

CUBE

for tenor sax, trumpet, trombone, contrabass, electronics, and two technicians

score in c

Taylor Brook

2018

About *Cube*

Cube was written for the International Contemporary Ensemble in the Winter of 2018.

The title, *Cube*, comes from the idea of the four instrumentalists arranged in a square with the extra dimension of depth added by electronics. Each of the four performers is paired with a set of stereo speakers that both amplify their instrument and enhance their parts using per-made soundfiles.

The music itself explores harmonic ideas in extended just intonation system, focusing on a tonic of E, but at times drifting far afield from this central pitch. The microtonal harmonies are most clearly perceived in slow, drone-like sections where the pacing of the music is modeled on breathing. These slow sections are juxtaposed with energetic solos and duos where each instrument has a chance to emerge from the texture and lead the ensemble.

Electronics

Equipment List:

computer

audio interface with minimum of 4 inputs and 8 outputs

mixer with minimum of 8 inputs and outputs

8 matched concert loudspeakers (may be reduced if necessary)

microphones as appropriate for all four instruments (clip-on DPA microphones are ideal)

Software:

Max/MSP or another program capable of multi-channel diffusion (qlab, PD, Live, etc.). A Max patch is supplied with the score.

Amplification:

The four live instruments should be amplified, their sound blended with the electronic parts in the speakers that flank them.

EQ, compression, reverb, and other processing may be used to taste.

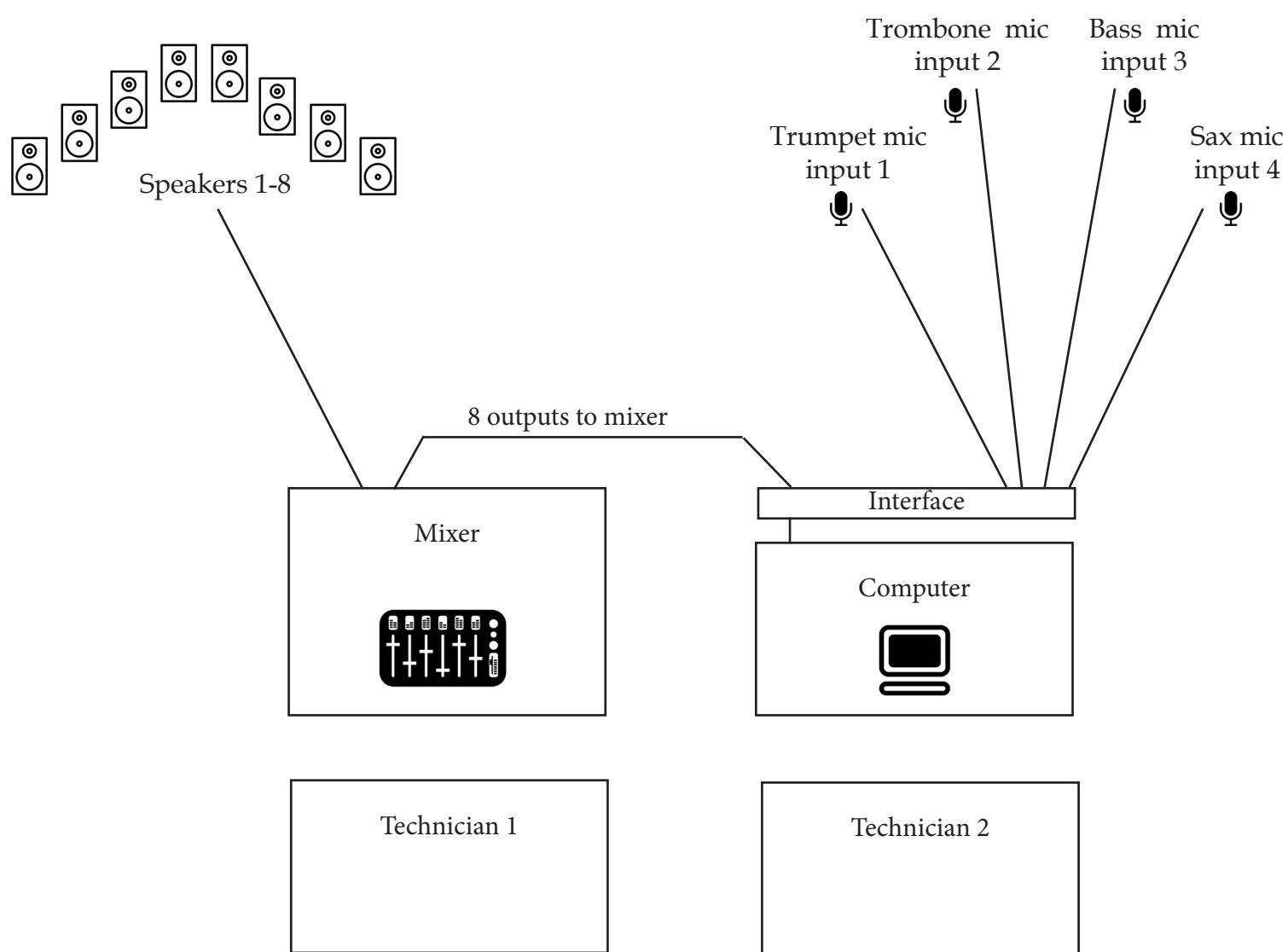
Synchronization:

Besides the amplification, the electronics in this piece are limited to soundfile playback. The score contains a “trigger” staff, indicating where each soundfile begins. The synchronization between the soundfiles and live performers does not have to be extremely precise and as long as the performers are sensitive to the electronics and playing close to the tempi indicated in the score than the synchronization will work as intended. The cue names in the score match the names in the max patch and the soundfiles.

Role of Technicians:

Two technicians are required to run this piece. One technician should be responsible for the amplification and mixing of the live sound. The second technician must follow the score and trigger the soundfile playback as indicated on the “trigger” staff of the score.

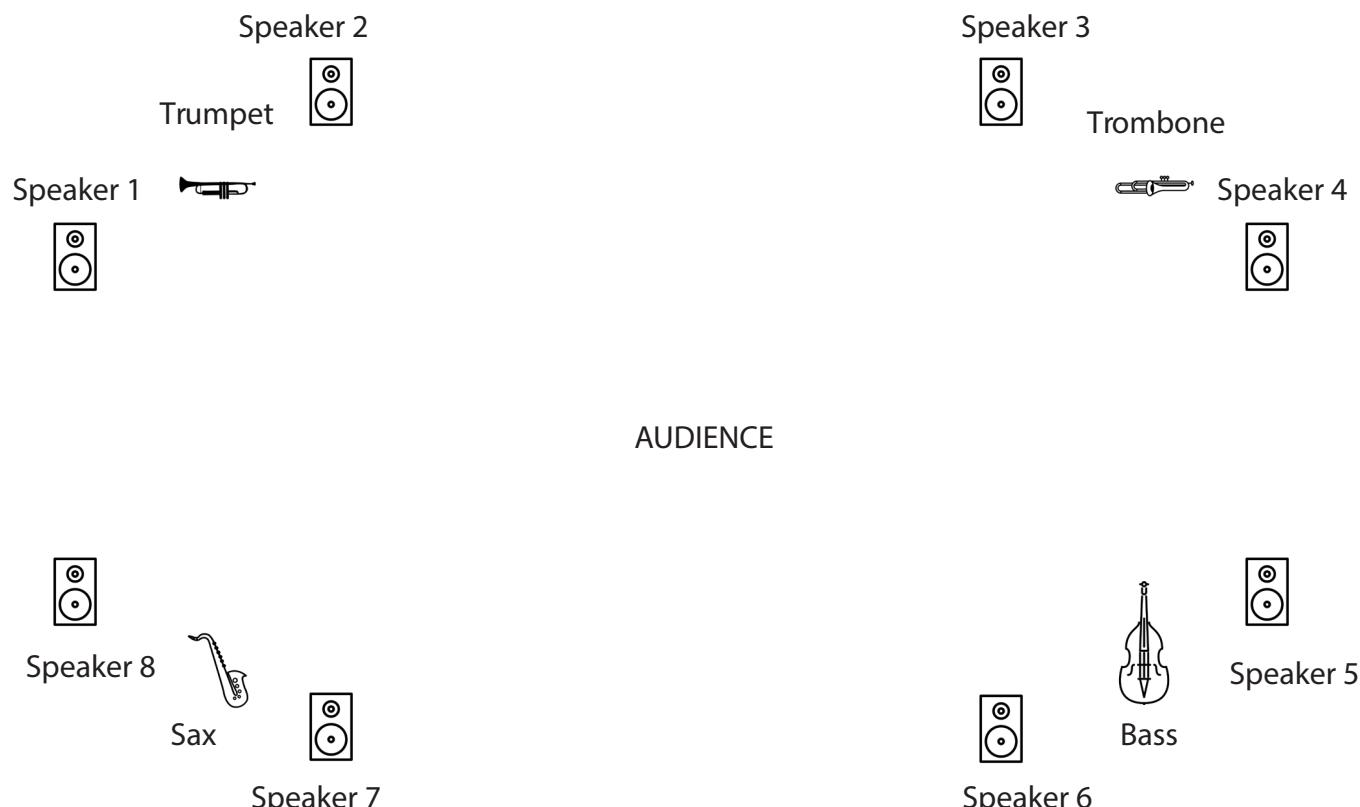
The amplification and EQ/Compression/etc. or the live instruments may be done by the computer, interface, or the mixer. In the case of the latter, then the microphones could be run directly to the mixer to minimize latency.



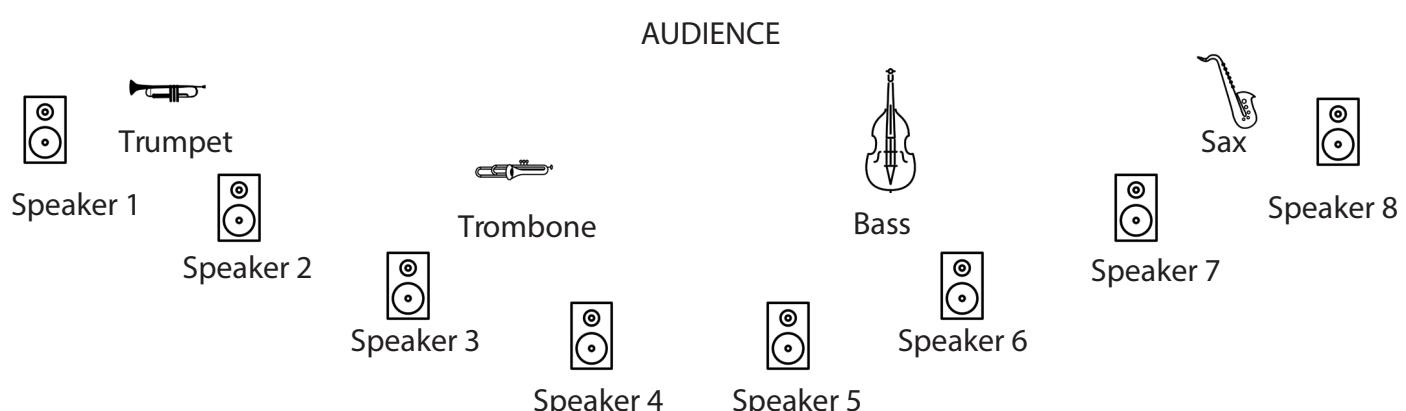
Staging

This piece may be staged in one of two ways depending on the venuesize and layout. The first option is ideal, but the second option may be more practical in many cases. In both stagings, the stereo pairs that flank each performer could be replaced by a single speaker. The stereo pairs allow for a better sounding stereo image of the electronics and blend with the live instruments more effectively. However, when eight speakers are not available, this could be mixed down to four, or even two channels in the case of the second staging. Staging 1 requires a minimum of four speakers.

Staging 1:



Staging 2:



Microtones

The following accidental nomenclature is used:

♩ - ♯ approximately 1/4 tone flat or sharp (50 cents)

↓ - ↑ approximately 1/6 tone flat or sharp (33 cents)

↓♯ - ↓♯ - ↓♯ - ♯ - ♯ - ♯ approximately 1/12 tone flat or sharp (17 cents)

The microtones in this piece are always part of a system of extended just intonation. More important than these accidentals is hearing the relationship between the written part and the electronic part. Pitches in the electronic part almost always double the live performers. Pitch matching and tuning to the electronics will ensure the most accurate results.

Additionally, the electronic parts includes pitch ratio notation as well as deviation in cents (hundredths of a semitone) from the nearest equal temperament pitch. Parts where this more precise way of notating microtones are available.

Parts

The instrumental parts contain both the main staff for the instrument as well as the grand staff for their flanking stereo speakers.

Technique Indications

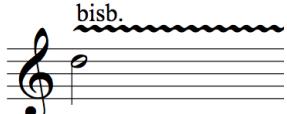
● / ○ Encircled noteheads are used to notate a pitch that is sung while playing a second pitch. This technique is called for on the sax, trumpet, and trombone.

◆ / ◇ Air sounds only, pitched for trumpet and unpitched for trombone and sax.

s.vib. - without vibrato

m.vib. - molto vibrato

flz. - fluttertongue



Trill between 2 or more fingerings for the same pitch.

Trombone

f-trigger trill - To add texture to air tones, there are a few moments where the f-trigger should be trilled. If this is not possible or does not have an interesting effect, a soft fluttertongue may be substituted.

Tenor Sax

alt. fingerings - for repeated notes, alternate between two or more fingerings for the same pitch.

venting fingerings - This piece uses a technique wherein certain keys are held down that alter a standard set of fingerings to create microtonal segments that are relatively easy to play. The example below shows this technique with the venting key written in a box and the fingered notes written as square noteheads. The sounding pitch is not provided in the score to save space, but the chart of fingerings on the opposite page will show the pitch results of these fingerings, with an "m" written above the notes that produce multiphonics.

These fingerings should be possible in rapid succession and at any dynamic level. Some of the notes tend to pop out or become muffled, which is taken into account when these passages are used in the score. These fingerings were tested on the instruments of Lands End Saxophone Quartet, and if different instruments produce slightly different results this is fine.

The musical score for Tenor Sax consists of three staves of music. The top staff is labeled "tenor sax". It features several square noteheads (venting fingerings) and boxes containing letters (Ta, Tc, C3, M, C5). The middle staff has a box containing "C3" and "M". The bottom staff has a box containing "C5". The music includes various dynamics and rests.



The Saxophone part calls for microtonal segments. In these cases, the performer should try to find a series of fingerings that fill out the pitch space between the beginning and ending of the glass line with the rhythm indicated. In the case where no possible fingerings exist, then the technique may be approximated by bending the pitch while playing alternate fingerings.

Multiphonics - Specific multiphonics are not indicated. Instead, when a multiphonic is desired a bold-faced **M** appears above the note. The performer may choose a multiphonic that ideally includes the indicated note, but more importantly is reliably produced at the correct dynamics.

Bass

f.mute - Mute the strings with your left hand while bowing the string(s) to produce unpitched noise. It is important to mute with the left hand in such a way that harmonic don't pop out. If for any reason pitch is still being produced, then bowing the bridge or body of the instrument may be substituted.

scordatura:

1/1 11/8 7/4 7/6
+2c +53c -29c -31c

A bass clef is shown above a staff. The staff contains four note heads: a solid black dot, a hollow circle with a dot, a hollow circle with a vertical line, and a hollow circle with a horizontal line.

The second string is tuned to the 7th harmonic of the fourth string. The Third string is tuned to the 11th harmonic of the fourth string. The first string may be tuned as the perfect fourth above the second string.

The bass part is written at sounding pitch (8vb) and uses open strings and natural harmonics almost exclusively.

Cube

for the International Contemporary Ensemble

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

274

275

276

277

278

279

280

281

282

283

284

285

286

287

288

289

290

291

292

293

294

295

296

297

298

299

300

301

302

303

304

305

306

307

308

309

310

311

312

313

314

315

316

317

318

319

320

321

322

323

324

325

326

327

328

329

330

331

332

333

334

335

336

337

338

339

340

341

342

343

344

345

346

347

348

349

350

351

352

353

354

355

356

357

358

359

360

361

362

363

364

365

366

367

368

369

370

371

372

373

374

375

376

377

378

379

380

381

382

383

384

385

386

387

388

389

390

391

392

393

394

395

396

397

398

399

400

401

402

403

404

405

406

407

408

409

410

411

412

413

414

415

416

417

418

419

420

421

422

423

424

425

426

427

428

429

430

431

432

433

434

435

436

437

438

439

440

441

442

443

444

445

446

447

448

449

450

451

452

453

454

455

456

457

458

459

460

461

462

463

464

465

466

467

468

469

470

471

472

473

474

475

476

477

478

479

480

481

482

483

484

485

486

487

488

489

490

491

492

493

494

495

496

497

498

499

500

501

502

503

504

505

506

507

508

509

510

511

512

513

514

515

516

517

518

519

520

521

522

523

524

525

526

527

528

529

530

531

532

533

534

535

536

537

538

539

540

541

542

543

544

545

546

547

548

549

550

551

552

553

554

555

556

557

558

559

560

561

562

563

564

565

566

567

568

569

570

571

572

573

574

575

576

577

578

579

580

581

582

583

584

585

586

587

588

589

590

591

592

593

594

595

596

597

598

599

600

601

602

603

604

605

606

607

608

609

610

611

612

613

614

615

616

617

618

619

620

621

622

623

624

625

626

627

628

629

630

631

632

633

634

635

636

637

638

639

640

641

642

643

644

645

646

647

648

649

650

651

652

653

654

655

656

657

658

659

660

661

662

663

664

665

666

667

668

669

670

671

672

673

674

675

676

677

678

679

680

681

682

683

684

685

686

687

688

689

690

691

692

693

694

695

696

697

698

699

700

701

702

703

704

705

706

707

708

709

710

711

712

713

714

715

716

717

718

719

720

721

722

723

724

725

726

727

728

729

730

731

732

733

734

735

736

737

738

739

740

741

742

743

744

745

746

747

748

749

750

751

752

753

754

755

756

757

758

759

760

761

762

763

764

765

766

767

768

769

770

771

772

773

774

775

776

777

778

779

780

781

782

783

784

785

786

787

788

789

790

791

792

793

794

795

796

797

798

799

800

801

802

803

804

805

806

807

808

809

810

811

812

813

814

815

816

817

818

819

820

821

822

823

824

825

826

827

828

829

830

831

832

833

834

835

836

837

838

839

840

841

842

843

844

845

846

847

848

849

850

851

852

853

854

855

856

857

858

859

860

861

862

863

864

865

866

867

868

869

870

871

872

873

874

875

876

877

878

879

880

881

882

883

884

885

886

887

888

889

890

891

892

893

894

895

896

897

898

899

900

901

902

903

904

905

906

907

908

909

910

911

912

913

914

915

916

917

918

919

920

921

922

923

924

925

926

927

928

929

930

931

932

933

934

935

936

937

938

939

940

941

942

943

944

945

946

947

948

949

950

951

952

953

954

955

956

957

958

959

960

961

962

963

964

965

966

967

968

969

970

971

972

973

974

975

976

977

978

979

980

981

982

983

984

985

986

987

988

989

990

991

992

993

994

995

996

997

998

999

1000



5 → senza vib.
T. Sx. *pp*

(alt. fingerings) 3
6
p f pp

mp f p

sp. 1

bis.
C Tpt. *p f pp* flz.

sp. 2

Tbn. (through partials) 5
pp f mp f

s.vib. → m.vib. → s.vib.
p f p

sp. 3

f

p f

D.B. (high as possible)
I II III IV
IV I II III IV
p f p

sp. 4

pp

f

Trigger m5 m6

molto rit. $\text{♩} = 52$

9

T. Sx. -

sp. 1 { -

C Tpt. -

sp. 2 { -

Tbn. -

sp. 3 { -

D.B. -

sp. 4 { -

Trigger m9 m10

Score details: The score consists of eight staves. The first four staves (T. Sx., sp. 1, C Tpt., sp. 2) play eighth-note patterns with dynamics pp, mp, and pp. The fifth staff (Tbn.) has a dynamic f at the beginning, followed by pp, mp, and pp. The sixth staff (sp. 3) has a dynamic mp. The seventh staff (D.B.) shows rhythmic patterns with circled dots and II, III markings. The eighth staff (sp. 4) includes measure numbers 29, 31, 44, and 27, along with 3/2 of 7/4, 11/8, and 53 markings. The Trigger staff at the bottom shows two measures, m9 and m10, with a vertical bar line between them.



accel. poco a poco ----- ♩ = 72

accen. p < p > p < p >

T. Sx.

sp. 1

C Tpt.

remove mute

32 of 74

sp. 2

Tbn.

sp. 3

(8va)

D.B.

sp. 4

Trigger

m13 m15 m17

poco rit.

$\text{♩} = 63$

T. Sx. 18 C5 6 5 3 3 5 3 10
 $\text{mp} \longrightarrow \text{mf} > \text{p} \longrightarrow \text{mf} \longrightarrow \text{p}$ $\text{mp} \nearrow \text{f} \text{ p} \text{ f} \text{ p}$ $\text{f} \text{ p} \text{ mf} \text{ p} \text{ mp} \text{ p}$

sp. 1

C Tpt. bis.
 $\text{pp} < \text{mp} = \text{pp} \text{ mf} \text{ p} \text{ f} \text{ pp} \text{ p} \text{ mp} \text{ p}$

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger m18 m20

$\text{♩} = 52$

T. Sx. 21 C3 (d) (s) Tc 6 5
 $\text{mp} \text{ p} \text{ mp} \text{ pp}$ p

sp. 1

C Tpt. pp p mp 3 > p mp pp
 $\text{p} \text{ p} \text{ mp} \text{ pp}$

sp. 2

Tbn. n 7/8 p ppp

sp. 3

D.B. 7/4 -29 I 3/2 29 33 1/1 31
 $n \text{ p} \text{ ppp}$ $\text{p} \text{ mp} \text{ mp} \text{ mp} \text{ mp}$

sp. 4

Trigger m21 m22 m23

25

T. Sx.

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger m25



29

T. Sx.

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger m29

m31

Musical score for orchestra and electronics, page 35. The score includes parts for T. Sx., sp. 1, C Tpt., sp. 2, Tbn., sp. 3, D.B., sp. 4, and Trigger. The score shows various instruments playing in 7/4 time, with specific dynamics like *mp* and *pp*, and performance instructions like '3' and '1/1 -31'. The Trigger part at the bottom indicates m35 and m38.



Musical score for orchestra and piano, page 41, measures 41-45.

Measure 41:

- T. Sx.: Rest
- sp. 1: Rest
- C Tpt.: Rest
- sp. 2: Rest
- Tbn.: Rest
- sp. 3: Rest
- D.B.: Rest
- sp. 4: Rest
- Trigger: Rest

Measure 42:

- T. Sx.: Rest
- sp. 1: Rest
- C Tpt.: Rest
- sp. 2: Rest
- Tbn.: Rest
- sp. 3: Rest
- D.B.: Rest
- sp. 4: Rest
- Trigger: Rest

Measure 43:

- T. Sx.: Rest
- sp. 1: Rest
- C Tpt.: Rest
- sp. 2: Rest
- Tbn.: Rest
- sp. 3: Rest
- D.B.: Rest
- sp. 4: Rest
- Trigger: Rest

Measure 44:

- T. Sx.: Rest
- sp. 1: Rest
- C Tpt.: Rest
- sp. 2: Rest
- Tbn.: Rest
- sp. 3: Rest
- D.B.: Rest
- sp. 4: Rest
- Trigger: Rest

Measure 45:

- T. Sx.: Rest
- sp. 1: Rest
- C Tpt.: Rest
- sp. 2: Rest
- Tbn.: Rest
- sp. 3: Rest
- D.B.: Rest
- sp. 4: Rest
- Trigger: Rest

46

T. Sx. *pp* *p*

sp. 1

C Tpt. *f* *mp* *p* *mp* *mf* *p* *f* *p* *mp* *mf* *pp*

sp. 2 *p*

Tbn. *p* *mp* *fp* *mf* *p*

sp. 3

D.B. *pp* *mp* II III IV II III IV IV⁵ III II III⁸ IV⁸ III⁶ II III⁸

sp. 4

Trigger m46 m49



51

T. Sx. *mf* *ppp* *pp* *mp* *pp*

sp. 1

C Tpt. *mf* > *p* *mp* *pp* *mp* *pp* *pp* *mp*

sp. 2 *p* *pp* *mp*

Tbn. *mf* *pp* *mp* > *pp* *n*

sp. 3 *p*

D.B. *pp* *p* *mp* IV⁸ IV⁹ III⁹ II⁶ III⁸ IV⁸ III⁹ III¹² III⁸ II⁶ III⁷ IV¹⁰ I⁴ IV⁹ II⁵ III⁶

sp. 4

Trigger m51 m54 m55

Musical score for orchestra and trigger instrument, page 56. The score includes parts for T. Sx., sp. 1, C Tpt., sp. 2, Tbn., sp. 3, D.B., and sp. 4. The D.B. part features complex rhythmic patterns with labels IV⁸, IV⁷, II⁴, III⁵, II, III, IV, and III-IV. The score is set in common time (indicated by '8'). Various dynamics are marked throughout the score, including *mp*, *pp*, *mf*, and specific performance instructions like 'pp' and 'mf' with slurs. Measure numbers m56 and m57 are indicated at the bottom.



60

T. Sx.

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger

118
+53

sing encircled note

3/2 +55

gliss. harmonics

m60 m61 m62 m63

64

T. Sx. *pp < mp > pp < mp >*

sp. 1

C Tpt. *pp < mp > pp < mp >*

sp. 2

Tbn. *pp < mp > pp < mp >*

sp. 3

D.B. *mp* II *mp* IV *8va* *pp* *mp*

sp. 4

Trigger m64 m65 m66 m67



68

T. Sx. *pp < mp > pp < mp >*

sp. 1 11/8 +53 5/4 -12 9/8 +6 3/2 +4 11/8 +53

C Tpt. *pp < mp > pp < mp >*

sp. 2 9/8 +6 8/8 +16 9/8 +6 3/2 +4 11/8 +53 7/4 -29

Tbn. *pp < mp > pp < mp >*

sp. 3 7/4 -29 9/8 +6 7/4 -31 11/8 +53

D.B. (8va) *pp* III *pp* II *pp* IV *pp* *mp* *pp*

sp. 4 8 8

Trigger m68 m69 m70 m71

72

T. Sx. $\text{♩} = 102$
 air trill
 $\gg pp \gg mp \gg pp$ $\ll "f" \gg$ $p \ll "f" \gg pp$ $fp \gg f \gg$

sp. 1 multiphonic
 air sounds

C Tpt. air trill
 $\gg pp \gg mp \gg pp$ $\ll "f" \gg p \ll "f" \gg pp$ $p \ll "f" \gg pp$ bisb.
 multiphonic
 air sounds

sp. 2

Tbn. air (f trigger trill)
 $\gg pp \gg mp \gg pp$ $\ll "f" \gg$ $fp \gg f \gg pp$

sp. 3 multiphonic
 air sounds

D.B. f.mute f.mute
 $pp \gg mp \gg pp$ $pp \gg mf \gg pp$ $"f" \gg$

sp. 4 multiphonic
 air sounds

Trigger m72 m73

77

T. Sx. air M norm. air
 $mp \gg p \gg mf \gg pp$ $p \ll "f" \gg pp$ $mp \gg pp \gg mp \gg pp$ $\ll "f" \gg$

sp. 1 multiphonic
 air sounds

C Tpt. air bisb. air
 $pp \gg mp \gg pp$ $\ll "f" \gg p \ll "f" \gg pp$ $pp \gg mp \gg pp$ $\ll "f" \gg$

sp. 2 multiphonic
 air sounds

Tbn. air (f trigger trill) 3 air
 $pp \gg mp \gg pp$ $\ll "f" \gg$ $fp \gg f \gg p \gg mf \gg$

sp. 3 multiphonic
 air sounds

D.B. f.mute f.mute multiphonic
 $pp \gg mp \gg pp$ $pp \gg mf \gg pp$ $"f" \gg$ $pp \gg mp \gg pp$

sp. 4 multiphonic
 air sounds

Trigger m77 m78 m80

82

T. Sx. *f* >*p* *f* *pp* *mp* *fp* *mf* *pp* *pp* < *mp* > *pp*
 sp. 1 air sounds *mp* air sounds
 C Tpt. *f* *pp* *6* *6* *5* bisb. *f* *pp* < *mp* > *pp* *< "f">*
 sp. 2 *p* *mp* air sounds
 Tbn. *pp* *f* trigger trill *ff* *pp* *f* *pp* < *f* > *air*
 sp. 3 *air sounds* *mp* *air sounds*
 D.B. f.mute *pp* f.mute *pp* f.mute *molto sul pont.* *ord.*
 sp. 4 *mf* *pp* *f* *pp* *mf* *ppp* *pp* < *mp* > *pp*
 Trigger m82 m85 m86



87

T. Sx. *f* >*p* *f* *pp* *pp* < *mp* > *pp* *pp* < *mp* > *pp* *p* *3* (alternate fingerings)
 sp. 1 *mp* *p* air sounds
 C Tpt. *p* *"f"* *p* *f* *pp* < *mp* > *pp* *< "f">* *"f"* *air*
 sp. 2 *p* *mp* air sounds
 Tbn. *f* trigger trill *ff* *mp* *f* > *p* *mf* > *pp* < *mp* > *pp* *< "f">* *f* trigger trill *ff* *air*
 sp. 3 *multiphonic* *mp* *air sounds*
 D.B. f.mute *pp* f.mute *f* *pp* *molto sul pont.* *ord.*
 sp. 4 *molto sul pont.* *mp* *mp* *air sounds*
 Trigger m89 m90

92

T. Sx. *f* > *pp* < *mp* > *pp* *pp* — *mp* — *pp* *pp* — *mf* — *pp* *pp* — *mp* — *pp* *air*
multiphonic

sp. 1 *mp* — *air sounds* *mp* — *air sounds*

C Tpt. *pp* < *mp* > *pp* *air* *flz.* *3* *3* *M* *air*
multiphonic *"f"* *p* *f* > *pp* < *mp* > *pp* *multiphonic* *"f"*

sp. 2 *mp* — *p* *air sounds* *mp* — *air sounds*

Tbn. *pp* — *mp* — *pp* *"f"* *pp* — *mf* — *pp* < *mp* > *pp* *pp* — *mp* — *pp*
multiphonic

sp. 3 *mp* — *air sounds* *mp* — *air sounds*

D.B. *pp* — *mp* — *pp* *molto sul pont.* *ord.* *pp* — *mf* — *pp* — *mp* — *pp*
multiphonic

sp. 4 *mp* — *air sounds* *pp* — *molto sul pont.* *pp* — *mp* — *pp* *multiphonic*
air sounds

Trigger m92 m93 m95 m96



97

T. Sx. *p* *flz.* *3* *3* *air* *pp* — *"f"* — *pp* *pp* — *mf* —
multiphonic *p* *air sounds*

sp. 1 *p* *air sounds*

C Tpt. *pp* — *mf* — *pp* *sing encircled note* *pp* — *mp* — *pp* *air* *"f"* — *p* — *"f"* — *pp* *multiphonic*
multiphonic

sp. 2 *p* *air sounds* *pp* — *mf* — *pp* *11/8 +53* *p* — *mf* — *pp* *11/8 +53*
multiphonic

Tbn. *p* < *mp* > *p* — *mf* — *p* — *mf* — *p* — *f* — *p* *air* *(f trigger trill)* *"f"* — *f* — *pp*
multiphonic

sp. 3 *pp* — *mf* — *pp* — *mp* — *pp* — *p* — *mf* — *pp* *11/8 +53* *III⁴* *III⁵* *gliss. harmonics*
multiphonic

D.B. *pp* — *mf* — *pp* — *mp* — *pp* — *p* — *mf* — *pp* *ord.* *5* *f*
multiphonic

sp. 4 *pp* — *mf* — *pp* — *mp* — *pp* — *air sounds* *multiphonic*

Trigger m98 m99 m101

102

T. Sx. 

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger

m102 m104 m105

====

107

T. Sx. 

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger

m107 m108 m110 m111

112 M

T. Sx. *p* — *mf* — *p* *pp* — *mp* — *pp* *p* — *mf* — *p* *p* — *mf* — *p*

sp. 1 multiphonic air sounds multiphonic multiphonic

C Tpt. air "f" — *p* — *mf* — *p* air

sp. 2 multiphonic air sounds multiphonic multiphonic

Tbn. air "f" — *pp* — *mp* — *pp* *pp* — *mp* — *pp* — *mf* — *p*

sp. 3 multiphonic air sounds multiphonic multiphonic

D.B. m.s.p. I ord. o III⁵ gliss. harmonics II gliss. harmonics

sp. 4 multiphonic air sounds multiphonic multiphonic

Trigger m112 m113 m115 m116 m116.2



117 M

T. Sx. *p* — *mf* — *p* *mp* — *f* — *p* *p* — *mf* — *p* *p* — *f* — *p*

sp. 1 multiphonic multiphonic multiphonic

C Tpt. air sounds air sounds air sounds air

sp. 2 multiphonic multiphonic multiphonic air sounds

Tbn. air *p* — *f* — *mf* — *p* *p* — *mf* — *p* *mp* — *f* — *p* air

sp. 3 multiphonic multiphonic multiphonic air sounds

D.B. *pp* — *mp* — *pp* *pp* — *mp* — *pp* *pp* — *mp* — *pp* — *mp* — >

sp. 4 multiphonic multiphonic multiphonic air sounds

Trigger m117 m119 m120 m121

new multiphonic on each M, ideally with a B (concert)

122

T. Sx. *M* *M*

sp. 1 multiphonic *mp* *mp*

C Tpt. *flz.* *air* *air* *air* *flz.*

sp. 2 multiphonic *mp* *mp*

Tbn. *air* *air*

sp. 3 multiphonic *mp* *mp*

D.B. *m.s.p.* → *ord.* → *m.s.p.*

sp. 4 multiphonic *mp* *mp*

Trigger m122 m123 m124 m125

rit. poco a poco

♩ = 72

new multiphonic on each note, all including a B-natural if possible.

127 *M* *M*

T. Sx. *p* *ff* *pp* *mp* *pp* *mf* *pp*

sp. 1 *ff* *subito p* resonance

C Tpt. *p* *ff* *subito p* *pp*

sp. 2 *ff* resonance *p*

Tbn. *p* *ff* *subito p* *pp*

sp. 3 *ff* resonance *p*

D.B. *p* *ff* *ord.* *m.s.p.* *ord.* *m.s.p.* *ord.* *m.s.p.* *ord.* *m.s.p.* *ord.* *m.s.p.* *ord.* *III⁸* *pp* *mp* *pp*

sp. 4 *ff* *< p* resonance

Trigger m129 m130

poco rit.

131

T. Sx. *bisb.*
pp — *mp* — *pp* — *mf* — *pp* — *pp* — *mf* — *pp* < *f* > *pp* — *p* —

sp. 1 *p* — *pp* — *p* — *p* — *p* — *p* — *p* — *p* —

C Tpt. *mp* — *pp* — *pp* — *mf* — *pp* — *pp* — *f* —

sp. 2 *p* — *pp* — *p* — *p* — *p* — *p* — *p* — *p* —

Tbn. *mp* — *pp* — *pp* — *mf* — *pp* — *pp* — *f* —

sp. 3 *p* — *pp* — *p* — *p* — *p* — *p* — *p* — *p* —

D.B. *pp* — *mp* — *pp* — *pp* — *mf* — *pp* — *pp* — *p* —

sp. 4 *p* — *pp* — *p* — *p* — *p* — *p* — *p* — *p* —

Trigger m131 — m133 — m134 —

 $\text{♩} = 63$

136 *bisb.* — *bisb.* —

T. Sx. *f* — *p* < *f* — *p* — *ff* — *mp* — *fp* — *f* — *mp* — *bend* —

sp. 1 *p* — *p* —

C Tpt. *pp* — *f* — *pp* — *pp* — *ff* — *pp* —

sp. 2 *p* — *p* —

Tbn. *pp* — *pp* — *f* — *pp* — *pp* — *ff* — *pp* —

sp. 3 *p* — *p* —

D.B. *p* — *pp* — *pp* — *ff* — *p* — *p* — *p* —

sp. 4 *p* — *p* —

Trigger m137 —

140

T. Sx. Ta Tc C3 C5 molto vib. and nasal
 mp f mp f mp f ff f pp

sp. 1 mp mp pp

C Tpt. f > mp ff f mp ff f f sff

sp. 2 o o o o

sp. 3 (gliss harmonics ad lib.) o o o o

Tbn. f > pp fp fff pp p f > p

D.B. o o o o

sp. 4 pp < mp o o o o

Trigger m141

$\text{J} = 72$

144 with normal tone

T. Sx. p

sp. 1 p 16/11 -.50 10/7 +20 7/5 -.16 11/8 +53 4/3 0 +37 4/11 9/7 -.3 5/4 -.12

C Tpt. p

sp. 2 o o o o

Tbn. with normal tone p

sp. 3 p mp 16/11 10/7 7/5 11/8 4/3 0 9/7 5/4

D.B. sul tasto IV⁶ o p 3 o o o o

sp. 4 pp p 16/11 10/7 7/5 11/8 4/3 0 9/7 27/16 5/4

Trigger m145 m146

148

T. Sx.

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger

m148

152

T. Sx.

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger

m153

156

T. Sx. 

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

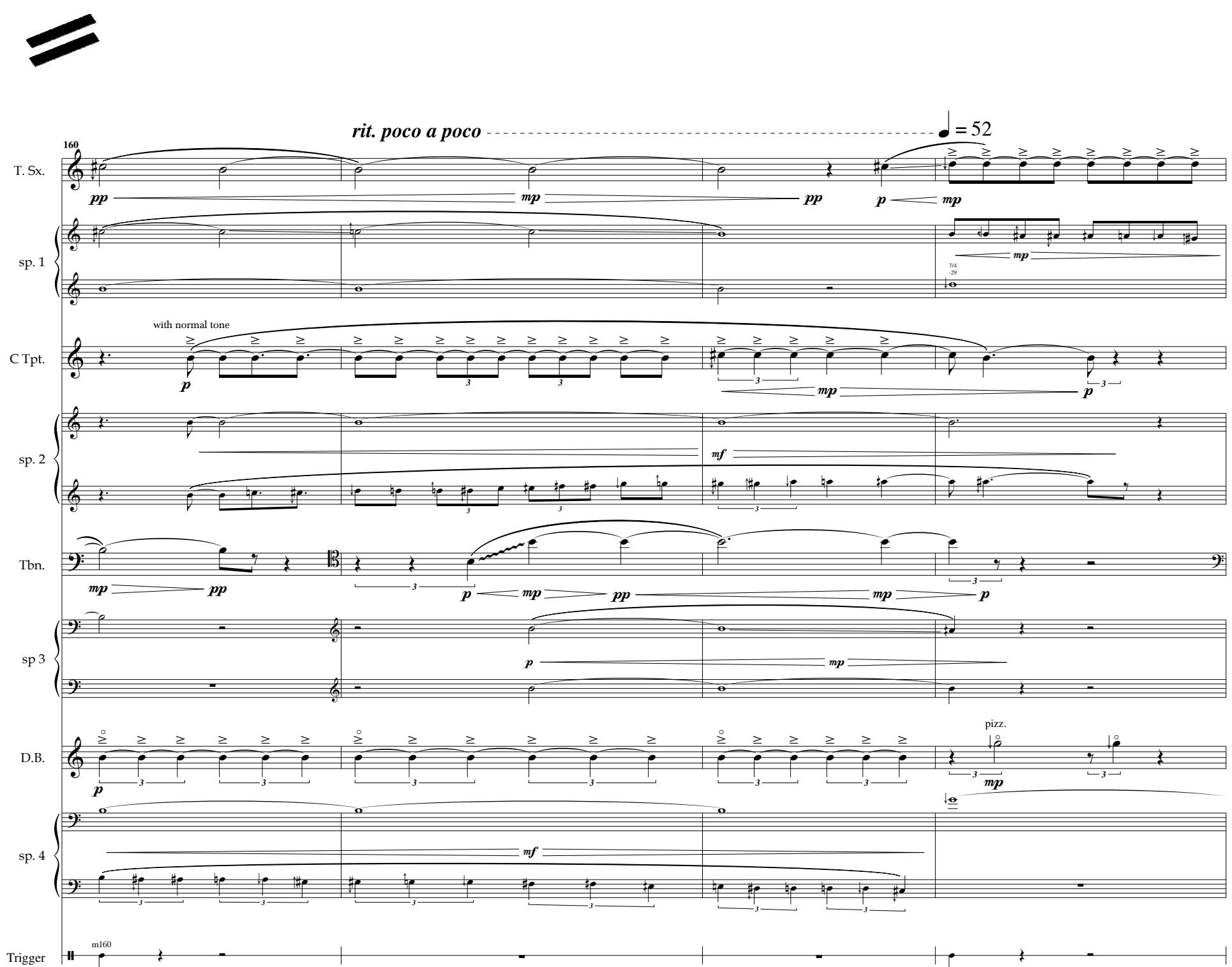
D.B.

sp. 4

Trigger m157

rit. poco a poco $\text{♩} = 52$

160

T. Sx. 

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger m160

164

T. Sx. 

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger m164

m167



168

T. Sx. 

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger m164

m170

172

T. Sx.

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger m173

176

T. Sx.

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger m176

Musical score for orchestra and electronics, page 179. The score includes parts for T. Sx., sp. 1, C Tpt., sp. 2, Tbn., sp. 3, D.B., and sp. 4. The score features complex rhythmic patterns with many grace notes and slurs. Measure numbers m179 through m182 are indicated at the bottom.



183

T. Sx.

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger

m183 m183.2 m184 m184.2 m185 m186

T. Sx. solo bisb. molto vib. and nasal

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger m187 m188 m189 m190

T. Sx. norm. Ta CS

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger m191 m192 m194

195

T. Sx. C3 5 C5 9 3 Tc bend 3 7 5 6

p mp pp p mp p mf pp p mp p pp p mp p pp mfp

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger m195 m197



199

T. Sx. C5 (.) pp pp mf p mp p mp p mp p ppp

sp. 1

C Tpt.

sp. 2

Tbn.

sp. 3

D.B.

sp. 4

Trigger m199