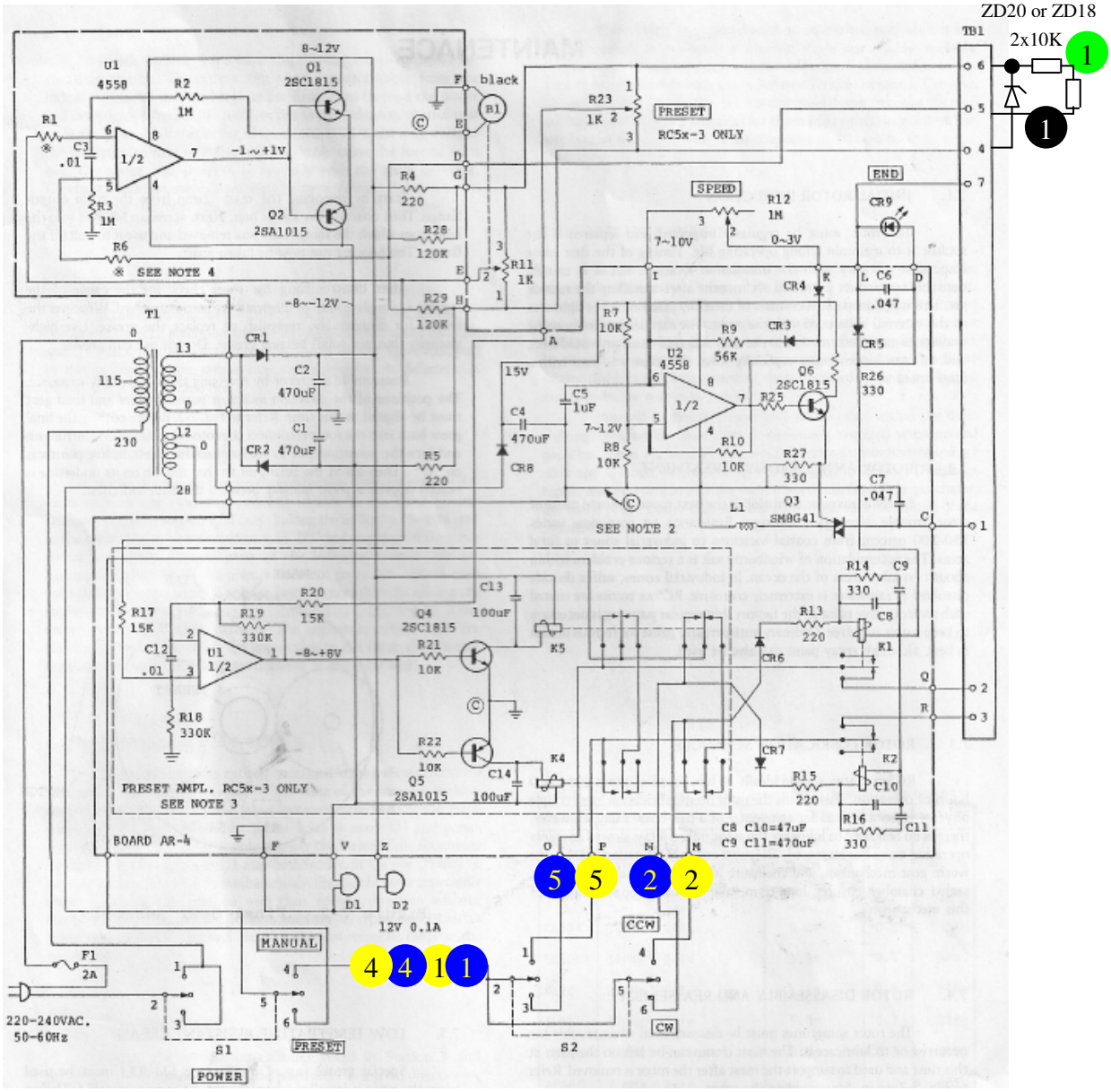


Create : RC5-1 (AR-4)

Type of installation: inside the rotor-controller
AUX-Relay : None

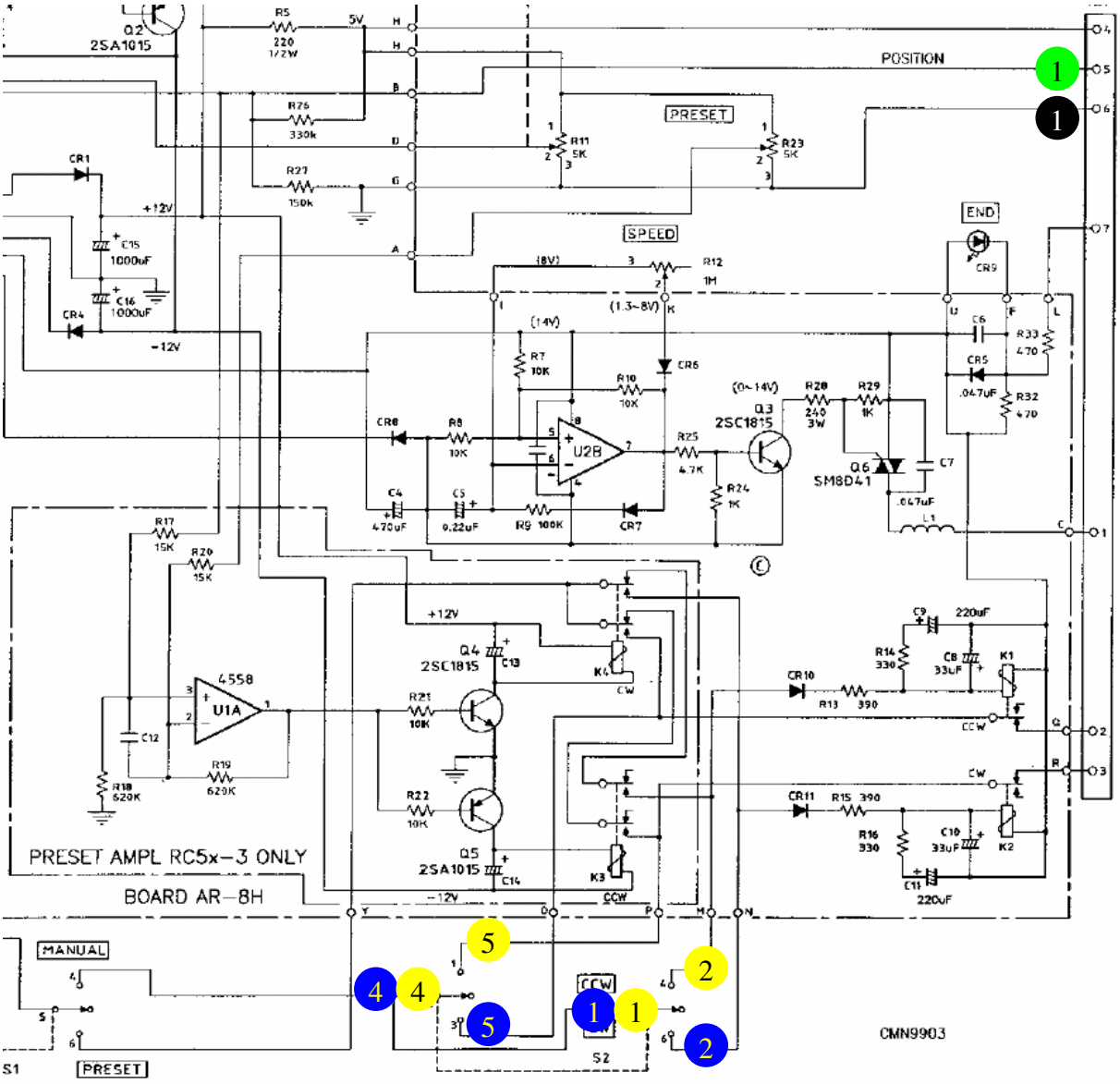
As none of the terminals of the rotator-feedback-potentiometer is tightened to the ground of the rotor-controller, take care about the following issue:

- Use a separate power-supply (e.g. wall-mount), that is not connected to stations ground.
- An additional Z-Diode and 2 resistors need to be added.



Create : RC5-3 – RC5A-3 – RC5B-3

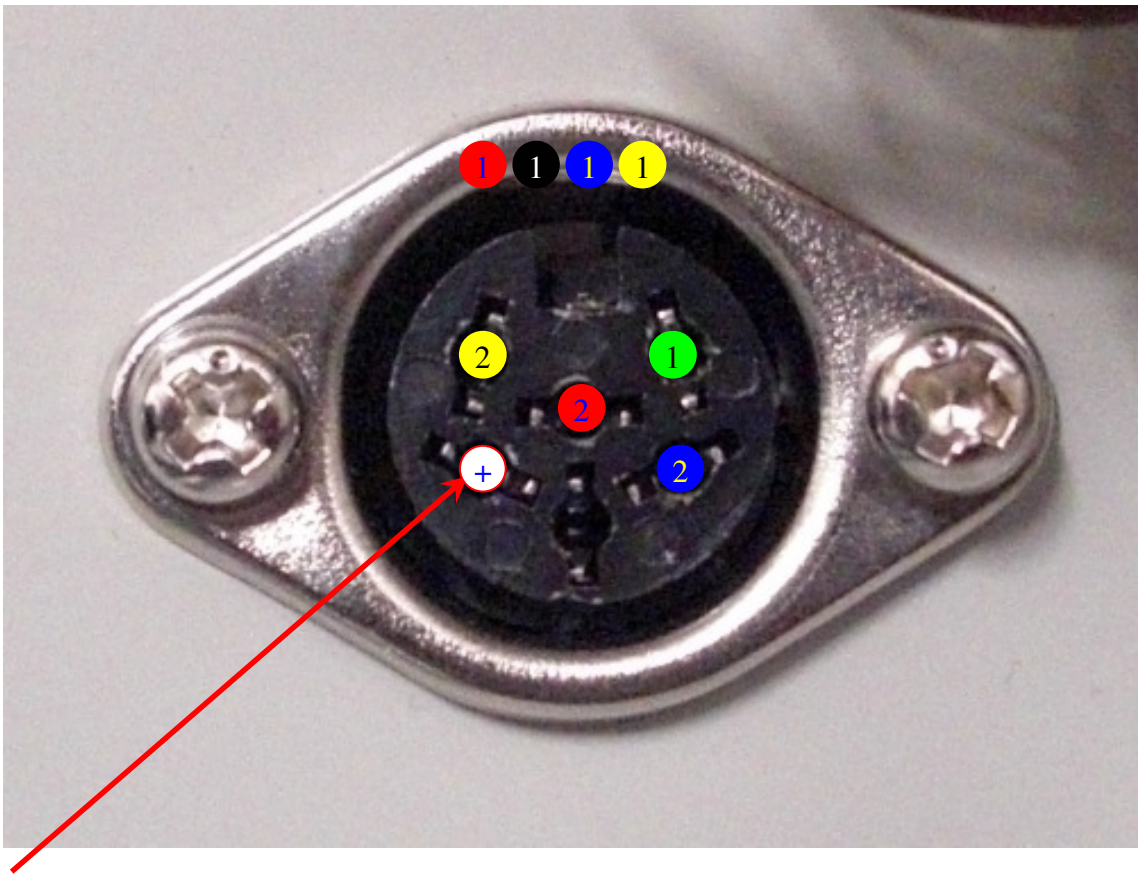
Type of installation: inside the rotor-controller
AUX-Relay : None



Create : RC5A-3-P – RC5B-3-P

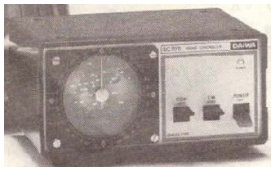
Type of installation: externally via the 6-pole DIN-jack J1.
AUX-Relay : Speed Rev.

Hint: The rotator only works with the remote-connector J1, if the switch S1 on the backside of the rotor-controller is in the lower position and if the switch on the front-panel is set to P.SET.

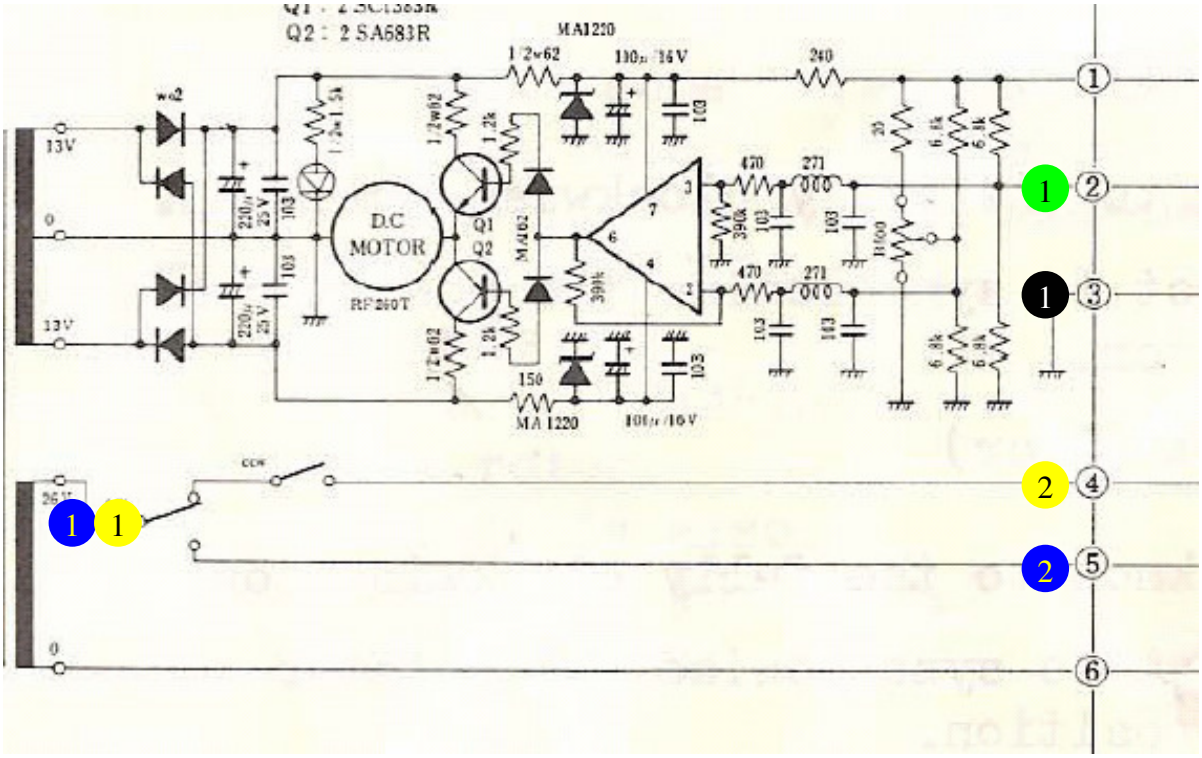


On this pin are +11V / 400mA available to supply the ERC

Daiwa : DC-7011 (DR7500R - DR7600R)



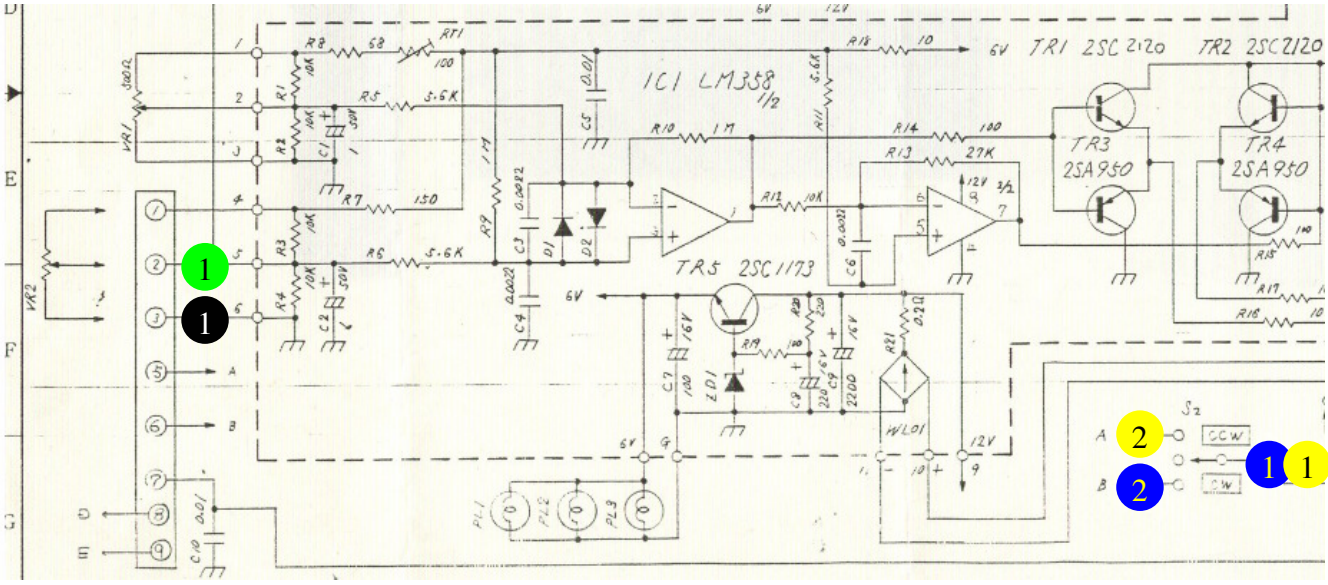
Type of installation: inside the rotor-controller
AUX-Relay : None



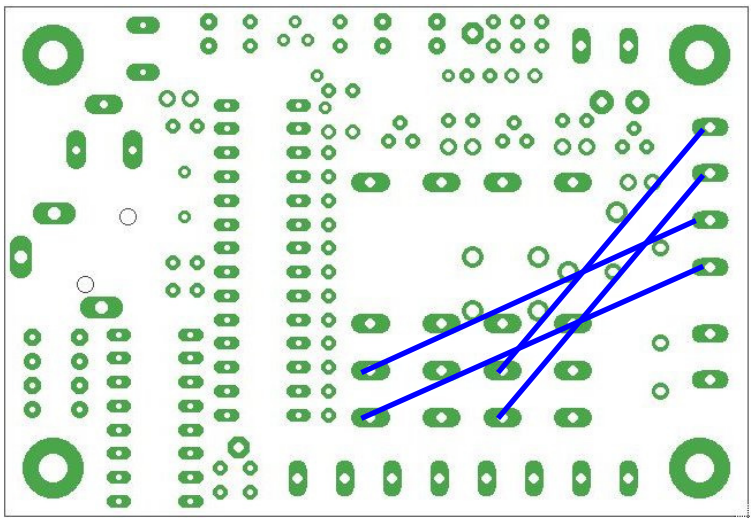
Daiwa : MR750

Type of installation: inside the rotor-controller
AUX-Relay : None

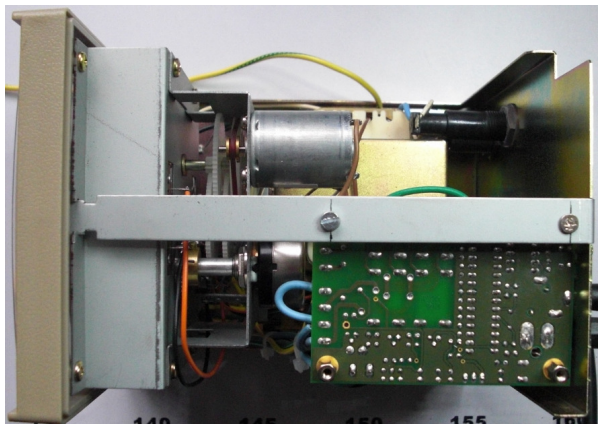
Hint: In order to use the rotator with the ERC, the mode-switch of the controller has to be set to Manual, not Preset.



If you use your MR750 with **more than 2 motors**, you need the heavy-duty-version of the ERC and 4 additional wires with 0,75 sqmm have to be soldered to the bottom of the PCB.

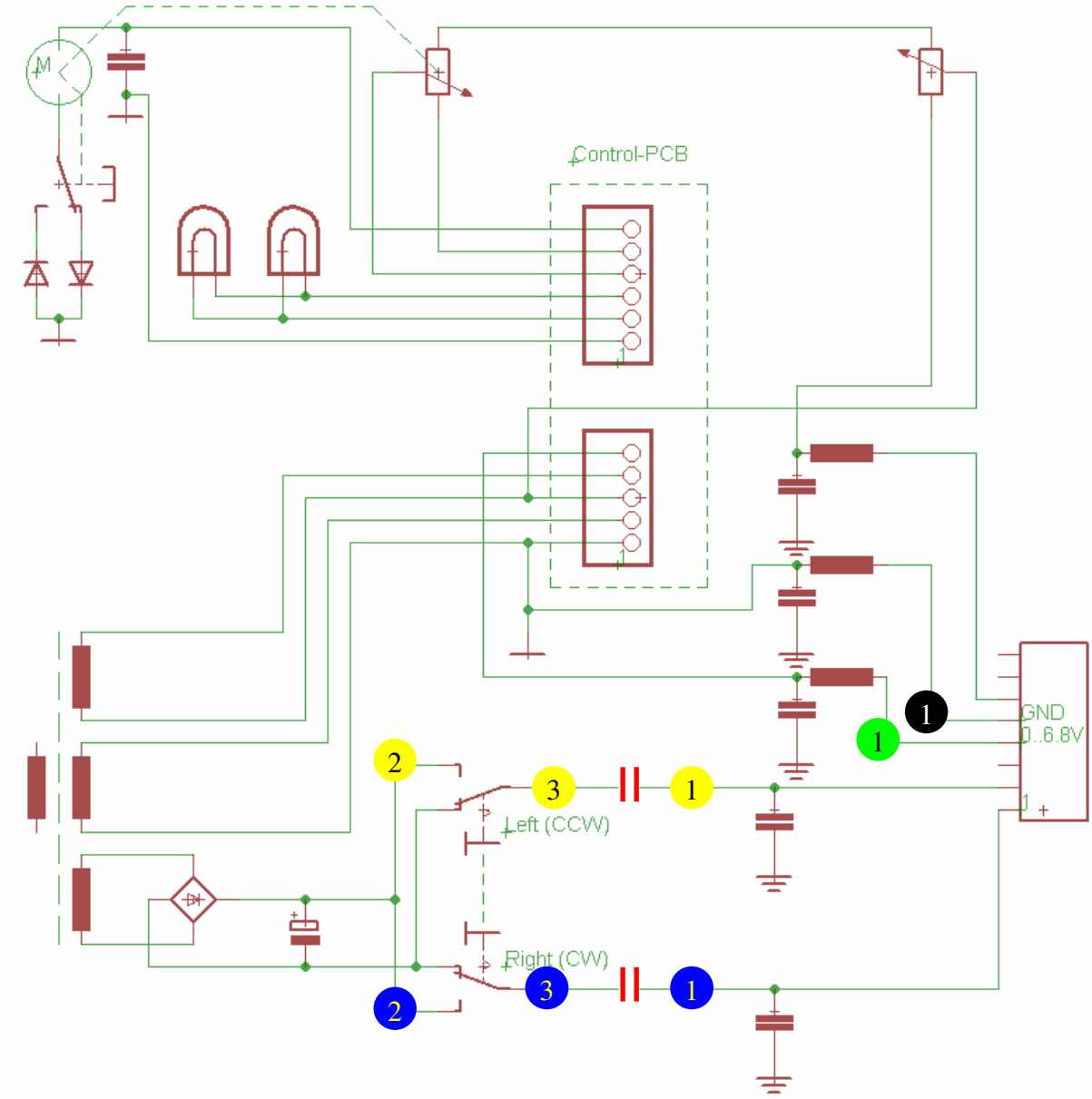


Emotator : 105 TSX

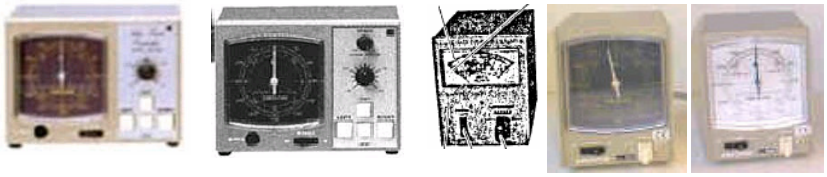


Type of installation: inside the rotor-controller
AUX-Relay : None

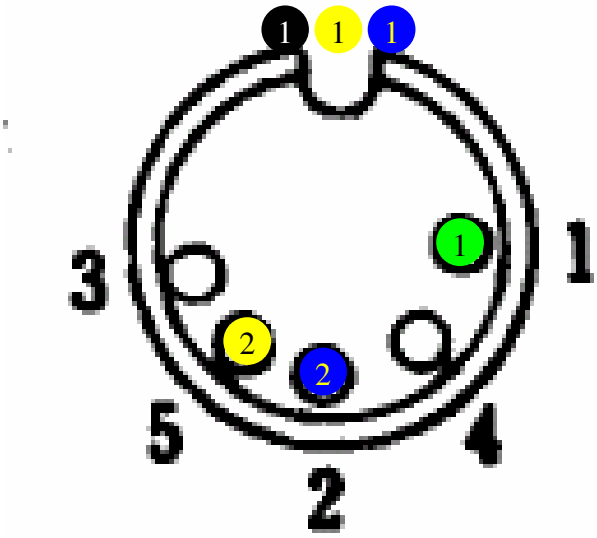
Additional work: The 2 connections to the center-points of the switches „Right“ and „Left“ have to be cut. Refer to the symbol || in the schematics.



Emotator : 747 SRX – 750FXX – 1200 FXX – 1300 MSAX – 1800 FXX



Type of installation: externally via a 5-pole DIN-Connector (180°).
AUX-Relay : None

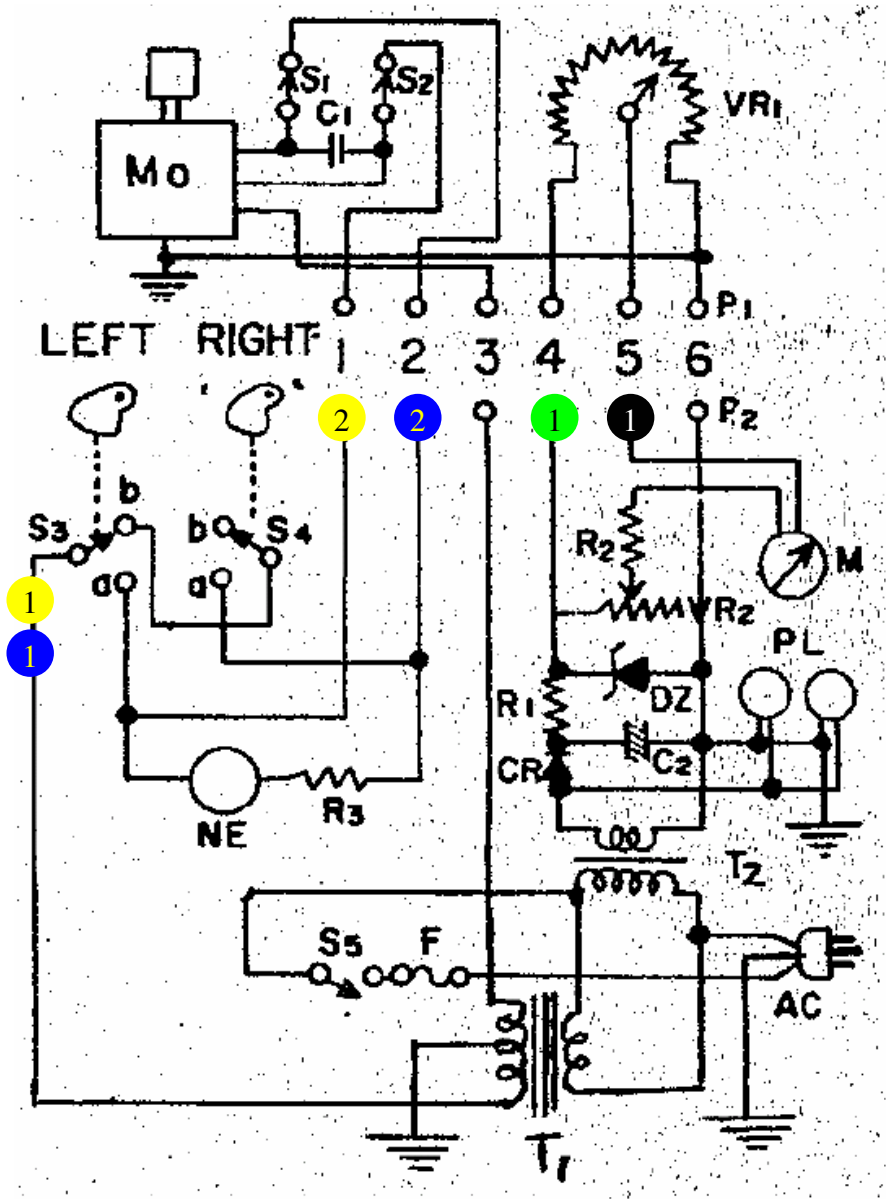


Emotator : 502 CXX

Type of installation: inside the rotor-controller
AUX-Relay : None

As none of the terminals of the rotator-feedback-potentiometer is tightened to the ground of the rotor-controller, take care about the following issue:

- Use a separate power-supply (e.g. wall-mount), that is not connected to stations ground.

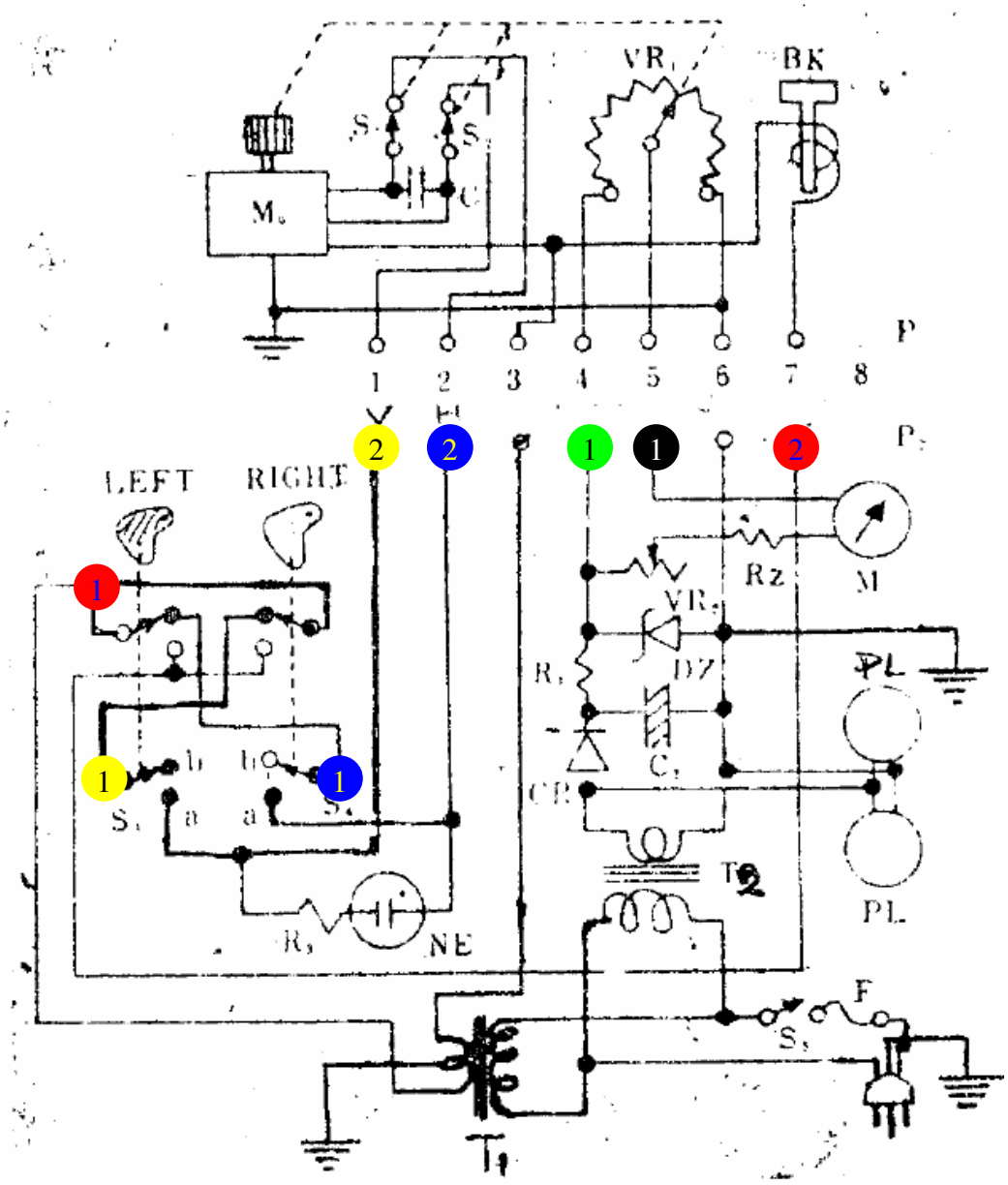


Emotator : 1102MXX – 1103MXX

Type of installation: inside the rotor-controller
AUX-Relay : Brake

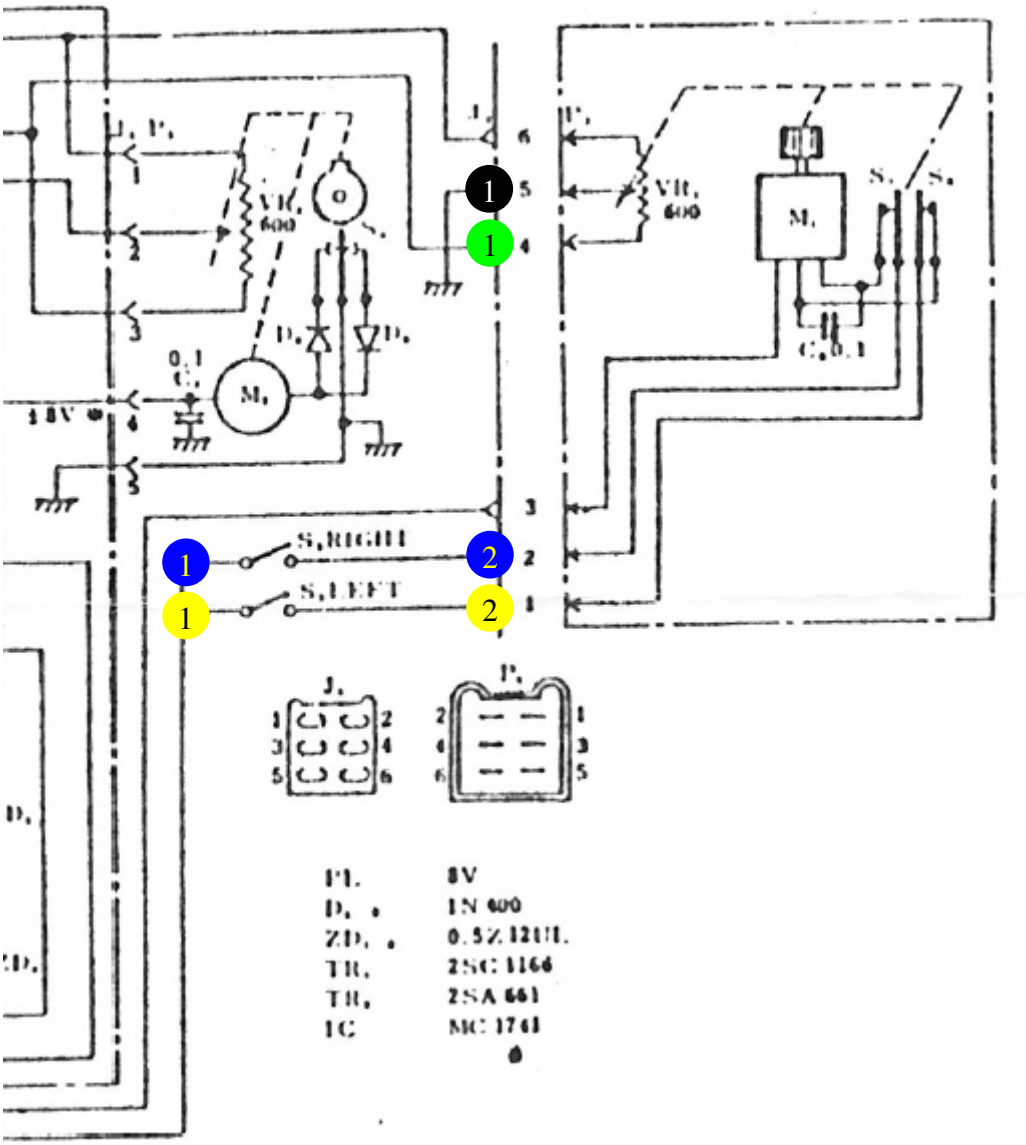
As none of the terminals of the rotator-feedback-potentiometer is tightened to the ground of the rotor-controller, take care about the following issue:

- Use a separate power-supply (e.g. wall-mount), that is not connected to stations ground.



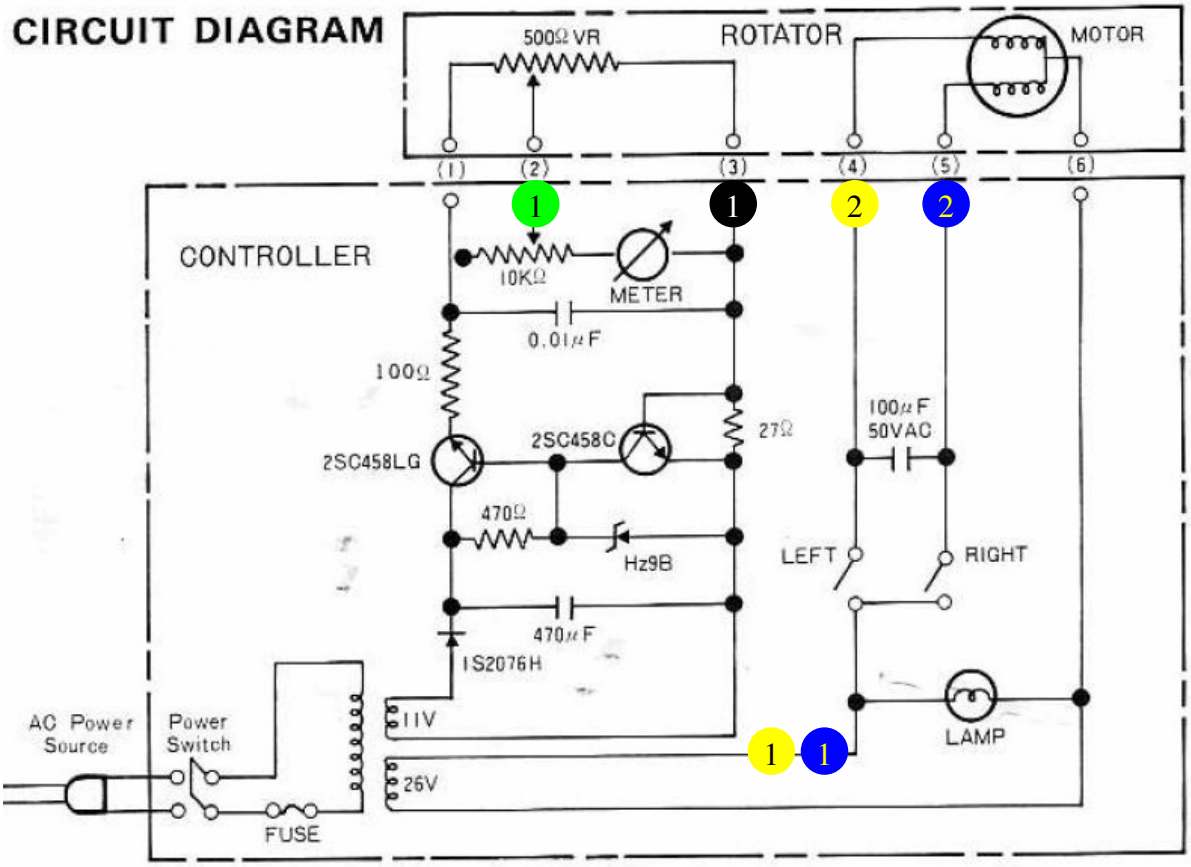
Emotator : EV-700 (Elevation)

Type of installation: inside the rotor-controller



Fukner : Commander 400

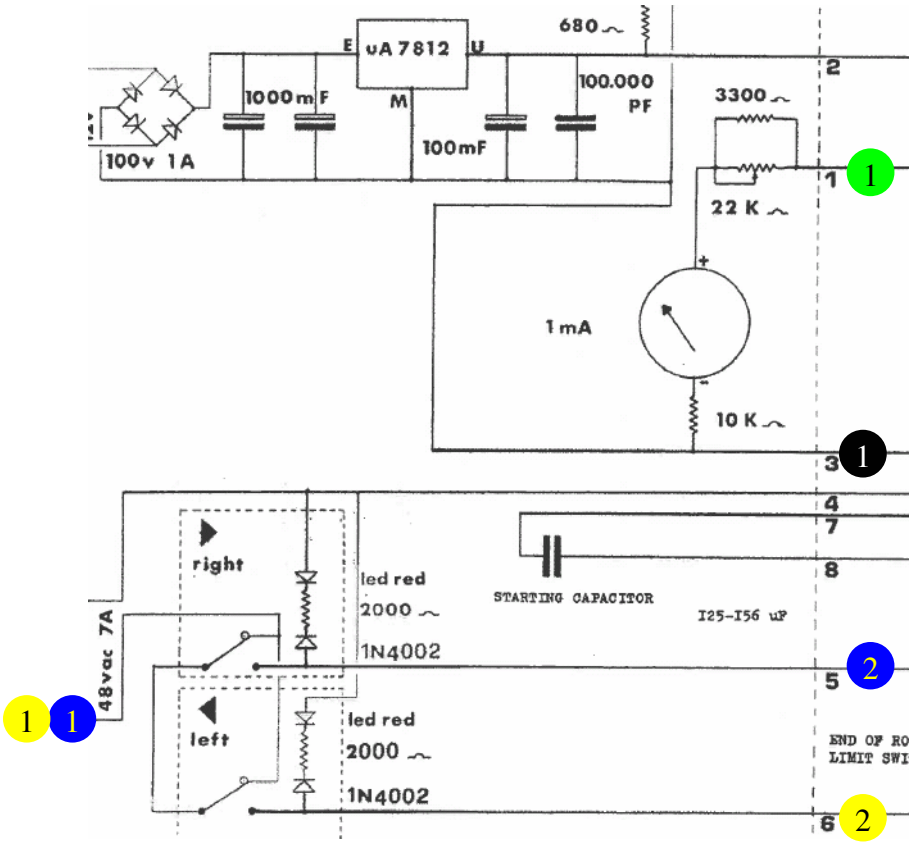
Type of installation: inside the rotor-controller
AUX-Relay : None



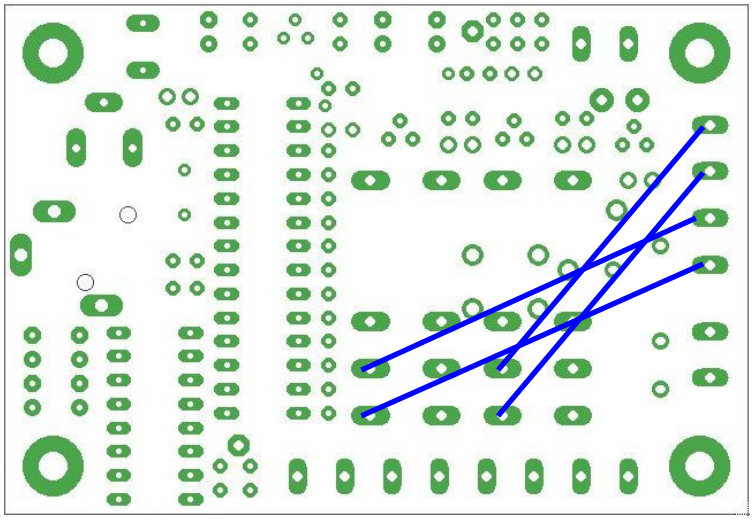
Giovannini : GE 1000/T – GE 1500/T

Type of installation: inside the rotor-controller
AUX-Relay : None

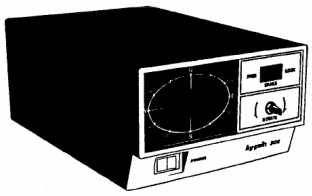
ATTENTION: as the rotator needs very high current you have to use the HEAVY-DUTY-version (1x ON/OFF 8A) of the ERC.



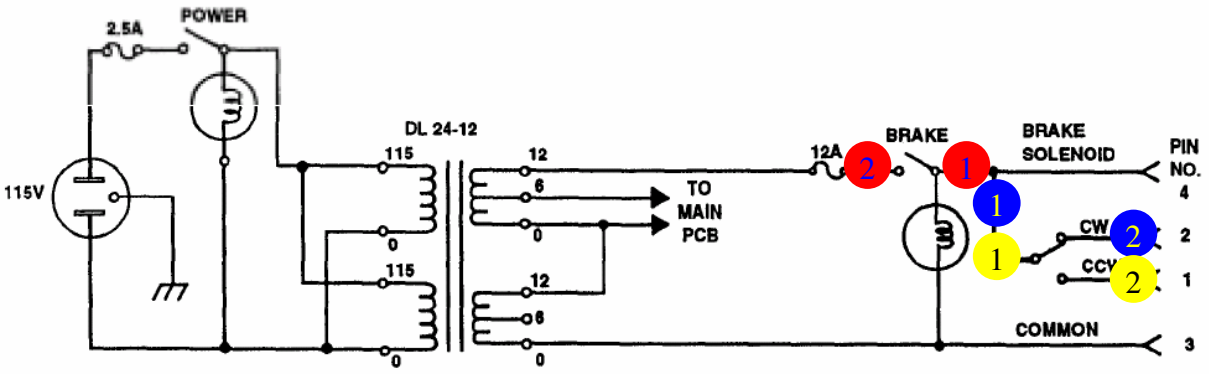
Additional Work: To carry the higher current, 4 additional wires with 0,75 sqmm have to be soldered to the bottom of the PCB.

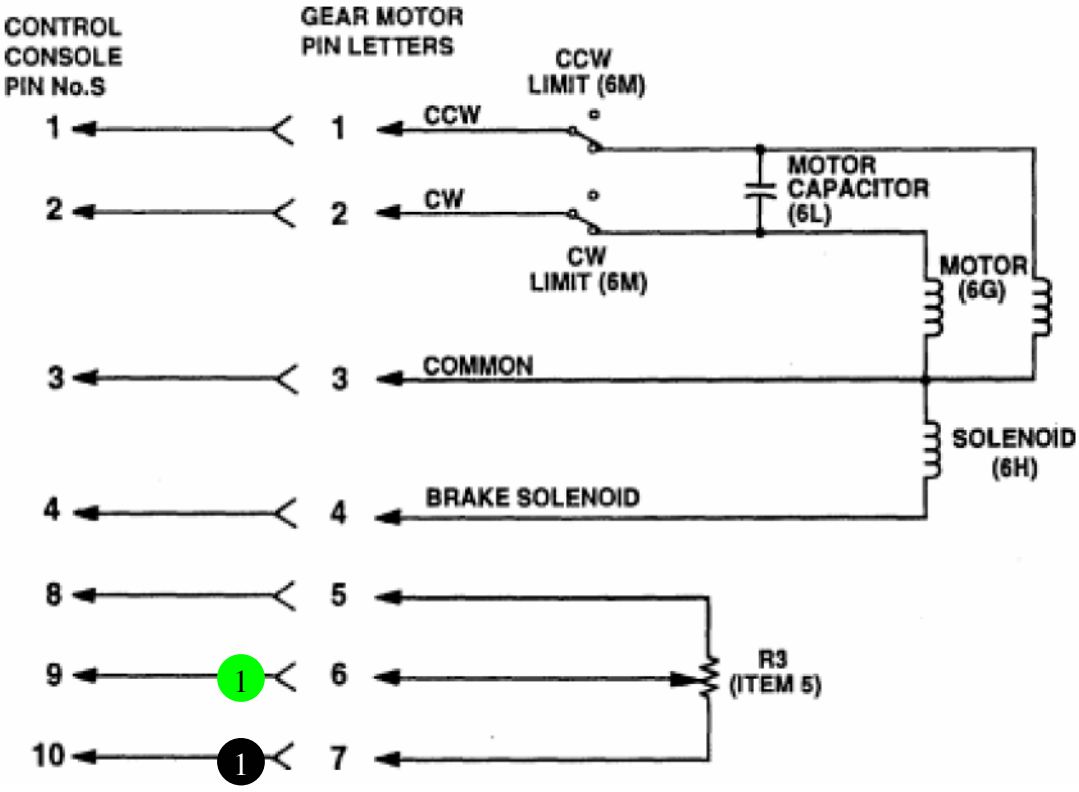


HyGain : HDR-300A

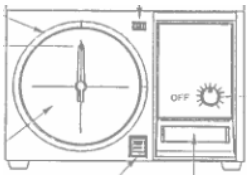


Type of installation: inside the rotor-controller
AUX-Relay : Brake

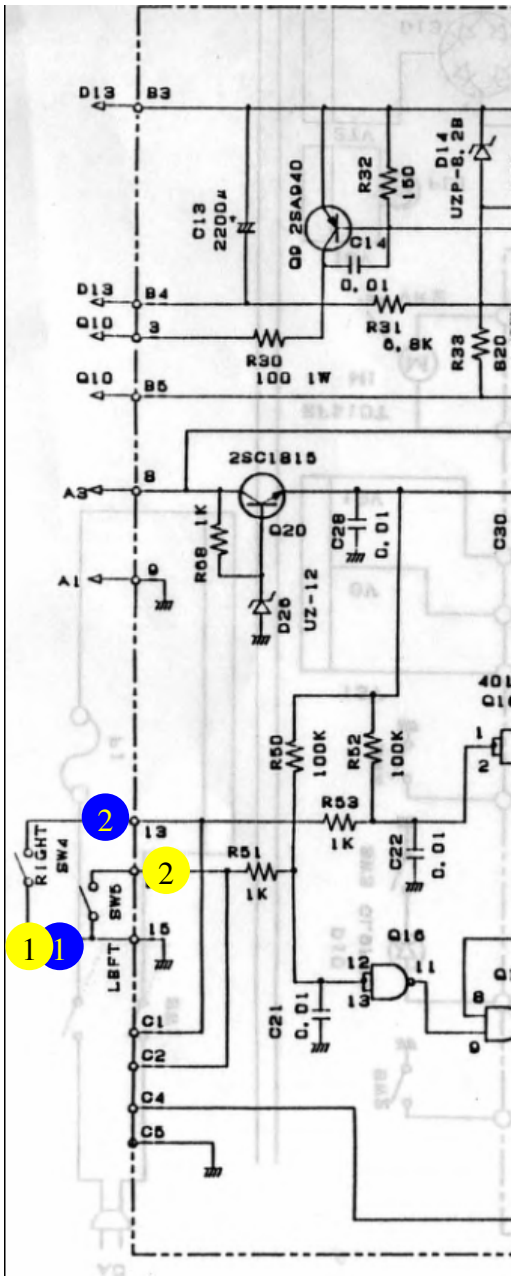


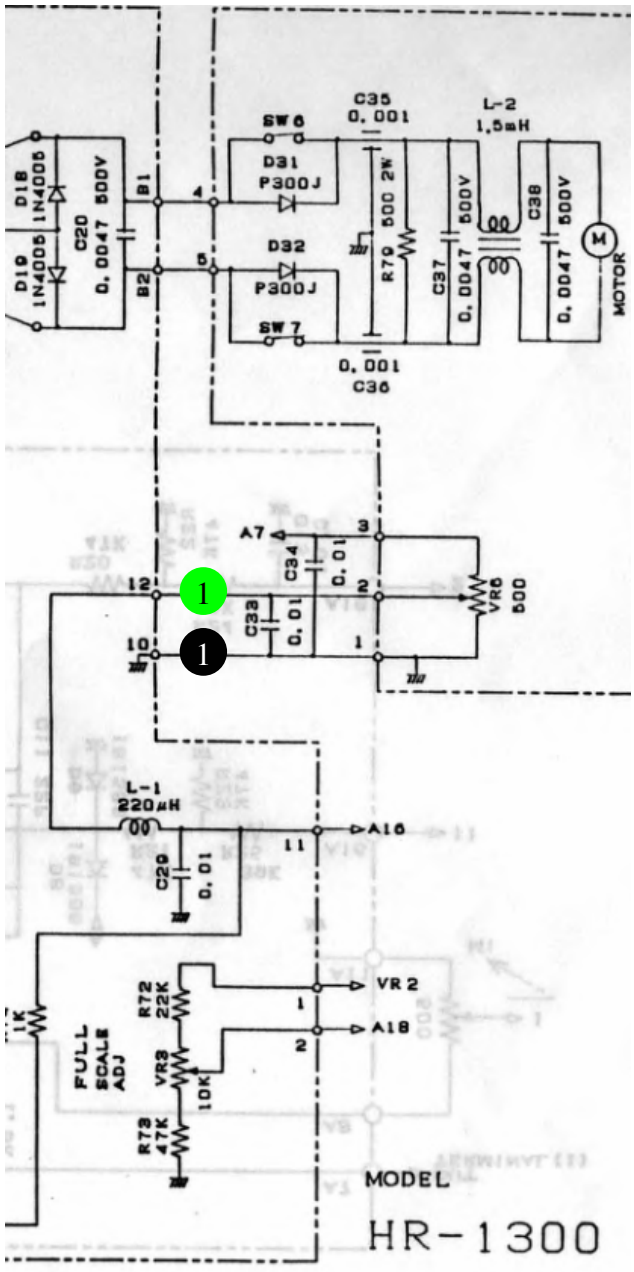


Kenpro : HR-1300



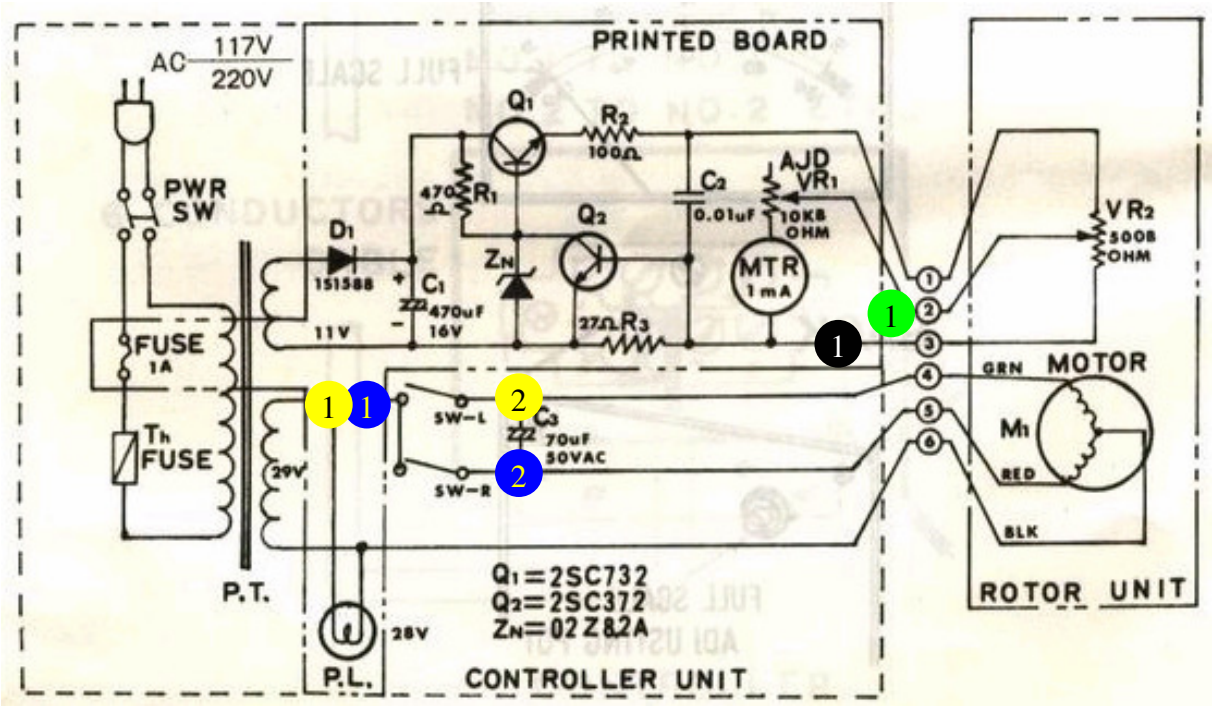
Type of installation: inside the rotor-controller
AUX-Relay : None





Kenpro : KR-400

Type of installation: inside the rotor-controller
AUX-Relay : None



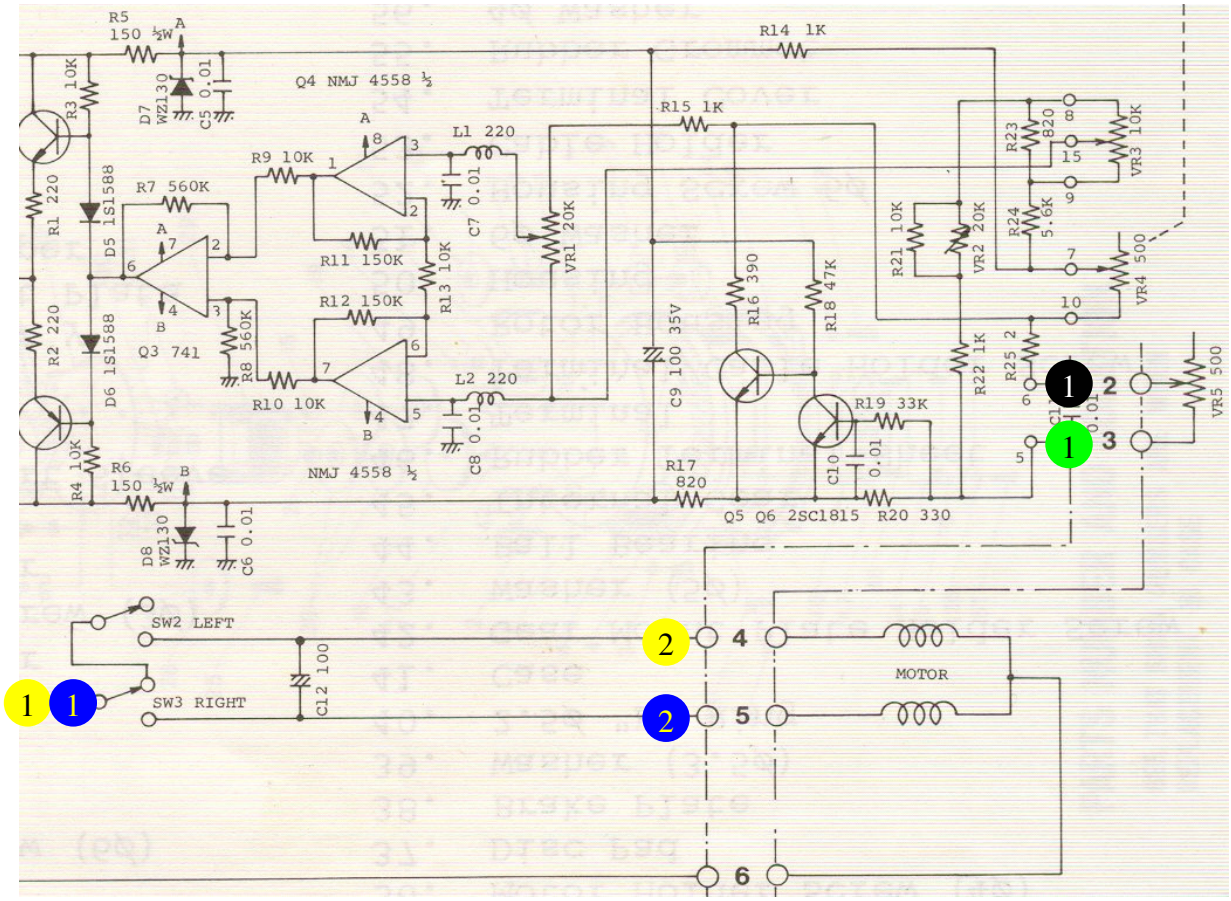
Kenpro : KR-400RC

Type of installation: inside the rotor-controller
AUX-Relay : None

Hint: It was reported from the field, that in some cases the wires 2 and 3 of the rotator-connector (rotor-feedback-voltage) where connected wrong against the schematics. If there are any problems, please check first the polarity and if wrong, change the green and black-coded connections. Green should have a positive voltage against black.

As none of the terminals of the rotator-feedback-potentiometer is tightened to the ground of the rotor-controller, take care about the following issue:

- Use a separate power-supply (e.g. wall-mount), that is not connected to stations ground.

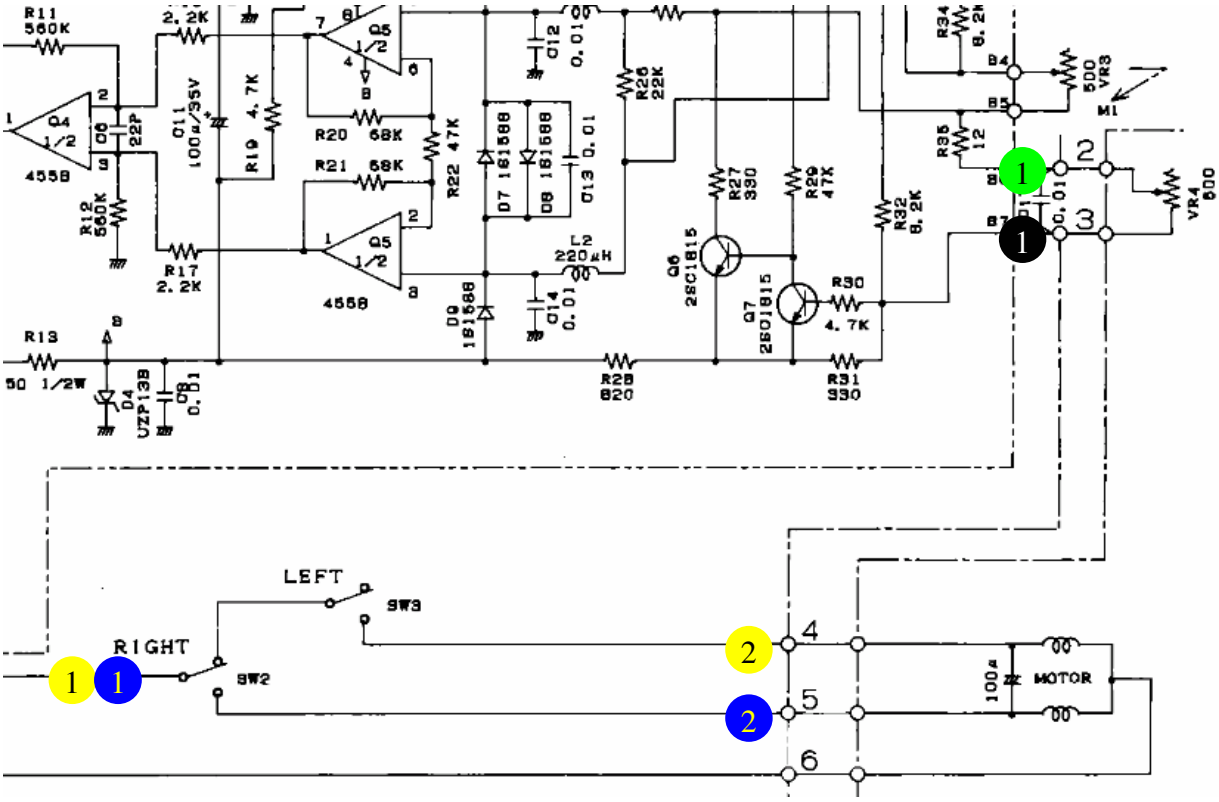


Kenpro : KR-450XL – KR-650XL

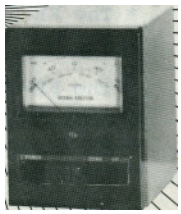
Type of installation: inside the rotor-controller
AUX-Relay : None

As none of the terminals of the rotator-feedback-potentiometer is tightened to the ground of the rotor-controller, take care about the following issue:

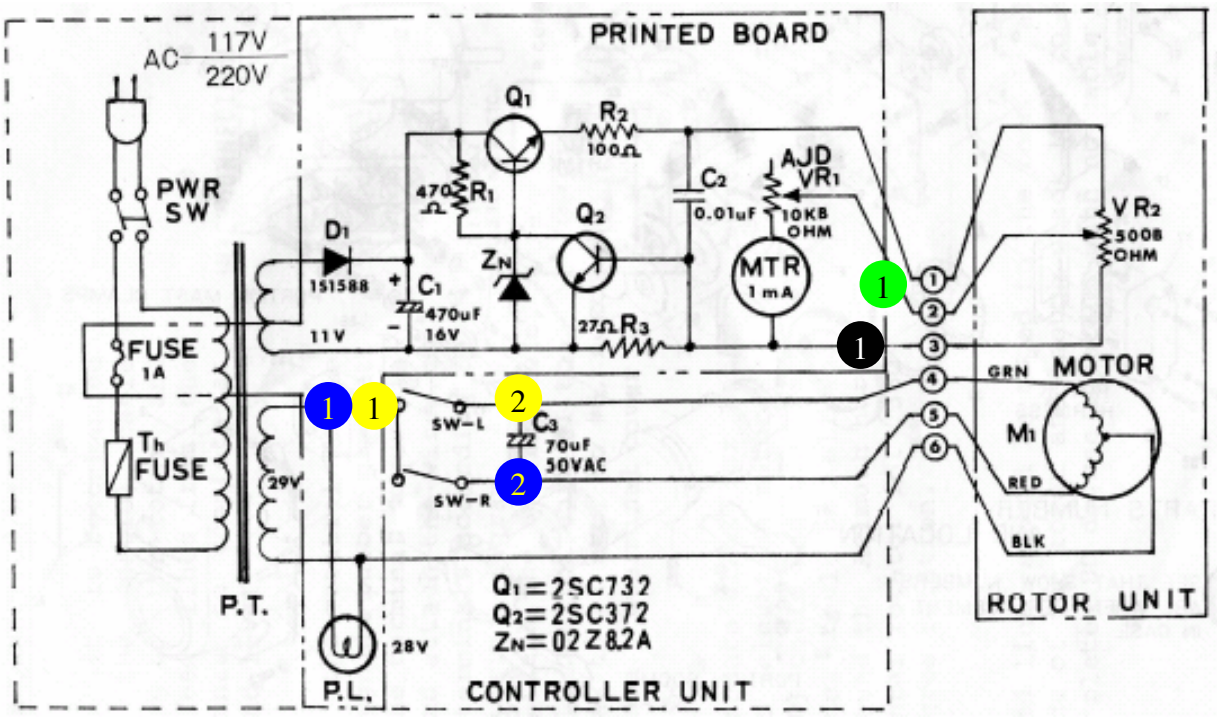
- Use a separate power-supply (e.g. wall-mount), that is not connected to stations ground.



Kenpro : KR-500 (Elevation)



Type of installation: inside the rotor-controller
AUX-Relay : None



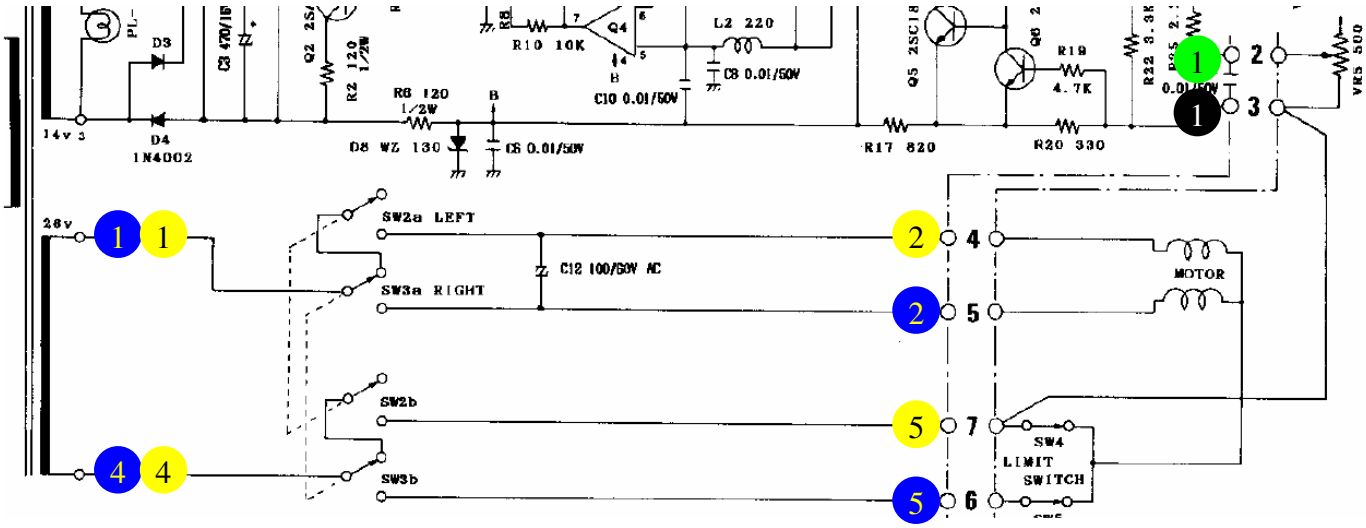
Kenpro : KR-600RC

Type of installation: inside the rotor-controller
AUX-Relay : None

Hint: It was reported from the field, that in some cases the wires 2 and 3 of the rotator-connector (rotor-feedback-voltage) where connected wrong against the schematics. If there are any problems, please check first the polarity and if wrong, change the green and black-coded connections. Green should have a positive voltage against black.

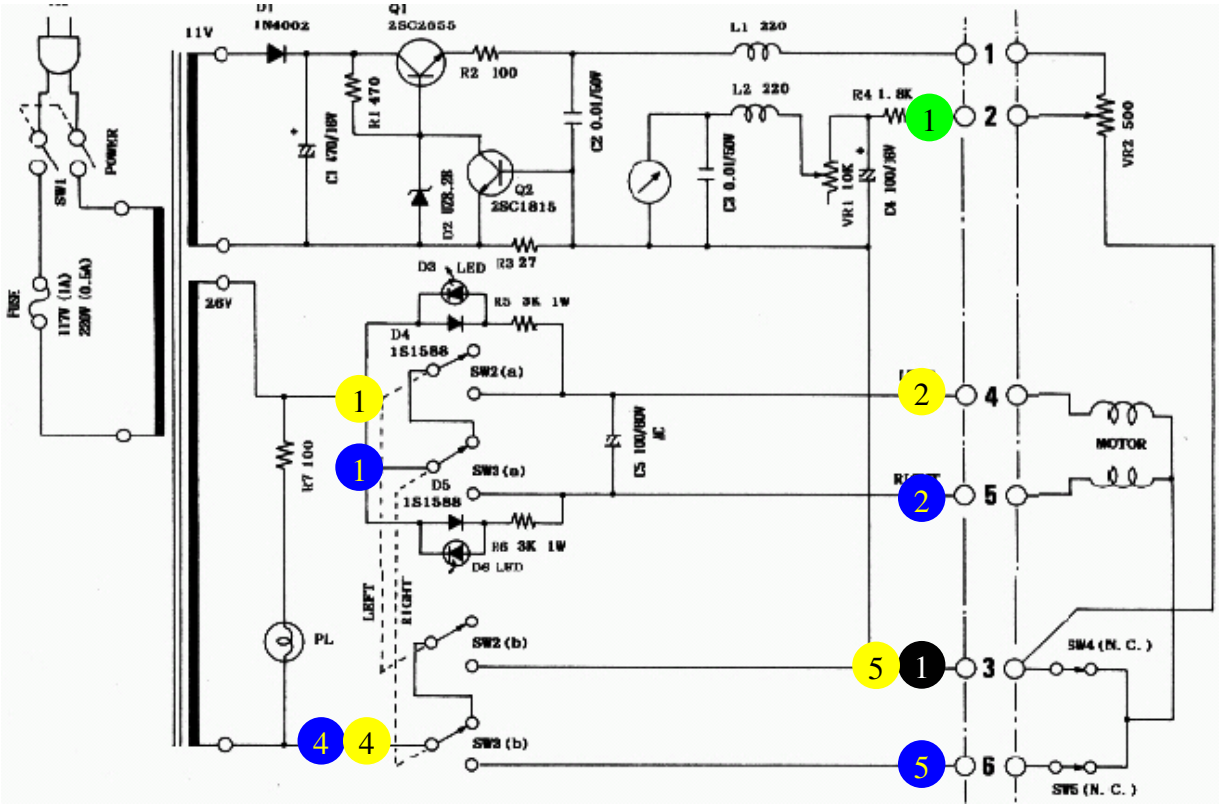
As none of the terminals of the rotator-feedback-potentiometer is tightened to the ground of the rotor-controller, take care about the following issue:

- Use a separate power-supply (e.g. wall-mount), that is not connected to stations ground.



Kenpro : KR-600S

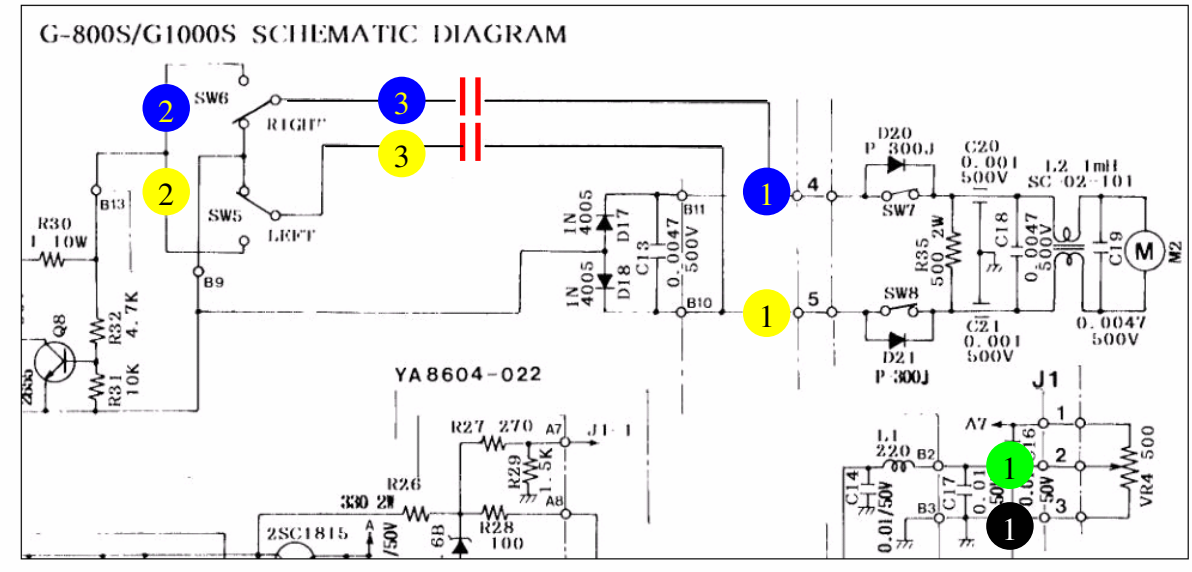
Type of installation: inside the rotor-controller
AUX-Relay : None



Kenpro : KR-800 – KR-800S – KR-1000

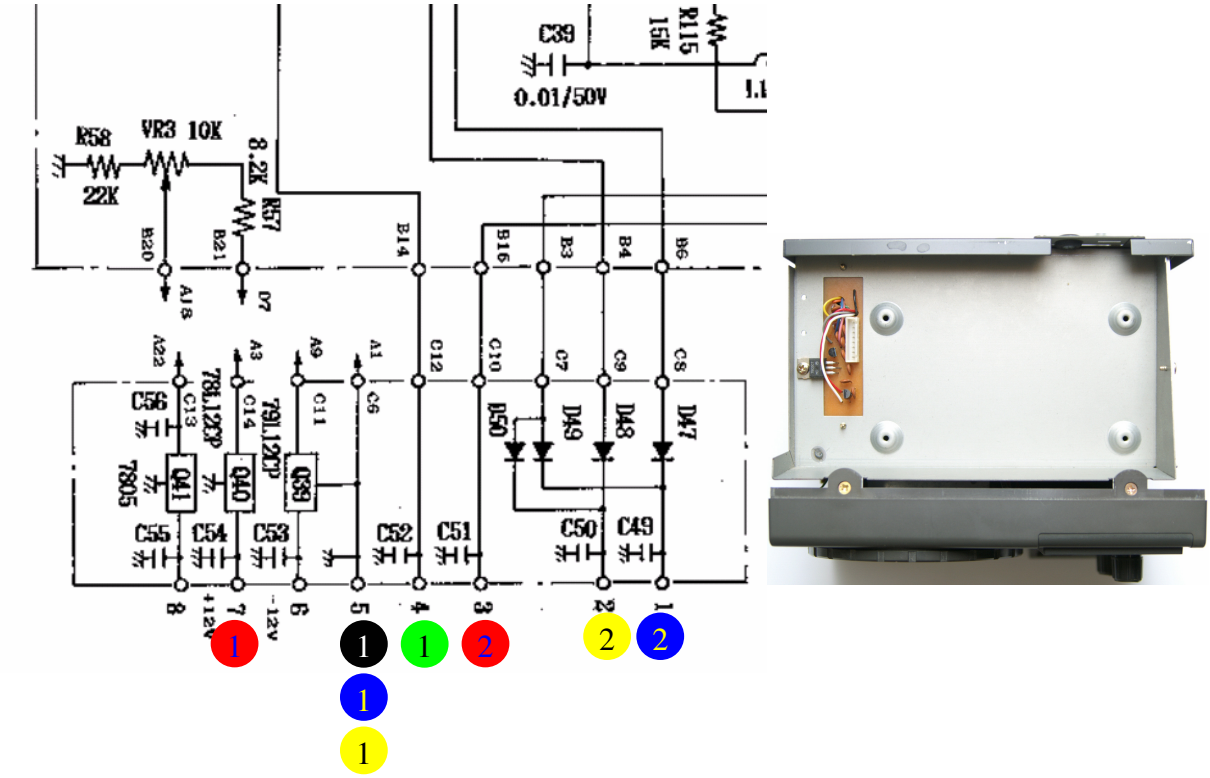
Type of installation: inside the rotor-controller
AUX-Relay : None

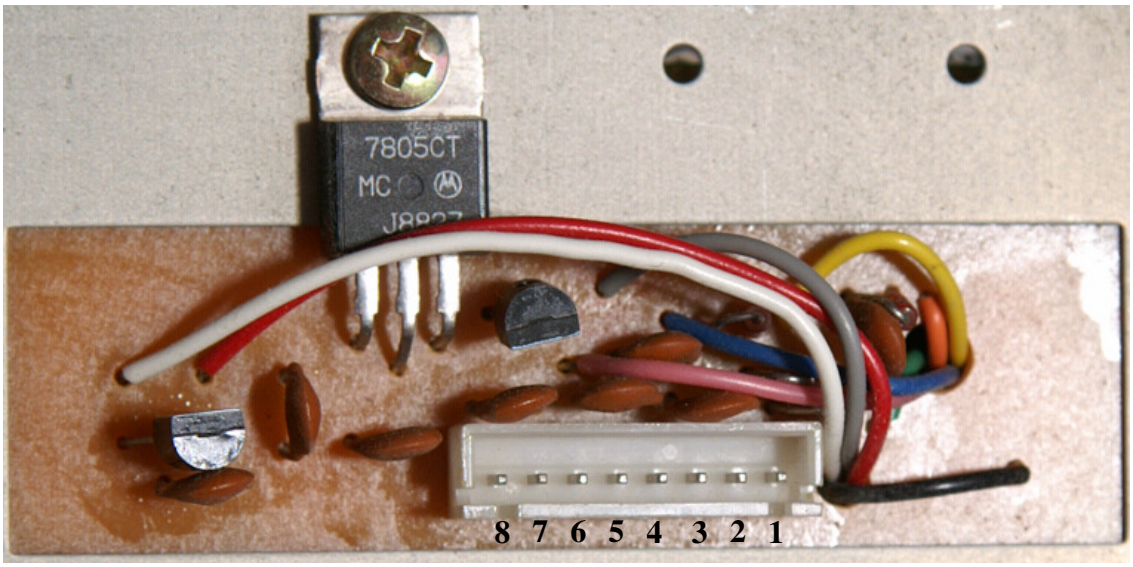
Additional work: The 2 connections to the center-points of the switches „Right“ and „Left“ have to be cut. Refer to the symbol || in the schematics.



Kenpro : KR-800SDX

Type of installation: inside the rotor-controller to a 8-pole connector.
AUX-Relay : Speed





If you change the 7805 in the picture above to a 7812, you may use the +12V on Pin 8 for the ERC.

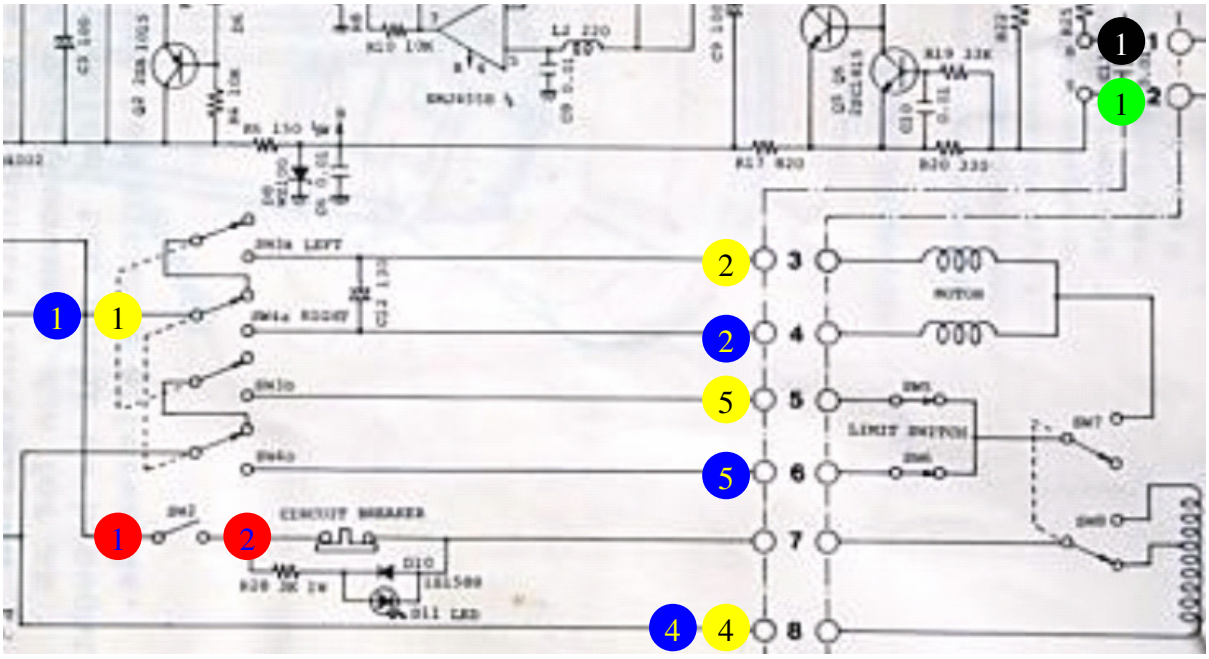
Kenpro : KR-2000RC

Type of installation: inside the rotor-controller
AUX-Relay : Brake

Hint: It was reported from the field, that in some cases the wires 2 and 3 of the rotator-connector (rotor-feedback-voltage) where connected wrong against the schematics. If there are any problems, please check first the polarity and if wrong, change the green and black-coded connections. Green should have a positive voltage against black.

As none of the terminals of the rotator-feedback-potentiometer is tightened to the ground of the rotor-controller, take care about the following issue:

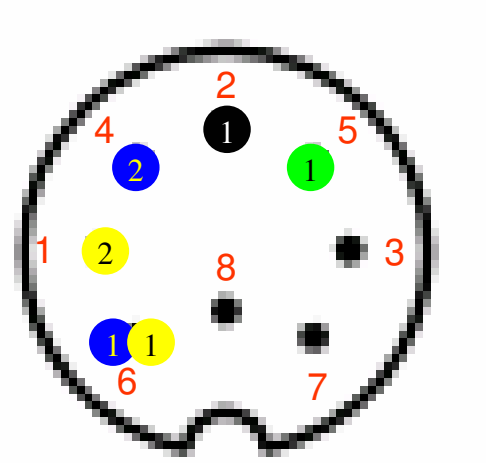
- Use a separate power-supply (e.g. wall-mount), that is not connected to stations ground.



Orion : OR-2300

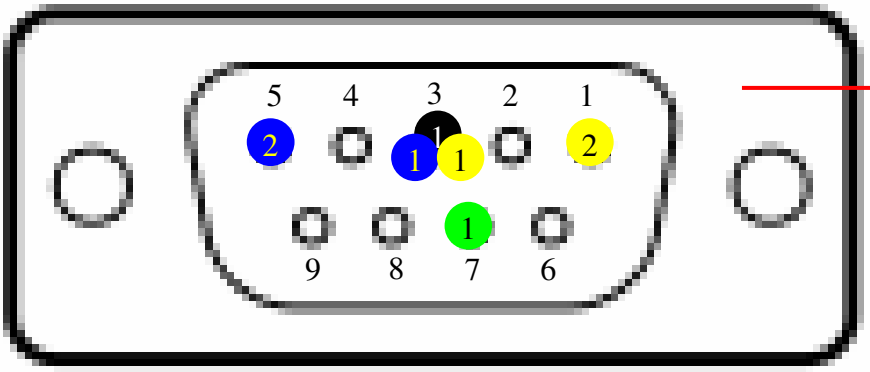
Type of installation: externally via a 8-pole DIN-Connector.
AUX-Relay : None

Hint: In order to use the rotator via the remote-connector, the mode-switch of the controller has to be set to Preset, not Manual.



PRO.SIS.TEL: Model A

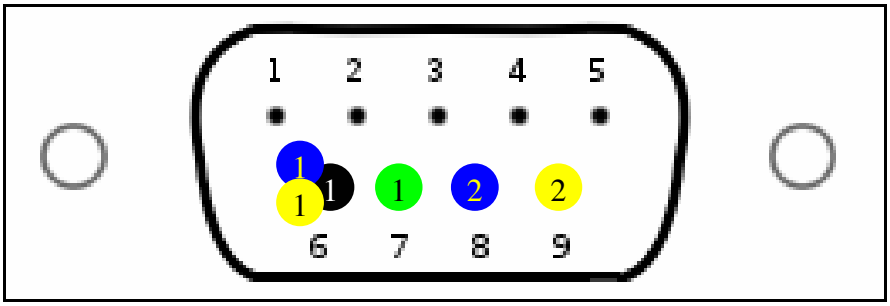
Type of installation: externally via a female 9-pole D-Sub.
AUX-Relay : None



Make a connection between 1 , 1 and 1 on the ERC and go only with 1 cable to the connector.

PRO.SIS.TEL: Model B

Type of installation: externally via a 9-pole D-Sub.
AUX-Relay : None



Make a connection between 1 , 1 and 1 on the ERC and go only with 1 cable to the connector.

Walmar : ML, MU-1, MU-3, MH

Type of installation: inside the rotor-controller
AUX-Relay: Brake

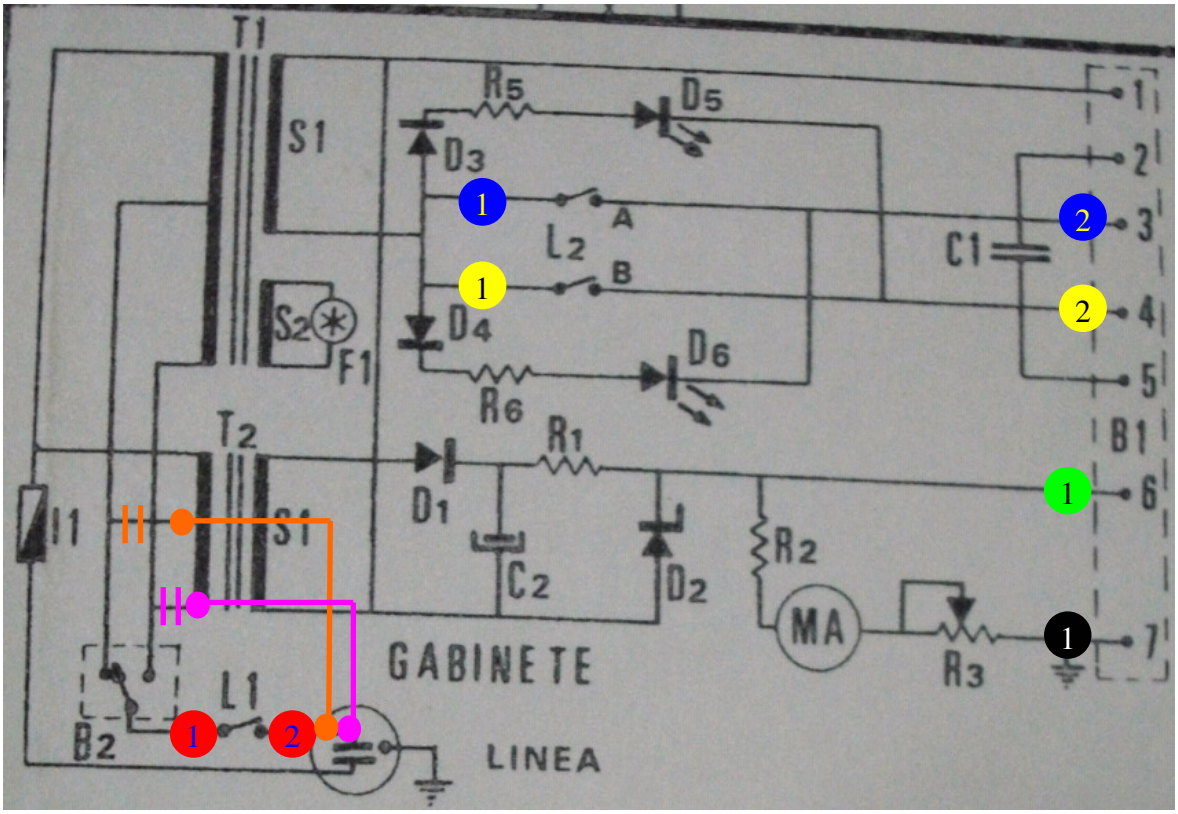
Additional work: The connection to the instrumentation-transformer has to be made permanent.

If your main-voltage is 230V:

- cut the wire to the instrumentation-transformer (Refer to the pink symbol || in the schematics)
- add a new wire (pink)

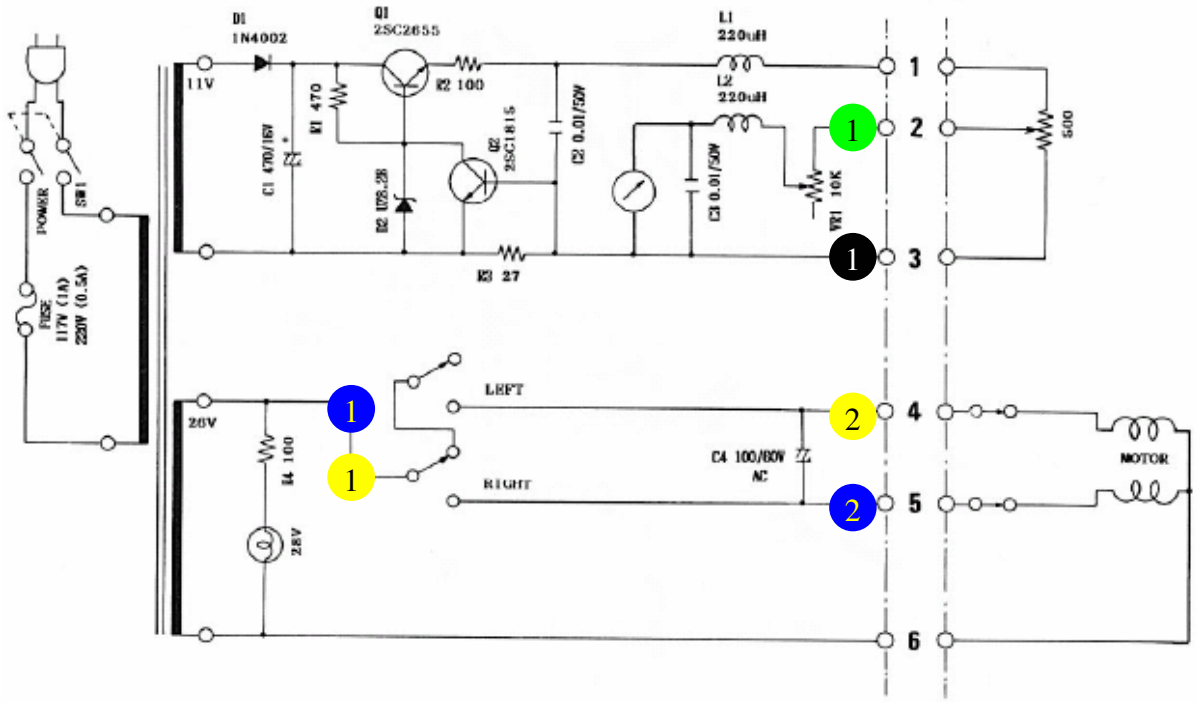
If your main-voltage is 115V:

- cut the wire to the instrumentation-transformer (Refer to the orange symbol || in the schematics)
- add a new wire (orange)



Yaesu : G-400

Type of installation: inside the rotor-controller
AUX-Relay : None



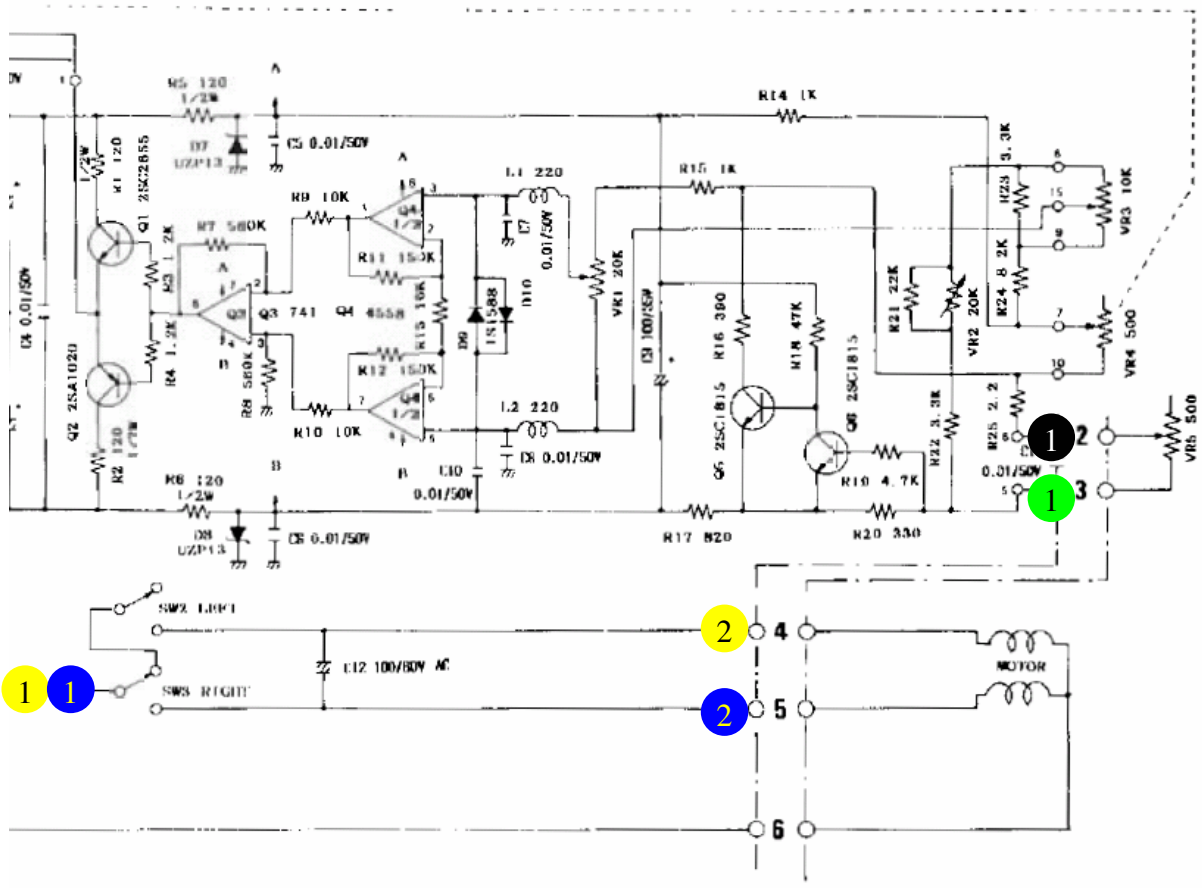
Yeasu : G-400RC

Type of installation: inside the rotor-controller
AUX-Relay : None

Hint: It was reported from the field, that in some cases the wires 2 and 3 of the rotator-connector (rotor-feedback-voltage) where connected wrong against the schematics. If there are any problems, please check first the polarity and if wrong, change the green and black-coded connections. Green should have a positive voltage against black.

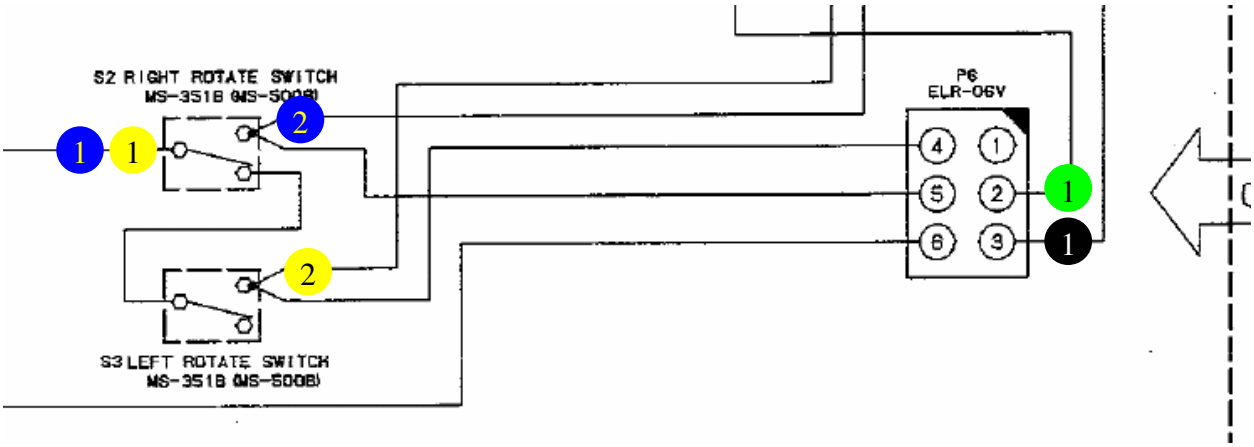
As none of the terminals of the rotator-feedback-potentiometer is tightened to the ground of the rotor-controller, take care about the following issue:

- Use a separate power-supply (e.g. wall-mount), that is not connected to stations ground.

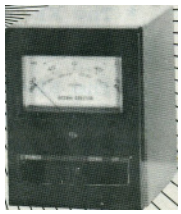


Yaesu : G-450A/C – G-650A/C – G-1000C

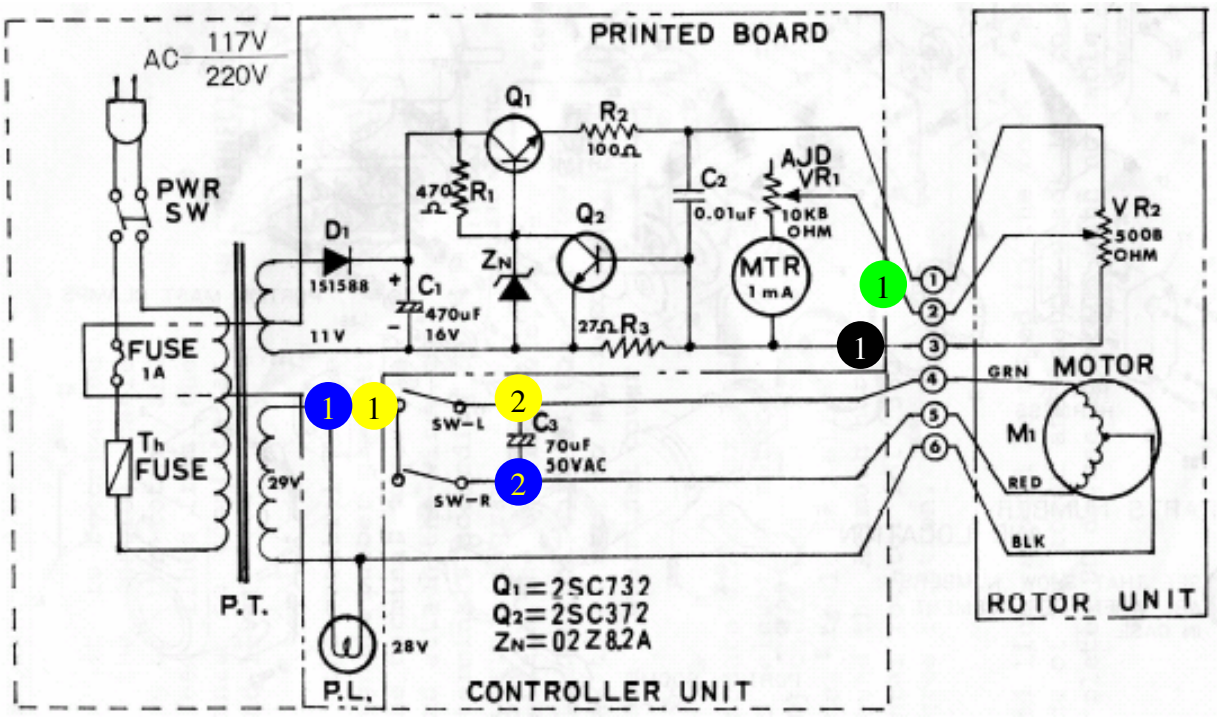
Type of installation: inside the rotor-controller
AUX-Relay : None



Yaesu : G-500/500A (Elevation)

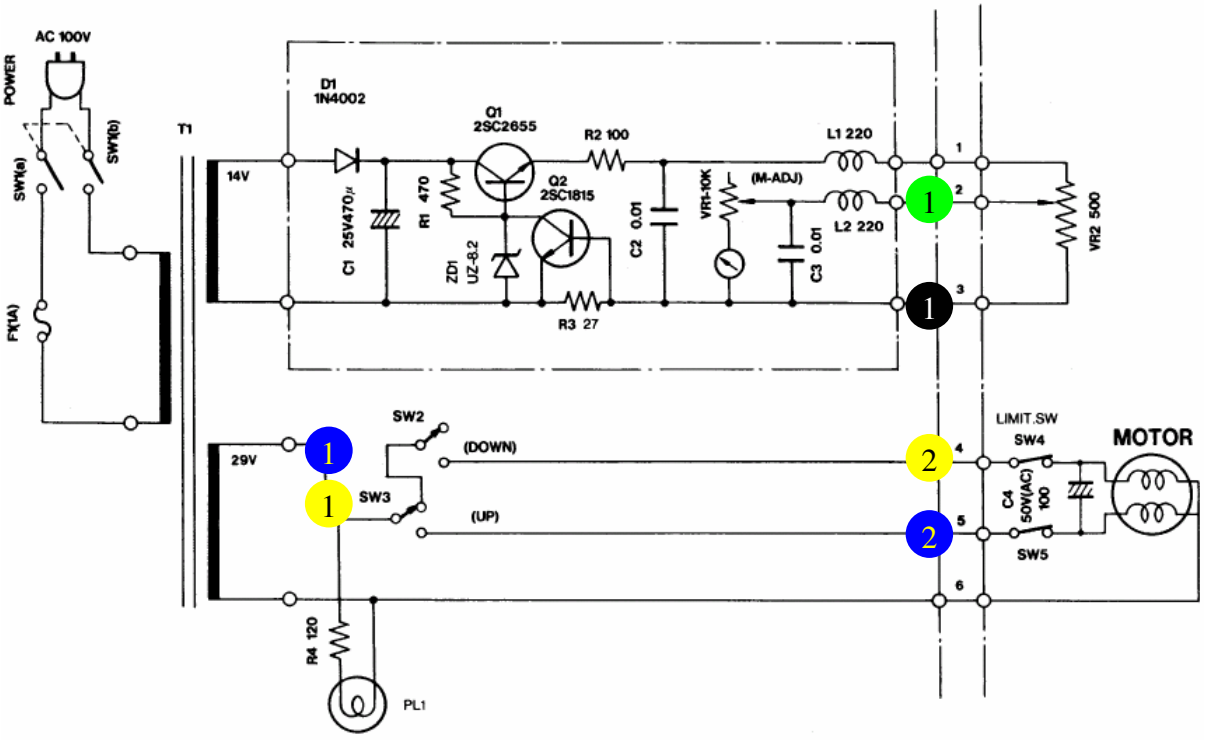


Type of installation: inside the rotor-controller
AUX-Relay : None

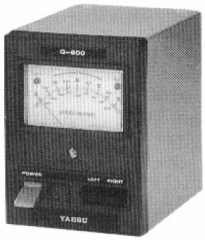


Yaesu : G-550 (Elevation)

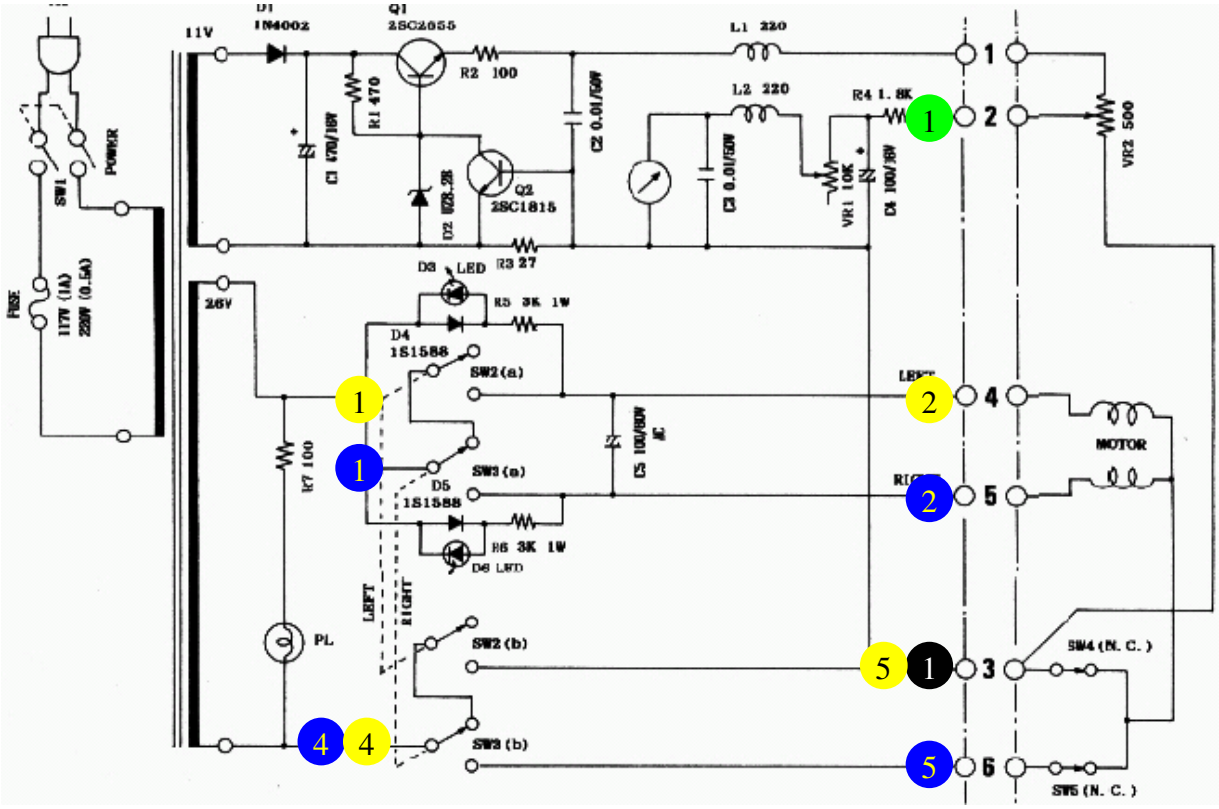
Type of installation: inside the rotor-controller
AUX-Relay : None



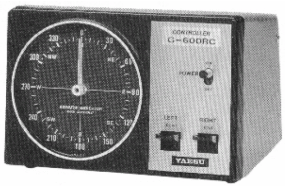
Yeasu : G-600



Type of installation: inside the rotor-controller
AUX-Relay : None



Yaesu : G-600RC

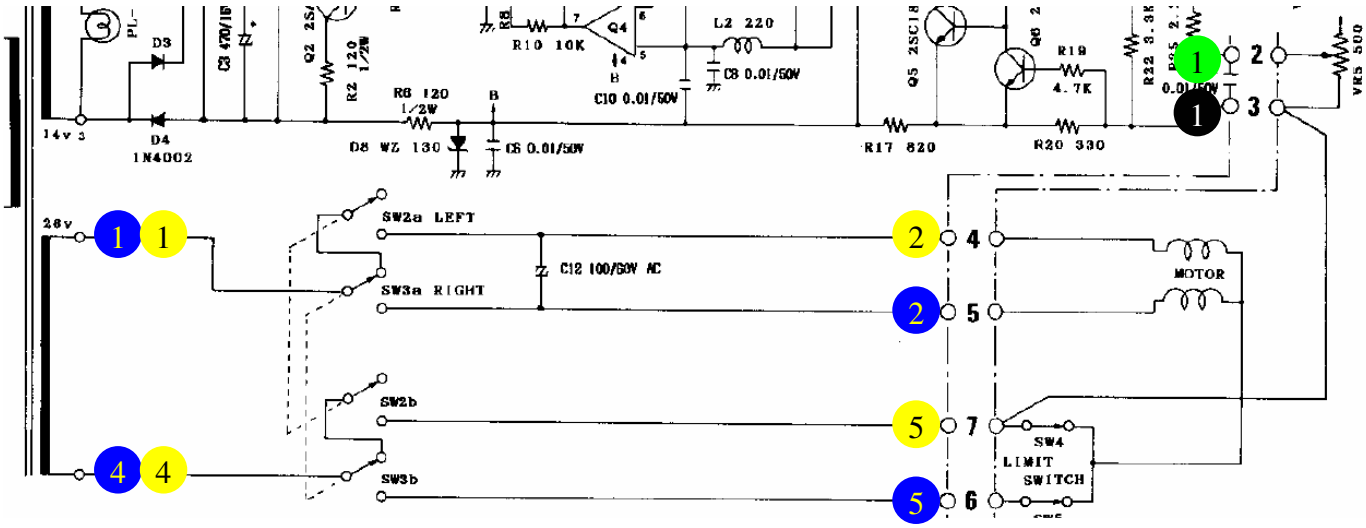


Type of installation: inside the rotor-controller
AUX-Relay : None

Hint: It was reported from the field, that in some cases the wires 2 and 3 of the rotator-connector (rotor-feedback-voltage) where connected wrong against the schematics. If there are any problems, please check first the polarity and if wrong, change the green and black-coded connections. Green should have a positive voltage against black.

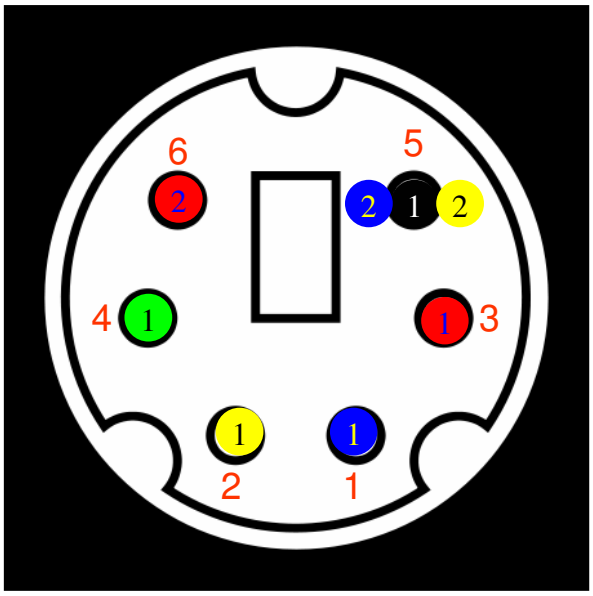
As none of the terminals of the rotator-feedback-potentiometer is tightened to the ground of the rotor-controller, take care about the following issue:

- Use a separate power-supply (e.g. wall-mount), that is not connected to stations ground.



Yaesu : G-800DXA/C – G-1000DXA/C – G-2800DXA/C

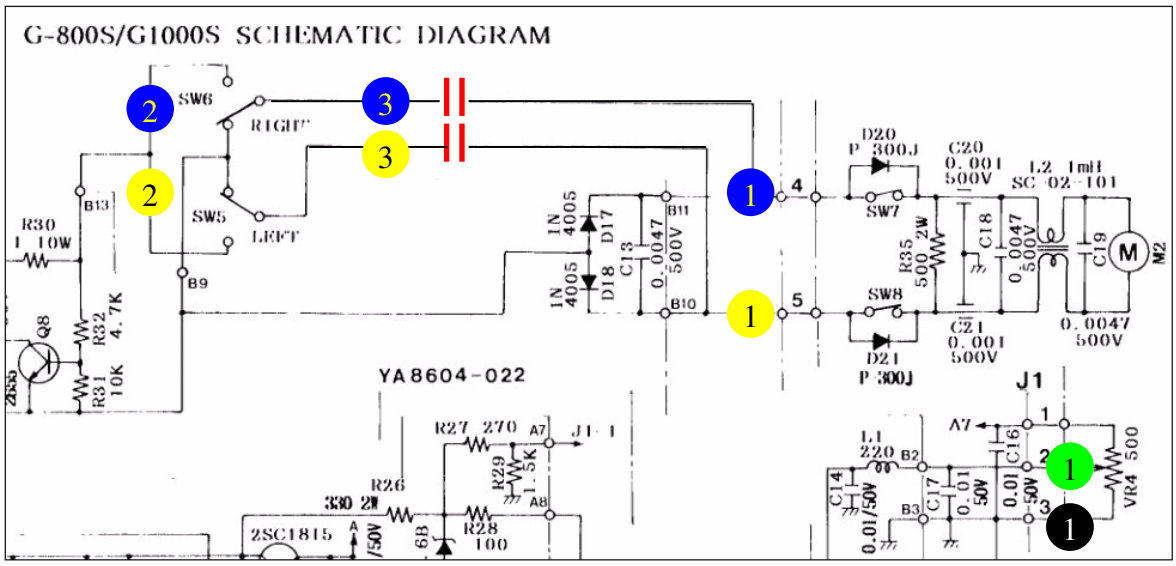
Type of installation: externally via a 6-pole Mini-DIN-Connector.
AUX-Relay : Speed



Yeasu : G-800S – G-1000S

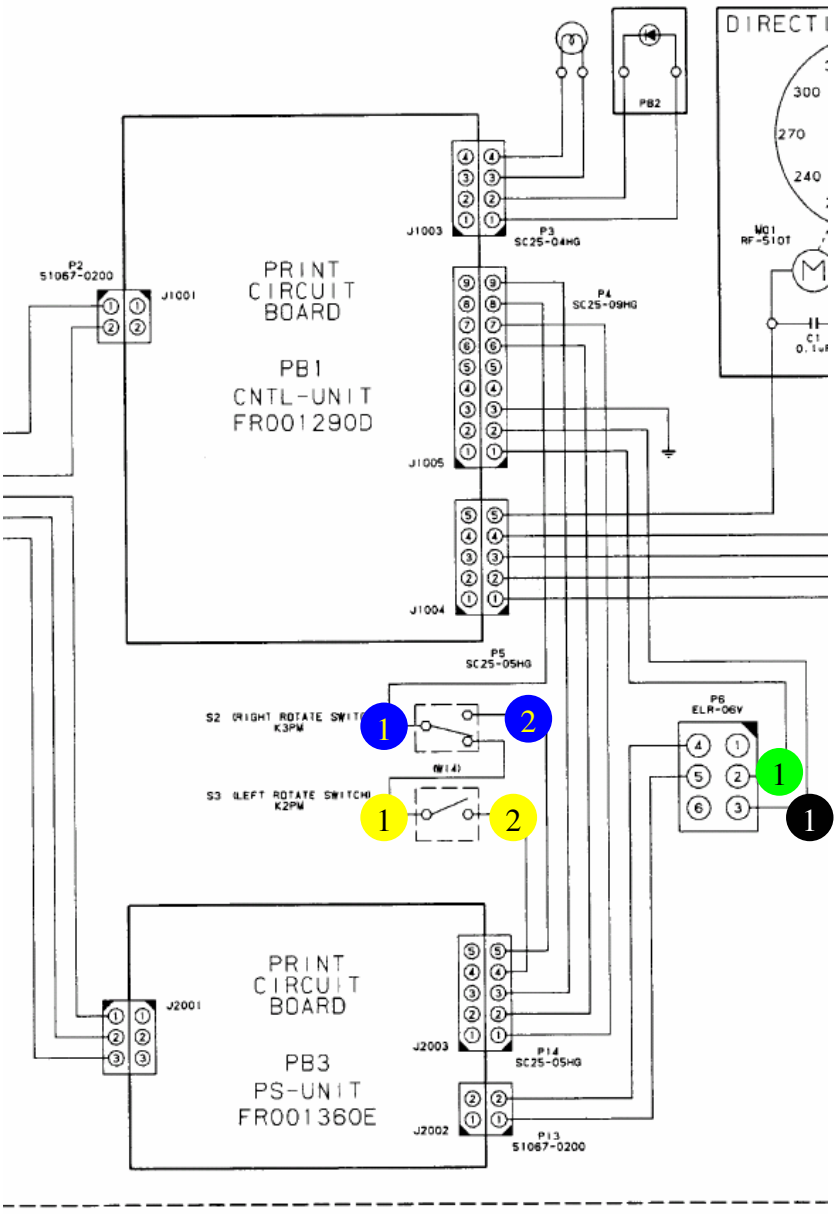
Type of installation: inside the rotor-controller
AUX-Relay : None

Additional work: The 2 connections to the center-points of the switches „Right“ and „Left“ have to be cut. Refer to the symbol || in the schematics.



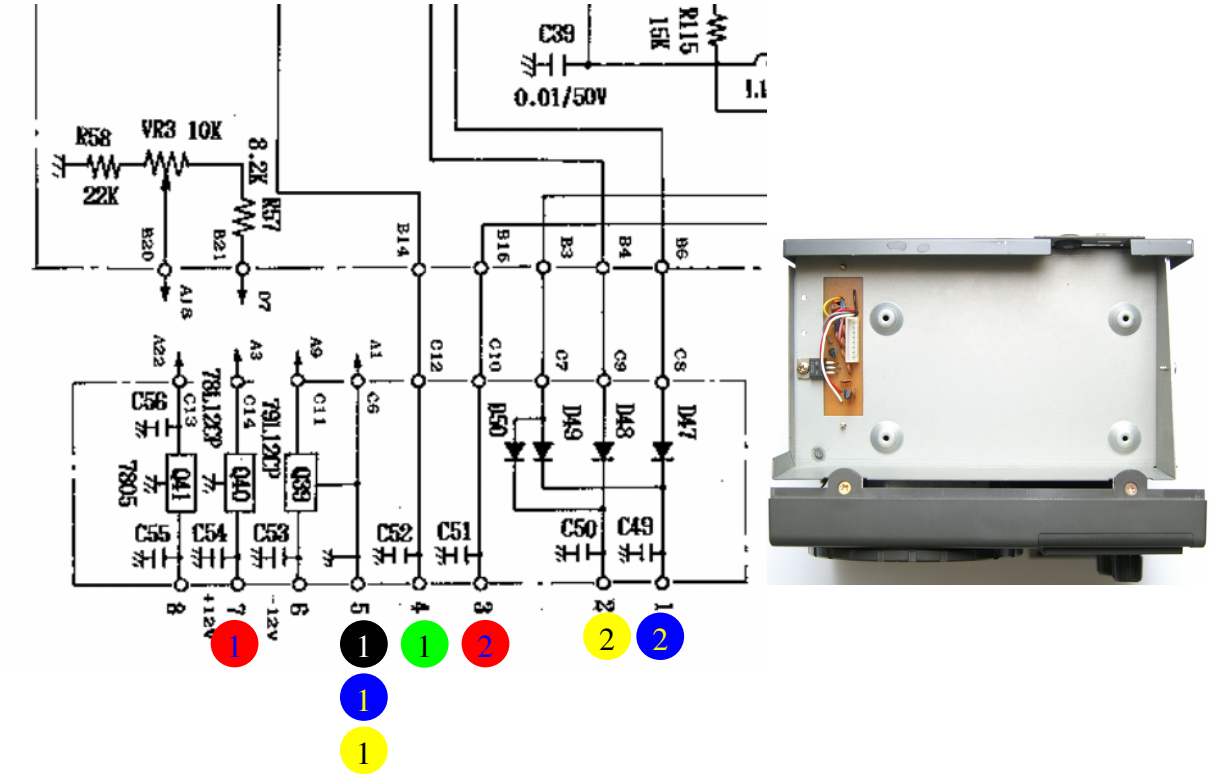
Yeasu : G-800SA – G-1000SA

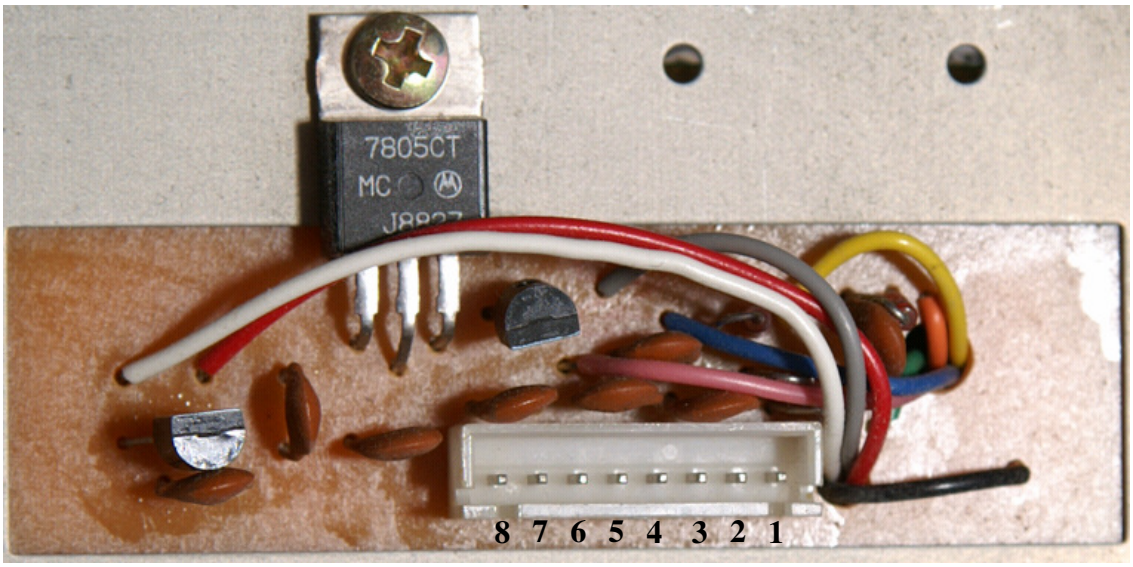
Type of installation: inside the rotor-controller
AUX-Relay : None



Yaesu : G-800SDX – G-1000SDX – G-2700SDX – G-2800SDX

Type of installation: inside the rotor-controller to a 8-pole connector.
AUX-Relay : Speed





If you change the 7805 in the picture above to a 7812, you may use the +12V on Pin 8 for the ERC.

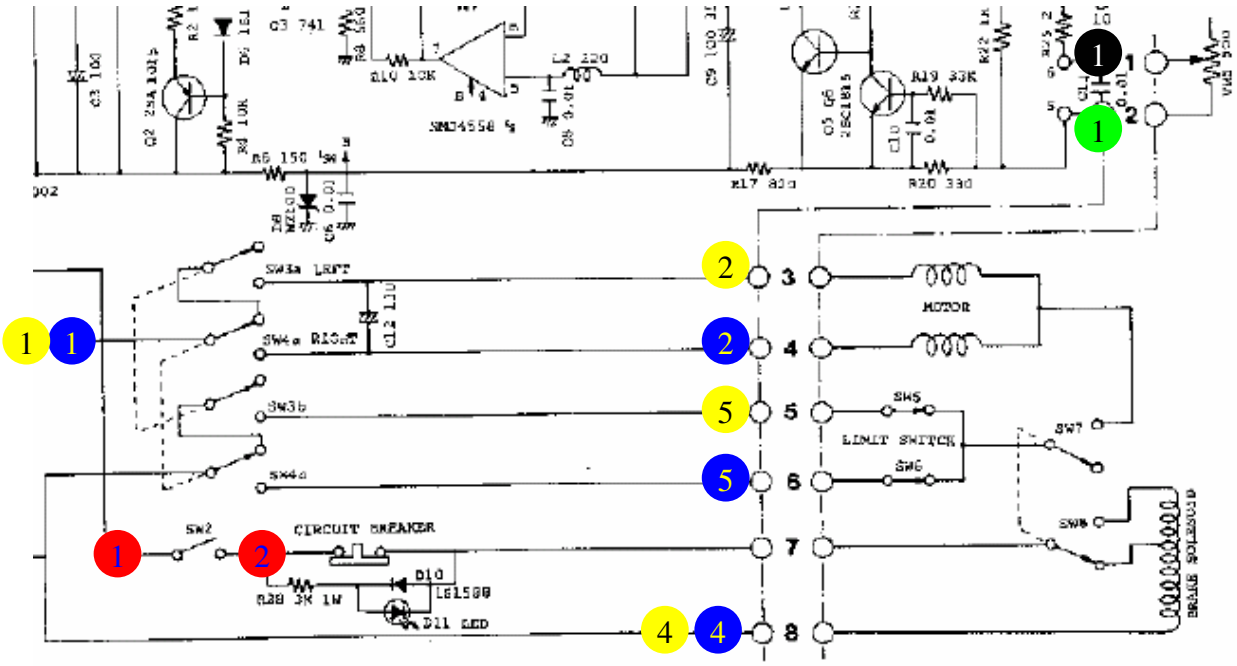
Yaesu : G-2000RC

Type of installation: inside the rotor-controller
AUX-Relay : Brake

Hint: It was reported from the field, that in some cases the wires 2 and 3 of the rotator-connector (rotor-feedback-voltage) where connected wrong against the schematics. If there are any problems, please check first the polarity and if wrong, change the green and black-coded connections. Green should have a positive voltage against black.

As none of the terminals of the rotator-feedback-potentiometer is tightened to the ground of the rotor-controller, take care about the following issue:

- Use a separate power-supply (e.g. wall-mount), that is not connected to stations ground.



HOMEBREW : DC-Rotator