

Orchestra:

- 3 flutes (all 3 also piccolo, 3rd also alto flute)
- 3 oboes (1st also oboe d'amore, 3rd also english horn)
- 1 piccolo clarinet (in E^b)
- 1 clarinet (in B^b)
- 1 bass clarinet
- 3 bassoons (3rd also contra-bassoon)

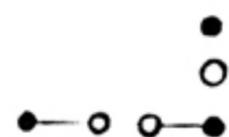
3 horns (1st high, 2nd middle, 3rd low) with mutes

3 trumpets

1 tenor trombone

1 bass trombone

each trumpeter and each trombonist has three mutes (choose trombone) pointed mute / cup mute / wawa mute:



special sizes for bass covered by the hand
open

continuous transitions from covered to open and vice versa

(or tenor trombone with bass valve)

1 bass tuba (with mute)

2 pianos (2nd also celesta)



2 harps

3 percussionists: 1st: tubular chimes, glockenspiel, 2 pedal timpani (high, low)

2nd: vibraphone

3rd: marimbaphone



hard mallets or sticks
soft mallets or sticks

use various kinds of hard and soft mallets and sticks according to the directions of the conductor

8 1st violins

8 2nd violins

8 violas

6 cellos

4 basses

all soloistic

All notes sound as written. An accidental (#, b, k) applies only to the note before which it stands.

K. Stockhausen

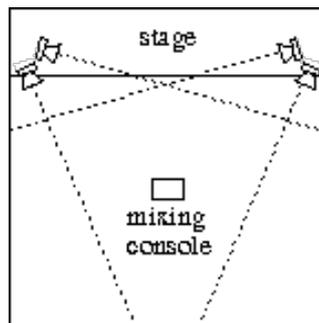
PUNKTE (POINTS) *for Orchestra*

Performances of PUNKTE have proven that the following instruments must be amplified:

- 1) the two harps with 2 microphones each: one placed low and one high next to the strings;
- 2) the two pianos (**without lids!**) with 2 microphones each: one placed over the highest octave, and the other one next to it pointed diagonally towards the lower strings and aimed at C¹  ;
- 3) the 4 double-basses with one microphone each.
- 4) The conductor and sound projectionist should be able to communicate with the orchestra and with each other via 2 transmitters. For this they also need 2 monitor loudspeakers on the stage and one at the mixing console.

In the middle of the hall, a sound projectionist at a small mixer (14 → 2) controls the dynamic balance between these instruments and the orchestra, as well as the dynamic level of the transmitters.

For the amplification, 2 x 2 **loudspeakers** are suspended about 4 m high at the left and right sides of the orchestra:



The amplification of the instruments mentioned is also necessary during the rehearsals.