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# Collective Memories

for amplified ensemble with live electronics

**Mike Vaughan (1990/4)**

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"Collective Memories ..." was commissioned by  
E.M.A.S. with funds provided by the Arts Council  
of Great Britain.

## Collective Memories (for amplified ensemble with live electronics)

*Collective Memories* is the final work in a series written between 1988 and 1994 for different instrumental ensembles and is the only one of the three which includes an electroacoustic element. All three have certain common elements of which the most obvious is the evolution of linear melodic material from the harmonic development of drones - in *Collective Memories* this pitch 'centre' is based around the A# below middle C.

The instrumentation of trumpet, trombone and french horn along with 'cello, keyboards and percussion suggests certain general relationships between the performers according to models derived from music where improvisation, in the form of alternating 'solos' and 'tuttis' is a key element (even when fairly loosely defined). In *Collective Memories* continual references are made to these performance 'strategies' both in terms of the constant reconfiguring of the ensemble (as the soloists alternate) and in the cyclic nature of the structural elements.

The electronics perform two major functions. In the case of the synthesizer part certain timbral aspects of the instruments are developed independently (and woven back into the music discourse as separate strands) and in the case of the signal processing functions (reverb etc.) the apparent acoustic 'size' of the ensemble can be expanded and the parts played by each individual transformed.

The work (which lasts for approximately 17 minutes) consists of two outer sections in which the ensemble is amplified only and a large inner section in which the material and performance relationships in these outer sections are developed further using the live electronics. This development is influenced by notions of 'memory' in which the micro and macro elements of performance (from the timbre of individual instruments to large-scale musical structures) are subject to detailed scrutiny.

*Collective Memories* was commissioned by EMAS (now Sonic Arts Network) with funds provided by the (then) Arts Council of Great Britain.

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Section 1 - PERFORMANCE NOTES (GENERAL).

1.1. INSTRUMENTATION

Horn (in F)	(straight mute required)
Trumpet in C	(harmon and plunger mutes required)
Trombone (Tenor)	(harmon and plunger mutes required)
*Piano/Synthesizer	(Voices programmed for Yamaha DX7IIFD on disc/ <i>CAUTION</i> )
*Percussion	4 Tomtoms (low to high) Pedal Bass Drum 3 Suspended Cymbals (different sizes) Tamtam
'Cello	

Signal Processing equipment as detailed in section 2.




\*(see note 2.1 for alternatives)

1.2. DURATION

At the given tempo markings the overall duration is c.17'30". In performance spaces with a difficult acoustic the tempo may be modified slightly, as long as any modification is consistent throughout.

1.3. PERFORMANCE NOTES.

1.3.1. Microtones.

	quartertone sharp.
	quartertone flat.
	three quartertones sharp.

1.3.2. Vibrato.

<u>s.v.</u>	senza vibrato.
<u>n.v.</u>	normal vibrato.
<u>m.v.</u>	molto vibrato.

1.3.3. Trills/Tremolos

All trills and tremolos to be played as fast as possible.

Vtr. (Trumpet) indicates "Valve Tremolo". The tremolo is achieved by alternating between two partials of the same pitch of different fundamentals.

1.3.4. Grace Notes

All grace notes are to be played as fast as possible. The temporal position of main noteheads is always exact.

1.3.5. Glissandi

All glissandi to be regarded as linear with respect to pitch where possible.



Gliss away as high (or low) as possible.

Approximate glissando using a combination of valve and overtone series.

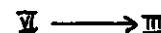
1.3.6. Special Notation (Trombone)



To be played on the inhale



(Exhale)



Continuous transition from one slide position to another.

1.3.7. Timbral Indications ('Cello)

<u>s.p.</u>	sul ponticello
<u>n.p.</u>	'normal' position
<u>s.t.</u>	sul tasto

s.p. ----->s.t. gradual transition from (e.g.) sul ponticello to sul tasto.

1.3.8. Breath Indications.

During passages of long sustained notes the mark ( // ) between two notes indicates that a breath may be taken after the first note is completed. (It is not intended that a breath should be taken at all such points.)

## Section 2 - Electronics/Signal Processing Requirements

### 2.1 General Approach

It is intended that the amplification and signal processing requirements of the work should not be device specific in order that full advantage might be taken of improvements in available products and that equipment obsolescence is not a barrier to performance. The form of processing required in each section is subjectively described in section 2.5. and can usually be achieved with three multi-effects units such as the Yamaha SPX-1000 or similar. As up to three different effects may be in operation at any one time then the mixing desk used for sound diffusion must have at least 6 auxiliary channels if the effects units are connected in this way. For the inner sections (C-L) electronic drum pads may be used in place of amplified tomtoms and bass drum to facilitate sound processing and mixing and to add to the sense of contrast between these and the outer sections.

### 2.2 Synthesizer Requirements

The synthesizer voices were designed on a Yamaha DX7II and are available from the composer on cartridge or floppy disk. Although voices are specific to this device data along with a recording for sampling is available for reconstruction using a sampler.

### 2.3 Mixer Requirements

#### Input Channels

- 14 input channels
  - Horn, Trombone, Trumpet, 'Cello (4)
  - Piano (2)
  - Synthesizer (2)
  - Percussion (6)

#### Effects Returns (ON INPUT CHANNELS)

- 3 stereo effects units (6)

#### Auxiliary Channels

- 3 stereo effects units ~~(6)~~ 3

Obviously there are many ways of meeting these minimum requirements and a flexible solution should be found. Changes to signal processing devices settings as well as changes in relative level between instruments often need to be made quite quickly throughout the piece and all such changes should be able to be implemented as easily and as quickly as possible.

2.4 (deleted this version)

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## 2.5. DESCRIPTION OF SIGNAL PROCESSING

(see note at front of score)

### 2.5.1 General

A description of the processing requirements at each stage of the work is given below and is summarised and cross-referenced in the score as in the following example:

[12]Pitch-Shift(+/-1) -----|

Patch Number    General Function    Process Duration

### 2.5.2 Section A (Page 1-11)

[1] Horn/Trumpet/Trombone/Piano (SLIGHT AMPLIFICATION)  
[1] 'Cello (AMPLIFIED TO LEVEL OF BRASS + LIGHT PHASING)

The level of amplification applied to the brass is to ensure that the introduction of pitch shift at "B" does not appear too incongruous.

The level applied to piano is to ensure that all detail is audible.

The amplification of the 'Cello is in order that it may appear integrated in level with the brass. Phasing is intended to preserve continuity in the noise textures whilst retaining the characteristic granularity of the sound and enhancing the "electronic" white noise quality.

### 2.5.3 Section B (Page 12-13)

At this point in the work the general breadth of the sound stage should be increased from the "ensemble" form of playing to include a much broader spatialisation of the sound.

[2]Brass/'Cello (PITCH SHIFT +/-1 with REVERB(Short))

At the start of "B" the pitch shift is introduced to create semitone clusters around the (harmonic) chord. The level of the pitch shift signal should be just below the level of the instrument centre pitch and the onset should be delayed as a function of the effect to allow the sfmp attacks to be uncoloured.

A short reverb is envisaged in order to more fully integrate the various strands if required.

The patch should be gradually faded out over bars 59-61.

### 2.5.4 Section C (Page 13-15)

[3]Bass Drum (VERY SHORT DELAY + FEEDBACK)  
[3]Brass (DELAY c. 0.5 sec(1 delay))

The bass drum delay should be very short in order to create a metallic "spring" effect when sufficient feedback is added. The exact delay may be varied manually during performance in order to alter the frequency of the resonance.

The delay added to the brass should be sufficient in level to create the effect of a greater density of sound but somewhat lower in volume than the (amplified) instrumental sound to create an "antiphonal" effect.

The patch should be faded out over bars 70-71.

[4] Brass (REVERB(long))

This patch should be introduced in order to catch the cluster in the brass in bar 73 and should be audible until around the end of bar 75. The degree of reverb added to the synth is for integration purposes only.

### 2.5.5 Section D (page 15-19)

[5] Trombone/'Cello (PITCH SHIFT +/-0.5)  
[5] Synth (CHORUS + REVERB(medium))

The function of the pitch shift is to thicken the instrumental texture and is an attempt to create an instrumental sound with a strong "synthesized" characteristic. The chorus and reverb applied to the synthesizer is in order to both broaden the overall sound and to disperse it over the sound stage in a "veil-like" manner.

The patch should be faded over bar 87.

### 2.5.6 Section E (page 19-20)

[6] Cymbals/Tamtam (PHASE)  
[6] TomToms/Bass Drum (AUTOPAN(FAST))  
[6] 'Cello (PHASE)

This section is the first percussion feature in which the general intention is to create two separate textures; a fused moving mass created from the processing of cymbals and tamtam along with incisive patterns on the drums. Spatialisation of these textures should be apparent and the overall level

progressively greater than the (integrated) ensemble level. The speed of autopanning may be varied manually if time permits. The overall level should revert to ensemble level over bars 92-93.

The 'Cello sound should be as section "A" providing a focal point at the centre of the sound stage from which the treated percussion diverges and converges.

#### 2.5.7 Section F (page 21-36)

F1 (page 21)

[7] Brass (PITCH SHIFT +/- 1) (SEMITONES)

F2 (page 22)

[8] Brass (PITCH SHIFT +/- 2) (SEMITONES)

F3 (page 25)

[9] Brass (PITCH SHIFT +/- 4) (SEMITONES)

[9] Cymbals (PHASE/CHORUS/REVERB)

F4 (page 28)

[10] Brass (PITCH SHIFT +/- 1) (SEMITONE)

F5 (page 33)

[11] Brass (PITCH SHIFT +/- 7.5) (SEMITONES)

In the sections where the brass are affected by pitch shift there is a common process whereby the overall tessitura of a polyphony increases from a narrow overall bandwidth to a relatively wide one. This aspect is also present in the fineness of interval in the synthesizer which creates the onset to these sections. In this way the upper pitch shifted signal of e.g. the trombone is around the same area as the lower pitchshifted signal of the horn etc. The onset of the pitchshifted signal should be delayed slightly to enhance the polyphonic effect. The brass at page 31 is coloured by pitch shift only and is not part of the overall process.

With the exception of F4 the reverb applied to the synthesizer should be such to form a drone which slightly "covers" the brass entries following the initial flurry. The reverb level should however be initially relatively low in order not to cloud the synthesizer part but may be increased after the part has been played creating a fusion of the initially granular events. Throughout the synthesizer "solo" at F4 a very "lively" sound should be achieved.

The cymbals from 120-125 should be fused as a single accented strand and the overall sound quality of the percussion during F4 should have a rather "dirty" sound by means of fast phasing on cymbals and relatively strong mid/hi EQ on Tomtoms and Bass drum.

At bar 150 the upper and lower pitch shift members should be widely diffused around the performance space.

#### 2.5.8 Section G (page 36-42)

[12] Cymbals/Tamtam (PHASE) [12] SYNTH. (REVERB(SHORT))

[12] Tomtoms/Bass Drum (AUTOPAN(FAST))

[12] 'Cello (REVERB(SHORT))

This patch is similar to [6] in section (E) and the same general notes apply.

The reverb setting for the 'cello at G2 (page 40) should be sufficient to enhance the overall 'presence' of the sound without in any way detracting from the attack. It is envisaged that the level of amplification of the 'cello at this point should be very high. The overall process of movement from unpitched to pitched sounds should be made clear.

#### 2.5.9 SECTION H (page 42-48)

[13] 'Cello (CHORUS/PHASE) PITCH SHIFT +/- 0.5)

[13] Brass (PITCH SHIFT +/- 0.5)

[13] Brass (REVERB(MED))

+ Synth.

During this section the continuous line on the 'cello should be very prominent and the granular characteristics of the sound enhanced by treatment. The complexities in the sound should be made audibly clear by a wide dispersion of sound. A very fast (stereo) delay may be considered to further enhance this aspect. Any delay to the onset of effects must be sufficiently short in duration to avoid confusing the melodic gestures within the line or alternatively the level of effects may be attenuated somewhat at the mixing desk at points where this is likely to be problematic.

The level of pitch shift applied to the brass is in order to create additional depth to the sound only and does not serve a specific (harmonic) function. The reverb, which should have sufficient delay at the onset to avoid softening the attack in any way, is in order to integrate the chord complexes.



2.5.10 Section I (page 49-50)

[14] Cymbals/Tamtam (PHASE)  
[14] Toms/Bass Drum (AUTOPAN(FAST))  
~~[14] 'Cello (REVERB(MED))~~  
[14] Brass (REVERB(MED)/PITCH SHIFT - 0.5 - LONG DELAY/FEEDBACK)

With respect to the percussion this patch is similar to [6] in section (E) and the same general notes apply.

The brass gesture at 204 should be "catastrophic" in effect with a perceivable "stepping down" during the (reverberated) decay.

2.5.11 Section J (page 51-57)

J1

[15] Brass (DELAY 0.25(approx))  
[15] CYMBALS/TAMTAM (PHASE)  
[15] 'CELLO REVERB (MED)

J2

[16] Brass (PITCH SHIFT +/- 1/REVERB(MED))  
[16] 'Cello (PITCH SHIFT +/- 1)  
[16] CYMBALS/TAMTAM PHASE

Throughout section J a single fused texture evolves. The delay added to the brass throughout J1 aims at a synchronisation point just before J2. During J2 the fusion of all elements into a homogenous evolving texture should be aimed at. Pitch shift added to the brass is in order to broaden the individual strands of the texture and the reverb added to the synthesizer is to integrate the sound more fully.

Throughout J1 the A# drone on the 'cello should always be clear although not too prominent.

At the end of J2 the removal of effects should be quick but without creating an unnecessary discontinuity.

2.5.12 Section K (page 58-59)

[17] 'Cello (AMPLIFIED TO LEVEL OF BRASS + LIGHT PHASING)

This patch is identical to section A and the same general notes apply.

2.5.13 Section L (page 60-63)

[18] Brass (DELAY 0.5(approx))  
[18] 'Cello (Pitch Shift +/- 0.5)  
[18] Bass Drum (VERY FAST DELAY + FEEDBACK)  
[18] Piano (AMPLIFIED TO MATCH BRASS ATTACKS)

The bass drum delay is the same as for section C and the same general notes apply.

The pitch shift applied to the 'Cello is in order to thicken the sound only and should not result in a lack of articulation during the tremolando "onsets".

The delay to the brass should generate one repetition only and should be mixed slightly lower than the source to give the effect of "terraced" dynamics.

During this section the brass may be panned from centre at bar 244 to full right, centre and left at bar 252 and back to the centre again at bar 262 in order to enhance the dispersion of register over this section. The delay of each instrument should be placed at the complement of its source if this strategy is adopted.

This patch is to be faded out before the end of 262.

2.5.14 Section M (page 64-70)

[19] Synth. (REVERB(med.))  
[19] Brass. (REVERB(short))

This section is essentially to be heard as "untreated". The reverb added to the synthesizer is to artificially extend the decay portion of the sound and also enhance the continuity of the line.

The reverb added to the brass is in order to assist "fusion" of the gestures only.

It may be necessary to use moderate amplification to ensure the clarity of the 'cello line particularly during the harmonics at the end of the section. If this is the case then it should gradually be faded out over the last three bars.

Section 3 VOICE PROGRAMS FOR YAMAHA DX7II

*Redo*

Exceptions

3.1 General

Voice programs were created using the DXPERT voicing program on an Atari 1040ST. A bank of 32 voices was created and used to create 14 performances using combinations of two voices with the exception of PERF#10 which is a single voice performance. These may be loaded directly into a DX7IID using the disc provided, ~~or to the TX902 using a cartridge available on request.~~ Alternatively the voice data may be loaded via DXPERT using a disc also available on request and the performance data set up using the synthesizer editing facilities. Section 3.2 details the performance settings and section 3.3 the voice data. Appendix A gives key to pitch correspondences for those performances notated in quartertones in the score.

3.2 Performance Data for DX7II

In all the following combinations "PAN" should be set to the "On" position and "DUAL" mode should be selected.

3.2.1 Voice Configurations

<u>Performance No.</u>	<u>Voice Combination</u>
1	1/2
2	3/4
3	5/6
4	7/8
5	31/32
6	11/12
7	31/32
8	21/30
9	3/4
10	22
11	17/18
12	25/26
13	27/28
14	19/6

3.2.2 Volume/Balance/Dual Detune

With the exceptions detailed below these parameters are set as follows:

Volume = 99  
Balance = +0  
Dual Detune = 0

Performance

Parameters

2	Balance = +5
8	Balance = +4
9	Balance = -1
9	Dual Detune = 4

3.2.3 Tuning/Note Shift/EG forced damp

With the exceptions detailed below these parameters are set as follows:

Equal Temp	A/B
EG forced damp	OFF
Note Shift	+0 +0

Exceptions

Performance

Parameters

3	1/4 tone ON ON
4	1/8 tone ON ON
4	Note Shift -18 -13
5	1/4 tone ON ON
5	Note Shift -14 -18
6	Note Shift 0 +4
10	1/4 tone ON
10	Note Shift +12

3.2.4 Pan Settings

With the following exceptions Range is set to 0 making panning inoperative:

Exceptions

Performance

Parameters

3	Range = 94 /LFO /Mode = 0:(MIX)
4	Range = 99 /Note No. /Mode = 1
5	Range = 99 /Note No. /Mode = 1
6	Range = 99 /Note No. /Mode = 1
10	Range = 41 /LFO /(Single)
11	Range = 55 /LFO /Mode = 0:(MIX)
14	Range = 99 /LFO /Mode = 0:(MIX)

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### 3.3 Voice Data

The performances described above are compiled from a bank of 32 voices. Some of these voices are used more than once and currently some are not used at all. This latter group are included in order to facilitate future updates of the performance settings. The voices are arranged as follows:

<u>Voice No.</u>	<u>Voice Name</u>
1	Voice#1 C
2	V1/2
3	Voice#2 C2
4	V2/201
5	Voice#302D
6	V3/201
7	PSOLO~14
8	PSOLO~24
9	PSOLO~15
10	PSOLO~25
11	PSOLO~16
12	PSOLO~26
13	PSOLO~1
14	PSOLO~2
15	V7~1
16	V7/2
17	BATH 01
18	BBATH02
19	Voice#14D
20	TEST PIANO
21	BABSE-41
22	CHURCH\$ORG
23	WALPNT01
24	WALPNT02
25	V2/WATER.1
26	V2/WATER.2
27	D~beat~02
28	D~beat~01
29	Voice#1231
30	CHURCH\$V8
31	PSOLO~1
32	PSOLO~2

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The parameter values for these voices are available on request for the purpose of reconstruction on alternative synthesis equipment for this work only.

In the case of the following voices the pitches are notated in 1/4 tones. The following tables show how the keys played correspond to the sounding pitch. In other cases where 1/4 or 1/8 tones are used the keyed pitch rather than the notated pitch is shown in the score.

1. PERF#3

C4  
↓

Notated Pitch

Keyed Pitch

2. PERF#10

C3  
↓

Notated Pitch

Keyed Pitch

N.B. Voice #10 has components an 8ve higher at a relatively high amplitude i.e. it can sound an 8ve higher than notated.

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1 7  
8 8

5  
8

9  
8

Horn

Tpt.

Trb.

Pno.

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Percussion

4 Tom Toms

susa cymbal

Tom-Tom

Vc.

A

D

G

C

[DAMPED STRINGS, SUL PONT. (EXTREME) - TO PRODUCE CONSISTENT BANDS OF NOISE]

(1) Horn/Trumpet/Trombone/Piano (SLIGHT AMPLIFICATION) (BAR 1-53)

(1) 'Cello (AMPLIFIED TO LEVEL OF BRASS + LIGHT PHASING) (see section 2.5.2)

7  
16

7  
8

3  
16

5  
8

5  
16

4  
8

The musical score consists of several staves. At the top, there are five systems of two staves each, corresponding to the time signatures 7/16, 7/8, 3/16, 5/8, 5/16, and 4/8. The first two systems are empty. The third system contains a single note with a dynamic marking of *sfz*. The fourth system contains a piano accompaniment with a dynamic marking of *ff* and a tempo marking of *♩ = 126*. The fifth system contains a guitar part with various techniques such as triplets (marked '3'), slurs, and dynamic markings like *f*, *mp*, and *ff*. The sixth system contains a bass line with dynamic markings like *mp*, *fff*, and *sfmp*. A large blue watermark 'Preview File Only' is oriented diagonally across the center of the page.

6  
8  
11

8  
8

6  
8

3  
8

Handwritten musical score for Horns, Trpt, Trb., Pro, 4 Toms, Sus. Cymal, Tam-tam, and Vc. The score is divided into measures by vertical bar lines. Above the first measure, there are time signatures: 6/8, 8/8, 6/8, and 3/8. The Horns part starts with a wavy line and a *sfp* dynamic. The Trpt part has a *sfp* dynamic and includes markings like *tr.* and *tr.*. The Trb. part has a *sf* dynamic and includes a triplet of 3. The Pro part is complex with many dynamics including *p*, *ff*, *mf*, *f*, and *sfz*, and includes markings like *gliss.* and *tr.*. The 4 Toms part has a *mp* dynamic. The Vc. part has dynamics like *mp* and *sfz*. There are various musical notations including slurs, ties, and articulation marks throughout the score.

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7  
8

6  
8

7  
8

5  
8

2  
8

15

A handwritten musical score for piano, consisting of six staves. The score is divided into five measures by vertical bar lines. Above the staves, the numbers 7, 6, 7, 5, and 2 are written, with an 8 below each. The first measure is numbered 15. The notation includes various musical symbols such as notes, rests, slurs, and dynamic markings like *f*, *mf*, *pp*, *sfz*, *f*, *mp*, *f*, *mp*, *sfz*, *mp*, *ff*, *f*, *mp*, *f*, *ff*, *f*, *mp*, *f*, *ff*, *mf*, and *mp*. There are also performance instructions such as *Tr.*, *tr.*, *sfz*, *f*, *mp*, *f*, *mp*, *f*, *mp*, *sfz*, *mp*, *ff*, *f*, *mp*, *f*, *ff*, *mf*, and *mp*. The score includes a grand staff (treble and bass clefs) and a separate staff for the right hand. A large blue watermark "Preview File Only" is overlaid diagonally across the center of the page. At the bottom left, there are three small letters A, B, and C. At the bottom center, there is a large empty rectangular box.



1+4  
8

5  
8

3  
4

Horn

Musical staff for Horn, measures 20-24. Includes dynamic markings *mp* and *ff*. Features trills and slurs.

Tpt

Musical staff for Trumpet, measures 20-24. Includes dynamic markings *f*, *mf*, and *sfz*. Features trills and slurs.

Tub.

Musical staff for Trombone, measures 20-24. Includes dynamic markings *ff mp*, *sf*, *sfz*, and *f*. Features trills and slurs.

Pno.

Musical staff for Piano, measures 20-24. Includes dynamic markings *f*, *mp*, *ff*, and *p*. Features trills and slurs.

6 TOMTOMS  
SUB. CYMBAL  
TAMBOURINE

Musical staff for Percussion, measures 20-24. Includes dynamic markings *f*, *mp*, and *ff*. Features slurs and accents.

Vc.

Musical staff for Violin, measures 20-24. Includes dynamic markings *fff* and *mp*. Features slurs and accents.

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9  
8

24

4  
8

3  
4

2  
8

4  
8

Handwritten musical score for a multi-instrument ensemble. The score consists of seven staves. The first three staves are for woodwinds (flute, oboe, clarinet), the fourth is for strings, and the fifth and sixth are for piano. The seventh staff is empty. The score is divided into measures by vertical bar lines. Above the first staff, measures are grouped by time signatures: 9/8, 4/8, 3/4, 2/8, and 4/8. The music includes various dynamics such as *sfz.*, *(p)*, *mf*, *ff*, *p*, and *f*. There are also performance instructions like *Ta.*, *tr.*, *gliss.*, and *8va*. A large blue watermark "Preview File Only" is oriented vertically across the center of the page.

4  
8

3  
8

8  
8

7  
8

29

Horn

Tpt

Trb.

Pno

4 TOMTOMS  
SOS. CYMBAL  
TAMBURO

Vc.



6  
8  
33

3  
8

6  
8

3  
8

Handwritten musical score for six staves. The score is divided into four measures by vertical bar lines. Above the staves, the time signatures 6/8, 3/8, 6/8, and 3/8 are indicated. The music includes various rhythmic patterns, including triplets and sixteenth notes. Dynamics such as *f*, *ff*, *sfz*, *mp*, *mf*, *p*, and *ff* are used throughout. Performance instructions include *Te...*, *8ve*, *716*, *8:6*, and *7:..*. A specific instruction in the bottom staff reads "[increase bow pressure to noise]". The score is heavily annotated with slurs, accents, and other musical markings.

4  
8

5  
8

4  
8

3  
8

38

Horn

Handwritten musical notation for the Horn part, starting at measure 38. It features a melodic line with dynamic markings *mf* and *ff*, and a crescendo instruction *(poco a poco cresc.)*. There are three triplet markings over the notes.

Tpt

Handwritten musical notation for the Trumpet part. It includes dynamic markings *mf*, *sfz*, *f*, *ff*, and *sf=sf=ff*. It features a *(SWING BRASS)* section with sixteenth-note patterns and a *15:12* ratio marking. There are also triplet markings and a *Tam Tam* section.

Ttb

Handwritten musical notation for the Trombone part. It includes dynamic markings *mf* and *ff*, and a crescendo instruction *(poco a poco cresc.)*. There is a triplet marking at the end of the staff.

Pro

Handwritten musical notation for the Percussion part. It includes a dynamic marking *(p)* and a *ff* marking. The notation shows various rhythmic patterns and accents.

Pedal Bass Drum

4 TomToms

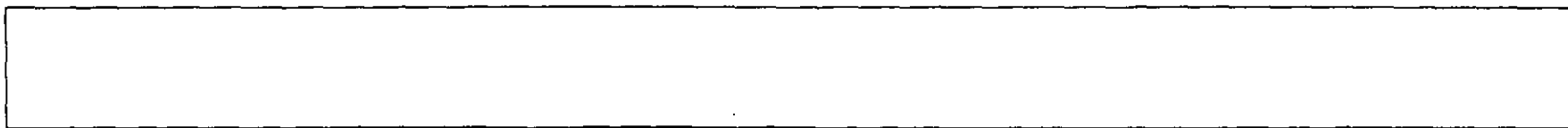
SUS. CYMBAL

TAHTAN

Handwritten musical notation for the Percussion section, including Pedal Bass Drum, 4 TomToms, SUS. CYMBAL, and TAHTAN. It includes dynamic markings *mf*, *ff*, and *f*, and a crescendo instruction *(poco a poco cresc.)*. There are triplet markings and *(acc)* markings.

Vc

Handwritten musical staff for the Violin part, which is currently blank.



Preview File Only

6  
8

4  
8

43

Handwritten musical score for percussion instruments. The score is divided into two systems. The first system contains five staves: Snare Drum, Tom-Toms, Cymbals, Bass Drum, and a combined Snare/Tom-Tom/Cymbal/Bass Drum staff. The second system contains three staves: Snare Drum, Tom-Toms, and Cymbals. The notation includes various rhythmic patterns, dynamics (e.g., *sfz*, *f*, *mf*, *ff*, *pp*, *mp*), and articulation marks. A large blue watermark "Preview File Only" is overlaid on the score. The number "43" is written in the top left corner. The numbers "6 8" and "4 8" are written at the top of the page, likely indicating the number of measures in each system. The word "Caccetti sempre f" is written in the second system.

PERCUSSION  
4 TOM-TOMS  
3 SUB. CYMBALS  
BASS DRUM

4  
8

5  
8

48

Musical score for Horn, Trumpet, Trombone, Saxophone, Piano, Percussion, and Violin. The score is divided into two systems, 4 and 5, each with 8 measures. The Horn part features a melodic line with dynamics *sfz* and *ff*. The Trumpet part has a rhythmic pattern with dynamics *sfz* and *ff*. The Trombone part includes fingerings (I, II, III) and dynamics *f*, *sfz*, and *ff*. The Saxophone part has dynamics *f* and *sfz*. The Piano part features complex chordal textures with dynamics *f* and *sfz*. The Percussion part includes parts for Bass Drum, Tom-Toms, Snare Drums, and Cymbals. The Violin part has dynamics *fz* and *sfz*. A large blue watermark "Preview File Only" is overlaid on the score.

(B) ♩ = 84

3  
4

53

Rit. →

Handwritten musical score for Brass/Cello, measures 53-61. The score consists of six staves. The top two staves are for the main brass/cello parts, the middle two are for a 'band' part, and the bottom two are for 'suspended cymbals' and 'tamtam'. The music includes various dynamics (sfz, sfmp, ff, mf, f, p), articulations (accents, slurs), and performance instructions like 'Rit.' and '(to DX7 II)'. There are also handwritten annotations like '(1) ff(l.v.)' and '(2) p'.

(2) Brass/'Cello (PITCH SHIFT +/-1 with REVERB(Short)) (BAR 53-61)  
 (see section 2.5.3)



3  
4

© ♩ = 52

**DX7 PERF #1:** THIS IS A PERCUSSIVE VOICE TO BE PLAYED IN 2 WAYS; CLOSED (+) WHERE THE KEY IS HELD DOWN MOMENTARILY, STOPS THE VOICE IMMEDIATELY OR OPEN (o) WHERE THE KEY IS RELEASED IMMEDIATELY CAUSING A RESONANCE.  
EACH NOTEHEAD REFERS TO A 2, 3 OR 4 NOTE CHORD OF RANDOM PITCHES IN 4 EQUAL DIVISIONS OF THE KEYBOARD RANGE

THE FOLLOWING SYNTHESIZER VOICES ARE GENERALLY COMPLEX IN CHARACTER. NO ATTEMPT HAS BEEN MADE TO FULLY NOTATE THE RESULTING SOUND. REFERENCE SHOULD BE MADE TO THE TAPE OF EXAMPLES TO DETERMINE THE GENERAL RELATIONSHIP BETWEEN KEYS NOTATED AND THE SOUND PRODUCED.

PERF #1 (SEE NOTE ABOVE)

4 TON TARTS

REAL BASS DRUM

SUSPENDED SYMBOLS

ff (sempre)

[3] Bass Drum (VERY SHORT DELAY + FEEDBACK) BAR 62-71  
 [3] Brass (DELAY c. 0.5 sec(1 delay))  
 (see section 2.5.4)

3  
4  
65

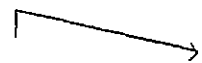
4  
4

Musical score for guitar, consisting of six staves. The score includes various musical notations such as chords, triplets, and dynamic markings. The dynamic markings include *f* (forte), *mf* (mezzo-forte), *sfmp* (sforzando mezzo-piano), *sfz* (sforzando), and *ff* (fortissimo). A specific instruction reads "SUSPENDER CYMBALS". The score is divided into measures by vertical bar lines, with some measures containing additional markings like "10", "108", "118", and "128".

Preview File Only



6 *poco accel.* → 5  $\text{♩} = 112$  3 5  
 8 8 8  
 70

RIT.   
 \* N.B. MUST ENOUGH REVERB TO MERGE SMOOTHLY WITH NEXT SIGNAL.

**HORN**  
*f sfz mp mf sfz sfz sfz*

**TPT**  
*ff f mp sfz mp sf sfz sfz sfz*

**TRB**  
*f mp f sfz sfz f sfz*

**SYNTH.**  
 (PERF#2)

**4 TOMTOMS**  
*f (sempr) sfz*

**PEARL DRUM BARR**  
*f*

**Vc.**  
*p*

**PERFORMANCE MARKINGS:**  
 SUSPENDED CYMBALS  
 Cymbal 1  
 TANTAN

[4] Brass (REVERB(long))  
 (see section 2.5.4)  
 BAR 73-75

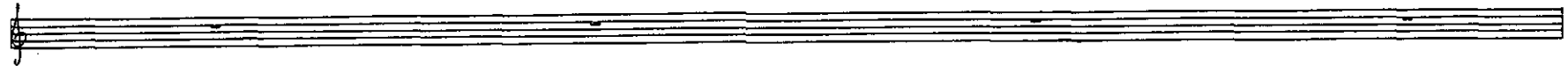
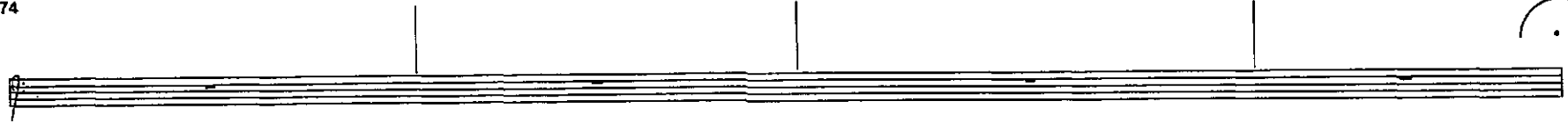
ⓓ 5  
4  
74

$\text{♩} = 48$

6  
4

4  
4

(poco r.t.) →



1 → 7

3 5 5

*mp*

*p*

*mf*

PERF #3

(SYNTH HELD THROUGH PAUSE)

3

*f* (*comp. Evr.*)

*pp*

*mf*

WITH TRIANGLE BEATER

G 7 7 G G 7 - 3 3 (l.v.s.)

SUSPENDED CYMBALS  
TANTAN

*f* (*comp. Evr.*)

*sp.*

*mp*

*sfz*

*p*

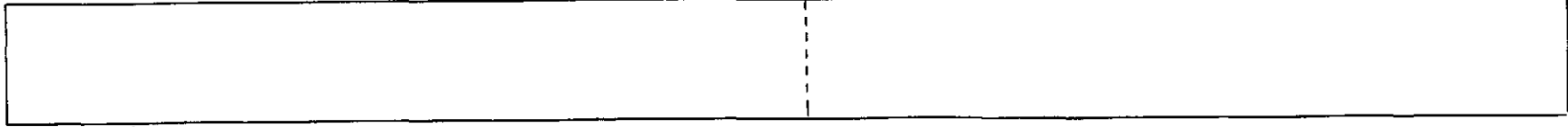
*mf*

*pp*

*mf*

*s.t.*

7/4



6 (a tempo)

4

78

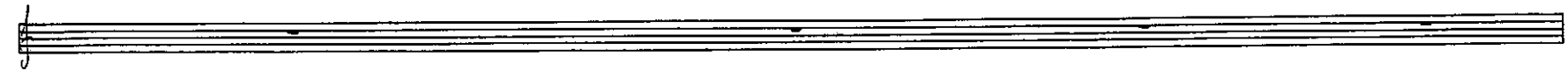
4

4

3

4

(poco rit.) →



Handwritten musical notation on a staff with a treble clef. It includes notes, rests, and dynamic markings such as *mp*, *sfz*, and *sf*. There are also annotations like "s.v." and "m.v." with arrows pointing to specific notes. A bracket labeled "5" is placed over a group of notes.

Handwritten musical notation on a grand staff (treble and bass clefs). It features notes, rests, and dynamic markings like *mp* and *sfz*. A note on the right side is annotated with "(SYNTH BEAT WORKING FRASE)".

Handwritten musical notation on a staff with a treble clef. It includes notes, rests, and dynamic markings such as *p*, *mf*, and *f*. There are also annotations like "s.v." and "m.v." with arrows.

Handwritten musical notation on a staff with a treble clef. It includes notes, rests, and dynamic markings such as *p*, *mf*, *sf*, and *p*. There are also annotations like "s.v." and "m.v." with arrows. A bracket labeled "5" is placed over a group of notes.

[5] Trombone/'Cello (PITCH SHIFT +/-0.5) BAR 78-87  
 [5] Synth (CHORUS + REVERB(medium))  
 (see section 2.5.5)  
 (FADE IN OVER 78, OUT OVER 87.)

6/8  
82

(a tempo)

4/4

4/8

6/8

4/4

(poco r.t.)

Musical staff with notes and dynamics. Dynamics include *pp*, *sf*, and *pp*.

WITH HARMONY NOTE

Musical staff with notes and dynamics. Dynamics include *pp*, *sfmp*, and *pp*. Includes markings *m.v.* and *s.v.*

Musical staff with notes and dynamics. Dynamics include *mp*, *sfz.*, *mf*, *sf*, *mf*, *sfmp*, and *f*. Includes markings *7+6*, *TR*, *TR*, *5*, *II*, *VII*, *I*, *VI*, and *I*.

Musical staff with notes and dynamics. Dynamics include *mf*, *f*, and *mf*. Includes a bracketed section labeled *[DELAY DURING PAUSE]*.

Musical staff with notes and dynamics. Dynamics include *p*, *f*, and *f*. Includes marking *(l.v.)*.

Musical staff with notes and dynamics. Dynamics include *mp*, *sf*, *sfz.*, *mf*, *sf*, *sfmp*, *mf*, *mp*, *f*, and *s.t.*. Includes marking *(p)*.



7  
4  
87  
(a tempo)

ⓔ  
4  
4  
♩ = 40

pp mf pp

pp mf

mf mp

sp sit. sp (GRADUAL TRANSITION TO 3+4 DAMPED) sp

pp mf pp

[6] Cymbals/Tamtam (PHASE) BAR 88 TO 93  
[6] Tomtoms/Bass Drum (AUTOPAN (FAST))  
[6] Cello (PHASE)  
(see section 2.5.6)

5  
4  
90

Accl. →

6  
4  
♩ = 60

Four empty musical staves, likely for strings and woodwinds, positioned above the main musical score.

(CHANGE TO VOICE # 4)

Preview File Only

Main musical score with five staves. The top staff is for 4 Tenors. The second staff is for REAL BASS DRUM. The third staff is for 3 SUSPENDED CYMBALS and TANTAN. The bottom two staves are for piano accompaniment. Dynamics include *f*, *mp*, *ff*, *mf*, *f*, *mf*, *p*, and *ff*. There are also markings for *mf* and *f* in the upper staves. The score includes various rhythmic figures, including triplets and sixteenth notes.





F<sub>1</sub>  
3  
8  
94

[P=120]

4  
8

3  
4

Rit.

5  
4

3  
4

N.B. SYNTH PERF. #4 IS SET TO 1/8 TONE INTERVALS FROM A#2. THE PITCHES NOTATED ARE AS PLAYED. SOUNDING INTERVALS ARE, THEREFORE, REDUCED BY A FACTOR OF 4.

Horn. *ff* *sfz-pp* *sfp*

Trp. *ff* *sfz-pp* *sfp*

Trb. *ff* *sfz-pp* *sfp*

PERF #4  
(SEE NOTE ABOVE)

NOTATED RANGE  
SOUNDING RANGE (+1/8)

THROUGHOUT SECTION F TIMBRAL VARIATIONS MAY BE ACHIEVED IN SYNTH. SOUNDS BY VARYING THE ARTICULATION (STACCATO/LEGATO, DYNAMIC) AD. LIB.

SYNTH. *ff*

TOMS  
SUB. CYMBAL  
TANTAM *f* [esp. damped] *sfz* *pp* *p*

T.C. *sfz* *pp* *p*

PLUNGER MUTE  
HARMON MUTE

CHANGES ARE IMPERCEPTIBLE

[7] Brass (PITCH SHIFT +/- 1) (FADE IN) TO BAR 102  
(see section 2.5.7)

5  $\downarrow = 60$   
4  
99

Rit. ————— 4 ————— 4 —————  $\downarrow = 40$

Musical staff 1: Treble clef, 4/4 time signature. Contains a series of chords and notes. Dynamics: *mf*, *sfz*, *pp*. Includes a *Rit.* marking at the beginning and a tempo change to  $\downarrow = 40$  at the end.

Musical staff 2: Treble clef, 4/4 time signature. Contains melodic lines with slurs and accents. Dynamics: *sfz*, *p*, *mp*, *sfz*, *mp*, *pp*. Includes markings for *m.v.* (movements) and *(s.m.)* (sustained motion).

Musical staff 3: Treble clef, 4/4 time signature. Contains chords and notes. Dynamics: *mf*, *f*, *sfz*, *p*.

Musical staff 4: Treble clef, 4/4 time signature. Contains chords and notes. Dynamics: *mf*, *f*, *sfz*, *p*.

Musical staff 5: Treble clef, 4/4 time signature. Includes markings for *3 sus. chords* and *TANTUM*. Dynamics: *p*, *f*, *mf (l.v.)*. Includes markings for *(l.v.)* and *(s)*.

Musical staff 6: Treble clef, 4/4 time signature. Contains long notes and slurs. Dynamics: *mp*, *pp*.

Musical staff 7: Treble clef, 4/4 time signature. Contains a box with the text *(7) FADE OUT* and an arrow pointing right.

Preview File Only

5  
4  
103

$\frac{E_2}{8}$   
4  
8  $\text{♩} = 120$

4 RIT. ————— 6  
4 ————— 4

N.B. SYNTH PERF. #5 IS SET TO  $\frac{1}{4}$  TONE INTERVALS FROM A#2. THE PITCHES NOTATED ARE AS PLAYED. SOUNDING INTERVALS ARE, THEREFORE, REDUCED BY A FACTOR OF 2.

$\text{♩} = 40$

HORN. *ff* (senza word) *sfz. pp* *mf* *pp* (American Mute) *mf*

TRP. *ff* (senza word) *sfz* *mf*

TRB. *ff* (American Mute) *sfz* *mf*

PERF #5 (SEE NOTE ABOVE)

NOTATED RANGE  
SOUNDING RANGE

SYNTH. *pp* *f* *pp* *mf*

4 TOM TONES  
4 SUS. CYMBAL  
2 BASS DRUM

3 SUS. CYMBAL  
TAM-TAM

Vc. *pp* *f* *pp* *mf*

CHANGE BOW IMPERCEPTIBLY

Preview File Only

(8) Brass (PITCH SHIFT +/- 2) (FADE IN) →  
(see section 2.5.7)  
(TO BAR 111)

3  $\text{♩} = 60$   
4

4  
4

3  $\text{♩} = 40$   
4

107

Rit. —————

m.r. —————> s.r.

Handwritten musical score for piano, consisting of six staves. The score includes various musical notations such as triplets, slurs, and dynamic markings. The dynamics range from *pp* (pianissimo) to *sfz* (sforzando). The tempo is marked as  $\text{♩} = 60$  and  $\text{♩} = 40$ . The score is divided into measures by vertical bar lines. A large blue watermark "Preview File Only" is overlaid diagonally across the middle of the page.

(8) (FADE OUT) —————>

7  
4  
112

(E<sub>3</sub>)  
5  
8  
♩ = 120

7  
4  
(♩ = 60) *Rit.* → ♩ = 40

HORN

TRM.

TRB.

SYNTH.

SUS. CYMBALS

TAMTAM

Vc.

PERF #6

(SOUNDS = WRITTEN)

AT THIS SETTING LOW NOTES TO THE SYNTH. TEND  
TOWARDS PULSATIVE SOUNDS. MOST OF THE L.H.  
WILL BE RELATIVELY INDISTINCT WITH RESPECT TO  
PITCH BUT WILL RETAIN A TIMBRAL VARIATION  
ACCORDING TO PITCH.

PEARL BASS DRUM

[9] Brass (PITCH SHIFT +/- 4)

(FADE IN) →

[9] Cymbals (PHASE/CHORUS/REVERB)  
(see section 2.5.7)

(TO BAR 120)

4 = 60  
4

7  
4

Rit.

Handwritten musical score for piano and synth. The score is written on six staves. The first three staves are for the piano, and the last three are for the synth. The tempo is marked as 4 = 60. The key signature has one flat (Bb). The score includes various musical notations such as dynamics (mf, f, sfz, p, sf), articulation (accents, slurs), and performance instructions like 'Rit.' and '(FIBRATO WITHIN NOTED LIMITS)'. There are also some handwritten annotations like '115°', '12:8', and 'm.v.'. The score is divided into measures by vertical bar lines. A large blue watermark 'Preview File Only' is overlaid on the score.

6  
4

4  
4

$\text{♩} = 40$

118

HORN.

mf *sfz* mf *sfz* p mf

6/4 7/4

3

Tpt.

*sfz* *sfmp* pp

7/4

Tb.

*sfp* *sfmp* pp

SYNTH.

3 SOL. CYMBALS

CATTANI

mf f (p) mp *sfz* pp

3/2

Vc.

*sfz* (p) (mp)

(9) (FADE OUT EXCEPT CYMBALS)

4

6

(F4)

4

$\text{♩} = 60$

4

ACCEL

4

122

(SENZA SORD.)

(SENZA SORD.)

PERF #7

Preview File Only

(10) Brass (PITCH SHIFT +/- 1)  
 (see section 2.5.7)  
 (FADE IN) →

(TO BAR 139)



4  
8

7  
8

8  
8

125

Horn. *ff* *mf* *ff* *sfz.* *p*

Tpt. *ff* *mf* *ff* *sfz.* *p*

Trb. *ff* *mf* *ff* *sfz.* *p*

THE FOLLOWING SYNTH SOLO IS TO BE  
RECORDED AS *ff* (SENPRE). TIMBRAL  
VARIATION IS TO BE ACHIEVED BY VARYING ARTICULATION  
AD. LIB.

N.B. CHORDS IN R.H. MUST BE "HELD" SLIGHTLY  
TO ALLOW VOICE TO DEVELOP.

SYNTH

4. TONTONS  
BASS DRUM  
3. SDS. CYM.  
TANTAN

Vc.



5  
8  
129

2  
4

5  
8

6  
8

The image shows a handwritten musical score on a page with four systems of staves. The first system consists of two empty staves. The second system consists of two empty staves. The third system contains a guitar staff with a treble clef and a drum staff with a bass clef. The guitar staff has a key signature of one flat and a 12/8 time signature. It features a complex melodic line with various rhythmic patterns, including triplets and sixteenth notes. Annotations include "5" above a group of notes, "3" above a triplet, "(GLASS)" above a note, and "7/6" below a group of notes. The drum staff has two sections labeled "(3.) IMPROVISE DRUM FILL". The fourth system consists of two empty staves. A large empty rectangular box is located at the bottom of the page.

Preview File Only

7  
8

133

5  
8

5  
4

(mp)

f

Horn

Tpt.

Ttb

Synth.

4 TOMTOMS  
BASS DRUM  
3 SWS. CYMBALS  
TAMTAM

Vc

IMPROVISE DRUM  
FILL

(GLASS)

Preview File Only



4  
8

5  
8

6  
8

136

*f* ————— *(p)*

Handwritten musical score for guitar, consisting of several staves. The score includes a melody line with various dynamics such as *f*, *(p)*, *sfp*, *sffz*, *sfz*, *sf*, *mf*, and *ff*. It also features guitar-specific techniques and markings, including *(PITCH-WHEEL GLISS.)*, *(p)*, and *ff*. The score is divided into measures, with some measures containing complex rhythmic patterns and fingerings (e.g., 6, 5, 3, 6, 6). A large blue watermark "Preview Only" is overlaid diagonally across the middle of the page.



F5

3  
4

7  
8

3  
4

2  
4

$\downarrow = 52$

140

Handwritten musical score for Horns, Tpt., Trb., and Percussion. The score includes dynamic markings such as *sfz*, *ff*, *mf*, and *mp*. It features various musical notations including slurs, accents, and articulation marks. A large blue watermark "PREVIEW FILE ONLY" is overlaid on the score. A circled note in the percussion part is labeled "To VOICE #8".

4 TOMTOMS  
 BASS DRUM  
 3 SOS. CYMBALS  
 TAMTAM

<p>(10) ————— (FADE OUT) —————&gt;</p>	<p>(11) Brass (PITCH SHIFT +/- 7.5) ————— (FADE IN) —————&gt;</p> <p>(see section 2.5.7)</p> <p>(TO BAR 151)</p>
--	--

7  
4  
144

5  
4

4  
4

Handwritten musical notation for the first three staves. The first staff begins with a dynamic of *f* and includes a triplet of eighth notes. The second staff starts with *sfz* and features a triplet of eighth notes. The third staff begins with *f* and contains a slur over a group of notes. Various dynamics such as *mf*, *p*, and *sfz* are used throughout. Articulation marks include accents and slurs.

Handwritten musical notation for the fourth staff. It features a circled annotation "Pers #8" and a "RELEASE" instruction with a downward arrow pointing to the staff. The notation includes rhythmic patterns and dynamic markings.

Handwritten musical notation for the fifth and sixth staves. The fifth staff includes a triplet of eighth notes and a dynamic of *mf*. The sixth staff also features a triplet of eighth notes. The notation is dense with rhythmic and dynamic markings.



4  
4

147

$\text{♩} = 60$

Accel.  $\rightarrow$

Handwritten musical score for a 4/4 piece, measure 147. The score includes parts for Horn, Trumpet, Trombone, Synth, 3 SOS-Cymbals, and Violin. The tempo is marked as quarter note = 60. An acceleration (Accel.) is indicated with a long arrow pointing right across the top of the score. The Horn part features a series of sixteenth-note patterns with dynamics ranging from *sfz* to *f*. The Trumpet part includes triplet markings (3) and dynamic markings (*sfz*, *f*). The Trombone part starts with *mf* and *sfz*, then moves to *f* and *mp*. The Synth part has a "RELEASE" marking and a series of vertical lines representing a sustained texture. The 3 SOS-Cymbals part has dynamic markings *mp* and *f*. The Violin part starts with *mp* and *f*, and includes a section marked *s.t.* (sustained texture) with a dynamic of *mf*.

Preview File Only

6  
4 (meno mosso) ♩ = 52

4  
4

161

Musical score for multiple instruments. The score is divided into two systems. The first system includes staves for strings (marked *sfz*), woodwinds (marked *sfz*), brass (marked *sfz*), and a grand staff (marked *(RELEASE)*). The second system includes staves for percussion (marked *mf*), strings (marked *p*), and brass (marked *mf* and *pp*). The percussion part includes cymbals, tomtoms/bass drum, and cello. The score is marked with various dynamics and articulations.

Preview File Only

<p>(ii) (FADE OUT) →</p>	<p>[12] Cymbals/Tantam (PHASE) [12] Tomtoms/Bass Drum (AUTOPAN (FAST)) (TO BAR 174) [12] 'Cello (REVERB (SHORT)) (see section 2.5.8)</p>
--------------------------	--



11  
8

155

6  
4

9  
8

Horn

Tpt.

Trb.

PERF #4

NOTATED RANGE  
SOUND OF RANGE  
(+ 8)

Preview File Only

SYNTH.

4 TOMTOMS

BASS DRUM

3 SUB. CYMBALS

Vc

(FADE IN SYNTH. (FROM PPP))

Revision 1995

5  
8

158

7  
8

*Accel.*

3  
4

4  
4

$\text{♩} = 84$

3  
4

$\text{♩} = 52$  (TEMPO 1)

Preview File Only

ff

mp

5

7:8

(A.B.)

ff

ff

mp

3

3:2

TAMTAM

ff

ff

7:8

7:8

PERF 19

(FADE OUT SYNTH)

(RESET LEVEL AFTER PERFORM SELECT)

5  
8  
163

~~5~~  
~~8~~

~~5~~  
~~8~~

6  
4

Accel.

$\downarrow = 84$

Horn

Tpt.

Trb.

Synth.

Preview File Only

4 TOM TOMS  
BASS LEAD  
3 SOX CYMBALS

Vc.

Revision 1995

3  
4 } = 52 (TEMPO 1)

3  
4

5  
4 (G2)

5  
8

4  
8

167

PERC #4

FADE IN GRADUALLY ON BESK.

MIXING

(RELEASE)

4  
4  
172

3  
4

RIT.

$\text{♩} = 40$

Horn.

Trpt.

Trb.

PERF #1

SEE NOTE ON PAGE 13 FOR PERFORMANCE METHOD.

(RANGE)

1  
2  
3  
4

4 TOMTOMS

BASS DRUM

Vc.

4  
4  
177

(H)

$\text{♩} = 104$

5  
8

5  
4

Musical score for Percussion #10. The score consists of several staves. The top three staves are empty. The fourth staff contains the notation for Percussion #10, starting with a measure of rests followed by a series of notes. A circled label 'PERF #10' is placed above this staff. The bottom two staves contain detailed performance instructions and dynamics. The first staff of the bottom section includes markings for 's.p.' (soft pedal), 'pizz.' (pizzicato), and 'HEAVY BOW - VIBRATO ON BRIDGE'. The second staff of the bottom section includes markings for 's.p. (normal)', '10:8', and 's.p.'. Dynamics include *f*, *ff*, and *sfz*. There are also slurs and accents throughout the notation.

Preview File Only

(FADE OUT 12) →

- (13) 'Cello ~~REVERB (MED)~~ PITCH SHIFT  $\nabla$  (0.5)
- (13) Brass (PITCH SHIFT +/- 0.5)
- (13) Brass (REVERB (MED)) (FADE IN) →
- + Synth.
- (see section 2.5.9)

4

4

181

♩ = 56

8

8

HORN

Musical staff for Horn. It begins with a dynamic marking of *pp* and a fermata. A measure later, there is a dynamic shift to *sf* with a fermata. The staff continues with a melodic line.

TRP.

Musical staff for Trumpet. It starts with a dynamic marking of *pp* and a fermata. A measure later, there is a dynamic shift to *sf* with a fermata. The staff continues with a melodic line.

TRB.

Musical staff for Trombone. It starts with a dynamic marking of *pp* and a fermata. A measure later, there is a dynamic shift to *sf* with a fermata. The staff continues with a melodic line.

N.B. SLIGHT IRREGULAR ARPEGGIATION

SYNTH.

Musical staff for Synthesizer. It features a complex, arpeggiated texture with various dynamics and articulations.

[GRADUALLY FADE IN SYNTHESIZER VIA DESK] (mark) TO MATCH *sf* LEVEL OF 'CELLO AT BAR 193 (\*)

4 TOMTOMS

BASS DRUM

TAMTAM

Musical staff for Percussion, including 4 Tomtoms, Bass Drum, and Tamtam. It shows rhythmic patterns and dynamic markings.

Vc.

Musical staff for Violoncello. It features a melodic line with various dynamics including *mf*, *mp*, *ff*, and *sfz*. There are also some performance markings like *rit.* and *tr.*

An empty rectangular box at the bottom of the page, likely a placeholder for additional information or a signature.

3  
4

4  
4

5  
4

184

Musical score for piano and strings. The score consists of five systems of staves. The first three systems are for the piano, each starting with a forte (*ff*) dynamic. The fourth system is for the strings, showing a melodic line with various dynamics including *sfz-mf*, *ff*, and *sfz-mf*. The fifth system is for the piano, featuring complex rhythmic patterns with slurs and dynamics such as *ff*, *sfz-mf*, and *ff*. A large blue watermark "Preview File Only" is overlaid diagonally across the middle of the score. A large empty rectangular box is located at the bottom of the page.



4  
4

187

6  
8

5  
8

HORN

TRP.

TRB.

SYNTH

4 TROMBONES

BASS DRUM

TAMTAM

Vc.

Preview File Only

Handwritten musical score for a section of a piece. The score is written on ten staves. The top three staves are for Horn, Trumpet (TRP.), and Trombone (TRB.). The fourth staff is for Synth. The fifth staff is for 4 Trombones. The sixth staff is for Bass Drum and Tamtam. The seventh staff is for Violin (Vc.). The score includes various musical notations such as notes, rests, and dynamic markings. A large blue watermark "Preview File Only" is overlaid on the center of the page. Above the staves, there are large numbers: "4 4" with "187" below it, "6 8", and "5 8". The Violin staff has several dynamic markings: *f*, *ff*, *sfz-mf*, *ff*, *mf*, *sfz-mf*, *ff*, *sfz-mf*, and *ff*. There are also some performance instructions like "18/16" and "12/8" above certain notes. The score ends with a double bar line and a fermata over the final note.

2  
4

5  
4

(see note p43)  
\*

This page contains a handwritten musical score for piano, consisting of seven staves. The first three staves are treble clef staves, and the last four are bass clef staves. The score includes various musical notations such as notes, rests, and slurs. Dynamic markings include *ff*, *sfz*, *mf*, and *f*. There are also markings for *M.V.* (Moderato Vivace) and *S.V.* (Squarcio Vivace) with arrows indicating transitions. A large blue watermark "Preview File Only" is oriented diagonally across the center of the page. At the bottom of the page, there is a large empty rectangular box.

4  
4

(poco meno mosso)

HORN. <sup>194</sup> *ff* *fff*

Tpt. *ff* *fff*

Trb. *ff* *fff*

SYNTH.

4 Trombones  
BASS DRUM  
TAMTAM

*ff* *fff* *fff sempre*



7  
8

6  
4

4  
4

ALLOW REVERB ON BRASS TO  
DECAY TO LEVEL OF 'CELLO.  
THEN FADE OUT. PATCH 13  
AND FADE IN PATCH 14

197

The musical score consists of seven staves. The top two staves are for strings, with dynamic markings *sfz*, *sffz-mf*, and *sffz*. The third staff is for woodwinds, with *sfz* and *sffz* markings. The fourth staff is for brass, with *sfz*, *sffz*, and *mp* markings. The fifth staff is for piano, with *ff* and *sffz* markings. The sixth staff is for another instrument, with *ff* and *mf* markings. The seventh staff is for a final instrument, with *mf* and *sfz* markings. A large blue watermark 'Preview File Only' is oriented diagonally across the center of the page.

(SEE NOTE ABOVE)

① 4 } = 80

4  
200

HORN

Tpt.

Trb.

to Bar # 11

SYNTH.

Preview File Only

- [14] Cymbals/Tamtam (PHASE)
- [14] Tomtoms/Bass Drum (AUTOPAN(FAST))
- [14] 'Cello (REVERB(MED))
- [14] Brass (REVERB(MED)/PITCH SHIFT - 0.5 - LONG DELAY/FEEDBACK)  
(see section 2.5.10)

(TO BAR 207)

3  
4  
204

4  
4

6  
4

Accl.

sfz

sfz

sfz

PERF # 11.

(RELEASE ON 3rd BEAT)

sfz

f

Accl.

Preview File Only

[ REMOVE BRASS PITCH SHIFT AND PREPARE DELAY ]

J1

4  
4  
208

$\text{♩} = c.100$

Handwritten musical score for Horn, Tpt., Trb., Synth., 3 SUS. CYMBALS, TAMTAM, and Vc. The score is in 4/4 time with a tempo of approximately 100 beats per minute. The Horn part features complex rhythmic patterns with markings like '6:5' and '8:6'. The Tpt. and Trb. parts have similar rhythmic structures with 'f' and 'p' dynamics. The Synth. part consists of two staves with a wavy, oscillating pattern. The 3 SUS. CYMBALS and TAMTAM parts have a 'f' dynamic and include '(l.r.)' markings. The Vc. part has a 'f' dynamic and a 'p' dynamic marking.

Preview File Only

[15] Brass (DELAY 0.25(approx))  
 [15] CYMBALS/TAMTAM (PHASE)  
 [15] 'CELLO (REVERB(MED))  
 (see section 2.5.11)

4

4

212

Accen. To c.120 AT BAR 220

The image shows a handwritten musical score for piano, consisting of several staves. The top three staves contain the main melodic and harmonic lines, featuring complex rhythmic patterns, triplets, and dynamic markings such as *f*, *sfz.*, *mf*, and *p*. The fourth and fifth staves are filled with a dense, wavy texture, likely representing a tremolo or a specific performance technique. The sixth and seventh staves show a more sparse melodic line with some triplets and dynamic markings like *mf*. The score is annotated with various performance instructions, including accents and dynamic changes. A large blue watermark "Preview File Only" is overlaid diagonally across the center of the page. At the bottom of the page, there is a large empty rectangular box.



4

4

2116

Hoar.

Handwritten musical notation for Horns (Hoar.) in 4/4 time. The staff contains several measures of music with dynamic markings such as *f* and *sfz*. There are also articulation marks and slurs. A large blue watermark "Preview File Only" is overlaid on the page.

Tpt.

Handwritten musical notation for Trumpets (Tpt.) in 4/4 time. The staff contains several measures of music with dynamic markings such as *f* and *sfz*. There are also articulation marks and slurs. A large blue watermark "Preview File Only" is overlaid on the page.

Tbn.

Handwritten musical notation for Trombones (Tbn.) in 4/4 time. The staff contains several measures of music with dynamic markings such as *f* and *sfz*. There are also articulation marks and slurs. A large blue watermark "Preview File Only" is overlaid on the page.

SYNTH.

Handwritten musical notation for Synthesizer (SYNTH.) in 4/4 time. The staff contains several measures of music with dynamic markings such as *f* and *sfz*. There are also articulation marks and slurs. A large blue watermark "Preview File Only" is overlaid on the page.

3 Sps. CYMBALS

TAM TAM

Handwritten musical notation for 3 Sps. CYMBALS and TAM TAM in 4/4 time. The staff contains several measures of music with dynamic markings such as *f* and *sfz*. There are also articulation marks and slurs. A large blue watermark "Preview File Only" is overlaid on the page.

Vc.

Handwritten musical notation for Violin (Vc.) in 4/4 time. The staff contains several measures of music with dynamic markings such as *f* and *sfz*. There are also articulation marks and slurs. A large blue watermark "Preview File Only" is overlaid on the page.



4

4

220

$\text{♩} = 120(+)$

N.B. OMIT ONE OF A REPEATED PITCH TO  
BREATHE IF NECESSARY

3

4

J<sub>2</sub>

Handwritten musical notation for the first staff. It begins with a dynamic marking of *f* and *sfz.*. The notes are grouped with slurs and have a wavy line above them. The staff ends with a dynamic marking of *sfz.*.

Handwritten musical notation for the second staff. It starts with a dynamic marking of *sfz.* and continues with slurred notes. The staff concludes with a dynamic marking of *sfz.*.

Handwritten musical notation for the third staff. It features a sequence of notes with a dynamic marking of *sfz.* at the beginning.

Handwritten musical notation for the fourth staff. It includes a box labeled *(RELEASE)* and a *GLISS* instruction. The staff shows a series of notes with a wavy line underneath.

Handwritten musical notation for the fifth staff. It begins with a dynamic marking of *ff*.

Handwritten musical notation for the sixth staff. It includes a *DAMP* instruction and a dynamic marking of *ff*.

Handwritten musical notation for the seventh staff. It ends with a box containing the instruction *FADE OUT FX* with an arrow pointing to the right.

Preview File Only

[CUT OFF SYNTH BY SELECTING  
PERF #12]

(PEDALBOARD LAMP)

4

6

4

4

4

4

(c. 120+)

Accel.

(To c. 138-144 AT BAR 235)

HORN

225

(s.v.)

(p)

mp

3

(h)

f

mp

Tpt.

s.v.

m.v.

sfz

f

tr

(h)

mp

Trb.

s.v.

m.v.

sfz

PERF #12

N.B. BACH "NOTE" TRIGGERS A TEXTURE - PLACE SLIGHTLY IRREGULARLY WITHIN BAR TO AVOID ANY "RHYTHMIC" EFFECT

SYNTH.

FADE IN SYNTH FROM DESK

3. SWS. CYMBALS

TAMTAM

(p)

Vc.

(p)

f

[16] Brass (PITCH SHIFT +/- 1/REVERB(MED)) [16] SYNTH (REVERB)  
 [16] 'Cello (PITCH SHIFT +/- 1)  
 [16] Cymbals/Tamtam (PHASE)  
 (see section 2.5.11)  
 (FADE IN)

4

4

229

Handwritten musical notation for the first system. It features a treble clef and a wavy line above the staff. The notation includes notes with stems and beams, and dynamic markings *ff* and *mp*. There are also some handwritten annotations like *tr.* and *(b)*.

Handwritten musical notation for the second system, similar to the first, with dynamic markings *ff* and *mp*. It includes notes with stems and beams, and some handwritten annotations like *tr.* and *(b)*.

Handwritten musical notation for the third system. It features a treble clef and a wavy line above the staff. The notation includes notes with stems and beams, and dynamic markings *ff* and *mp*. There are also some handwritten annotations like *tr.* and *(b)*.

Handwritten musical notation for the fourth system. It features a treble clef and a wavy line above the staff. The notation includes notes with stems and beams, and dynamic markings *ff* and *mp*. There are also some handwritten annotations like *tr.* and *(b)*.

(WITH CONSTANTLY CHANGING POSITION TO VARY TIMBRE)

Handwritten musical notation for the fifth system. It features a treble clef and a wavy line above the staff. The notation includes notes with stems and beams, and dynamic markings *ff (sempre)* and *f*. There are also some handwritten annotations like *tr.* and *(b)*.



4  
4  
233

\* OMIT B<sup>b</sup> BETWEEN BRACKETS  
IF NECESSARY.

6  
4

♩ = c.138-144

HORN.

TPT.

TRB.

SYNTH.

3 SUS. CYMBALS

TAM-TAM

Vc.

PERCUSSION

TR.

ff mp ff (p)

(vtr.) (RIT VTR.) (MOTO)

[REMOVE SYNTH. BY SELECTING PERF #13]

ff

PERCUSSION

f

[16] FADE OUT FX

(K)

4

4

♩ = 54-66 (TEMPO AT 'A')

236

*Handwritten scribble*

*Handwritten scribble*

Musical staff with notes and dynamics markings (pp).

Musical staff with notes and dynamics markings (ff).

Musical staff with notes and dynamics markings (mf, pp, mp).

REAR #13

Musical staff with notes and dynamics markings (pp).

REAR BASS DRUM

Musical staff with notes and dynamics markings (ff).

Musical staff with notes and dynamics markings (sff).

Preview File Only

(17) 'Cello (AMPLIFIED TO LEVEL OF BRASS + LIGHT PINGING)  
 (see section 2.5.12)

1995 Revision

7

8

240

4

4

4  
4

Handwritten musical score for piano, featuring multiple staves. The score is heavily crossed out with large, thick black diagonal lines. The notation includes notes, rests, and dynamic markings such as *sff. mp* and *p*. There are also some handwritten annotations like *(TO PIANO)* and *(GRADUAL TRANSFORMATION)*. The score is divided into measures by vertical bar lines, with some measures containing triplets or other rhythmic groupings.

PEDAL BRASS BASS  
 4 TARTANS  
 SUS. CYMBAL

(GRADUAL TRANSFORMATION)

1995 Nevson

③ ] = 60  
 3  
 4  
 244

Rit.

N.B. GLOBAL DYNAMICS REFER TO MAXIMUM LEVEL WITHIN PHRASES

The score consists of several staves for percussion instruments. The top staff is for Piano, with dynamics ranging from *p* to *mf*. Below it are staves for Pedal Bass Drum, 4 Tomtoms, and Tambourine. The bottom staff shows a series of dynamic markings: *sfmf*, *p*, *sfmf*, *p*, *sfmf*, *p*, *sfmf*. Above this staff are horizontal lines with labels (s.r.) and (m.v.) and arrows indicating transitions between *s.p.* and *s.t.* (short and long) articulations.

Preview File Only

- [18] Brass (DELAY 0.5 (approx))
- [18] 'Cello (Pitch Shift +/- 0.5)
- [18] Bass Drum (VERY SHORT DELAY + FEEDBACK) (TO BAR 266)
- [18] Piano (AMPLIFIED TO MATCH BRASS ATTACKS) (see section 2.5.13)



RIT.

4

6

3 } = 40

2

8

8

4

4

249

The musical score is a handwritten manuscript for a symphonic or concert band. It features six staves: Horn, Trumpet, Trombone, Piano, Percussion (including Pedal Bass Drum, Tom-Toms, and Tambourine), and Violin. The score is marked with a 'RIT.' (ritardando) and includes various dynamic levels such as *f*, *ff*, *mf*, and *p*. There are numerous slurs, accents, and articulation marks throughout the piece. Rehearsal marks are placed at measures 249, 455, 1110, 514, 716, 718, 800, and 1115. A section of the Piano part is marked '(Chords sempre ff)'. The Violin part includes markings like '(mv.) > s.t.' and '(p)'. The score concludes with a large empty rectangular box at the bottom.

2  
4  
255

ACCEL.

3  
4

4  
8

3  
4

$\text{♩} = 60$

Handwritten musical score for a string quartet. The score consists of seven staves. The first staff is the Violin I part, starting with a  $\text{♩} = 60$  tempo marking and an *ACCEL.* instruction. The time signature changes from 2/4 to 3/4, then to 4/8, and finally to 3/4. The score includes various dynamics such as *ff*, *sfz.*, *mf*, and *sfz. - mf*. There are numerous performance markings including accents, slurs, and fingerings (e.g., 3, 5, 1, 2, 3, 4, 5, 6). The second staff is Violin II, the third is Viola, and the fourth is Cello. The fifth staff is the Double Bass part, which includes a *div.* (divisi) marking. The bottom two staves are for the Double Bass, with *div.* markings and dynamics like *sfz.* and *mf*. The score concludes with a *div.* marking and a *sfz.* dynamic.

Preview File Only

(18) (FADE OUT PITCH SHIFT) (VC) →

8  
8

4  
4

261 m.v.

s.v.

Horn

*sfz*

*pp*

Trp.

m.v.

s.v.

*sfz*

*pp*

Trb.

m.v.

s.v.

*sfz*

*pp*

Piano

*mf*

Bass Drum

4 TOMTOMS

TAMTAM

*f* (c.v.)

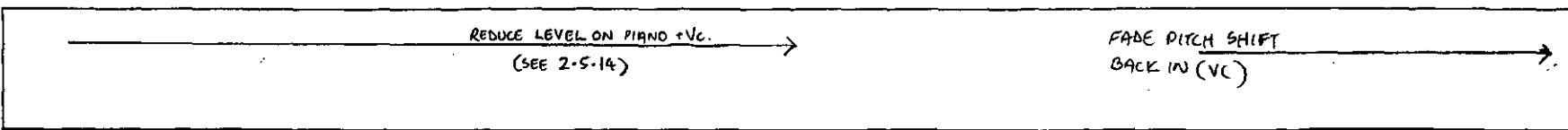
Vc.

*sp.*

s.t.

[WITH INCREASING BOW PRESSURE]

*sp.*

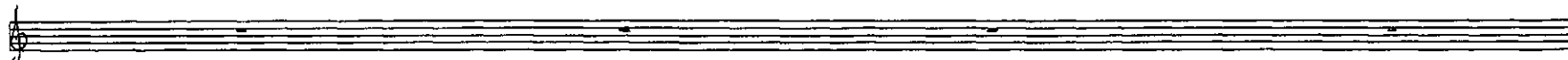
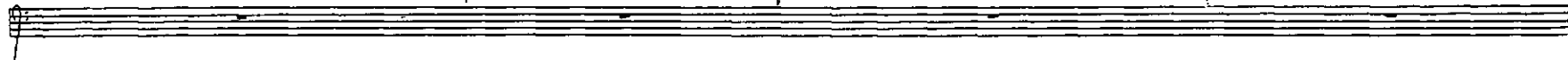


(M)

4  
4 } = 52  
265

3  
4

5  
8



*sf.* *mp* *sf* *p* *pp*

*mp* *pp*



[*s.p.* (extreme) with heavy bow pressure (noise to *s.p.*)] *(s.p.)* *(s.p.)* *sf.* *(s.p.)*

*ff* *p* *f* *sfz* *f* *mp* *f*



5  
4  
269

7  
4

Horn

Trp.

Trb.

Piano

Preview File Only

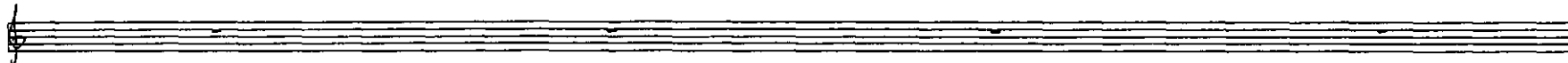
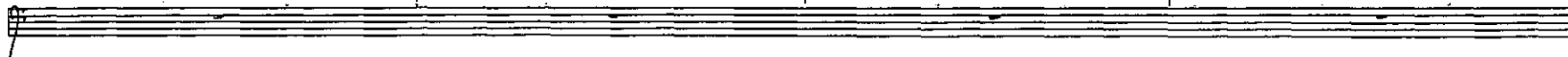
Handwritten musical score for Horn, Trumpet, Trombone, and Piano. The score is written on five staves. The top three staves are for Horn, Trumpet, and Trombone, and are currently empty. The fourth staff is for Piano, showing a melodic line with various dynamics and articulations. The bottom staff is for another instrument, possibly a second Piano or a different part, showing a rhythmic accompaniment with various dynamics and articulations. The score includes various musical notations such as notes, rests, slurs, and dynamic markings like *mf*, *pp*, *sfz*, *sf*, *p*, and *pppp*. There are also markings for *ped.* and *(sm.)*. The score is marked with a large blue watermark "Preview File Only".

3  
4  
271

6  
8

3  
4

13  
16



8ve.  
mf (semibre)

To SYNTH.

4 TOMTOM'S  
SUS. CYMBAL  
TAMTAM

(VC) FADE OUT PITCH SHIFT →

3  
4

2  
8

4  
4

275 CON SOLO.

HORN

Musical staff for Horn. Dynamics: *sfp*, *sfmf*, *pp*. Markings: *Ta.*, *Tr.*

CON SOLO. (HARMON)

TPT.

Musical staff for Trumpet. Dynamics: *pp*, *sfmf*, *pp*.

CON SOLO. (HARMON)

TRB.

Musical staff for Trombone. Dynamics: *sfp*, *sfmf*, *pp*.

PERF #14

Preview File Only

[SYNTH. LEVEL INTEGRATED WITH Vc.]

SYNTH.

Musical staff for Synth. Includes reverb markings: *REVERB* and *REVERB* with arrows.

4 TOMTOMS

AVS. CYMBAL

TANTARI

Musical staff for Percussion. Dynamics: *pp*, *s.p.*, *sfmf*, *p*, *mp*, *p*, *mp*, *p*. Markings: *(p.v.)*, *(p.v.)*, *no.v.*, *no.v.*

[19] Synth. (REVERB(med.))  
 [19] Brass. (REVERB(short))  
 (see section 2.5.14)

5  
8

279

7  
8

Handwritten musical score for percussion instruments. The score is written on six staves. The first three staves are for snare drum, cymbals, and tom-toms. The last two staves are for 3 SOS. CYMBALS and TOM-TOM. The score includes various dynamics such as *mp*, *sfmp*, *pp*, *sfp*, *mp*, *pp*, *pp*, *mp*, *pp*, *pp*, *p*, *mf*, *mf*, *mp*, and *pp*. It also features articulation marks like accents (>), slurs, and breath marks ((l.r.)). There are also some handwritten annotations like "7" and "10:8". A large blue watermark "Preview File Only" is overlaid on the score.



3  
4

5  
4

4  
4

283

3:2

TR.

Musical staff with notes, dynamics (sfp, sf, pp), and a tremolo effect.

Musical staff with notes and dynamics (sfmp, sf, pp).

Musical staff with notes and dynamics (sfp, pp).

Musical staff with notes and dynamics (pp).

Preview File Only

3 SUB-CYMBOLS  
TARTAN

Musical staff with notes, dynamics (pp, mf, p), and various markings.



5  
4

286

The musical score consists of five staves. The top staff begins with a dynamic marking of *sfpp* and ends with *(pp)*. The second staff starts with *pp* and includes a triplet of notes marked with a '3' and a dynamic marking of *p* followed by *(pp)*. The third staff has a dynamic marking of *sfpp* and includes the instruction *(TO BREWER ONLY)* and *(ment)*. The fourth staff, which appears to be a grand staff, contains various notes and rests, with some markings like */////* and *( )*. The fifth staff starts with *pp* and includes the instruction *(DECAY(al niente) WITH SYNTH.)*. A large blue watermark 'Preview File Only' is written diagonally across the middle of the page. At the bottom of the page, there is a large empty rectangular box.

ALLEN 2/10/84  
TO LEE 1/10/84

Albe Wagner  
June '84