



AG200 Instruction

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A. To start up all system

1. Turn on the system at the carrier to start the computer Trans.. and Psr.. as well as the Transmitter DTC6 and the Receiver PSR12.
2. Wait about 30 minutes to warm up system
3. Turn on your computer
4. Start AGmaster on your computer
 - a) Open ag500folder (if created on your desktop)
 - b) Click on agmaster to start
5. Start MC500 on your computer
 - a) if red, click get system status
 - b) if type in trans..
6. click system control, then type (to switch control to the AGmaster on "my computer")
7. switch AGmaster
 - a) type "my computername"
 - b) click OK
8. AG master window should appear green
9. Close the program MC500
10. Start MC500 on your computer again
 - a) type in "my computer".
Now the MC500 is connected in the right way to the AGmaster on your computer

B. Calibration

1. Placing the Sensors in the Calibration Magazine

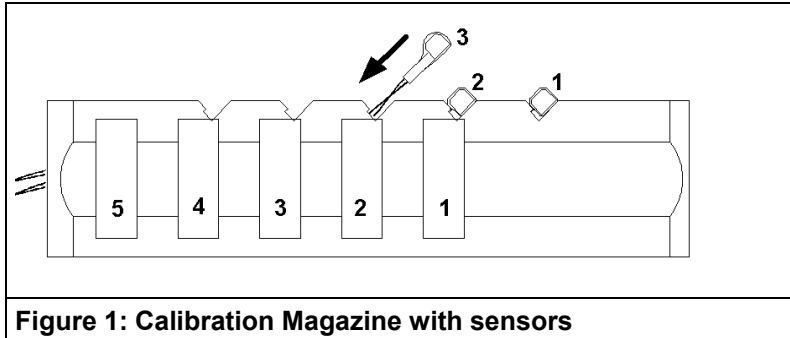


Figure 1: Calibration Magazine with sensors

Using the diagram for guidance place the sensors so that they fit snugly into the magazine. Run the wires along the slot in the calibration magazine. Make sure that the channels are arranged in the order shown.

Now place the calibration magazine in the calibration device and fix it in the first position. Make sure that the connecting wires to the sensors are kept as far away as possible from the transmitter coils.

2. select amplitudes at the AGmaster window

- a) There have to be positive values in channels for plugged receivers
- b) if not, do "angle adjust"

3. click on mc500 window

4. Start ag5sndrec program at the computer for the soundrecording, but do nothing else

5. click on mastercontrol window

6. checkmark ag200 session box (make sure acoustic recording is checked on)

7. type "my computername" if not already in computer box

8. click calibration box arrange windows to see AG500 calibration factors and AGmaster amplitudes

9. click amp adjustment if values negative if not, do angle adjust

10. slide and turn magazine until maximum value achieved (to be repeated for each sensor)

11. adjust position with knob

12. click calibrate sensor # (within #area)

13. bring (click) next receiver into centre

14. repeat for each sensor

15. file is created of sensor amplitudes from ag500, agmaster, kf.txt

16. the file kf.txt in the mc500 folder will be used in the experiment. To have different copies (e.g. replacement sensors) give it a new name. Can paste in data for a failed receiver (must have been calibrated in correct receiver position)

17. These amplitudes can be used for replacement set of sensors too. Be sure to change name of kf.txt. The AG system only reads kf.txt file name

18. When done calibrating click ok

C. Accuracy Test and Session

1. Start session (You should create a new subfolder for each study) give it *.tim name (.tim is default)
2. perform accuracy test as
3. click go
4. start with magazine in position 1
5. aligned in centre line
6. when it says move magazine, move to last position (position 5)
7. mm is second column from right
8. accuracy should be $<0.3\text{mm}$ and 1%

D. Begin collecting data

1. Write in comment for next sweep with what is being collected (stored in *.prt)
2. When all data collected click "close session"
3. Check data in Eanalyse or with MultiCV before shutting down system
May you should check after a first test-sweep with close session and MultiCV, that the data and tilt factors are okay.
4. System control (in MC500) click on shutdown system (look at agmaster, control to see that system status is ??)
5. turn off computers on side of box.
6. analyse data

Figure 2:	Figure 3:

Table 1:

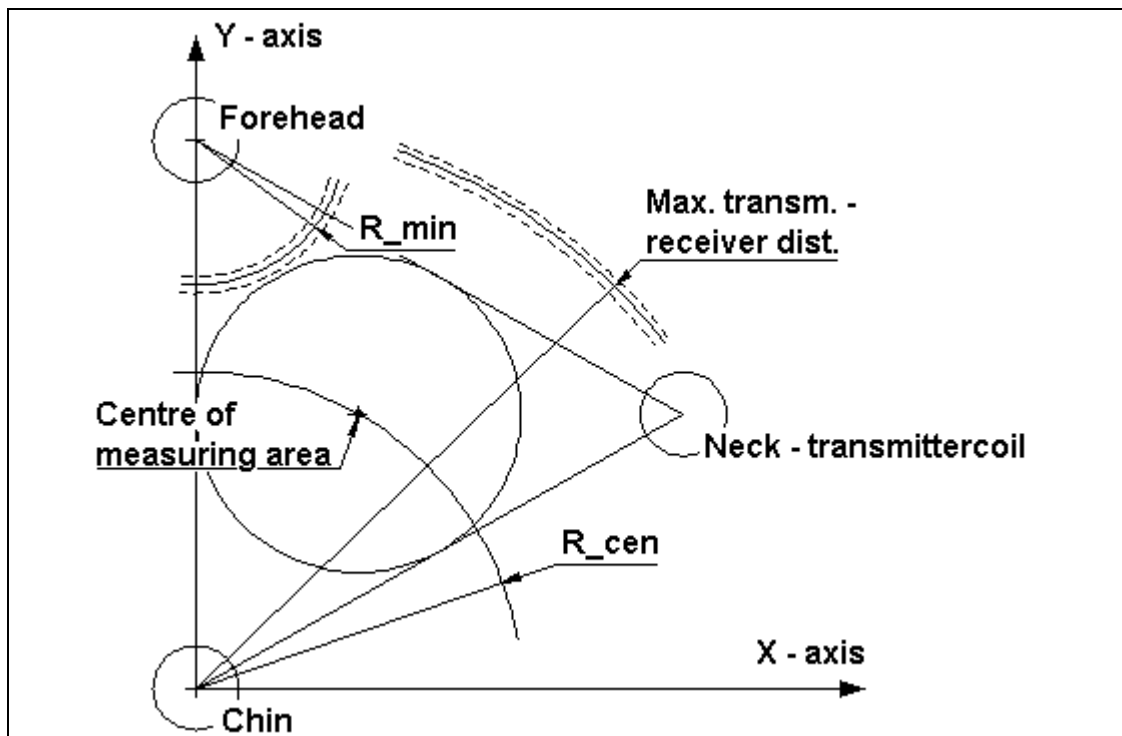
E. Others

1.) The Transmitter Coils determine the Co-ordinate System

a) The Co-ordinates of the Transmitter Coils

The top lines of the first page show the X and Y co-ordinates of the green (forehead), and the red (neck) transmitter coils. Together with the blue (chin) transmitter coil, which is located at the origin, this determines the co-ordinate system for the measurements carried out by the Articulograph AG100.

The following diagram shows how the positions of the transmitter coils determine the co-ordinate system. For the sake of clarity the distances R_{min} , R_{cen} and the maximum coil distance are only indicated with respect to one transmitter coil.



b) The Geometric Centre

This shows the distance from one transmitter coil to the centre of the measurement area. The transmitter coils are arranged at the vertices of an equilateral triangle.

The R_{min} values accordingly show the smallest possible distance between a sensor and a transmitter coil that can be used for position calculations.

That means the value shown at the AGmaster is not allowed to be higher than 28000 digits