

# Test points

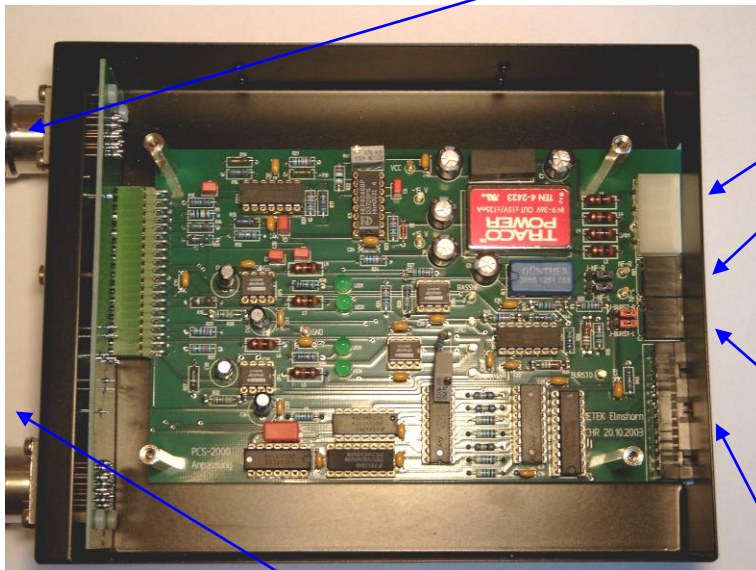
## Doppler SODAR: PCS.2000/64MF

21.07.2008/Le



### PC-Adaptation internal

Type: PCA004



RASS (option) and Pt100 connector (Out of use)

PC - power socket +5V; +12V

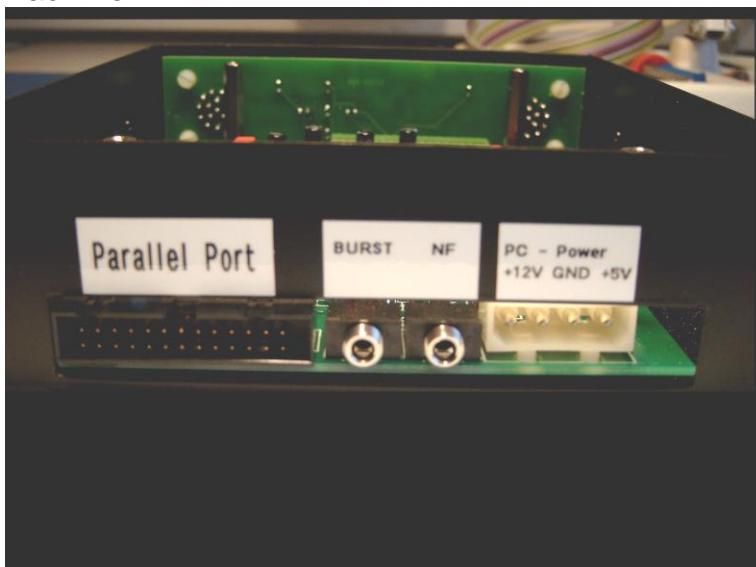
NF: Output Receive Signal; Connect to the PC-Soundcard [IN]

BURST: Input Transmit Signal; Connect to the PC-Soundcard [OUT]

Parallel Port; Connect to the PC [Parallel Port]

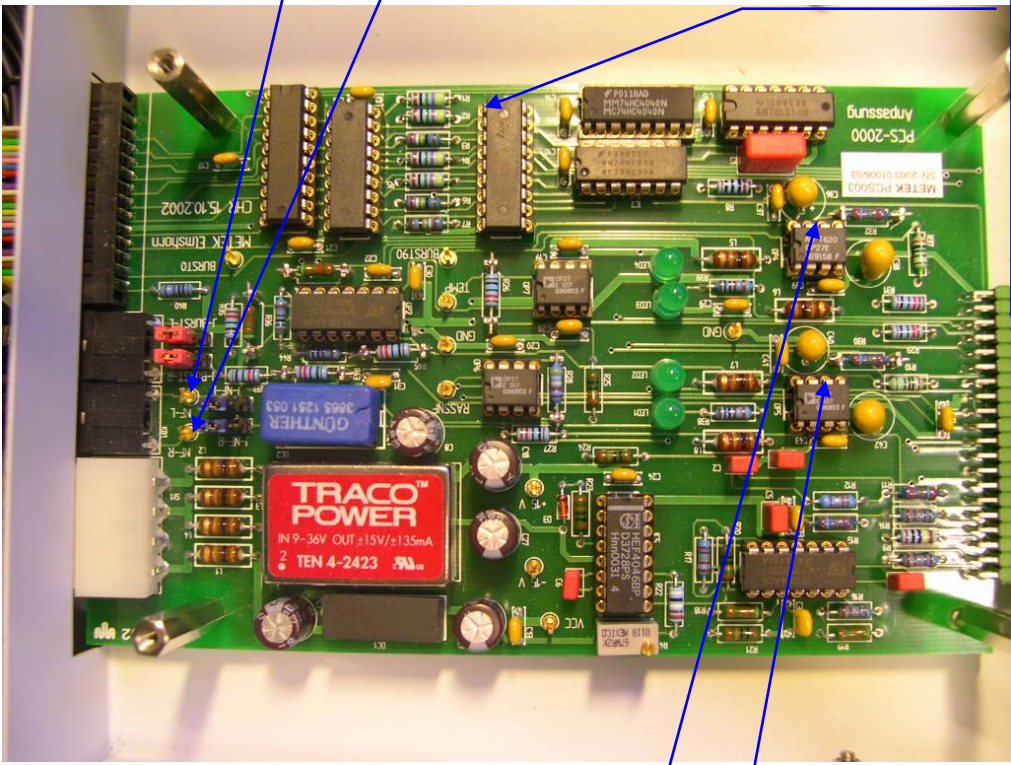
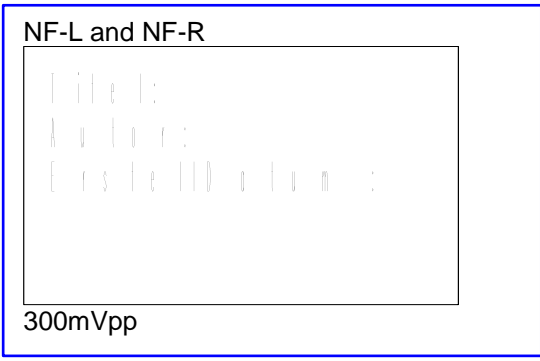
SODAR Control connector Connect to the antenna electronic

### Back view

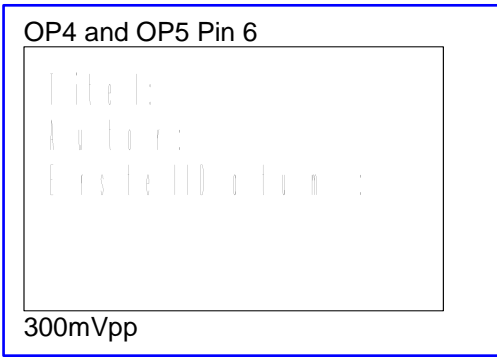




# Receive signals



IC2: Check antenna beam selection  
 Pin1: A1  
 |  
 Pin5: A5  
 Pin6: RASS  
 Pin7: SP;  
 Transmitpuls

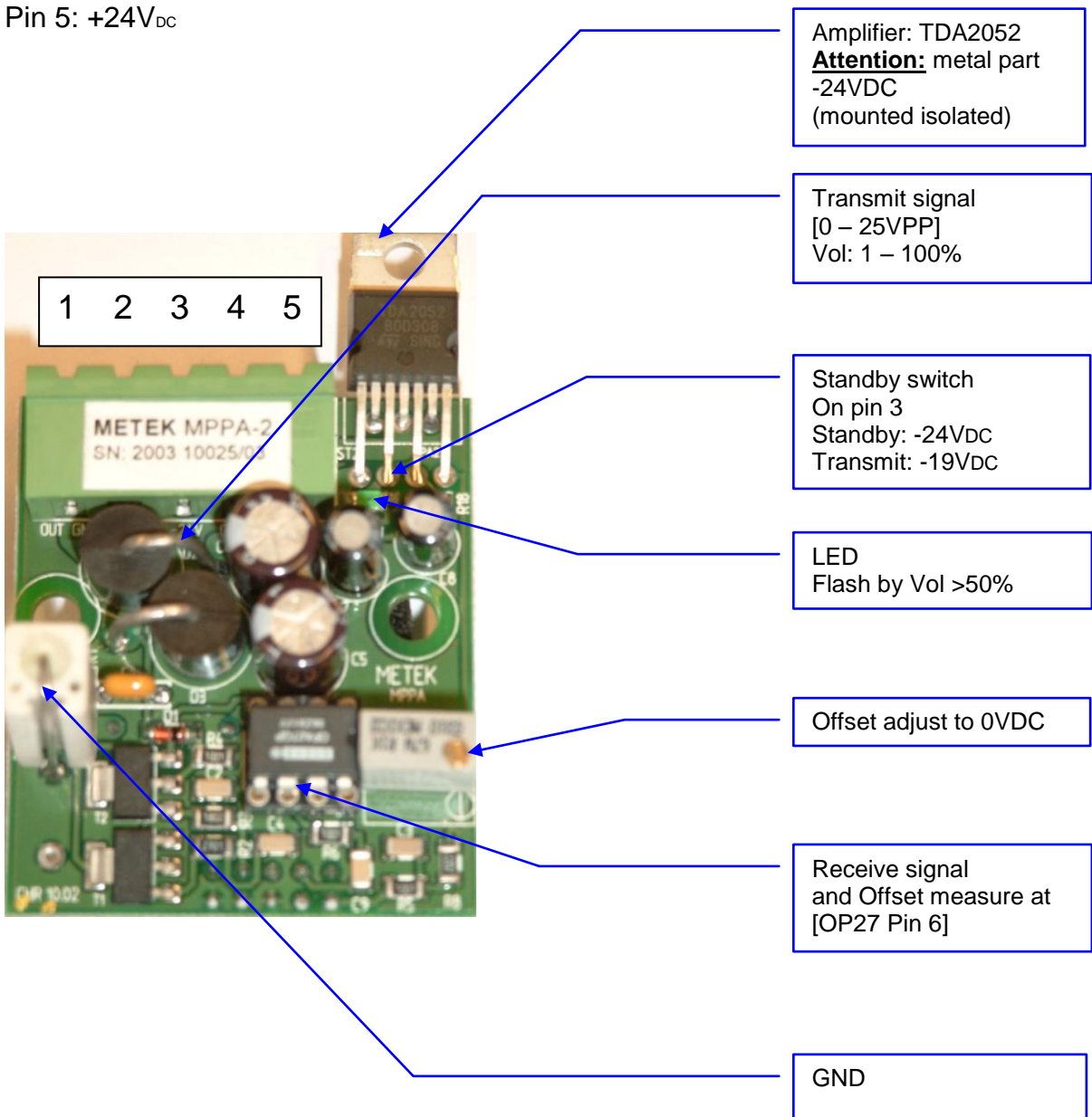


By using input signal 0,636Vpp or 0dB or 0,225VRMS and phase 0° at NF0 [plug Pin 11] and phase shift (90°) at NF90 [plug Pin 12]

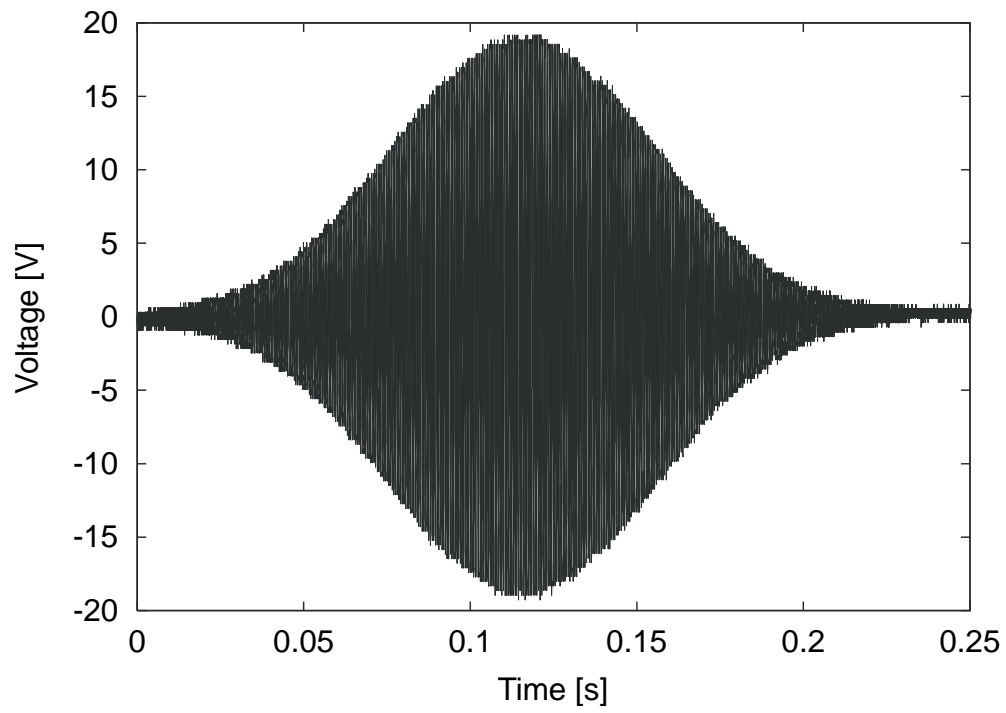
# Antenna electronic AEP005

## Power Amplifier MPPA-2

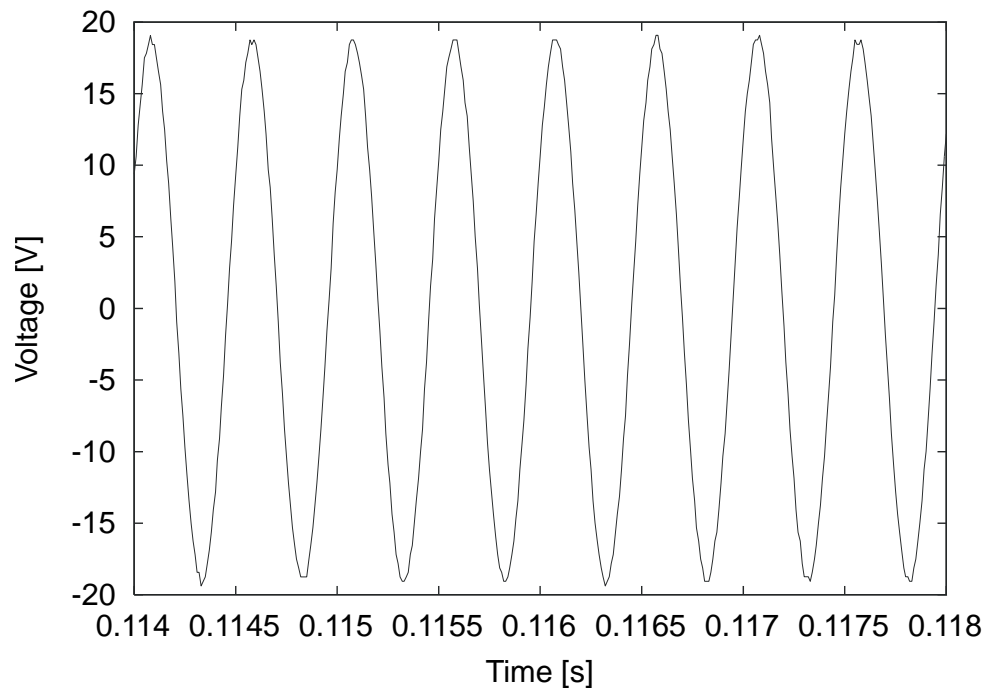
- Pin 1: Loudspeaker [+] brown
- Pin 2: Loudspeaker [-] blue
- Pin 3: -24V<sub>DC</sub>
- Pin 4: GND
- Pin 5: +24V<sub>DC</sub>



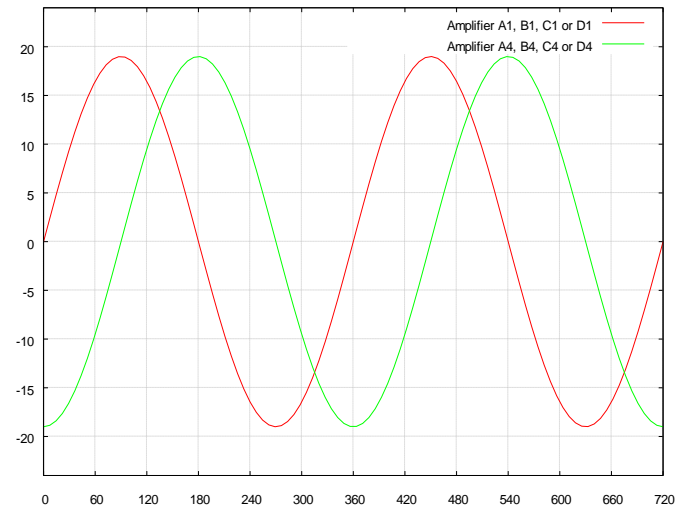
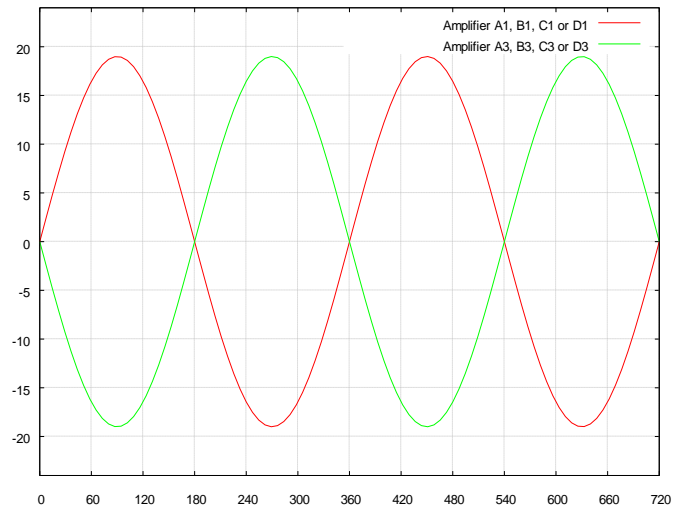
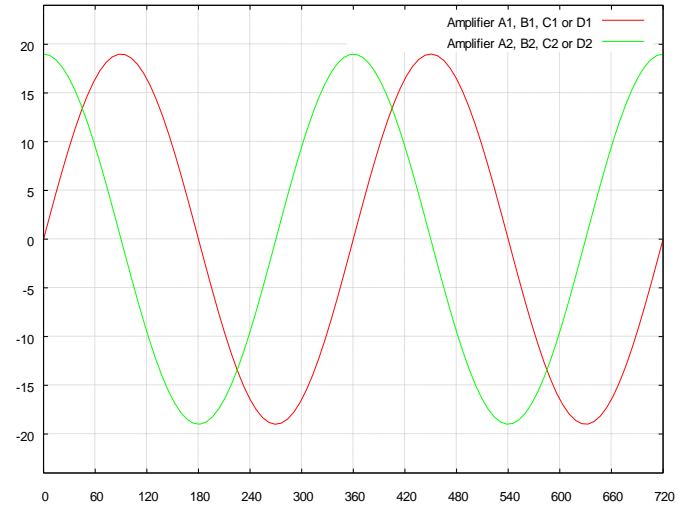
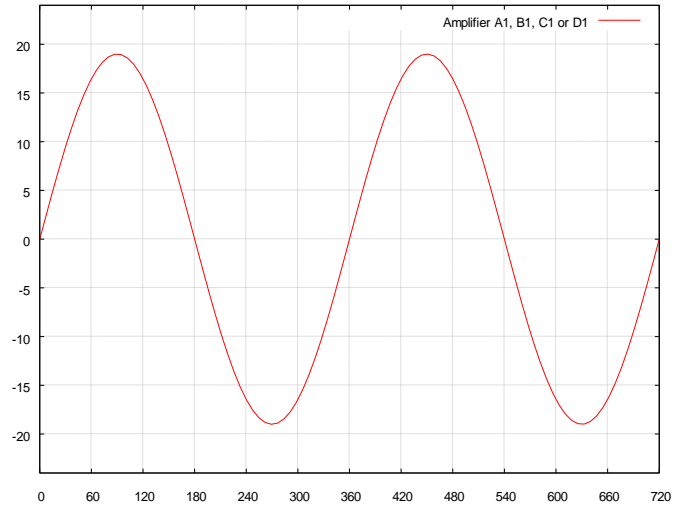
### Transmit Signal in Gausform



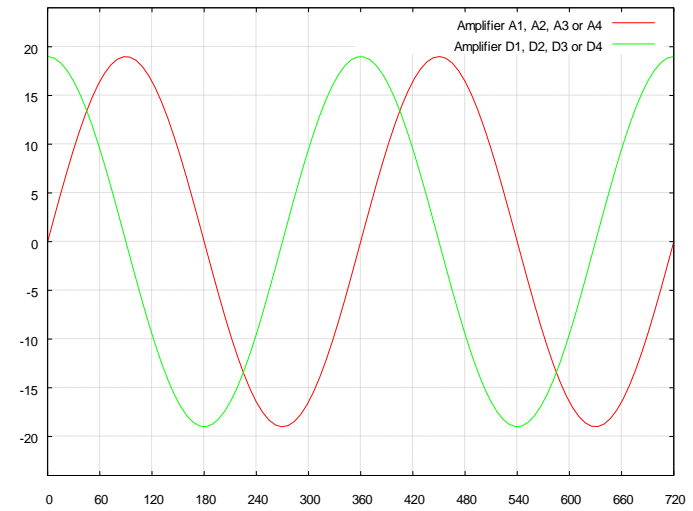
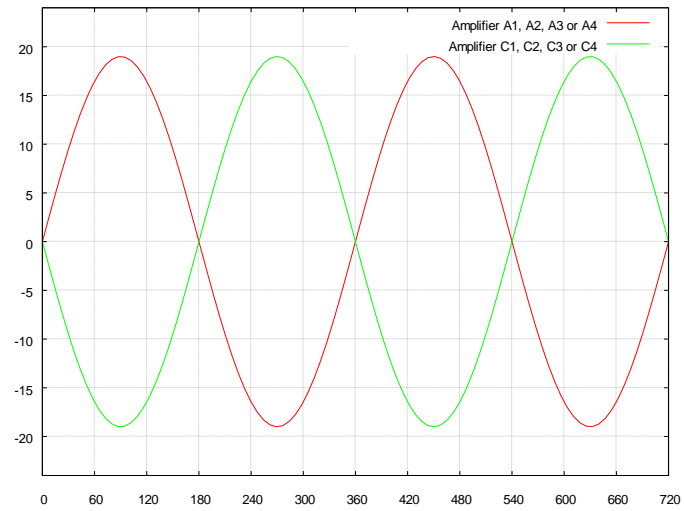
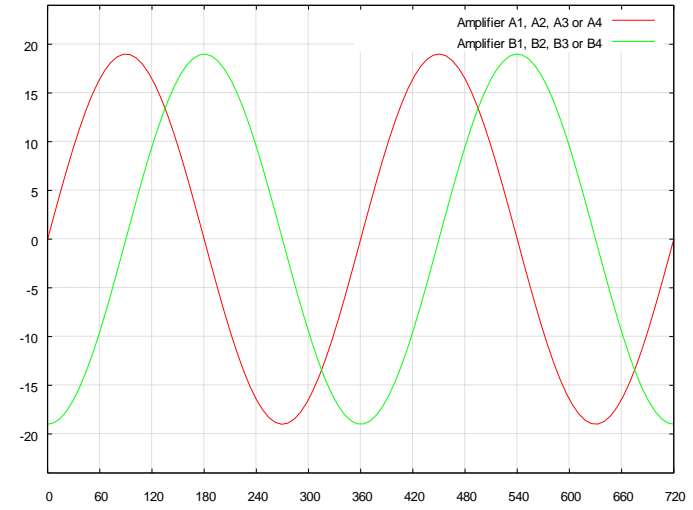
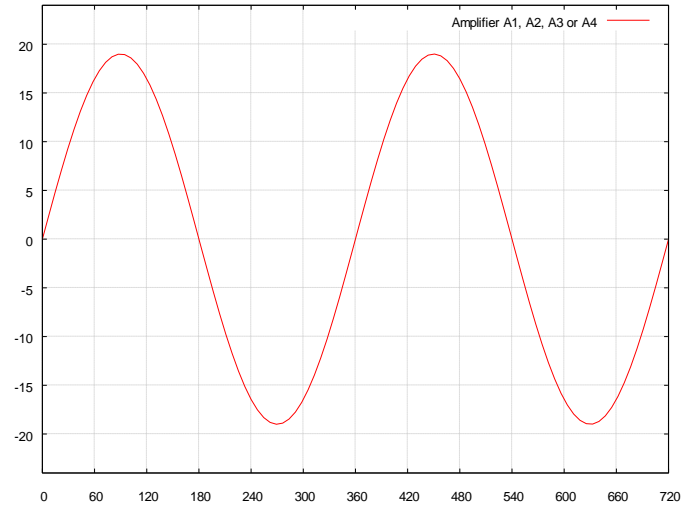
### Part from Transmit Signal



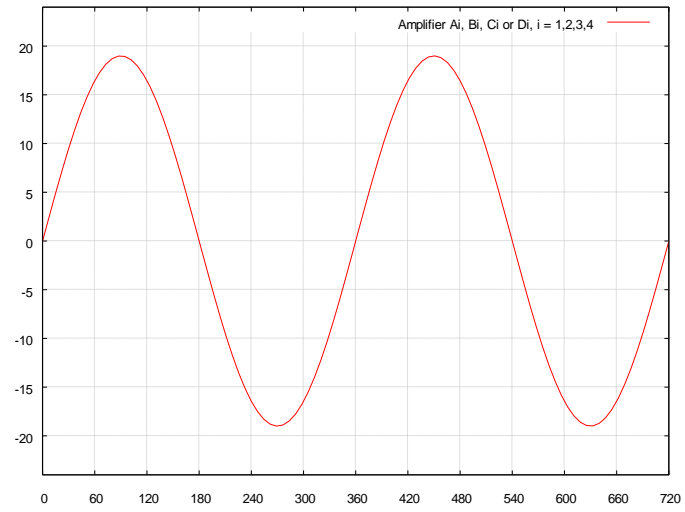
# Antenna Beam A1



## Antenna Beam A2

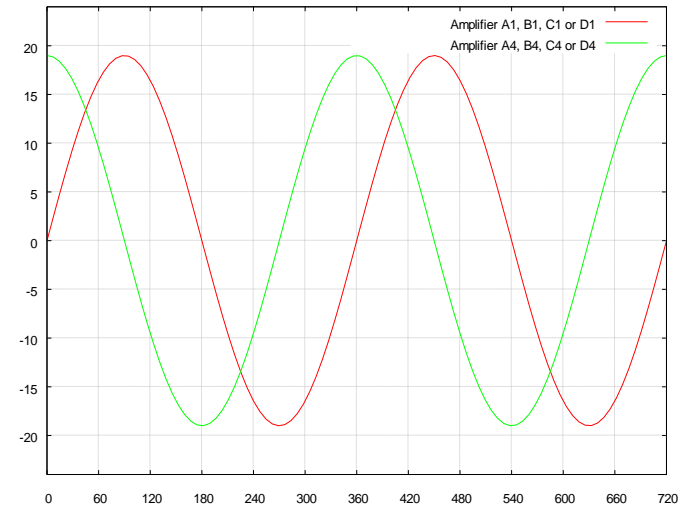
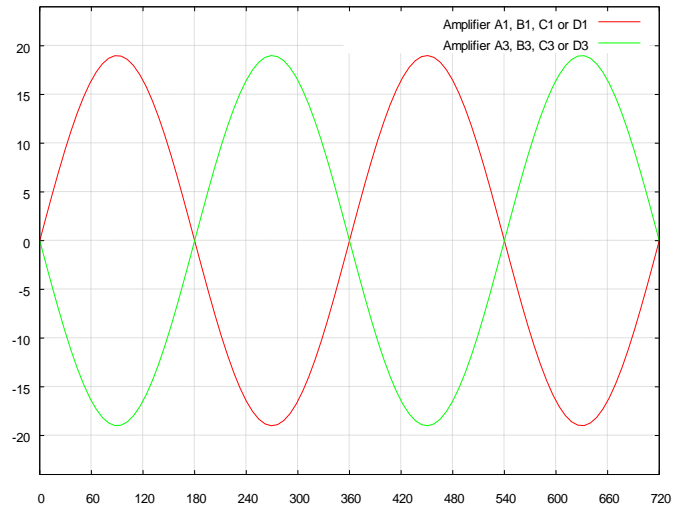
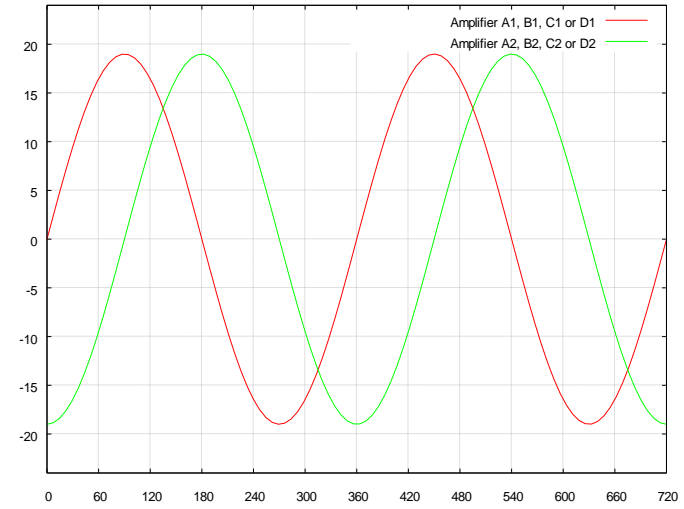
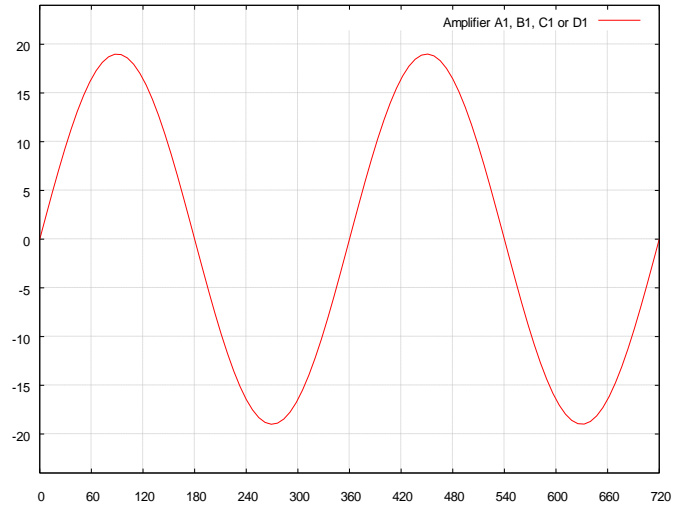


## Antenna Beam A3

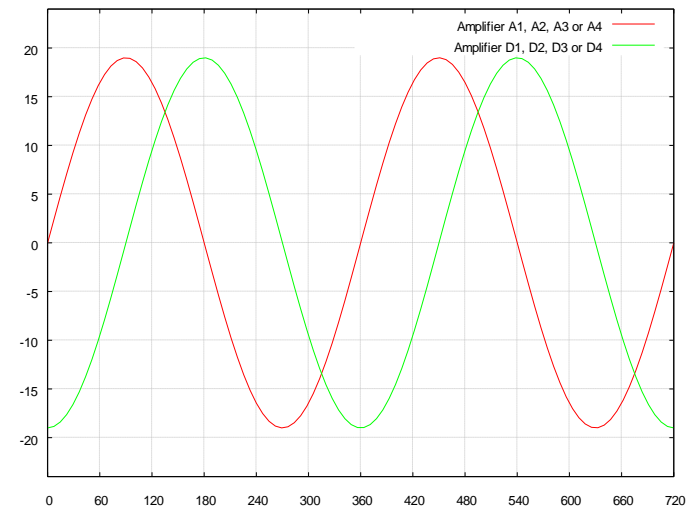
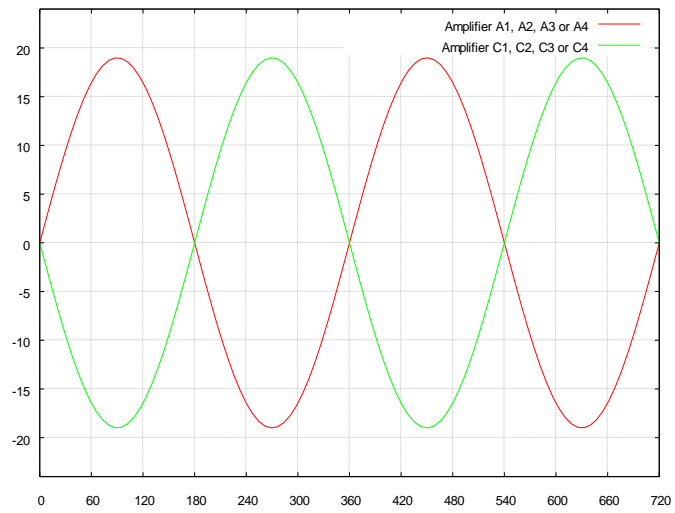
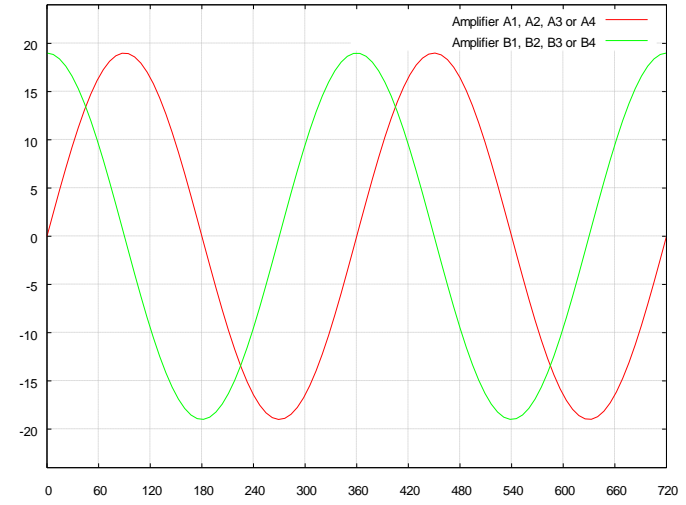
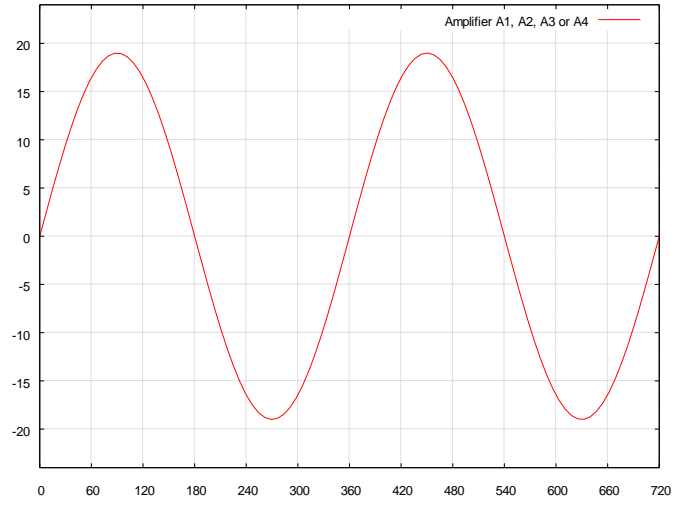




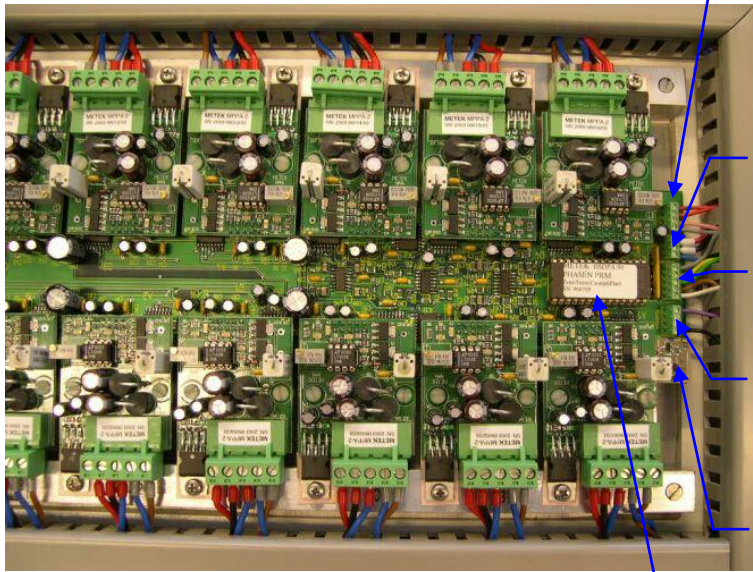
# Antenna Beam A4



# Antenna Beam A5



# Motherboard



E 0: Receive signal Phase-0  
E90: Receive signal Phase-90

SP: Transmitpuls low active  
5V: 5VDC

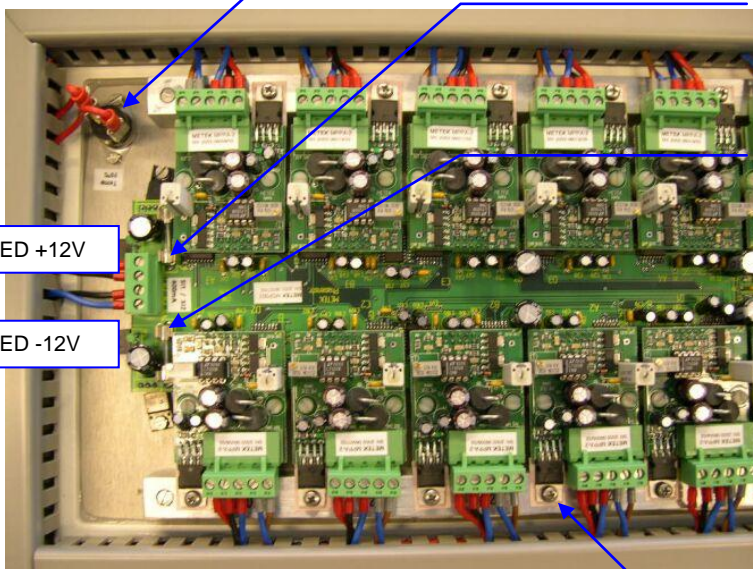
ANT1-5: Antenna beam selection; low active

B 0: Transmit signal Phase-0; 14,2Vpp  
B90: Transmit signal Phase-90; 14,2Vpp

SPS002: Transmit pulse switch; Switch from 5V to 0V by emit transmit pulse. Test on pin 3

EPROM: for optimise Antenna beam selection (test on pin 11-17)

Temp 70°C: open by over 70°C; switch off the ±24V1 for Power Amplifier; Reset by pressing red pin



LED +12V

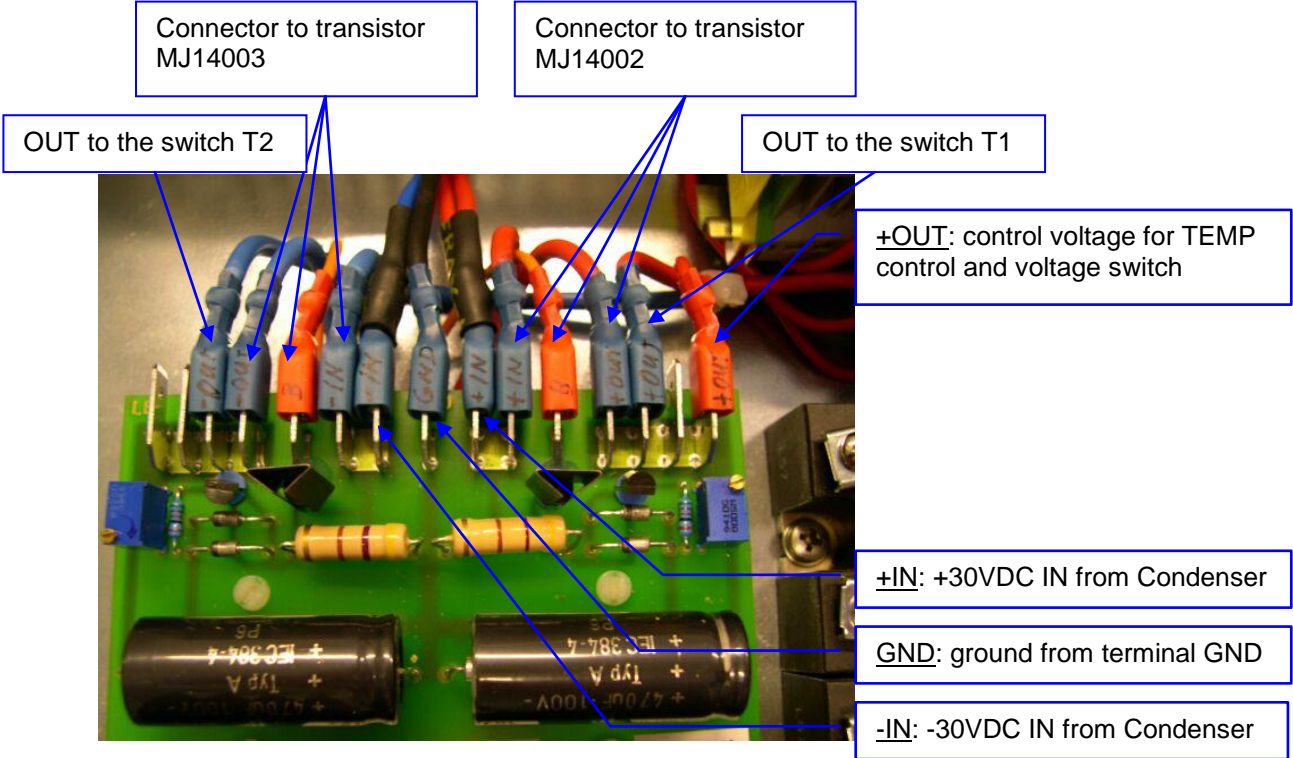
LED -12V

Fuse 0,4A for voltage regulator +15VDC and +12VDC

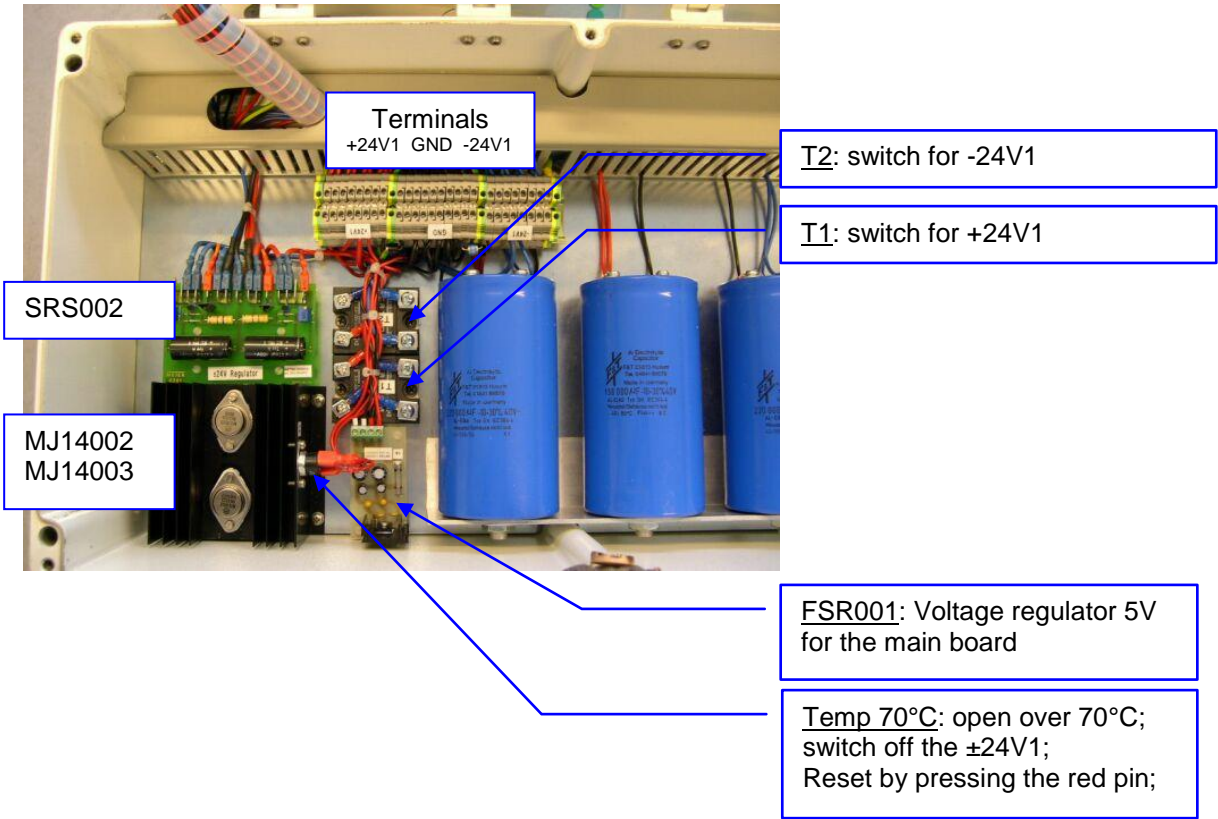
Fuse 0,4A for voltage regulator -15VDC and -12VDC

Amplifier TDA2052: Mounted isolated! Use mica washer and isolating disk

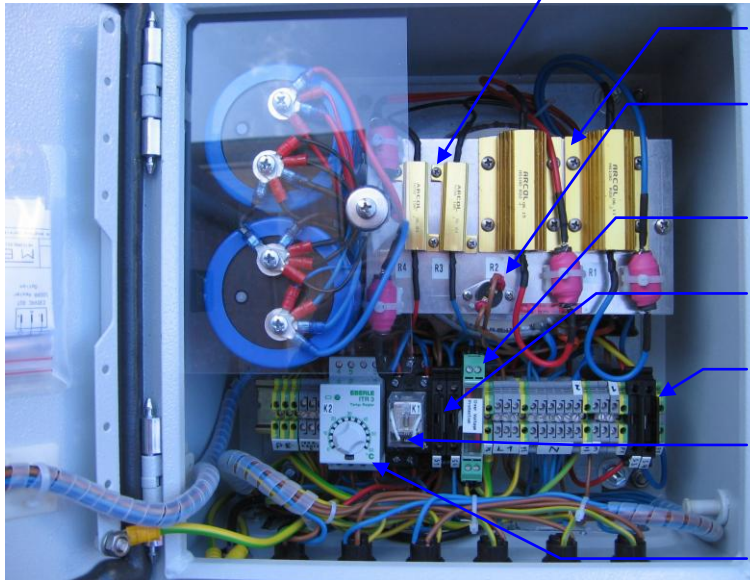
# Voltage Regulator SRS002



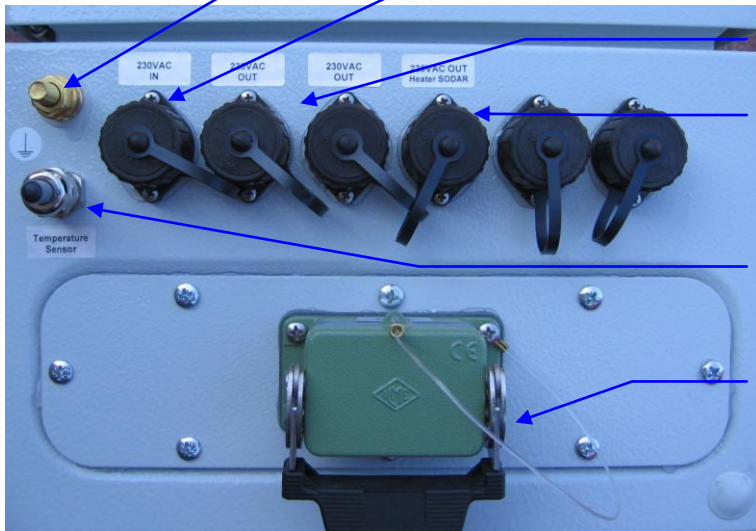
# Antenna electronic



# Power Supply $\pm 30\text{VDC}$ SVS011



- R3, R4:** resistors for discharging capacitors C1, C2 ( $\pm 30\text{VDC}$ )
- R1, R2:** Capacitor current limiter
- TEMP 70°C:** switch off by over 70°C! Reset by pressing red pin
- Over voltage protection 230VAC
- S1, S2:** Input fuse 10A
- S3, S4:** Transformer fuse 10A
- K1:** Relay for discharging capacitor  $\pm 30\text{VDC}$
- K2:** Temperature switch  
Option heater



- Earth Bolt
- 230VAC IN
- 230VAC OUT
- 230VAC OUT  
Option: heater SODAR antenna
- Temperature Sensor:  
Option: heater SODAR antenna
- $\pm 30\text{VDC}$  OUT:  
connection to the antenna electronic

## Antenna ASP008

For the test of the antenna loudspeaker please use the two testloudspeakers and the two special loudspeaker cables. Place the testloudspeaker as shown in the picture on the antenna loudspeaker. Set the SODAR output to antenna beam A3 only, the transmitfrequency to 1502Hz and the output volume to 10%.

(Use the earprotection)

Connect the testloudspeaker 1 to the oszilloscope channel 1 and the testloudspeaker 2 to the oszilloscope channel 2.

Set the oszilloscope channel 1 to 20mV/div., the timebase to 50us/div. and adjust to the center line of the screen. By using the variable timebase, you can change the received loudspeaker signal to 36 small timemarks according to 360°. Now, you can measure the amplitude and the phase shift with the testloudspeaker 2 at the SODAR loudspeaker 2 up to 64 times.

