

MIXTUR for orchestra, sine-wave generators and ring-modulators

SCH = PERCUSSION

H = WOODWIND

B = BRASS

P = PIZZICATO (one half of the strings, harp(s), other plucked instruments)

S = STRINGS (the other half of the strings)

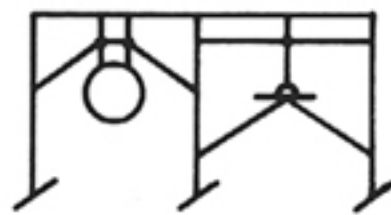
The number of the instruments in each of the groups H B P and S is to be determined by the conductor.

There is only one part for each group of instruments. All parts have the same page numbers as in the score.

2 players read from 1 part and have 2 stands.

The following average instrumentation is recommended:

SCH 3 percussionists: each 1 cymbal ⊥ } each is hung with several leather straps; for each ⊥ and each ○ 1 contact microphone is fastened  
1 tam-tam ○ } onto the leather straps.



H 3 flutes (all also piccolo)

3 oboes

3 clarinets (1 also piccolo clarinet, 1 also bass clarinet)

3 bassoons (1 also contrabassoon)

B 3 trumpets

each trumpet and trombone requires 3 mutes: straight, cup, wawa.

3 trombones (3rd. with thumb valve)

3 high horns

the horns require mutes.

2 low horns

1 tuba

P 6 violins I

6 violins II

5 violas

4 violoncelli

3 double basses

1 or 2 harps

harps (and any other plucked instruments) use the P-part and choose - after consulting the conductor - what they play.

S 6 violins I

6 violins II

5 violas

4 violoncelli

3 double basses

If fewer instruments are used, the parts in the moments with specified instrumentation can be distributed among the instruments available (if necessary even exchanged between the groups of instruments).

If the orchestra is larger, the increase should be proportionally equal for the groups H B P S.

The parts include transpositions for piccolos, B<sup>b</sup> clarinets, E<sup>b</sup> clarinet, B<sup>b</sup> bass clarinet, contrabassoon, F horns, double basses.

If further transposing instruments are used in addition (cor anglais, saxophones, guitar etc.) the corresponding transpositions must be added in the material.

Where only the word SOLO is given in the score the conductor must determine which instrument is to play (choosing different instruments for different versions).

The contact microphones of the 3 percussionists are to be connected to 3 loudspeakers (c.f. position in the plan).

Each of the groups H B P S should be concentrated as much as possible and sit separated from each other in the hall. Microphones with high directional sensitivity hang above each group. When possible single "solo"-players in each group and the first desks in P and S should also have individual microphones.

The 4 microphone groups are to be connected to 4 ring-modulators (if possible use special modulators, which give only the simple sum and difference frequencies).